



**Rural Water Supply and Sanitation
Project in Western Nepal Phase II**

2018

Step-By-Step Manual



**Project Support Unit
FCG International
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Step-by-Step Manual for Sustainable Community Managed Water Supply Services

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LIST OF SUPPORTING DOCUMENTS TO STEP-BY-STEP MANUAL

School Teacher Orientation Guideline, 2010

Lead TBC Facilitator's Training Manual, CLTBCHS, February 2011

Training Manual to TBC Triggers on CLTBCHS (Nepali version), 2009 & 2010

Resource Materials to TBC Triggers on CLTBCHS (Nepali version), 2009

Detailed Process of CLTBCHS (Draft), 2011

Recharge Ponds Handbook for WASH Programme (English version and Nepali version), 2013

Water Safety Plan Handbook, 2013 and related guidelines

Model District Arsenic Mitigation Strategy, March 2010

Gender Equality and Social Inclusion (GESI) Strategy and Institutional GESI Hand Book, Feb. 2009

Post ODF strategy Behaviour Change in Hygiene & Sanitation Strategic Action Plan 2013

GESI Policy Final, MoFALD/GON in Nepali B.S 2067(2011)

RWSSP-WN Brief 7-2016 Procurement Brief, RWSSP-WN II, 2016, revised in November 2017

Human Resources Management Guideline for (Rural Municipality/Municipality) WASH Unit and Technical Support Unit, 2074 (2017)

ACRONYMS/ABBREVIATION

CAP	Community Action Plan
DAG	Disadvantaged Groups
DWS	Drinking Water Supply
GESI	Gender Equality and Social Inclusion
GoN	Government of Nepal
HH	Household
MoFaGa	Ministry of Local Development and General Administration
MoFALD	Ministry of Local Development and Federal Affairs
M-WASH-CC	Municipality WASH Coordination Committee
M-WASH-MC	Municipality WASH Management Committee
M-WASH Unit	Municipality WASH Unit
O&M	Operation and Maintenance
ODF	Open Defecation Free
PO	Pump Operator
RWH	Rain Water Harvesting
TBC	Total Behavioural Change
V-WASH Plan	Village Development Committee WASH Plan
WASH	Water Supply, Sanitation and Hygiene
VMW	Village Maintenance Worker
WSP	Water Supply Plan
WSST	Water Supply and Sanitation Technician
WUSC	Water Users and Sanitation Committee

FOREWORD

The Step-By-Step approach was developed to guide all stakeholders through a participatory interactive planning and implementation process over the years. It has evolved throughout the Rural Water Supply and Sanitation Support Programme in the Lumbini zone (1990-2005) and more recently through the Rural Village Water Resources Management Project in Mid and Far Western regions since 2006. This Step-By-Step manual was updated again in October-December 2017 for the Rural Water Supply and Sanitation Project in Western Nepal Phase II when the local governance structure changed in Nepal due to local elections, and the Project moved to operate through the Municipality WASH Units instead of District WASH Units. At this point we have also included other learnings so far.

The Step-By-Step approach guides multiple stakeholders through the planning, implementation and post-construction phases. It builds the capacity and sense of ownership in communities to ensure future sustainability. Attention is given to developing services that respond to the needs of communities and provide water for domestic, sanitation, hygiene and productive uses. The multiple-use nature of water has the potential to enhance livelihoods and thereby can increase the sustainability of the system itself.

The Step-By-Step approach is applied to the schemes identified and prioritised in the Village Development Committee WASH Plans ('V-WASH Plans'), and taken up for action in the respective annual plans by the respective local governments. It is fully embedded into local governance systems from the on-set. The Step-By-Step approach has three main phases, each guided through one step at a time:

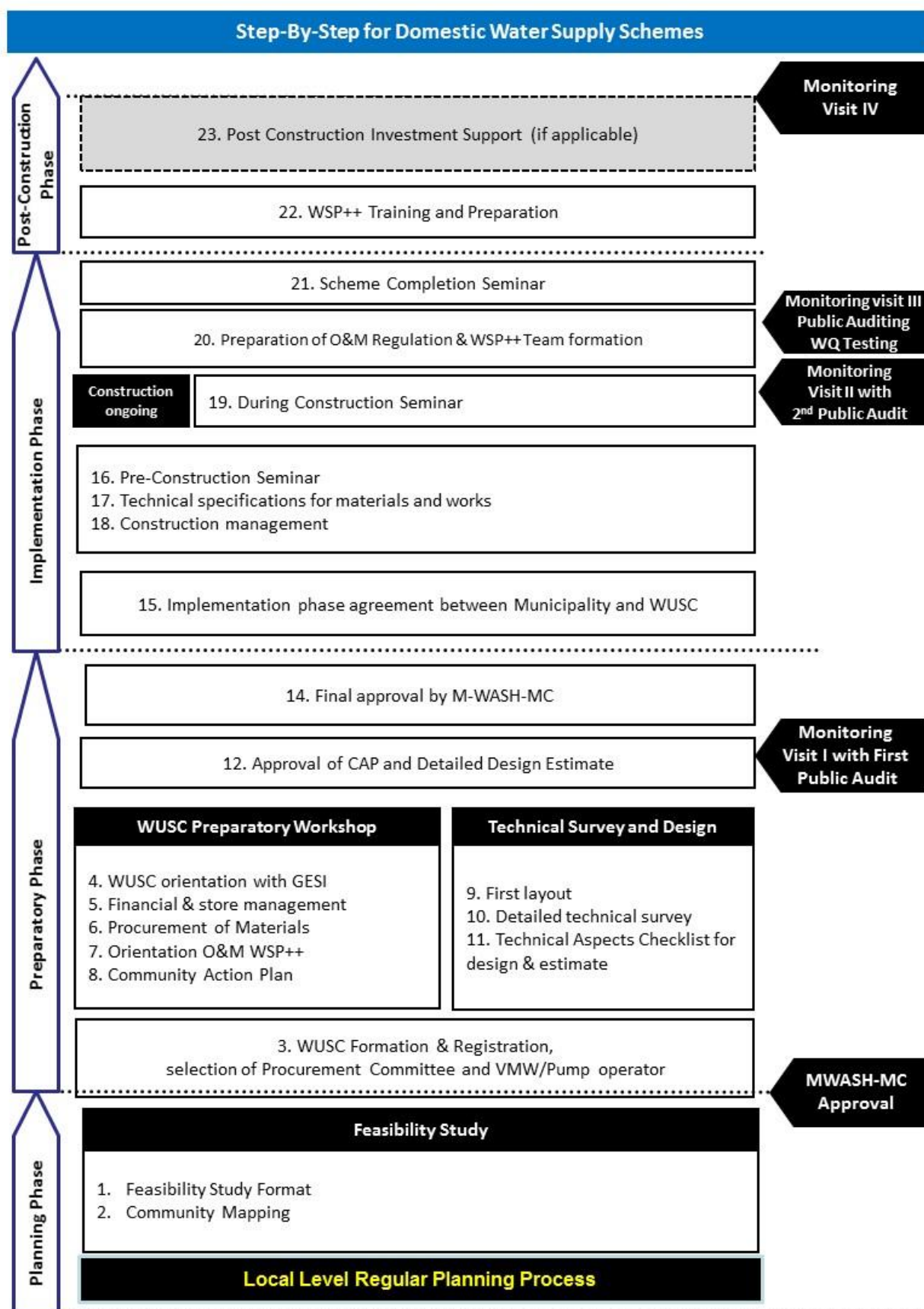
- **Preparatory Phase** introduces inclusive and gender-sensitive planning tools to ensure that the schemes are both technically and socially acceptable, responding to the needs of all potential beneficiaries, and focused on the unserved. The foundations for a sustainable future are built at this phase, step-by-step.
- **Implementation Phase** is where the Water Users and Sanitation Committee (WUSC) capacity is developed through gradual learning-by-doing backed up by individual training events and scheduled monitoring visits while the actual scheme construction proceeds.
- **Post-Construction Phase** is very specific for each unique situation, tailored to fit to the needs of the individual case.

Approaches to improved sanitation and hygiene are aligned with the Nepal National Sanitation Master Plan (2011). At the same time, individual WUSCs continue to have an important role in promoting and sustaining Open Defecation Free status amongst users, and in further improving environmental sanitation in their service area.

The Step-By-Step Manual focuses on the WUSC and building their capacity, and therefore, such technical training events as Village Maintenance Workers, Local Latrine Builders and Rainwater Harvesting Masons trainings, or those aimed at other stakeholders such as livelihood groups, female tap stand groups and Community Organizations, are beyond the scope of this edition. The Step-By-Step approach and related capacity building elements are a constant work in progress. Any feedback on the contents of this manual are continuously welcomed. This version will be finalized towards the end of the RWSSP-WN Phase II based on lessons learned over the coming years in an effort to make the Step-By-Step approach truly replicable by any rural water supply programme.

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RWSSP-WN Phase II
Pokhara, Kaski District, Nepal, December 2017

STEP-BY-STEP CHART



1 FEASIBILITY STUDY FORMAT

Objectives

The key objective of the Feasibility study is to ensure technical, social and financial feasibility of a scheme prioritized in the Village Development Committee WASH Plan (see V-WASH Plan Guideline) or in other local level planning processes. M-WASH Unit staff conducts the study.

Key issues to be verified during Feasibility study

The Feasibility study should be prepared by the WASH Coordinator and Sub-Engineer together. The following aspects should be considered:

- Is there a real demand for the scheme? Do the beneficiaries feel that they need the scheme or not? Has this been discussed in the community meeting or is this the opinion of only some individual persons?
- Are the beneficiaries unserved, or is this scheme to improve their service level?
- Are there any households left out from the scheme that could be technically included?
- Are the users aware of the V-WASH Plan priority/Local level Planning priority?
- Are the users aware of the community contribution (cash, kind and participation)?
- Can they realistically contribute this? Has consideration been given to varying the balance between in-kind and cash contributions for the ultra-poor or disadvantaged?
- Has the Municipality considered providing support to the very poorest households?
- Is there a water source dispute or other community conflict that may influence the proposed scheme?
- Is the proposal as given in the V-WASH Plan/Local Level plan realistic? If not, what changes are needed?
- Can the scheme be sustainable? If the proposed scheme is an electrical lift scheme, for instance, are the users aware of the kind of electricity bill that they can expect every month?
- Can the proposed scheme be completed and financially cleared by the end of FY2075/76? If not, who will provide the financing needed to complete the scheme, and who will support the WUSC?

Selection of water source: Adequacy, quality and cost economy.

For improvement of water supply at rural community level, the following strategies should be followed:

- Use of least contaminated spring/stream source (catchment assessment and source protection are necessary)
- Innovation in the design of the spring and stream intakes (including source protection) to minimize problems in their operation
- Continue to strengthen both the institutional and community capability to operate and maintain the water scheme
- Water Safety Plan application and monitoring
- Health and hygiene, and training activities targeted especially to women and mothers' groups
- Provide simple, cost effective and easy to operate and maintain water treatment facilities. Closed system design is preferred as much as possible

These steps are followed to carry out the Feasibility study

1. Organize meeting with W-WASH-CC to discuss the V-WASH Plan/Local Level Plan prioritization and multiple-use water systems (MUS) potential.

2. Observe the proposed scheme area and its existing water source/s. What water sources are already used? What are the closest appropriate water source/s that should be selected for source measurement and its verification?
3. After visiting the scheme area and source, explore the technological options other than proposed in V-WASH Plan/Local Level Plan, such as point source development, rain water harvesting and other options. These may be particularly important for remote households when selecting the best technological option.
4. If the proposed technological option is unfeasible, discuss and select the appropriate technological options in the community; fill the feasibility format accordingly.
5. Verify the number of benefitting households/population and measure the water source/s to verify that the water discharge meets the demand.
6. Note down altitude of key points (e.g. source(s), tentative location of reservoir tank (RVT), service area, ridge, valley, landslide/flood prone areas, present and planned land-use including roads etc.).
7. In case of lift scheme (solar or electrical), verify the altitude difference of water source and service reservoir using altimeter.
8. Organize the scheme level mass meeting. The mass meeting should include participation of at least 75% of the households and at least 50% of the participants should be female. The participants should be from all clusters, castes and ethnic groups (in proportion to their presence in the cluster). Any variation should be justified. W-WASH-CC/Ward representative should be present during the mass meeting.
9. In the mass meeting, note the information in the Feasibility study format of the next pages. The discussion in the meeting should cover at least the following:
 - Working modality of the project
 - Contribution pattern
 - Role and responsibility of WUSC and other stakeholders (Ward/Municipality etc.)
 - Scheme implementation procedure
10. After completion of the discussion, the filled format is presented in the mass meeting and signed by the key persons. Separate attendance sheet should be filled.
11. The WASH Coordinator will present the Feasibility study to the Municipality WASH Management Committee (M-WASH-MC) in the M-WASH Unit with recommendations. The Technical Support Unit should be present in the meeting to represent the project.

FEASIBILITY STUDY FORMAT

Date of study: from to.....

Prepared by:

District, Municipality & Ward:.....

Scheme name:.....

Selected from V-WASH Plan (if no V-WASH Plan, then local planning process)? Yes No

Can the proposed scheme be completed and financially cleared by the end of RWSSP-WN II? Yes No

If the scheme cannot be completed and financially cleared by the end of RWSSP-WN Phase II, who will complete the scheme? Who will provide the remaining instalments and who will provide the necessary technical support?

If 'no' to above and there is no acceptable description on how the scheme will be completed, no need to proceed further with this report. The scheme is dropped from RWSSP-WN Phase II. The users should approach another agency (Department of Water Supply, the municipality's own programme, any (International) Non-Governmental Organization etc who can ensure successful completion of the proposed scheme)

If 'yes', then proceed with the rest of the Feasibility study as below:

Household categories	Total households
A. 'No External Support' Unreached HHs - HHs who have never been supported by water supply interventions external to Ward/Municipality)	
B. 'Design Period Over' Unreached HHs - HHs whose water supply has clearly exceeded its design period; more than 20 years old schemes)	
C. Unfunctional RWSSP-WN Phase I Scheme HHs - Major repair or rehab of Phase I Schemes to make them functional; (no minor repair).	
D. Other HHs - HHs served by schemes which are less than 20 years old and the service level is 2-4.	
Grand total (number of households should match with the number of households in the above table!)	

Number of beneficiaries	Households	Female	Male	Total population
Dalit				
Adibasi/Janajati				
Disadvantaged Tarai				
Religious minorities				
Others				
Total				

Scheme technology

- ☐ Gravity WSS (New)
- ☐ Gravity WSS (Rehab)
- ☐ Rainwater Harvesting
- ☐ Solar Lift
- ☐ Electric Lift
- ☐ Point Source Improvement
- ☐ Multiple-use system (MUS). If MUS, describe:
- ☐ Other, describe:

Type of connections	Number of connections	Remarks
Public		
Private		
Institutions		
Schools		

Water Source Information (add rows as necessary)

Sn	Source name	Source type	Water quality (P/A)	Source Yield (1)	Measured Date (1)	Source Yield (2)	Measured Date (2)

- (1) First measurement, as in the V-WASH Plan or as measured during Feasibility study
 (2) Second measurement, verification

The water source safe yield (lps)

General trend of source discharge

- ☐ Reducing
- ☐ Increasing
- ☐ Constant

If the source discharge is reducing or if there are water quality problems, or if the source is prone to any other risks such as flooding or landslides, what measures should be implemented in the catchment area to recharge and protect the source?

Technical Aspects (add rows as necessary)

Source/Structure	Altitude	Coordinates (GPS reading)	Remarks
Source-1			
Source-2			
Proposed RVT 1			
Proposed RVT 2			

Is available head enough for the proposed system? Yes No

Available water _____ litre/capita/day

In case of lift scheme, how many lifting stages are required? _____

Distance of electric transmission line from the proposed intake of the scheme: _____

In case of rehabilitation of the existing scheme, list the structures that could be used:

Key technical aspects to be considered in the scheme implementation e.g. crossings, ridge and valley etc. geographical feature, parallel/overlapping schemes, upstream settlements, risk of floods and landslides and other risks to water quality:

Financial aspects

Tentative total cost of the scheme: _____ NPR

Per Capita Cost of the scheme: _____ NPR

In case of electric lift scheme, expected monthly electricity cost: _____ NPR

In case of any lift scheme, expected monthly operation cost (Pump Operators salary + electricity cost + VMW/other human resources): _____ NPR

Social aspects

Are all the potential beneficiaries included in the scheme beneficiary list? Yes No

If not, give the reason for exclusion:

Is there demand for private connections? Yes No

If yes, is the water source sufficient?

Are all the beneficiaries ready to contribute cash and kind as per guidelines? Yes No

Is the Municipality ready for its funding share as per guidelines? Yes No

If yes, has the commitment letter been submitted or budget allocated by the Municipality Council?

Is there any kind of source or land dispute? Yes No

If yes, describe the type of dispute and the possibility of its settlement:

Is there any kind of social disputes/disagreements that effect scheme sustainability? Yes No

If yes, describe the type of dispute and its effect on the scheme sustainability:

Is the scheme the best option for the community, in terms of cost of the scheme? Yes No

If not, what are other cost-efficient options?

Community opinion/plan for sustainable operation and maintenance:

Does the proposed scheme meet the following criteria:

Availability	Yes	No
Accessibility	Yes	No
Quality/safety	Yes	No
Affordability	Yes	No
Acceptability	Yes	No

Recommendations

Is the scheme technically and environmentally feasible? Yes No

If not, why:

Is the scheme socially and financially feasible? Yes No

If not, why:

Is the scheme recommended for Preparatory Phase? Yes No

If not, why:

Annex 1. Draw tentative layout of the scheme showing settlements, geographical features, required structures and length of pipelines/irrigation channels.

2 COMMUNITY MAPPING

Introduction

Community mapping is the first step in the community mobilization and planning. This is the entry point for preparing a scheme-level community map as described in this paper. Community mapping is an important participatory tool that acknowledges and values the wealth of knowledge that community members can bring to project planning, by rapidly providing basic widespread information about the community. At this point, social, technical and demographic data is collected as needed for planning the water supply scheme. It is a visual method of showing the relative location of households and the distribution of different groups (such as male, female, adult, child, landed, landless, literate, and illiterate, toilet-owning or otherwise, etc.) together with the social structure and institutions in the area. Here, 'community' implies the scheme area to be served by proposed water supply and sanitation scheme.

Community mapping involves local men and women, including all ethnic groups, castes, and clusters, to create a pictorial representation of their community in the form of a map. It may be necessary to prepare the community maps in separate groups for women and men in places where the women are clearly shy or afraid to speak up in public, especially in front of men. If needed, a confidence-building workshop for women may be carried out before preparing the community map.

The materials required for community mapping are locally available materials such as sand, stone, small bricks, leaves, sticks, coal, clay, pieces of wood and paper, etc. Some of the materials like pencils, drawing paper, colour pens, etc. can also be used if available on site and if appropriate.

Applications of the community map

- Used as a basis for scheme layout
- Showing data on community layout, present infrastructure, demography, ethno-linguistic groups, open defecation areas, HH toilet, water fetching time etc.
- Identifying different social groups using locally defined criteria
- Learning about the social institutions
- Showing boundaries of particular places
- Identifying available local and natural resources (water source, aggregate, sand etc.)
- Identifying hazards and risks having negative effect on the community
- Identifying real or possible disputes relating to the scheme

Process

- Walk around in the village and discuss with local people including all representatives of women/men, children and adults including all disadvantaged groups about important features such as existing wells and taps, sanitation situation, settlement pattern, social groups etc., before drawing the map. This exercise helps in rapport building in the community. The community walk should be used to discuss possible critical issues that relate to accessibility and use of facilities by all - who is forbidden or cannot physically access/use the facilities (eg. menstruating women, people living with disabilities and disadvantaged groups etc.).
- Avoid sensitive topics where possible, such as XXX
- Call a community meeting. The time and venue of the meeting should be convenient to the women and all ethnic/caste groups. All clusters and ethnic/caste groups are encouraged to participate in the meeting. Equal participation of women, men and proportional representation of all ethnic and caste groups is required. In the meeting facilitators should prepare a list of participants showing their name, gender, occupation,

ethnic/caste groups and age by clusters using the attached table. A minimum 75% of HH representatives should participate in the mapping process.

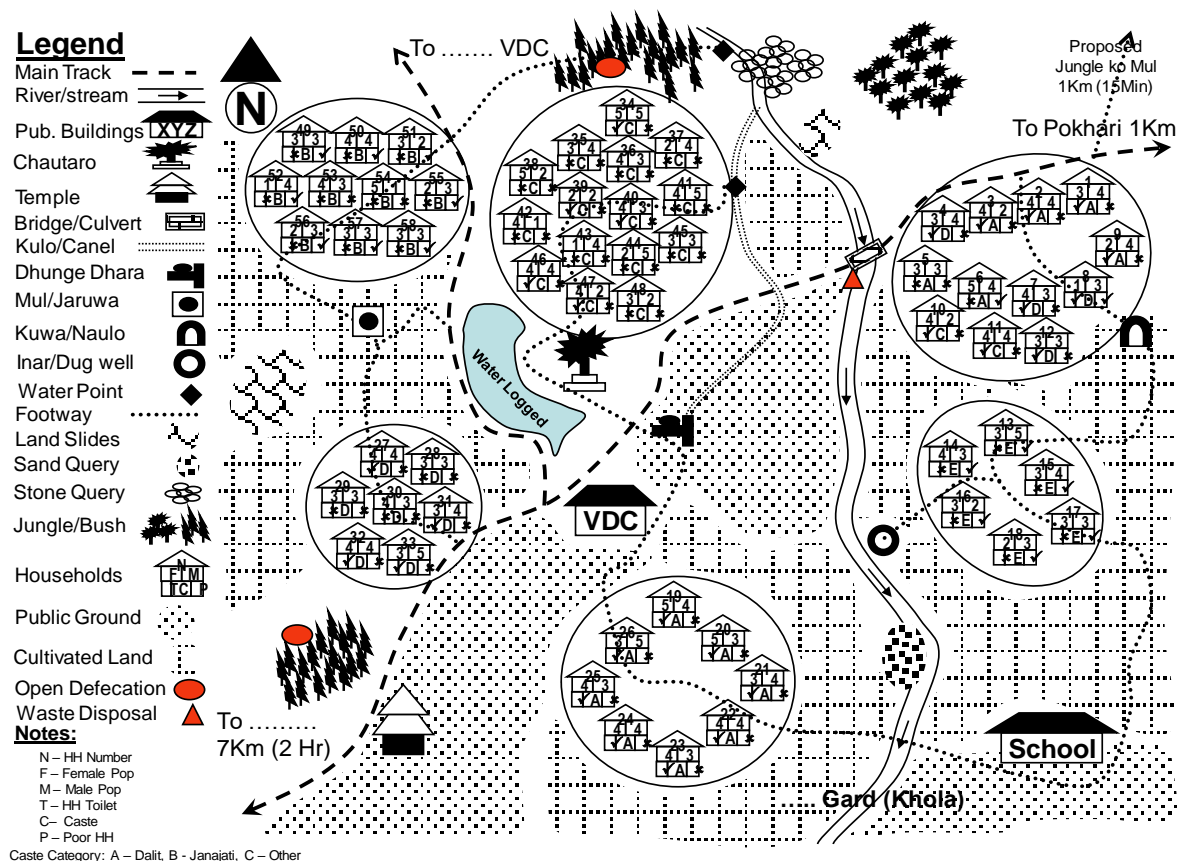
- When working with the group, the facilitator/s should begin by introducing themselves and explaining clearly the objectives and agenda of the meeting, what the participants are expected to do and why. Check that the participants understand and feel comfortable with what will be discussed. Encourage participation of female and DAG community members.
- First decide what type of area the map will show (village, indigenous ancestral domain, watershed etc.). Social maps begin as physical maps of the residential area of the community.
- With the help of local analysts, select a suitable place and medium for the map, such as the ground using locally available objects (stones, seeds, sticks, leaves, colour powder, coal etc.).
- After rapport building with the community, ask the local analysts to start by preparing the outline or boundary of the map. Initially facilitate the analysts to draw a simple village map showing the village borders. Then ask the analysts to identify and draw with the community participation other institutions and landmarks that are important to them. These might include religious buildings, schools, health centres, community centres, other public and business buildings, households, sanitation facilities and open defecation areas.
- Ask for the location of all houses in the community.
- Mark the houses in different colours to indicate those who have latrines.
- The map should also identify houses that belong to people from different social categories (such as ethnicity/caste, female headed-households, ultra-poor, people with disabilities or having limited mobility).
- Identify any access problems – who is not allowed/not able to use infrastructure (eg. taps, toilets).
- The map should identify the areas vulnerable to hazards such as floods, landslides and drought. The map can be used to highlight both physical vulnerability to climate impacts and hazards, and the social factors that enhance the vulnerability. The risk of the hazard occurring and having negative impacts on the community and infrastructure should be discussed. Protective infrastructure for water supply schemes could be considered based on the map.
- If the map is drawn on the ground, once the broad outline has been established, ask the local analysts to start making a copy on the paper (indicating which direction is the north) making necessary amendments and additions as they go along.
- Do not lead, just assist the community when asked, and thus facilitate drawing the map.
- When the map is completed on the ground, make sure that all the components are there. If not, ask the community members to put them in place and copy them on the paper. Taking photographs of the map and its paper copy is recommended.
- Once the map is completed, use it as a basis for conducting semi-structured interviews on topics of interests and for enabling local analysts to conduct their own discussion and analysis.
- Check again that the local analysts know how the information will be used. Ask the analysts to reflect on the advantages, disadvantages and the analytical potential of the tool. Finally thank the local analysts for their time and effort.
- Prepare a separate list of houses with household owner's name and population (women, men and children, adults). Key persons' houses can be indicated with special marks on the map.
- Ensure that all the information collected through the community mapping is recorded in WUSC register for future reference.

Information to be included in the map

At least the following (and any additional important) information shall be recorded in the community map:

- Direction of north
- Date when the map was created.
- All the symbols should be explained in the right bottom corner of the map.
- Name of the municipality, ward number and cluster (of which the map is drawn) shall be written on the top of the map.
- Total number of HHs indicating female headed HHs, HHs having person with disability, population (men, women, ethnicities/castes), taps, toilets, etc., can be written on the left corner or on the bottom of the map or on an additional sheet.
- Number of people (female, male, ethnic/caste groups) in the community.
- Community area including cluster names and their boundaries.
- Geographical features e.g. mountains, forest, paths, rivers, water storages and recharge ponds, roads and their distance from the village, cultivated land, grazing land, community land and its use, available sources of sand, stones, gravel, bamboo etc.
- Name and location of currently used and proposed water sources (verify also from a report).
- Location/layout of existing pipeline systems/water supply systems (and functionality).
- Infrastructure under planning or under construction.
- Institutions (schools, health posts, municipality buildings, banks and other offices).
- Other important locations e.g. temples, parks, mass gathering/meeting places, market areas, shops, etc.
- Latrines and open defecation areas.
- Waste disposal and cremation places.
- Areas vulnerable to floods, landslides, droughts and other risks.

EXAMPLE OF A COMMUNITY MAP



3 WUSC FORMATION, REGISTRATION & VMW/PO SELECTION

Introduction

All users cannot be mobilized every time a decision needs to be done and an action to be taken. Therefore, the water supply scheme users shall select a Water Users' and Sanitation Committee (WUSC) in a mass meeting (See **WUSC Operational Guidelines 2070** for details). The Water Resource Act, 2049 (clause 5.) has provisioned to form a Water Users and Sanitation Committee to represent all users and to use the water resources for common benefit of the users in an institutional way.

WUSC is responsible to the users for various tasks related to their scheme such as scheme implementation, operation and maintenance. While forming the WUSC, the provisions made in Users Committee Formation, Operation and Management Directives B.S 2068 (Amendment on B.S. 2068/12/22 with Ministerial level decision) of GoN/MoFaGa need to be followed.

There should be fifty percent representation of women and proportional representation of disadvantaged groups (DAG) in the WUSC and at least one female member and one DAG member (depending on their representation in the community) shall hold a key position.

Composition of the WUSC

WUSC acts on behalf of the scheme users. Therefore, it is useful to think what kind of WUSC composition represents the community in the best possible way. The project recommends the following guidelines:

- In general, WUSC consists of seven to eleven representatives depending upon the size of the community to be served. The representatives include chairperson, vice chairperson, secretary, treasurer and three to seven members. WUSC with more than eleven members may not be efficient in making decisions. In case of large and complex schemes, different sub committees can also be formed as per requirements but the overall responsibility lies on the WUSC itself.
- Women are the primary users of water so their expertise is necessary in WUSC. They have rich knowledge about the water resources management. Therefore, their role in WUSC is vital. At least half of the WUSC members are required to be women. If there is an uneven number of WUSC members, quota of women can be rounded either up or down. For example, if there are seven members, either three or four must be women. Women should hold the position of either a chairperson or a vice chairperson as well as other key positions in WUSC.
- WUSC should have a balanced representation from each ethnic/caste group and cluster/settlement. If WUSC members come only from one ethnic/caste group or one cluster, they may not be supported by the whole community, nor represent all opinions. An imbalance between different ethnic/caste groups and clusters in WUSC can create problems in various steps of the project cycle. Women and DAGs should be encouraged to come forward to be potential WUSC members.
- There should be only one WUSC per scheme. All WUSC members must be scheme users.
- WUSC should meet or have the potential to meet the following criteria: non-discrimination, participation and accountability.

General requirements for representatives of the WUSC

The users are free to select any woman, man or ethnic/caste group representative they assume to be able to carry out the duties of a WUSC member. However, only an active and trustworthy WUSC will be able to implement the project successfully. Generally, the WUSC representatives should:

- Be cooperative and sociable and encourage participation of all.
- Be free from political squabbling.
- Have a reputation as a reliable person in the community.

- Be able to motivate the users.
- Be able to cooperate with the community in a democratic way.
- Be able to organize enough time to do the work.
- Have sound health, and be energetic and smart.
- Have high social morale and be committed to work in a transparent and non-corrupted way.
- Be a permanent resident in the scheme area and have no plans to migrate.
- Be mentally stable and quick in decision-making.
- Be mature enough and interested in organizational activities.
- Be gender sensitive and non-discriminatory.
- Preferably, key position holders should be literate.
- As specified in the Users Group Formation Guidelines of GoN/MoFALD, the following persons CANNOT be WUSC members: school teachers, government officials and those holding any key positions in any other organisations and political parties.

Procedure to form WUSC

- Call a mass meeting. Make sure that the time and venue of the meeting is suitable for all users. House to house invitation (written/verbal) should be provided to all women and men. All user ethnic/caste groups and clusters should be informed of the meeting.
- At least 75 % of the user households should be present in the mass meeting. Be sure that there is an adequate representation of all the users (men, women, clusters, ethnic/caste groups). If there are fewer representatives or if women are in a minority, postpone the meeting until the representation is adequate and equal. Collect information about the participants in the attached format (Annex 1).
- For WUSC formation mass meeting, the following representatives are compulsory:
 - One female and one male representative from each household
 - Municipality representatives
 - WASH Unit staff representatives
 - Ward representatives
 - Catalysts such as Female Community Health Volunteers, teachers, traditional birth attendants and other important actors in the community etc.
- In the meeting, start dialogue with the participants about their daily activities in order to build rapport. After rapport building, move to the agenda and present information regarding the WUSC formation.
- Based on the size of the proposed scheme and the number of settlements ask the community to decide on a number of WUSC members (7 to 11). After deciding the number of WUSC members, decide on the number of women and the number of members from different ethnic/caste groups and clusters to ensure full representativeness.
- Let the community discuss who to nominate as WUSC representatives. Do not interfere in the discussion. Only guide them to nominate enough women and representatives from all the ethnicities/castes and clusters. The final nomination of representatives should be based on consensus among the users.
- If the criteria for representation is not met, the mass meeting must be required to revise the WUSC members and encouraged to select a gender balanced and inclusive WUSC.
- Finally, key positions should be selected - women and all ethnic groups will have an opportunity to hold key positions in the WUSC – there should be at least one woman and one DAG member (depending on their representation in the community).
- The mass meeting should elect the WUSC members in socially inclusive, balanced and democratic way.
- To get a legal status, WUSC should be registered under the Water Resource Act.

- The WUSC makes a constitution with rules and regulations with the help of the Municipality WASH Unit staff. An example of the constitution and a sample registration format are found in the end of this chapter.

WUSC roles and responsibilities

Users are both managers and the owners of their scheme. They will be involved in every step of the scheme implementation. WUSC is the representative body of the users. In other words, WUSC is the main executive body to plan, manage and implement the scheme and to operate it after completion. WUSC is thus also responsible for the future sustainability of the scheme. The success of the scheme depends largely on the capacity of the WUSC.

WUSC has many responsibilities before and during the implementation of the scheme, as well as after the implementation phase. The main responsibilities of WUSC are to:

- Co-ordinate with the Municipality/M-WASH Unit staff/M-WASH-CC and the users.
- Play an active role in the different steps of the scheme planning and implementation.
- Hold meetings regularly and frequently.
- Collect local cash contributions for scheme implementation.
- Keep and update the records of the scheme related transactions.
- Keep the users informed of the status of works and develop the feeling of ownership among the users.
- Be transparent and accountable to the users and other stakeholders.
- Operate, repair and maintain the scheme in the post-implementation phase.
- Generate O&M fund and mobilize it for income generating activities when appropriate.
- Prepare scheme progress reports and financial statements; submit reports to the municipality and present them to the users.
- Manage resources, such as materials, tools and workforce.
- Procure the non-local materials needed for the scheme, manage their storage, use them properly in construction works, keep spare materials for future O&M and keep the records of all the transactions.
- Solve all disputes that arise in the project, including source disputes.
- Promote hygiene and sanitation activities in the community.
- Promote environmental protection of water sources.
- Ensure the implementation of O&M Plan and Water Safety Plan.
- Formulate new rules and regulations for the scheme as per need and call a mass meeting for their approval.
- Be sensitive towards different groups such as women, poor and DAG. Ensure inclusiveness.

WUSC registration

- The need of WUSC registration is mentioned in the Water Resource Act 2049, Article 5(2).
- The entire WUSC should be registered latest during the scheme implementation (Water Resource Act 2049, Article 6). Only a legally existing WUSC can receive grants and funds from official sources. In case of rainwater harvesting, tube well, dug well and point source improvement schemes, WUSC can be registered at the Ward office.
- WUSC shall be a self-governed and institutionalized organization.
- WUSC shall have a separate stamp for their work.
- WUSC has a legal entity status (with the rights applying to a legal person). WUSC has the right to receive, use and sell property like an individual.

Process of registration

WUSCs formed under the Water Resource Regulation 2050, Rule 3 should apply to the District Water Resource Committee for registration as per the sample application provided below, until the new provision has been made by the Province government. The Secretariat of the District Water Resource Committee is the District Coordination Committee (DCC). WUSC shall submit all necessary documents along with the registration fee to DCC. The Secretariat of the Water Resource Committee shall publish a public notice for the investigation of any kind of claim against the registration. After 35 days of publishing the notice, the Water Resource Committee shall decide on the registration and the registration certificate shall be provided to the WUSC.

Place of registration

All WUSCs should be registered under the Water Resource Committee (Water Resource Act 2049, Article 6). This committee exists in each district. The Local Development Officer of the DCC is a member secretary. Various line agency chiefs are also members of the committee.

Composition of the Water Resource Committee: (Water Resource Regulation 2050, Rule 8)

Chief District Officer	Chairperson
Local Development Officer	Member-Secretary
Representative, District Agriculture Development Office	Member
Representative, District Forest Office	Member
Representative, District Water Supply Office	Member
Representative, District Irrigation Office	Member
Representative, Concerned office of the Government of Nepal	Member
Electricity Development Programme	Member
Other than above, representatives of water resource related offices within the district.	Member

Necessary documents needed for the registration

As per Rule 4 of the Water Resource Act, the following documents are needed for the registration:

- A copy of WUSC Constitution
- Registration fee NPR 100

In addition, it is suggested to submit the following documents along with the WUSC Constitution (signed by all members):

- Copy of citizenship of all WUSC members. If prospective WUSC members do not have citizenship papers, the Ward office will assist in receiving them.
- WUSC formation minutes and WUSC minutes of the decision to register the WUSC.

Full sample of the WUSC Constitution is found later in this chapter.

Procurement Committee and other responsible persons' selection

After the selection of WUSC, Procurement Committee, Monitoring Committee, other sub-committees and responsible persons for the transportation and storage management of materials should be selected so that the members of the sub-committees can get the opportunity to participate in the preparatory phase trainings and orientations. WUSC should assign one or two persons as store keepers with orientation before the materials procurement.

Village Maintenance Worker (VMW) and Pump Operator (PO) selection

Sustainability of any water supply scheme depends very much upon how much ownership the WUSC and the users take over the scheme. It is the responsibility of the WUSC to operate and maintain the scheme infrastructure from the beginning of the construction work. Therefore, the users need to select Village Maintenance Worker (VMW) (gravity and lift schemes) and/or Pump Operator (PO) (lift schemes) among the users in the beginning of the scheme implementation. VMW/PO has a crucial role in the maintenance of the scheme functionality after the completion of the construction works. Past experiences have shown that scheme functionality depends on VMW/PO performance and mobilization. Therefore, the users need to be very careful when selecting the VMW and/or PO.

VMW/PO Selection Process

- The VMW/PO should be selected in the same mass meeting where the WUSC is selected. At least two VMW(s)/PO(s) should be selected; one man and one woman.
- First the mass meeting should discuss about the VMW/PO requirements, job description (convenient responsibilities for VMW/PO), salary and the selection indicators. Examples of indicators for VMW/PO selection:
 - Scheme user
 - Age between..... and.....
 - Priority in disadvantaged groups
 - Motivation for social service
 - No plan for leaving the community (for work or any other reason)
- Interested persons should sign up. After interviews and a discussion, the mass meeting selects the VMW(s)/Pump Operator(s).
- Priority should be given to members of poor and disadvantaged groups.
- The selected persons will sign a work contract (listing their responsibilities and salary as agreed in the mass meeting)
- The selected persons will receive VMW/PO training organized by the Project.

Roles and Responsibilities of VMW/Pump Operator

- Participate in all WUSC meetings and inform WUSC about the scheme status
- Proper use and maintenance of tools
- Observe the scheme regularly (from catchment to tap)
- Inspect the fittings/valves of all structures regularly
- Conduct small doable works to maintain the scheme functionality. For works beyond VMW/PO capacity inform WUSC to receive external technical support.
- Clean regularly all scheme structures
- Motivate user household to maintain the scheme
- Protect the source and the whole catchment area and motivate the community in afforestation
- Motivate the community to use toilets and participate in sanitation programs
- Perform all other duties as required to ensure the sustainability and functionality of the scheme as advised by the WUSC members
- Take a lead role in WSP++ implementation
- Advise community to reuse tap drainage water in the kitchen gardens
- Take extra care of the catchment area, the water source and the water quality in the rainy season.

Work Termination of VMW/PO

In case VMW/PO does not perform his/her work or leaves the community, his/her appointment as VMW/PO will be terminated through the decision of the users' mass meeting. If needed, the users can select a new person or change the person through the decision of the users' mass meeting.

PARTICIPANTS IN THE MASS MEETINGS

Date of meetings: _____

List of people who attended the mass meeting: *(add the necessary number of rows)*

Name of household representative attending the meeting	Gender	No of other HH members present		Ethnicity*	Cluster & ward
		M	F		

* *Dalit, Adibasi/Janajati, Religious Minorities (Muslim), Disadvantaged Terai Caste Groups, Others (Bahun, Chhetri and others not included in the categories listed earlier)*

Continue to the next page if needed.

Number of households represented in the mass meeting: _____, which is _____% of the total scheme beneficiary households.

Number of women in the mass meeting: _____, which was _____ % of the participants.

Number of DAGs in the meeting _____, which was _____% of the participants.

SAMPLE STATUTE OF WATER USERS AND SANITATION COMMITTEE (WUSC)

Preamble

The Water Users and Sanitation Committee (WUSC) is an elected representative body of the water supply scheme users and is responsible to plan, implement, monitor and maintain the scheme. WUSC is formed according to the following legislation:

Name of the committee

Name of the scheme.....

District..... Municipality.....Ward no.....

Chapter 1 Introduction

Short name and beginning: Name of this statute will beDrinking Water Users and Sanitation committee 20....

Definitions

Act	Water Resources Act 2049
Rule	Rules developed by WUSC under this legislation
Members of WUSC	Chair, Vice Chair, Treasurer, Secretary and other members
Officials of WUSC	Chair, Vice Chair, Treasurer and Secretary
Users	Group of all users benefiting the services under this WUSC
Area	Geographical area in which the WUSC will deliver its services
Scheme	Water Supply system being operated by the WUSC under this legislation
Service fee	Cash or other assets collected from the users on a monthly/annual basis against the use of the services administered by the WUSC under this legislation

Logo and stamp

Description of the logo:

Description of the stamp:

Office

Office of the committee is located in

Chapter 2 Objective

Objective of WUSC

Ensuring the existing law, the main objectives of WUSC are the following:

- Organize and mobilize the scheme users and act as their representative and spokesman
- Identify the needs of the users and try to meet these needs as far as possible
- Ensure equal distribution of benefits among the users
- Mobilize capital, labour and other resources required for the planning and implementation of the scheme
- Carry out regular scheme operation and maintenance activities

Chapter 3 Drinking Water and Sanitation Users Committee

Formation of WUSC

- Users' mass meeting will form the WUSC. At least 7 days' notice should be given to all users (male and female) comprising the information of venue, date and time of the mass meeting. The mass meeting venue should be appropriate to all participants.
- Proportionate representation of all the ethnicities/castes and clusters of the scheme area should be ensured in the mass meeting. It is mandatory that at least 75% of the user households should be present while forming the WUSC. Furthermore, 50% of the total participants should be female.
- There should be a proportionate representation of all ethnicities/castes and men and women in the WUSC.
- Separate female and male mass meetings will be organized to ensure equal participation in the WUSC. Selection basis will be 1:1 from each separate mass meeting to ensure 50% participation of women in the WUSC.
- Even in the case of already organized WUSCs, the above conditions are required to be applied.

WUSC meetings

- WUSC meetings shall be held regularly and frequently.
- Written agenda, date, time and venue of the meetings will be circulated among the WUSC members before holding the WUSC meeting.
- Quorum for holding a meeting is% of the WUSC members. 50% of the total WUSC members may hold the meeting in the second time if the quorum is not met in the first time.

Roles, responsibilities and rights of the WUSC

Planning phase

- Organize users mass meetings
- Identify and prioritize community needs
- Support the feasibility study
- Ensure cash and kind contributions for the scheme implementation identifying alternative arrangements than cash for the ultra-poor
- Consult the users of the scheme area ensuring that views of all groups are considered
- Keep good relations to all the stakeholders

Preparatory phase

- Organize users mass meetings
- Keep the users informed about the scheme preparations
- Prepare a social map and collect required data. Discuss potential uses of water
- Organize users mass meeting to prepare the community map
- Register WUSC
- Collect cash from the users
- Open bank account in the name of the WUSC
- Participate in trainings
- Prepare the Community Action Plan (CAP)
- Sign Implementation Phase Agreement

Implementation Phase

- Organize Pre-Construction Seminar and discuss the cost estimate, implementation phase agreement, CAP and other issues
- Collect local construction materials

- Purchase construction materials, manage inventory and mobilize skilled and unskilled labour – priority to be given to women and DAG members
- Mobilize community contribution in different activities of the scheme. Allow ultra-poor to contribute in labour rather than cash if needed
- Review and analyse the scheme progress, income and expenditure and organize public audits/mass meetings at least three times during the Step-by-Step to endorse the transactions
- Submit reports of the public audits and the work completion to the respective agencies
- Maintain book keeping of cash and material transactions in a transparent way

Post-Construction phase

- Establish a norm to collect water service fee for regular operation and maintenance of the scheme
- Collect water service fee regularly
- Carry out regular scheme operation and maintenance activities
- Store tools and fittings adequately to meet any urgent scheme repair needs
- Mobilize O&M fund as per the established norms
- Ensure that health and sanitation activities are continued in the scheme area
- Organize mass meetings at least once a year to approve all the transactions
- Monitor the scheme regularly and report any functionality and/or sustainability issues to the concerned municipality

Chapter 4 Roles, responsibilities and rights of the WUSC members

Chairperson

- Follow all the rules, responsibilities and rights as assigned by the committee
- Call WUSC meetings when necessary
- Make the agenda for WUSC meetings
- Chair the WUSC meetings and cast deciding vote only if needed. Ensure that all WUSC members are encouraged to speak in the meetings and actively fulfil their roles
- In case of absence, authorize chairmanship to the Vice-chairperson or other WUSC members
- Implement WUSC decisions
- Manage scheme activities
- Enhance users' participation in scheme activities

Vice-Chair person

- Work as chairperson in his/her absence

Secretary

- Minute decisions made in the WUSC and mass meetings
- Provide required logistic support to WUSC
- Maintain adequately scheme related documents

Treasurer

- Handle and audit scheme transactions
- Keep WUSC aware of scheme related financial issues and get WUSC approval for any transactions
- Manage proper book keeping of the use and balance of financial transactions, kind and materials

- Take responsibility over cash and materials received for the scheme implementation and proceed them as suggested by the WUSC

WUSC members

- Monitor the scheme planning and implementation activities
- Ensure that the scheme transactions (cash, kind and materials) are done in an adequate manner
- Enhance community participation as needed
- Keep the users informed of the scheme situation regularly

Chapter 5 Financial management

Financial resources

- Financial resources received in terms of support from the Project and the Municipality as per contract and agreement.
- Financial resources received from the users in terms of service fee and support.
- Financial and physical resources and labour received from the users
- Other financial and physical resources received in terms of support from governmental/non- governmental organizations and other institutions

Current and fixed assets management

The WUSC is a self-governed, autonomous and organized institution. WUSC may earn, use and sell the current and fixed assets as provisioned in the existing law. All legal obligations will be activated by its name.

Fund management

- WUSC will have its separate fund for all required expenditures.
- The bank account will be operated by joint signatures of any two WUSC members as assigned by the WUSC.
- The fund will be utilized under the supervision of the treasurer as provisioned by WUSC.
- WUSC will carry out periodic monitoring and supervision of fund to ensure proper utilization and may instruct the treasurer for further improvement.
- Mobilization, book keeping, auditing and other processes regarding the fund will be done as per rules and regulations administered by the WUSC.

Labour, capital and material management process

WUSC is in charge of managing capital, labour and materials required for the scheme implementation. All the local materials (except sand) and unskilled labour needed for the scheme implementation are managed locally as users' kind contribution. Materials not found locally and skilled labour will be managed and financed by WUSC through the WUSC account.

Management of cash for the scheme operation and maintenance:

WUSC collects regular water service fee from the scheme users. The collected fees are kept in the Operation and Maintenance Fund (O&M Fund). The O&M fund shall be kept on a bank account. It is wise to mobilize the fund in the community. Book keeping will be maintained for service fee collection and O&M Fund mobilization.

Auditing

- An auditor appointed by the WUSC meeting will audit all the scheme related transactions.
- The auditor's comments and reports are submitted to the concerned agencies and presented in the mass meeting.

Chapter 6 Miscellaneous

Election of the WUSC

Members of the WUSC shall be elected by the users' mass meeting.

Ineligibility of the candidates

Candidates having the following conditions will not be eligible for WUSC members:

- Candidates below 21 years old
- Candidates medically certified to be mentally abnormal
- Candidates convicted of criminal cases
- Candidates working against the WUSC

Vote of no-confidence

A vote of no-confidence can be submitted against any WUSC candidate. 2/3 votes of the committee members may cancel the membership of any WUSC member.

Amendment of the statute

2/3 of WUSC members may edit or revise the legislation if felt necessary, but this must be approved by the users' mass meeting before implementation. The WUSC may develop new rules and regulations based on the existing legislation.

WUSC progress report

The committee must produce and provide reports as requested by the concerned agencies.

Other things related to the objectives and programme of WUSC

- An advisory committee can be formed comprising selected members from the municipality, donor agency and society.
- The advisory committee will advise the WUSC in the scheme implementation and operation.
- During the scheme implementation, the WUSC must obtain the approval of any changed objectives from the concerned agencies before implementation.

Cancellation of the regulation

Things provisioned under this legislation will be automatically cancelled if they do not comply with the existing act and law.

Penalty/punishment

To maintain discipline among the committee members, penalty provision is made as per the following:

- WUSC will penalize the members not attending the WUSC or WUSC meetings without prior information or justifiable reason. Repetition of such absence from the same member may require more punishment. Punishment modality will be decided by the WUSC.
- WUSC may penalize users not contributing their participation as decided by the WUSC or the mass meeting.

Settlement of transactions

All transactions should be settled upon completion of the scheme.

Annual General Meeting

WUSC will conduct an annual general meeting where it will obtain approval from the users' mass meeting for its progress, technical and financial reports and set targets for the coming year.

Reformation of the Committee

WUSC tenure is Years and before completing the tenure the Annual General meeting will elect the new WUSC via election or consensus, according to Clause 7:5.

Regular operation and maintenance activities must be carried out to sustain the scheme.

Users can ask to reform WUSC if the existing WUSC members do not work in favour of the users. This requires consensus of 2/3 of the users.

Other

WUSC may sign an agreement with government or non-government agencies for the implementation and operation of the scheme.

A service fee or terms of conditions will be applied for delivering services to interested people or community other than scheme area. The decision will be made by the WUSC.

M-WASH-CC representatives should be invited to participate in the WUSC meetings as observers.

Sample Application

Chairperson

District Water Resource Committee.....

Sir,

As it is required to register a Water Users' and Sanitation Committee. This application is submitted pursuant to Article 5 of the Water Resource Act 2049 and Rule 4 of the Water Resource Regulation 2050 along with NPR 100.00 for the registration fee and one copy of the Users' Committee Constitution.

Description:

Name of the Users' Committee:

Working area:

Objectives:

Names and addresses of Users' Committee members:

Description of water resource to be used

Name and location of source and present use of that source

Type and use of source and quantity of source to be utilized

Description of service to be provided by the Users' Committee and office address

Type of service and scope of work and No of beneficiaries:

Possibility of future extension of service:

- Description of financial sources

Applicant

On behalf of Users' Committee

(Signature)

Name:

Designation:

Address :

Date :

4 WUSC ORIENTATION WITH HRBA & GESI

Introduction

The Water Users and Sanitation Committee (WUSC) is the representative body of the scheme user households formed as per the Water Resource Act B.S. 2049 article 5. WUSC is accountable to the users and responsible for the scheme management, operation and maintenance. WUSC is fully responsible for the community involvement at all stages of the planning, implementing, and sustaining the schemes as well as for related budget and materials.

Therefore, it is essential to build the WUSC capacity and to clarify the roles and responsibilities of each WUSC member. This is done in the WUSC preparatory workshop where the WUSC will receive a set of trainings and orientations in a number of scheme management related issues. In order to promote the right to water and sanitation, gender equality and social inclusion and to minimize social discrimination among the community, it is necessary to increase the WUSC members' and other key persons' awareness in gender and social inclusion. That is why, the WUSC preparatory workshop will start with WUSC orientation on Human Right Based Approach and Gender and Social Inclusion (HRBA & GESI). In the training the WUSC members learn from the Project guidelines and approaches to inclusive WASH.

Duration	One day
Timing	Immediately after the formation of WUSC
Participants	All members of WUSC & M-WASH-CC members of scheme area.
Resources person	WASH Coordinator, Sub Engineer, WASH Facilitators and focal person of M-WASH unit
Organizer	M-WASH Unit

Objectives

After the event all WUSC members will

- understand the Step-By-Step approach, guidelines and norms and WUSC's and other stakeholder's roles and responsibilities in the process
- understand what is meant by the *Right to Water and Sanitation*
- understand the GESI concept, why it is important in WASH and what it means in the Step-by-Step process and in overall scheme planning and management
- understand what is meant by gender, child, and disabled-friendly structures
- know the role and responsibility of WUSC in increasing meaningful participation of women and ethnic/caste groups in WUSC and other scheme activities and have ideas on how to do it in practice

Materials required

- Paper/power point presentation about the Project details and the fund flow
- Step by Step flow chart and other supporting IEC materials
- Memorandum of Understanding (cost sharing, roles and responsibility of various stakeholders etc.)
- HRBA&GESI strategy Brochures (4 Series)
- Other materials as required; eg. WUSC Operational Manual

Methodology: Presentations, discussions, group work and brainstorming

Training contents and schedule for one-day program:

Content	Time	Activities
Session I: Introductory session Arrival, registration and opening Objectives' of the orientation Introduction of participants and facilitators Training expectations & objectives Ground rules	30 min	Self-introduction, ice breaking, games etc.
Session II Brief project introduction Fund flow mechanism Contribution pattern of stakeholders	30 min	Presentation by the M-WASH Unit staff
Session III WUSC statute and registration Step by Step approach of the scheme.	30 Min	Presentation by the M-WASH Unit staff
Session IV Introduction to HRBA and GESI, duty bearers and rights holders, non-discrimination, participation, transparency, accountability, impact and sustainability, measurable normative criteria, legal requirements.	90 min	Presentation on right to water and sanitation, HRBA and GESI. Community WASH access mapping by social groups and discussion on GESI status in the community. Gender, Child and disable friendly WASH services. Discussion on the meaning of safe, sufficient, acceptable, physically accessible, affordable, secure and socially and culturally acceptable WASH.
Session IV Roles and responsibilities of WUSC Chairperson, Vice Chairperson, Treasurer, Secretary and members. Roles/responsibility of other stakeholders (Municipality, M-WASH-CC, M-WASH unit staff, DCC)	90	Brainstorming about the roles of the WUSC members in supporting GESI and HRBA. Good practices related to scheme and work planning, organizing meetings, keeping minutes and attendance lists etc.
Recap and closing of the day	30 min	Questions and answers. Request randomly WUSC members to describe key issues such as Step-by-Step approach, WUSCs role or GESI using their own words

5 FINANCIAL & STORE MANAGEMENT

Introduction

Since the investment fund from the Municipality (local WASH Fund) goes directly to the WUSC account for the scheme implementation, the WUSC must hold adequate skills for the procurement of construction materials, store management and book keeping of all transactions (financial, material, labour). Details of the procurement process is explained in Paper 6 and in Procurement Brief 7-2016. Refer to WUSC operational manual Chapter 5. page 26-35 for details procedures.

To make WUSC members aware of the importance of the quality of construction materials and capacitate WUSC on financial and store management a two-day orientation is organized as part of the WUSC Preparatory Workshop.

Financial resources management

Financial management refers to the efficient and effective management of money (funds) received by WUSC from various sources for scheme implementation. The source of funds to WUSC are:

- Cash received in terms of support from the Municipality WASH fund
- Cash received from users in terms of service fee and support
- Cash and physical resources received in terms of support from any other stakeholders

Once receiving the funds, they must be recorded properly and systematically in such a manner that scheme implementation runs smoothly. WUSC must ensure proper record keeping (Cash & Bank ledger) of all transactions and that all works will be conducted and completed as per the Community Action Plan. Scheme implementation is a challenging task and the WUSC must handle a considerable amount of funds responsibly. Therefore, it is very important that the WUSC keeps adequate records. Mainly WUSC must maintain two types of funds:

- Operating fund (for scheme implementation)
- Operation and Maintenance fund (O&M fund, for scheme operation and maintenance)

It is recommended that the WUSC keep two separate bank accounts for these funds: (i) one operating bank account for scheme investment fund and (ii) other O&M fund Account (savings account). There must be 3 signatories (Chairperson, Secretary, Treasurer) and minimum two signatures is compulsory for cheque operation. It is recommended for all signatories **not to sign** in any blank cheque.

Operating fund

The operating fund contains all funds for the scheme implementation received from the Municipality WASH Fund, scheme users and any other stakeholders. It is mandatory to open a bank account for the operating fund to minimise financial risks. All received funds should be deposited in the bank as soon as possible and cash should not be kept a long time with WUSC. This fund is used for procurement of scheme construction materials, payment for un/skilled labour, transportation, purchase of local materials etc. including management costs of WUSC. WUSC can withdraw a bank cheque to utilise the operating fund as per the headings of the technical design estimate, by informing a mass meeting after a decision of a WUSC meeting. WUSC should not keep more than NPR 10,000 cash in hand. If in any unavoidable circumstance WUSC must keep more than NPR 10,000 in cash, it must be properly recorded in a minute book together with a reason and approved by WUSC meeting. If not, the person who holds the cash must pay the equivalent amount with interest as per the law. The interest earned could be deposited in the O&M fund or spent on scheme management costs as per the decision of the users' mass meeting.

Operating fund mobilization

- It is compulsory to deposit all cheque and cash received for scheme construction on the WUSC bank account
- Operating fund can only be spent on scheme materials procurement, payment of wages, transportation, tools
- Any payment from the Operating fund must be as per the technical design document budget headings
- Bank cheques should be preferred in payment. Payment of more than NPR 10,000 should be made by cheque only.
- WUSC must inform all users about the Operating fund purpose, budget headings and balance
- For all payment from the Operating fund, decision has to be taken by mass meeting on why, how much and for whom the fund is going to be withdrawn.
- WUSC must inform the users time to time about the status of the Operating fund
- If there is any surplus in the Operating fund such as interest income of the bank, fine payments etc. it can be deposited in the O&M fund with the decision of a mass meeting

Operation & Maintenance fund

Keeping the drinking water scheme functional in the long-term is more challenging than constructing a scheme. O&M fund is needed for the post-construction phase. It is important that WUSC considers already in the preparatory phase the future operation and maintenance cost of the scheme. As a starting point, it is mandatory to collect 1 % of the total scheme cost from the users to be placed in the O&M fund before signing the Scheme Implementation Phase Agreement between the Municipality and WUSC. O&M fund cannot be utilised for scheme construction. It is the responsibility of WUSC to think about the fund increment, however, WASH Unit staff will suggest ways and methods of increasing the fund.

Sources of income and potential reasons for expenditure of O&M fund (Note: this information can also be used in the O&M Training ref. paper 8)

Potential source of income for O&M fund	Potential expenditure from O&M fund
<ul style="list-style-type: none"> - one percent cash collected from users during the scheme preparatory phase - Water tariff collected from every households - Payment received by users working in the scheme (main pipeline digging, transportation, skilled & unskilled labour) can be deposited in the fund with a mass meeting's decision - Money collected from renting out tools - Money collected from new households connected to the scheme - Any donation received by WUSC from individuals and organisations - Interest received from mobilization of O&M fund at the local level level/among the users 	<ul style="list-style-type: none"> - Regular remuneration for VMW - Payment for skilled labour in scheme maintenance work - Purchase of necessary items to repair and maintain the scheme (washer, tap, fittings) - Store rent payment to store the tools and materials after the scheme completion - Meetings, stationary and any other needs such as opening ceremony and days celebrations - Any other unseen expenses

<ul style="list-style-type: none"> - Funds collected from <i>Deusi/Bhailo</i> during the festivals - Any others funds collected as rewards, fines, fees or donations. 	
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Financial bookkeeping

WUSC must keep financial records for the following items:

1. Income and expenditure account ledger (cash transactions)
2. Bank account ledger (transactions through bank account)
3. Other bills, receipts and vouchers

Income expenditure account ledger (cash transaction)

The income expenditure account is also known as the cash transaction account. In this ledger WUSC must enter all transactions made for the scheme construction in cash. The ledger must show how much money (cash income) WUSC has received, from whom it has been received (source of income) and when it has been received (date). The ledger must also show how much money is spent and for what purpose.

The sources of cash include for example cash contributions collected from the users, loans taken by WUSC from the users, money withdrawn from the bank and money collected from selling the remaining stock of non/consumable materials. Cash expenses of WUSC include small day-to-day expenses such as transportation, remuneration for skilled or nonskilled labour, purchase of construction materials, store rent etc. These can be made by WUSC and paid in cash. The model ledger book for income expenditure account is provided in Annex 10 in WUSC Operational manual. Simple format is provided hereunder.

Bank account ledger

WUSC must regularly enter all the financial transactions done through bank accounts in this ledger. It will help WUSC to follow the fund balance and work as a basis for public auditing. It will also help to spot mistakes if bank has done any. WUSC must start maintaining the bank account ledger immediately after the first cheque has been deposited in the bank and after follow sequentially all transactions within the same day the cheque has been issued for payment and/or cheques or cash has been deposited in the bank.

WUSC must check the bank account ledger against the bank statement from time to time. This helps WUSC to verify all transaction made through the bank accounts. (Refer Annex 11 in WUSC Operational manual)

Bank account ledger format

Name of the bank:.....

Account Name:

Account Number:

S.N.	Date	Description	Deposit NPR (Credit)	Withdrawn NPR (Debit)	Balance

Other necessary document bills, receipts, vouchers and muster roll

Recording only financial transactions is not sufficient. To make all the information kept in a ledger lawful, WUSC must fulfil preliminary conditions of accounting. Therefore, bills of expenditure and receipts of payments of any materials or works should be with WUSC as proof. Other necessary documents that WUSC has to keep properly are explained hereunder.

Bills

Bills are the legally enforceable financial documents issued by a seller to a buyer, relating to a sale transaction and indicating the materials, quantities, and agreed prices for products or services the seller has provided the buyer. A bill is a written or printed statement acknowledging that something has been paid for or that goods have been received. Procurement bills are needed for all materials. There are Permanent Account Number (PAN) and Value added tax (VAT) bills.

PAN bill can have an amount of maximum NPR 20,000.00 as per the system of GoN. Bills exceeding NPR 20,000.00 should be VAT bills.

For any financial transaction WUSC must collect the bill of procurement at the same time/day when the goods/materials are received. In the bill, the name of each item, unit price, quantity, total amount including date of purchase, scheme name, money paid by and received by should be mentioned clearly.

It is mandatory that all materials purchased for scheme construction should be VAT bills. It might be difficult to get a proper bill for the purchase of small items (below NPR 5,000) from the local market for WUSC management like stationary, photocopy and banners. In this case WUSC can make a bill using plain paper clearly mentioning the scheme name, seller's and buyer's name, date, name of goods purchased, rate and quantity. These bills must be endorsed by WUSC or mass meeting afterward. Bills should not have any double writing or deleted or cut descriptions. If any correction is made in the bill, the seller must sign next to that item.

Receipts

WUSC are ultimately required to purchase a considerable amount of services during the scheme implementation. Financial transactions related to local materials (stand, stone), payment for skilled/unskilled labour, transportation cost, store rent, pipeline digging are some examples where PAN/VAT bill cannot be expected. For all these type of payments, WUSC has to get a receipt of payment. It is suggested to have a separate receipt for each item/heading. Similarly to the bill, the receipt should include the name of the receiver with a signature, work performed, days, quantity, rate, date etc. If in one receipt many payments have been made, how much money is paid for which work has to be clearly mentioned with the rate and the date with the recipient's signature. For example, if payment has to be made to un/skilled labour WUSC has to verify using the attendance register how many days, in which structure s/he has worked, otherwise the receipt will not be valid. This receipt has to be endorsed by WUSC afterward. All transactions (money in and money out) should be recorded with a receipt. Keeping a Receipt book is a good way to minimize and correct mistakes. If any transactions are entered wrongly or omitted to enter in ledger by mistake, it will help to correct it

Muster Roll (Daily attendance form): (M.le.P FA. N. 152):

This form is used to record the day-to-day un/skilled labour workhours and tasks. The information includes the name of the worker, address, work done (skilled or unskilled) and the scheme structure in which the work is done. The attendance of all labour (skilled and unskilled) should be recorded

regularly. This record helps WUSC to pay wages and eases the preparation of the financial expenditure report that shows how much money is spent under each budget heading.

Transportation and store management

Material management includes procurement, transportation, storage and timely availability and use of materials and tools. After the completion of procurement, transportation and storekeeping are the next important steps of material management. WUSC must select one or two people as storekeepers and involve them in the Financial and Store management training provided by the Municipality WASH Unit.

WUSC must keep in mind that tools and utensils purchased for the scheme construction need maintenance. Sometimes replacement of tools is also necessary if they get damaged or lost during the construction works. Therefore, the storekeepers must keep WUSC informed about the availability of materials.

Procedures for transportation and store management

- WUSC makes a procurement plan of materials in such a way that urgently needed materials are procured first (priority order, attention to delivery times and availability).
- WUSC decides location/s for the storage of materials in WUSC or Community Action Plan meeting before the procurement starts.
- WUSC follows the Procurement Guideline.
- Persons nominated for the procurement rent a vehicle and verify each material item (quality and quantity) one by one before loading it to the vehicle.
- Technician from the Municipality or Technical Support Unit shall support quality verification before the items are used.
- Nominated persons shall ensure that materials like cement, tools and fittings are packed properly and that storerooms are well managed. Special attention needs to be paid to the storing of cement, tools and fittings.
- While unloading the materials at the road head, nominated persons shall verify materials one by one again before putting them in the storeroom.
- Nominated person shall maintain simple but authorized record while issuing the materials for transporting to the scheme site/village from road head storage.
- Persons dealing with store management shall maintain a ledger at each location to ensure accurate reception and release of materials.
- Unloaded materials at store locations shall be recorded as incoming stock. Similarly, materials are recorded as outgoing stock while handing over to the porter. Porter shall sign the record that the materials have been handed over.
- WUSC manages the main store room and must properly maintain store ledgers with one page for each type of item as per the store management rules. The store ledger will help to provide information in the monitoring, public audits and WUSC mass meetings.
- WUSC is responsible for any damage or loss of materials.
- Local materials collection, labour and transportation should be provided by community as per the project contribution pattern. The local materials include stones, aggregate, wood, bamboo, slate, water, etc.
- All materials and tools purchased during the scheme implementations are the property of users. These tools can be used for other community works as well with the direct supervision of WUSC.
- WUSC should properly store all tools needed for O&M.
- After the scheme completion, the tools should be handed over to VMW for future use. If needed WUSC can also purchase other required tools for O&M.

- WUSC should prepare an inventory list of a tools/utensils and verify and audit annually in a mass meeting whether the tools are in working condition, broken or missing.
- After the scheme completion, all tools should be entered in a non-consumable goods register. WUSC should always keep minimum stock of non-local materials which are easily breakable and require frequent changing such as taps, washers, control valves, gate valves, brass unions etc. The quantity of stock that WUSC should keep depends on the size of the scheme structure.
- WUSC must ensure uninterrupted supply of the materials required for the scheme construction.
- Avoid overstocking and understocking of materials to protect the materials from theft, fire and other risks and to minimise the storage cost. For example, if there is overstock of cement, it could be easily spoils with moist.
- WUSC should undertake inventory checks of all stores regularly and maintain proper records of the inventory.

Generally, WUSC has to maintain two separate registers for consumable materials and non-consumable materials.

- 1. Store ledger for consumable materials**
- 2. Store ledger for non-consumable materials**

Store ledger for consumable materials

WUSC should keep a separate ledger for consumable materials. Consumable materials are materials for scheme construction such as pipes, fittings, cement, rod, sand, stone etc. All these materials are used as per the design estimate of the scheme construction and stored at the construction site. Once the materials are purchased and brought to the construction site they must be immediately entered into a register as per the bills and materials received with date and supplier's name. Materials should be stored properly in a store room. Similarly, when the materials are taken out of storage and used in the construction works, it must be noted immediately in the register who took the materials, how much was taken, and for which structure they will be used together with the date. The storekeeper should release the materials based on the demand form and reduce the materials from the stock record. This will reduce the chances of misuse of materials and make WUSC aware about how much and where materials have been used and how much is remaining in stock. There should be a separate page of ledger for each material item.

Store ledger for non-consumable materials

Non-consumable goods are those which are purchased once and can be used time and time again. These are the permanent type of tools and utensils purchased for scheme construction. These types of tools should be kept safely in store each time after use. After the scheme completion, these tools can be used for O&M work. WUSC can also rent out these tools to community members by signing receipts. If these tools/utensils get broken or lost, WUSC must be informed and the items should be deducted from the stock ledger.

Model format for consumable/non-consumable materials

Name of the Scheme:.....

Address:.....

Consumable/non consumable materials

Unit:

S.N.	Date	Description	Rate Per unit (NPR)	Quantity of units	Expenditure	Balance	Remark/ Signature

Record keeping and management

All the scheme construction works must be done as per the written decision and record maintained by the WUSC. Activities carried out without any written decision and record may not be valid. WUSC record keeping does not only include cash and in-kind transactions but also storage keeping, important decisions, minute books, invoices, cheques, bills, receipts and any other supporting documents.

Records management refers to record keeping of all activities, transactions, decisions and information done by WUSC to collect systematical evidence on who did what, when and for which purpose.

During the scheme implementation WUSC has to perform various activities and transactions such as local and non-local materials collection, procurement of goods, payment to un/skilled labor and store keeping of procured materials. The proper recording and management of information will help WUSC to conduct public audits and to provide information to the Municipality, monitoring team and other stakeholders. It will also help WUSC to build trust among the scheme users.

Why to keep records?

- To manage all financial information in a proper way
- To maintain financial transparency and reduce internal and external conflicts that may arise from financial transactions and other works during the scheme construction
- To inform users and stakeholders as per need
- To facilitate the public auditing process
- To complete the scheme in time while maintaining the transparency
- To manage properly all the consumable and non-consumable materials and tools
- To legitimize the accounting system of WUSC by keeping all records in order from the start of the scheme construction

Benefits from well managed records

- Makes it easy to inform all the stakeholders including users about the scheme status, cost and contribution
- Makes it easy to report to Municipality/Project and other stakeholders as per need
- Makes it easy to conduct public audits
- Increases transparency, accountability and trust between WUSC, users and other stakeholders
- Helps to reduce misuse and loss of materials and to minimize corruption
- Reduces the chance of conflict among users
- Increases users' ownership and sustainability of the scheme

Who should keep records?

WUSC, especially Secretary and Treasurer have the main responsibility in record keeping and store management. WUSC is a legitimate entity by law. In case of any loss or mishandling of financial transaction or delay in completing the scheme construction works on time, WUSC is liable to compensate all the incurred losses. Therefore, WUSC has to maintain proper financial and store management record.

Important documents that WUSC must keep and show to users and other stakeholders any time when asked are:

Checklist

- ☐ Scheme documents
- ☐ Source/ WUSC registration certificate
- ☐ Agreement with the Municipality
- ☐ Technical design/estimate documents
- ☐ Minute books
- ☐ Account books
- ☐ Income-expenditure account ledger (Cash)
- ☐ Bank Account ledger
- ☐ Store ledger for consumable materials
- ☐ Store ledger for non-consumable materials
- ☐ Other bills, receipts and vouchers
- ☐ Attendance register (skilled and unskilled labour)
- ☐ Periodic bank statement
- ☐ Bank cheque book

Tentative contents of 2 days orientation on financial and store management

To make WUSC members aware of the importance of proper financial and store management, a two day orientation program is incorporated in the WUSC Preparatory workshop before moving to the Implementation phase.

The orientation should be scheduled after finalizing the design estimate and before the Community Action Plan preparation.

Duration	Two days (theoretical concept and practical exercise)
Participants	WUSC Chairperson, Treasurer, Secretary, all Procurement Committee members, Municipality WASH Focal Person, Chief of the Monitoring Committee, Store keeper/s selected by WUSC and Chairperson of the Municipality-WASH-CC
Resource persons	Municipality WASH Unit staff and Municipality accountant if possible
Organizer	Municipality WASH Unit

Objectives

- Capacitate WUSC members in procurement of materials, transportation, store management and record keeping
- Acknowledge financial policies/rules of local government and GoN.
- Make WUSC members aware of the importance of the quality of construction materials.

Expected results

After this training, WUSC members can:

- Understand materials needed for the scheme construction, quality standards of materials and how to purchase non-local materials,
- record income and expenditures of financial transactions
- maintain store ledger
- maintain record of skilled/unskilled labour payment and kind contribution
- follow financial policies/rules of the local government and GoN.

to the purpose of this training is to also build the capacity and confidence of women who are in financial management positions. Separate trainings and support for women may be required, including familiarisation with bank institutions and bookkeeping.

Required materials

Copy of the scheme design estimate, Step-by-Step chart, Procurement brief, book keeping/store ledgers formats, calculator, black/white board/brown paper, sample materials such as pipes and fittings for demonstration.

Follow-up training

One follow-up training with a practical workshop should be conducted in the implementation phase combined with the During Construction Seminar (Paper 18).

Major contents and session plan

Days	Course contents	Time	Activities/Tools
Day 1	Session I Introduction Objective of the training	15 min	Games
	Session II Fund flow mechanism Contribution pattern Funds and accounts Discussion on terms and condition of the Implementation agreement	1 h	Fund flow chart Contribution chart Agreement papers
	Session III Procurement processes	2 h	Step-by-step chart, Procurement brief, sample procurement notice publication, bill of quantity, quotation documents, comparative chart, list of manufacturers' names
	Session IV Transportation and store management Pipe and fittings, tools, cement, local materials	60 min	Pictorial books and samples of tools/fittings/pipes and

	Session V Quality of Materials, Technical specifications	60 min	construction materials for demonstration
Day 2	Session I Review of the day 1 Session II District rates, design estimate, component cost, WUSC management cost Instalment processes, release of payment to WUSC's account, support documents and filing thereof Session III Book Keeping (theory and practical) Bank ledger Income-expenditure ledger (cash book) Bills, Vouchers, Receipt, Master roll Session IV Stock management (theory and practical) Consumable and non-consumable goods/materials Store ledger for consumable materials Store ledger for non-consumable materials Requisition form, Issue of goods, role and responsibilities of the store keeper Session V Transparency, monitoring, public audits, Financial reporting Event closing	30 min 60 min 120 min 120 min 60 min	Design report, Agreement paper Book keeping formats Case studies and practical examples using documents and materials from real schemes/scenarios Stock entry formats for consumable and non-consumable , requisition forms,

Note: Municipality WASH Unit may further elaborate the contents and schedule of this orientation.

6 PROCUREMENT

Why this guideline?

The RWSSP-WN II Project Document states that “*major procurement (water supply) will be carried out in a transparent manner at the lowest appropriate level (predominantly by WUSCs), accountable to water user groups. Public audits at the community level are among the key instruments. Financial flows will be as direct as possible*” (p.40). All the schemes supported by the project will be implemented by WUSC. The WUSC has the following procurement options:

- Mode 1: Direct purchase
- Mode 2: Competitive quotation
- Mode 3: Tendering process

RWSSP-WN II Brief 7-2016 (revised in 2017) covers the Modes 1 and 2. For Mode 3, WUSC needs to follow the existing Act, by-laws, guidelines and detailed terms and conditions

Direct Purchase	<ul style="list-style-type: none">• Up to NPR 100,000• Less than NPR 20,000 PAN Bill also acceptable
Competitive Quotation	<ul style="list-style-type: none">• Open quotation: NPR 100,000 - NPR 500,000• Sealed quotation: over NPR 500,000
Tender	<ul style="list-style-type: none">• Exceptional cases where WUSC decides that it cannot proceed with its procurement

Procurement step-by-step

These are general steps that apply to any mode of procurement:

1. Maintaining transparency, records and minutes is essential at all stages regardless of the size of the procurement.
2. The Procurement Committee is formed by the users’ mass meeting. It comprises of three (3) members of which one is a WUSC member and two are users. At least one member must be a woman. The mass meeting nominates one Coordinator among the three Procurement Committee members. The mass meeting agrees also on the mode of the procurement process (Direct purchase, Competitive Quotation or Tender). WUSC meeting can decide and minute direct purchase up to NPR 100,000.
3. WUSC and Procurement Committee must receive training on the procurement process before procuring construction materials. The training includes existing procurement modes & processes as relevant at the local level, and technical specifications and quality standards of pipe, cement and other construction materials.

4. The technical staff of the Municipality WASH Unit assigned to the scheme, together with the Technical Support Unit as needed, support the WUSC to prepare quotation forms with detailed specifications of materials to be procured following the scheme design report.
5. WUSC and Procurement Committee follow the steps for their selected mode of procurement process. These are also described in the Step-By-Step Manual.
6. WUSC Chair or Coordinator of Procurement Committee signs the quotation/tender forms with WUSC stamp before issuing it to the Suppliers.
7. WUSC receives the materials, and lists them as consumable and non-consumable in the WUSC's store records/stock register. Sample is available in the WUSC Operational Manual 2070 B.S., Annex 12 & 13.
8. WUSC proceeds to payment by Account Payee Draft/Cheque.
9. WUSC cannot procure more than the said limit with the same individual, firm or company within one fiscal year.

Note: In case the Monitoring Team informs Municipality WASH Management Committee about mishandling or misuse of fund during procurement, the Municipality Chief Administrative Officer can request the concerned bank authority to suspend the WUSCs bank account. WUSC's suspended bank account can only be made operational on the written request of the Municipality Chief Administrative Officer.

FOR OPEN QUOTATION (NPR 100,000 – 500,000)

1. WUSC meeting identifies the need to procure items costing NPR 100,000 – NPR 500,000. WUSC minutes the decisions to start the open quotation procurement process in the WUSC Minutes (or register book). Considering the volume and cost of the procurement, WUSC also decides whether the Procurement Committee can prepare the comparison chart and proceed with the procurement themselves, or whether WUSC and the assigned persons from the Municipality WASH Unit/Technical Support Unit need to be present when the collected quotations are opened.
2. WUSC delegates the authority to the Procurement Committee regarding all procurement steps as described below.
3. The Procurement Committee collects open quotations from at least three Suppliers in a closed envelope. The supplier fills the rate both in figures and words in the quotation and the filled quotation must have the stamp of Supplier and signature in every page. The supplier submits the filled quotation with the copies of Company's registration, VAT registration and Tax clearance certificate of last FY.
4. The Procurement Committee members sign these closed envelopes before opening them. This opening can be done in the same market area, if the scheme area is far from the market and if WUSC decides so. In this case, 66% of the procurement committee members should be present.
5. The Procurement Committee members prepare the comparison chart (see WUSC Operational Manual 2070 B.S., Annex 7) and sign it. If the suppliers' price is found higher than the approved estimated rate, the Procurement Committee has the option for further negotiation of the price, with the lowest bidder for the package, to fall within the approved rate (without compromising the quality). If the lowest bidder does not agree, and provides written proof, then the Committee can negotiate with the second lowest bidder, to come to the amount within the approved estimated cost. The committee procures the materials and also negotiates with the selected Supplier for transportation of materials to the road head, and may decide the mode of payment.
6. The documents as per the filled quotation and the comparison chart should be approved by the WUSC later on.

7. If WUSC decides #1 option to involve M-WASH unit/Technical Support unit staff, the Quotations will be opened, comparison chart prepared and the lowest bidders identified together with assigned persons from the M-WASH Unit/Technical Support Unit. The Procurement Committee members must sign the prepared comparison chart. The Procurement Committee has the option for further negotiation of the price with the lowest bidder, if the submitted prices of the suppliers are higher than the approved estimate rate. If the lowest bidder does not agree, and provides written proof, then the Committee can negotiate with the second lowest bidder, to come to the amount within the approved estimated cost. Based on the lowest price (without compromising the quality), the Procurement Committee selects the Supplier or manufacturer, and recommends it to WUSC for approval and purchase of materials. The Procurement Committee must also negotiate with the selected Supplier for transportation of materials to the road head, and may decide the mode of payment.
8. The Municipality WASH Unit shall release the first installment (maximum up to 50% of agreement amount) from the Municipality WASH Fund to the WUSC's account once the quotation is approved by WUSC.
9. The minutes of the WUSC or the Procurement Committee must clearly describe all the processes/activities carried out during the procurement process. These minutes must be available during the WUSC meetings, scheme monitoring visits and related public audits.
10. The technical staff assigned to the scheme checks the quality, quantity and rates of materials in received bills/invoices (should be same as specified in approved quotation/agreement). This can also be done at the site/road head/point of delivery. The Supplier is responsible to take back any disqualified materials.
11. The WUSC receives the materials, and lists them as consumable and non-consumable in WUSC's store records/stock register. Sample is available in the WUSC Operational Manual 2070 B.S., Annex-12 & 13.
12. WUSC's proceeds to pay the Supplier and makes payments by Account Payee Drafts/Cheques.

FOR SEALED QUOTATION (OVER NPR 500,000)

1. WUSC meeting decides to publish procurement notice and prepare Standard Quotation Form. The notice and Standard Quotation Form are submitted also to the Municipality WASH Unit. The Municipality WASH Unit shall put the notice to public information board. The sample of procurement notice and conditions to be included in the notice are given in WUSC Operational Manual 2070 B.S. Annex 5. The following information should be clearly mentioned in notice:
 - Place to receive/purchase quotation and fee, if provisioned
 - Process in submitting the sealed quotation
 - Place to submit the sealed quotation
 - Date, time and place to open the sealed quotation
2. WUSC delegates all authority to the Procurement Committee regarding all steps of procurement starting from the notice publication to selection and recommendation of the Suppliers. For the first bidding period, the duration of the procurement period will be 15 days. If fewer than three Suppliers submit requests to purchase quotations within the duration, the Procurement Committee publishes the procurement notice a second time, following the WUSC meeting decision, for 15 days. If the second notice also fails to lead to the required minimum three quotations, upon the decision of WUSC meeting, the Procurement Committee can proceed to evaluate the existing bids (whatever the numbers of Suppliers' bids) received.
3. The Procurement Committee ensures that the procurement notices are published in local or, regional or national level daily newspaper/s, and publicly circulated at least to the following institutions/organizations: 1) Municipality and DCC offices; 2) Offices of chambers of

commerce & industry district chapter; 3) Association of Suppliers, district chapter, and 4) other relevant places.

4. The WUSC may decide to issue the quotation formats to additional outlets, in close coordination with the Municipality WASH Unit (to be clearly mentioned while publishing the procurement notice in the newspaper).
5. The Supplier requests the quotation form in written with the copies of the company's registration, PAN & VAT registration and tax clearance certificate of previous fiscal year.
6. The Procurement Committee or the responsible person decided by Procurement Committee issues the quotation form with or without charge, as decided in WUSC meeting.
7. The Procurement Committee keeps a record of issued quotation forms and submitted bids in WUSC or Procurement Committee minute book.
8. At least three Suppliers should submit the sealed quotation with rates in figures and words within the bidding period (if there is a difference in figures and word, word amount will be valid). The filled quotation must have the stamp of Supplier and signature in every page, be sealed in an envelope and submitted to the place as per the notice.
9. The Procurement Committee members all sign on the sealed envelopes before opening them. This is done at the beginning of the quotation opening meeting in the presence of WUSC members and the assigned persons from the Municipality WASH Unit/Technical Support Unit if relevant. The interested representatives of the Suppliers who submitted their bid, may be present during the opening of sealed quotations. If the rates of suppliers are double written or corrected, these should be well minutes and signed by the all Committee members at the opening.
10. The Procurement Committee, with the assigned persons from the Municipality WASH Unit/Technical Support Unit if relevant, prepare the comparison chart (for sample, see the WUSC Operational Manual 2070 B.S., Annex 7) and identifies the lowest bidders based on this. The Procurement Committee members must sign the prepared comparison chart. The Procurement Committee may have the option for further negotiation of price, with the lowest bidder for the package, to fall within the approved rate (without compromising the quality), if the rates submitted by the suppliers higher than the approved estimate rate. If the lowest bidder does not agree, and provides written proof, then the Committee can negotiate with the second lowest bidder, to come to the amount within the approved estimated cost.
11. On the basis of least price for the whole package (without compromising the quality), the Procurement Committee selects Supplier/manufacturer and recommends to WUSC for purchase of materials. The Committee may also negotiate with the selected Supplier for transportation of materials to the road head and may decide the mode of payment.
12. WUSC meeting approves the bid based on the recommendation of procurement committee.
13. WUSC invites the selected Supplier to prepare and sign the agreement by both parties. In the procurement agreement, the duration should be clearly noted. The WUSC and Supplier keep one copy of the signed agreement and a copy will be submitted to Municipality WASH Unit (the sample of the procurement agreement is given in the WUSC Operational Manual 2070 B.S. Annex 8).
14. The WUSC provides the work order to the Supplier/s (for sample, see the WUSC Operational Manual 2070, Annex 9).
15. The minutes of the WUSC or the Procurement Committee must clearly describe all the processes/activities carried out during procurement process. These minutes must be available during the WUSC meetings, scheme monitoring visits and related public audits.
16. The Supplier delivers the materials to the place as specified in the Agreement.
17. The technical staff assigned to the scheme check the quality, quantity and rates of materials in received bills/invoices (should be same as specified in approved quotation/agreement). This can also be done at the site/road head/point of delivery.
18. The Supplier is responsible to take back any disqualified materials.

19. WUSC receives the materials, and lists them as consumable and non-consumable in the WUSC's store records/stock register (sample is available in the WUSC Operational Manual 2070 B.S. Annex 12, 13).
20. WUSC proceeds to pay the Supplier. It is recommended that the Suppliers receive payments by Account Payee Drafts/Cheques.

DEFINITIONS

- a. Scheme: Any water supply and sanitation activity, planned to achieve a certain goal within a fix geographical boundary, duration and cost.
- b. WUSC: Water users' and sanitation committee elected/nominated by beneficiary group through a democratic process for planning, implementation, operation and maintenance of a water supply and sanitation scheme (Public/Institutional/School toilet as well), which is registered in the District Water Resource Committee according to the Water Resource Act 2049. The WUSC is the representative agency of the scheme Users.
- c. Project: Rural Water Supply and Sanitation Project in Western Nepal Phase II
- d. Public Audit: A mass meeting (process), organized according to the Public Audit Guideline of the project's Step by Step Manual 2070 to inform, assess and evaluate the goal, objective, working process, results and achievements including income and expenditure of the water supply scheme implemented by the WUSC.
- e. Open Quotation: A Quotation form directly provided to suppliers, firms and companies by the WUSC/procurement committee where the suppliers, firms and companies fill the rates of construction materials and submit it to the WUSC/procurement committee in a closed envelope. The amount of procurement is within NPR. 100,000 to NPR. 500,000.
- f. Sealed Quotation: A quotation form submitted by interested suppliers, firms and companies in a sealed envelope with their unit rates of construction materials, in accordance with the procurement notice of WUSC. The amount of procurement is more than NPR 500,000.

7 ORIENTATION TO O&M AND WSP++

Introduction

Regular scheme operation and maintenance (O&M) is crucial for ensuring the short- and long-term sustainability of any water supply scheme. It is necessary to stress to the community that it is their responsibility to maintain the infrastructure - nobody else will do it for them. Every WUSC shall have a clear O&M regulation that serves as WUSC policy for operation and maintenance of the water supply scheme considering both short- and long-term maintenance needs and climate change and disaster risks.

Communities supported by RWSSP-WN II prepare O&M Regulation and Water Safety Plan ++ (WSP++).

Even though communities prepare these plans only after the implementation phase, experience indicates that basic orientation to the themes of sustainability, functionality, climate change, natural hazards, disaster risks, water safety and spring shed management is very fruitful if provided to WUSC already during the preparatory phase. The orientation makes users think about the sustainability of their scheme, potential risks that may affect the functionality and how to best maintain the functionality in the short and long-term for smooth operation of the scheme. This guideline is for the field staff on how to conduct a one-day orientation programme to WUSC and the selected VMWs.

Objectives

- Discuss factors that may affect the scheme functionality including the water quality.
- Convince WUSC about the importance of proactive operation and maintenance.
- Introduce the concepts of O&M Regulation and WSP++.
- Discuss the importance of water tariff collection and O&M Fund mobilization.
- Discuss on integration of WSP++ and Total Sanitation.

Expected outcomes

- WUSC understands the concepts of climate change and climate change adaptation, disaster risk, risk reduction and mitigation, water quality, functionality and sustainability.
- WUSC has a clear understanding of the importance of proactive O&M, disaster risk reduction and water safety planning to ensure scheme sustainability.
- Necessary actions are taken to improve/maintain the water quality, to protect the catchment area/spring shed and to include applicable recharge structures in the scheme design, during preparatory phase.
- VMWs understand their role and responsibilities.
- The community will become less dependent on external help, and more capable to maintain their own infrastructure.
- The participants will be able to use point of use treatment, store properly their drinking water and promote drinking water related total sanitation indicators.

ORIENTATION TO O&M AND WSP++ SESSION PLAN

Duration	1 full day
Participants	All members of WUSC including VMW(s)
Organizer	Municipality WASH Unit staff
Resource Person	WASH coordinator and other Municipality WASH Unit staff

Required Materials Step-by-Step chart, model of O&M regulation, WSP++ guideline, WSP++ flipchart, posters and stationeries.

Major contents and session plan

Content	Time	Learning Activities
Session I Opening session Expectations of participants Objectives & expected outcomes of the workshop	30 min	Share of expectations: Participants are given 10 minutes to discuss in pairs about their expectations of the workshop. After, each participant will introduce his/her pair's thoughts to the group.
Session II Introduction to the concepts of sustainability, functionality, climate change, climate change adaptation, natural hazards, disaster risks, disaster risk reduction, disaster risk mitigation and water safety Discussion on participants' experiences and thoughts on these issues. How do they think climate change affects their life now and in the future, what kinds of natural hazards take place in their area, what kinds of disasters they do remember, what kinds of hazards are threatening their scheme, what kinds of disasters these hazards might cause, how can they prevent or mitigate these disasters, what can contaminate water, what kind of consequences can contaminated water have, how can water quality be improved/maintained.	2 h	The concepts are explained to the participants using posters, WSP++ flipchart or PowerPoint. Discussion on the topics and experience sharing.
Session III Introduction to the concepts of O&M Regulation, the role and responsibilities of VMW and the importance of water tariff collection and O&M fund mobilization for scheme functionality and sustainability	1.5 h	Presentation/discussion. Present a model O&M regulation and explain why and when WUSC will prepare one for their scheme. Explain the contents of VMW training and stress the importance of proactive scheme maintenance. Discuss about adequate water tariff level, what the water tariff is used for, where it can be kept, how it can be mobilized and how it improves the scheme sustainability.

<p>Session IV</p> <p>Introduction to the concept of water safety plan, introduce the Project WSP++ concept, the WSP++ steps and expected outcomes of the WSP++ process, explain why it is important to protect water all the way from the catchment area to the mouth, explain water quality parameters and how they can be tested, give examples of activities that can be done to improve water safety, explain spring shed management concept and how it can help to protect water and improve the source yields. Integration of WSP++ and total sanitation.</p>	<p>1.5 hrs</p>	<p>Presentation/discussion. Show WSP++ guideline and let participants familiarize with it.</p> <p>Share the result of the water test conducted in the planning phase (feasibility study). Discuss about the actions that the WUSC should take to either improve or maintain the result.</p> <p>Discuss about spring shed management needs of the scheme. Is there a need to include recharge structures in the scheme design from the beginning?</p> <p>What kinds of actions could already be taken to protect the scheme from water catchment to tap?</p> <p>Is there a need for tree plantation, check dams etc?</p> <p>Discuss about sanitation from source to household, point of use treatment, storage, handling, total sanitation indicator of drinking water etc.</p>
<p>Session V</p> <p>Closing session Feedback</p>	<p>30 min</p>	<p>Repeat the exercise of the beginning of the day but now the participants are given 10 minutes to discuss in pairs about their learning outcomes/feedback of the workshop. After, each participant will introduce his/her pair's thoughts to the group.</p>

BASIC DEFINITIONS OF CONCEPTS TO BE TAUGHT DURING THE ORIENTATION

SERVICE LEVEL Quality of service delivered by the water supply scheme. Service level is context specific and defined by indicators measuring parameters for required level of service. An example of water supply system service level criteria by *Ministry of Physical Planning and Works Rural Water Supply and Sanitation National Policy 2004*:

- Quantity: Water quantity for domestic use should be 45 liters per capita per day (lpcd). In no case, should per capita water availability be lower than 25 lpcd.
- Accessibility: All households should be able to fetch water within 15 minutes per round trip.
- Reliability: Reliability of source of the water supply scheme around the year (how many months in a year).
- Quality: Free from faecal coliforms

FUNCTIONALITY If a scheme fulfils its service level criteria, it is fully functional. If it does not, the level of functionality can be measured using needs assessment. The needs assessment analyses what kind

of repair or rehabilitation the scheme needs to become fully functional again. An example of common needs assessment criteria:

- Fully functional = no need of repairs
- Minor repair= can be repaired by WUSC without external support
- Major repair= repair which WUSC cannot repair without external technical (technician) and/or financial support
- Rehabilitation= upgrading works to raise services which need both technical (engineer) and financial external support.
- Not functional at all = no system including taps functioning (closed down)

SUSTAINABILITY Ability to maintain or support an activity or process over the long term. Water supply sustainability means maintaining the required water supply service level over long term.

CLIMATE CHANGE or global warming, refers to the rise in average global temperatures on Earth. Climate change is primarily due to the extensive human use of fossil fuels such as oil and coal that release carbon dioxide and other greenhouse gases into the air. Other human activities, such as agriculture and deforestation, also contribute to the release of greenhouse gases that contribute to global warming. These gases act like the glass in a greenhouse trapping the sun's heat in the atmosphere. Global warming can have a range of effects on ecosystems, including rising sea levels due to melting glaciers, more frequent storms, increased rainfall, droughts, heat waves and wildfires.

CLIMATE CHANGE ADAPTATION means anticipating and preparing for the adverse effects of global warming and taking appropriate actions to prevent or minimise the potential damage. Examples of adaptation measures include building flood defence systems or spring recharge structures, saving water by multiple-use water systems and adopting drought-tolerant crops and farming methods to save irrigation water. Climate change adaptation can also mean taking advantage of the opportunities that global warming may bring such as increased yields.

NATURAL HAZARDS or natural calamities, are naturally occurring processes or events that originate in the environment and have the potential to create loss or danger to people. Examples of natural hazards include floods, landslides, wildfires, droughts, storms, avalanches and earthquakes.

RISK is the probability of a certain hazard occurring and creating loss. Risk thus has two dimensions – the statistical chance of hazard occurrence and the exposure of something of human value to the hazard.

DISASTER is the realization of hazard risk and the interface between the natural hazardous event and something of human value. Examples of disasters include damaged scheme infrastructure due to a landslide (hazard), dried water source due to drought (hazard) or epidemic due to drinking water contaminated by flood (hazard).

DISASTER RISK REDUCTION/MITIGATION It is possible and advisable to aim at reducing the number of disasters or mitigate (lower) their impact. There are various measures that can help to prevent disasters from happening or minimize their impact. These include for example recharge structures, check dams, water source protection, tree plantation and water treatment.

WATER SAFETY The meaning of water safety is twofold. In the narrow sense, safe water fulfils quality parameters set for the water. It means that the water is safe to drink and safe to use in cooking, washing and agriculture. Chemical, physical and microbiological factors can decrease the water safety. The quality parameters are context specific and Nepal has its own National Water Quality Standards.

Water safety can be understood also in a broad sense as in the Water Safety Plan approach of RWSSP-WN II. In the broad understanding, in addition to water quality, water safety considers also safe quantity, reliability and access to water.

WATER SAFETY PLANNING Planning and implementing measures that ensure water safety in short- and long-term.

WATER QUALITY tells how well the water fulfils the chemical, physical and microbiological requirements set to the water. Nepal has National Drinking Water Quality Standards that comprise 27 parameters including turbidity, color, pH, arsenic, ammonia, E.Coli and total coliforms. Testing all the 27 parameters of each water source would be very expensive and time-consuming task and that is why in RWSSP-WN II, the testing concentrates on critical indicators: turbidity, pH, ammonia, arsenic, iron and bacterial contamination.

O&M REGULATION is a policy paper in which the water users decide on several important aspects of scheme operation and maintenance. These include:

- WUSC composition, number and frequency of WUSC meetings and general assemblies, communication between WUSC and water users
- VMWs, their salaries, roles and responsibilities
- Water tariff, water tariff collection, O&M fund, O&M fund mobilization, water tariff increase, punishment for neglecting tariff payment
- Source and catchment area protection, scheme infrastructure protection, proper utilization of water and punishment for damaging scheme or mishandling water.
- Tool and spare part management

The O&M regulation is prepared by WUSC and approved in a mass meeting during the 3rd monitoring and public audit. At least 50% women should be ensured in the mass meeting (and representative proportions of ethnic minorities and disadvantaged castes). The document must be accepted and signed by all the users. That document might be revised by the annual general assembly as needed.

WATER TARIFF It is important that the water users collect regular water tariff to raise sufficient funds for regular O&M, repair and replacement of damaged structures and components, for improvement or upgrading works, and for paying the VMW salary and electricity bill if applicable.

O&M FUND The collected water tariff funds are kept in O&M Fund operated by the WUSC Treasurer. WUSC must open a bank account for the deposit of the O&M Fund. The first deposit by the community is done before signing the Scheme Implementation Phase Agreement between Municipality and WUSC. In case there are users that are not capable to contribute in cash, a mass meeting including all the users discusses and comes up with a plan for an alternative and/or discounted contribution pattern for those who are genuinely unable to provide the required cash payment.

O&M FUND MOBILIZATION Due to the inflation, it is not wise to keep the O&M Fund without mobilization for long periods of time. Instead, an adequate amount should be reserved as an emergency fund for urgent repairs and maintenance but the remaining funds should be mobilized in the community to gain interest. WUSC has three options to maintain the O&M Fund: 1) The Fund can be deposited on a bank account but banks seldom pay good interest 2) The Fund can be placed on a Cooperative account that will pay interest to WUSC account. WUSC can also take a loan from the cooperative for major repairs. 3) WUSC can give small loans for productive purposes within the community and collect interest itself. WUSC members should discuss and decide the most relevant option in their context when preparing the O&M regulation.

CATCHMENT AREA is an area of land where water flows to a single water body such as stream, river, lake or a groundwater system. Catchment area is defined by natural landscape and it can vary a lot in size. Catchment area matters as it is within the catchment area that people, animals, rain and run-off carry substances to the water source and might contaminate the water. That is why, drinking water sources should be well protected considering both the land use and human behaviour in the catchment area.

SPRING SHED MANAGEMENT The catchment area of spring sources is called spring shed. Spring sheds are not as easy to recognize as catchment areas of surface water sources as springs deliver groundwater that is not visible to people. That is why it is difficult to define exactly from which area the spring collects its water. Spring shed management means measures taken in the spring shed area to either protect the spring from contamination and damage or trying to increase the water volume in the spring. This is especially relevant in locations where the springs tend to dry up in the dry months of the year. Different methods for spring-shed management include recharge ponds, recharge pits, trenches, check dams and tree plantation. There are also methods for the exact definition of the spring shed area (See *RWSSP-WN II Brief 9-2016* and *Recharge Ponds Handbook for WASH Programme*).

MULTIPLE USE WATER SYSTEMS (MUS) are usually low-cost water supply systems that provide water for both domestic and agricultural needs of smallholders. In MUS system, the priority is in providing water for drinking and domestic use and any excess water is used for agriculture and livestock. A common example of MUS is the use of tap stand drainage water for kitchen garden irrigation. When properly implemented, MUS can help to alleviate poverty and to increase food security.

8 COMMUNITY ACTION PLAN (CAP)

Introduction

At the end of the preparatory phase, WUSC has to prepare a Community Action Plan (CAP) that follows the step-by-step (SBS) process. The community action plan is a road map for WUSC for successful implementation of DWS scheme. It clarifies what will be done, how it will be done, who will do it, when it will be done, what resources (money, people and materials) are needed at what time and how funds will be available. It is important that the users themselves prepare their own CAP.

M-WASH Unit will organise one-day orientation to WUSC members, before starting of the scheme implementation phase. After the training, WUSC is clear about the design, estimate and layout of the proposed scheme and cash, labour and voluntary contribution patterns from different stakeholders. This orientation to CAP preparation is part of the WUSC Preparatory Phase Workshop.

Community Action Plan is prepared in a democratic and transparent way, requiring participation of all clusters, genders and social groups. After the training, WUSC will organize a mass meeting to prepare and finalize the CAP for the implementation phase (The CAP preparation meeting should have one female and one male member from at least 2/3 of the user households, including proportionate representation of all ethnic/caste groups and 50% women). M-WASH Unit must visit the scheme during CAP preparation and finalization. The CAP format is included in the end of this chapter. A copy of CAP needs to be attached to the scheme implementation agreement paper.

Duration	one day
Participants	All WUSC members, VMW, Procurement committee members
Resource Person	WASH Coordinator, WASH Facilitator, WSST, Sub-engineer
Organizer	M-WASH Unit

Objective

To make WUSC members able to

- Understand the design, estimate and layout of the scheme.
- Understand the importance of the CAP.
- Draft CAP for scheme implementation

Expected outcome

After preparing the draft CAP (as per the provided format) WUSC members will be clear on the scheme design and layout, quantity of required materials and works to be done.

Required materials

Draft design estimate, CAP format, Step by Step chart, Step by Step Manual, financial record keeping formats, handouts, posters and contribution chart

Major contents and session plan

Content	Time	Methodology
Introductory Session Review of previous training Expectations of participants Objectives of training Expected outcomes of training	30 Min.	List the expectations expressed by the participants and make conclusions.
Session I Scheme design and layout Structures to be constructed Estimated cost (components, rates of skilled labour, unskilled labour, sand, cement and other construction materials, etc.)	1:00hrs	Explain according to design and estimate of scheme Refer to the scheme layout
Session II Total scheme cost and contributions to cover the cost. Amount of labour.	1:00 hrs	Presentation and discussion.
Session III Environmental conservation works and sanitation activities (source protection, fencing, tree plantation, recharge structures). Ensure that women are consulted regarding protection works. Methods to avoid unnecessary activities, which can disturb the environment during construction eg. Pipeline trench digging. <i>ODF/Post ODF plan, construction and use of toilets, waste pits, drainage systems etc.)</i>	1:00 hrs	Presentation and discussion.
Session V Resource mobilization and seasonal calendar preparation. Identification of local resource persons (skilled and unskilled), local materials and contribution pattern (cash/kind) etc. Ensuring that women and poor households are given the opportunity to provide in kind, and to be employed in the works.	1 :00 hrs	Presentation and discussion.
Session VII Formulation of draft CAP for the scheme implementation. Setting the wage and transportation rates Preparation of the procurement plan	2:30 hrs	Presentation and discussion.
Session VIII Closing Session Feedback & closing	30 min	Written and oral feedback

SAMPLE OF COMMUNITY ACTION PLAN FORMAT FOR WATER SUPPLY SCHEMES

Name of the scheme:

Municipality:

Ward No:

Total number of households:

Total Population:

SN	Detailed description of works	Required days	When?		Where? Place name	How? Process	Who is responsible?	Who supports?
			Starting date	Completion date				
1	First public audit and first monitoring							
2	Implementation phase agreement							
3	Preparation of quotation formats							
4	Market survey and collection of quotations							
5	Preparation of comparative chart and selection of suppliers							
6	Request for first instalment							
7	Pre-construction seminar							
8	Agreement with suppliers							
9	Local material collection and transport							
A	Sand							
B	Stone							
C	Aggregate							
D	Other							
10	Non-local material transportation							
11	Storage keeping							
12	Structures construction 1							
13	Structures construction 2							
14	Structures construction 3							
15	Structures construction 4							
16	Transmission line digging							
17	During-Construction seminar							
18	2 nd Public Audit and monitoring							

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19	Digging of distribution line							
20	Public/private tap construction							
21	Completion of all implementation phase construction works							
22	Preparation of MB and final bills							
23	Preparation of O&M regulation							
24	3 rd Public audit, III-Monitoring, Approval of O&M regulation, formation of WSP++ team							
25	Scheme completion seminar							
26	Scheme inauguration							

Signature of all WUSC Members

9 FIRST LAYOUT PREPARATION

Introduction

A layout is a diagrammatic scheme plan, in which all the features and components of the scheme are displayed indicating their location. The layout contains also other existing or planned infrastructures such as roads and buildings. The layout plan is prepared based on the community map.

The layout should be prepared in a mass meeting where all the users can discuss the best possible scheme layout. Since women are mainly responsible for fetching water, a separate women's meeting in each cluster should decide the tap stand locations. M-WASH Unit staff should assist the meetings and present different layout options. Not all options may be feasible (e.g. due to geographical barriers) but the layout should ensure everyone's access to water. The layout should be finalized after the technical survey and design.

The first layout plan is the basis for the detailed technical survey. Layout should be discussed again with the community if something is not found to be technically feasible and must be changed. The community should reach consensus to minimize disputes during the detailed survey and scheme implementation.

Process

Organize WUSC meeting to discuss and agree on the number of taps required for the area based on location of households, source yield and needs of the community.

Visit each settlement where taps are proposed. Organize a meeting between women of each beneficiary household to discuss and decide on the location of tapstands. Ensure that the access of all potential users is considered including the elderly, the disabled and also menstruating women. If possible, ask the elderly and the disabled to participate in the meeting). The Sub-Engineer must visit each tap location to ensure its technical feasibility. Minute the tap location mentioning exact location (*char killa*) and possibility of using the wastewater drainage (in kitchen garden etc). Plot the tap location in a copy of the community map. If the tapstand is proposed in private land, prepare a no-objection note from the landowner for tap construction, its drainage and free movement of tap users to fetch water.

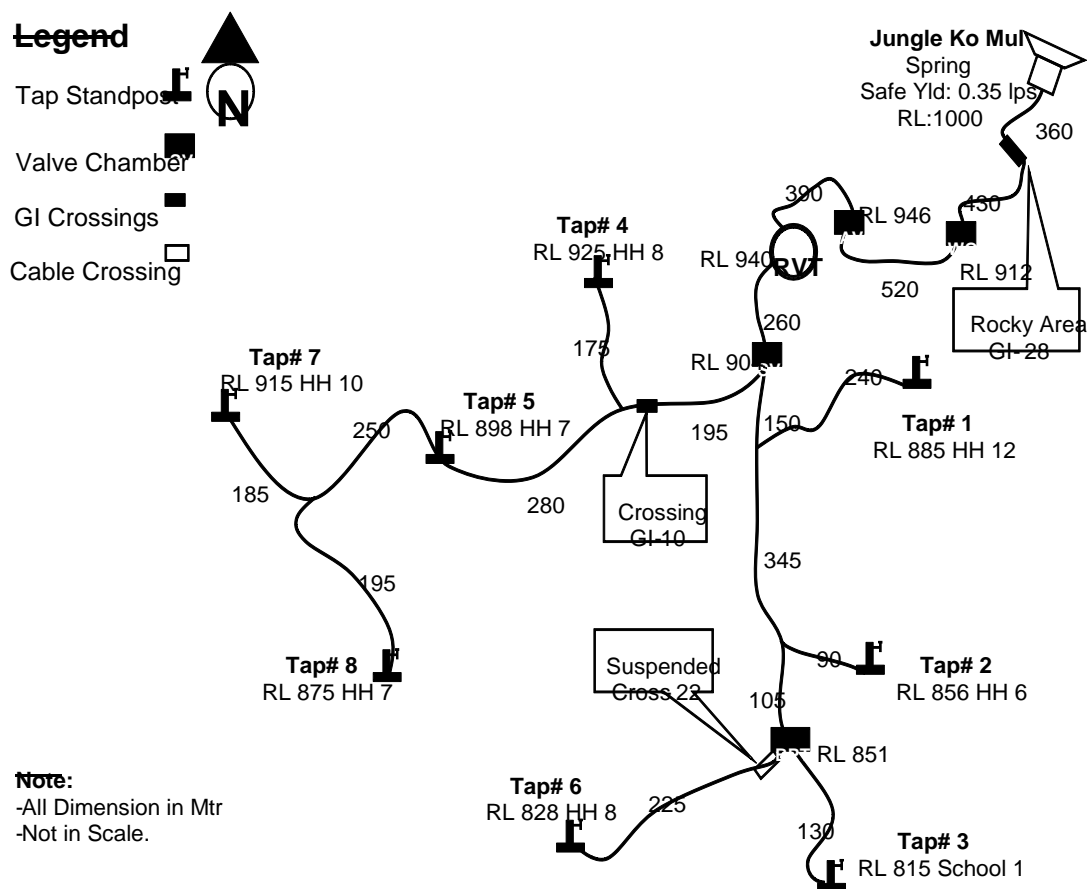
Call a mass meeting of all users. One female and one male representative from each household should be invited to the meeting, as well as Ward/W-WASH-CC members if possible. Make sure that the time and venue of the meeting is suitable for all. Ensure that information (oral/written) about the meeting reaches all households. All ethnic/caste groups living in the community, as well as all clusters, should be well represented in the meeting. At least 75% of the households of the proposed scheme area should be present in the mass meeting. At least 50 % of the participants should be women. If the number of households is less or if women are in minority in the meeting, **postpone the meeting until the representation is adequate and equal.**

Present the tap locations decided by the women and discuss the pipeline route, required number of structures, and their location. Minute the proposed details and discussion. If the pipeline route or other structures are proposed on private land, prepare a no objection note from landowners for structure construction and drainage of overflow water.

Draw a layout map over a copy of the community map and present and get preliminary approval from the community.

The survey team will refer to and follow the first layout. If some locations are found to be technically unfeasible, those should be presented in a mass meeting after the detailed technical survey. After the

detailed technical survey and preliminary approval of the community, the survey team should prepare the final layout map.



Layout Plan of..... W/S Scheme

10 DETAILED TECHNICAL SURVEY

Introduction

The exact position of various structures, their size and type are confirmed only after the detailed technical survey of a scheme. The technical survey includes desk study and field work.

The persons conducting the survey should keep in mind the following things before starting:

- The survey is a technical study on the location and level of the scheme structures as well as the distance between the structures such as source and the tap stands. The collected data is presented in a table format showing both the distance and level differences between structures.
- To have sufficient knowledge about the proposed scheme, coverage area and the social aspects, the survey team should study the V-WASH Plan/Local Level Plan and feasibility study before starting the survey. The first layout plan prepared by the community is the basis of the technical survey.
- Community participation is very important for the sustainability of the rural water supply schemes. Both women and men and all ethnic/caste groups in the community have the right and should participate in the survey, as well as in the decision-making. Especially women's participation should be encouraged and their decisions on the community tap stand locations should be followed if feasible.

A survey team should be led by an experienced Sub-Engineer and supported by an Assistant Sub-Engineer or Water Supply Technician. The Technical Support Unit/Municipality Engineer should support in critical situations. The community members should provide field support when needed. Community members participating in the survey, including females and DAGs, should be selected before starting the detailed technical survey.

Desk study

Before the field work, a detailed desk study is conducted to get a general idea about the scheme area. Necessary information should be taken to the field for reference. The survey team should study:

- All the information gathered during the V-WASH planning/Local Level planning and the feasibility study of the scheme.
- The topographical maps of the area, the satellite imagery and ortho-photo when available and the Digital Terrain Model when available.
- The recommended design parameters for the scheme

Field work

The community plays a major role in the technical survey. Both women and men and all ethnic/caste groups have the right and should take part in the decision-making processes. The survey team should meet and discuss with the WUSC and the users at the very beginning of the fieldwork. The WUSC and users should help the team during the survey while measuring and estimating the source discharges, fixing the location of different structures, selecting alignments, etc. The users should explain important access issues to the survey team (elderly, disabled etc.). They should also solve any disputes within the community for equitable access of all.

The survey team should complete the following steps:

During the reconnaissance, the team should

- Meet WUSC to review the actual disaggregated population data and HHs layout plan and discuss any revisions of clusters or community tap stands. If there is a need for major changes, a mass meeting should be organized for approval.
- Verify the best possible source locations considering upstream clusters, environmental issues and any other issues that may influence quantity or quality of the source, now or in the future (e.g. roads construction, source yields).
- Bear in mind the normative criteria of the right to water - **availability, accessibility, quality/safety, affordability and acceptability**. The target quantity of water should be 45 litres per day per capita, 12 months a year, within 15 minutes' round trip from each household and free from microbiological contamination. However, this may not be feasible due to water scarcity or geography. And while there may other sources of better quality or quantity of water available further away, longer pipeline may run a risk of landslide damage or lead to conflict with other clusters, and therefore be unsustainable. Altogether, a pragmatic decision must be taken regarding the source selection.
- Calculate the required safe source discharge before measuring the selected source/s so that new sources can be looked for if the present source discharge is insufficient.

$$P_f = P_o * (1 + r/100)^n$$

Where P_f = Projected population

P_o = Present population

r = Population growth rate

n = Design period (20 years + 1 or 2 base years)

Design Demand = $P_f * 45$ l/d

Per capita water demand per day = 45 l/d but can be reduced up to 25 l/d depending upon source scarcity.

Required safe discharged at source = $(P_f * 45) / 86400$ l/s

- Measure the source during the survey period by bucket and watch method. Safe discharge is $0.9 * \text{measured discharge}$.
- Reconfirm that there are no source disputes in the community and that it will be possible to legally register the source.
- Cross-check the scheme technology options other than what has been proposed (lift, gravity, point source improvement, rain water harvesting and other options). Were the options discussed during the feasibility study? These may be particularly important for remote households.
- Identify the critical locations along the scheme alignment and fix the approximate locations for different components. Measure level differences, using altimeter, to see if the proposed locations are technically feasible. The survey team should consult the community about these matters.
- Refer to the community map and first layout plan to fix the approximate alignment of pipeline with the community cooperation and support.
- Search for options like private taps if the HHs in the service area are very scattered and users are willing to share the cost of extra pipes, fittings and tap stand.

Detailed survey

The detailed survey is conducted to study the differences in level between various places in the scheme area and the distances between the different scheme structures. Factors to be considered and included in the survey are:

- Hardship and water consumption (priority must be given to domestic water use)
- Topography and settlement pattern
- Expectations of the community

- Sources in the vicinity
- Disputes
- Source conservation
- Previous water supply constructions

The pipeline and structure locations should be fixed to minimize construction cost and future maintenance. This leads to:

- Construct all structures on stable ground and slopes.
- Avoid “U”- or “Hump”-profiles and landslide prone areas.
- Follow foot trail for pipe alignment.
- Locate stream intake “in non-drying” area but avoid direct flood.
- Think of proper water treatment options if required.

There are many types of survey instruments for calculating the level. The choice of the survey instrument should be made according to the following recommendation:

Altimeter: Generally used in reconnaissance and pre-feasibility survey works

Abney level: If terrain is steep. Used especially in rural water supply schemes in hilly areas.

Automatic level: If terrain has a gentle slope.

Field data should be processed using the equations mentioned in the survey record sheets. Once the survey data have been processed, the plan and the longitudinal profile can be made. Recommended scales are:

- Plan : any scale
- Longitudinal profile : Vertical: 1 cm = 20 m Horizontal: 1 cm = 50 m

Field book data and calculated level will be introduced in the **RWSSP-WN design software**.

Ref: *DWSS 2002: Design Guidelines for community based rural water supply schemes, vol.1 – 12*

11 TECHNICAL ASPECTS CHECK LIST FOR DESIGN & ESTIMATE

Why this check list?

This checklist can be used by the WUSCs and the technical teams alike, both during the Feasibility Study but also later in the Preparatory Phase. The objectives of this check list are to:

- Establish uniform design approach for implementing community based water supply schemes
- To reduce the prevalence of water and sanitation related diseases through quality assurance and water safety planning
- To minimize hardship in collecting and carrying water

Design strategies

The design of a community-based scheme must consider a number of issues. These relate to the type of a system: whether it is to be open or closed; whether the supply is to be continuous or intermittent; and whether to make provisions for future expansion. Systems combining water for domestic use and micro irrigation are also promoted as multiple use system schemes wherever possible (when there is sufficient water to satisfy domestic needs).

The basic concept is to provide multiple storage tanks (that is, more than one) to supply water to clusters. This type of multi reservoir system is found to be more equitable in supply, sustainable and maintainable compared to a centralized reservoir system.

The designer must focus on

- optimal use of the resources available
- minimizing operation and maintenance requirements and
- keeping the construction works within acceptable limits (i.e. economically).

When a gravity flow scheme is not feasible, alternate provision modalities such as rainwater harvesting, improvement of point sources (spring protection) and lifting scheme are investigated. Spring sources are the best option as they are easy to protect from contamination. Point source improvement is the principal option in mountain and hill communities where water is available nearby. It costs a fraction of gravity flow schemes and requires only simple and virtually cash free maintenance.

Regarding lift schemes, selection between electrical lift and solar lift systems is very important and should be discussed with the community from the very beginning.

All components of the gravity water supply scheme are important. However, special care should be taken while surveying and designing the intake. A good intake must ensure that the source is not affected, there is no leakage and the possibility of contamination is minimized. Each intake should be properly designed by undertaking detailed survey of the site to enable appropriate construction. A skilled technician must be present at the time of the layout and construction of the intake(s).

Even though water treatment is generally desirable for domestic water supply, water treatment options in rural water supply schemes are limited. Water treatment involves additional investment and skilled workers for complex operation and maintenance, which are usually not available in rural areas. That is why it is important to select the source and design the intake carefully to avoid the need for treatment as far as possible.

A balanced approach provides simplicity while maintaining flexibility. Wherever necessary, the designer should use his judgment and creativity to propose a scheme that will function satisfactorily over the design period in the given environment.

Preferences regarding flow usage and frequency of distribution

A scheme where water source(s) is located at an elevation higher than the service area is referred to as a gravity scheme. Water can be supplied by gravity from the source to the storage tank and distributed again by gravity. Location of the storage at a higher altitude allows adequate head pressure to be maintained in the distribution network. When appropriately designed, constructed and maintained, a gravity scheme is a reliable water supply system. A gravity scheme is the most appropriate option after the point source improvement due to its low operation cost.

When the source discharge is higher than the peak domestic water demand, a multiple use system can be used to provide water for both domestic use and productive uses (irrigation). This may entail construction of livestock watering through the tap stand, to avoid livestock drinking directly from the tap. In addition, micro and small irrigation or micro-hydro should be considered at the survey stage to maximise the use of the available water.

In an open system, the safe source yield must meet the peak water demand of the service area. A storage tank is not required in an open system and all its pipelines are distribution lines. In an open system, no flow closing devices are installed in the distribution system hence no faucet is installed on the community tap stand. Static pressure, therefore, never builds up in the system. These systems are very cheap to build, operate and maintain. Nevertheless, they do not make an optimum use of the water extracted and can lead to environmental hazards like soil erosion and public health hazards by a continuous water flow.

A closed system is used when the safe source yield cannot directly supply the peak water demand. To balance the deficit and meet the peak demand, a storage tank is provided. As water must be saved to meet the demand, faucets and valves are installed to control flow. A closed system is subject to the maximum static water pressure and should be designed accordingly.

A multiple reservoir tank system should be used instead of providing break pressure chambers (BPCs) in the selected locations in a closed system. The performance of BPCs has been found to be very problematic in the operation of gravity water supply schemes. In some cases, however, interruption chambers may be provided to break the pressure in main pipelines. Distribution chambers may also be needed to ensure proper distribution of flow in different branches.

Open or closed system? The closed system is the preferred option to optimize the use of water in all possible ways. Nevertheless, an open system may be considered if there is a need for low cost option (small size scheme) and safe disposal of excess water is possible.

The difference between a continuous and an intermittent system is more valid for a closed system. **In a continuous system**, the water is available in the distribution lines all the time and the water runs out of the tap whenever the faucet is opened. Since the distribution line is always under pressure, the possibility of contamination by negative suction in the pipeline in a continuous system does not exist.

In an intermittent supply system, the water is supplied to the consumers only during some fixed hours of the day. Many schemes in Nepal are presently being operated intermittently even though they were originally designed to function continuously. The possible reasons include for example depleting water sources or continuous water flow due to broken faucets that leads to wastage. In many cases, the non-performance of the float valves in break pressure chambers also leads to excessive wastage. When schemes are operated on an intermittent basis, water is supplied for a short period within which the design demand must be met.

While designing a lift scheme, the following points must be considered to ensure the best possible type, size and capacity of electro-mechanical components:

- Appropriate selection of pump (electricity powered/solar powered) based on the total dynamic head and required discharge.

- Selection of transformer (for electricity) and solar panel based on the capacity of selected pump(s), cable (wire) size and location aiming at minimum energy loss in the cable.

In a scheme with only public tap stands with fixed tap flow, the pipe size of the distribution network will not be affected, even if the scheme is operated on the intermittent basis. The storage volume will increase when the scheme is operated on an intermittent basis. The likelihood of contamination in an intermittent system is higher. It is due to infiltration of polluted and dirty water from outside into the empty water pipes through leaking joints etc. due to negative suction pressure.

Community water supply schemes should be designed and operated as continuous closed systems, wherever possible.

Tap stands should be designed to include two taps, with a lower tap available to improve access for children or potentially disabled users. There must also be a clear acceptance by the community that everyone has access to the public taps – despite of their caste, ethnicity, gender or any other reason (menstruation etc.).

Private connections are increasingly in demand and should be designed depending upon the availability of water in the source. Private connection will increase the per capita water demand to minimum 60 litres a day and require at least 8 hours water supply balance reservoir. A separate reservoir should be designed for such tap systems. Tap flow control should be placed in a branching pipe location.

Innovativeness in design: Maximum use of locally available materials shall be promoted.

Point source development and water quality improvement: Spring protection schemes are built primarily to develop and protect spring fed water supply that communities have already been using. A catchment, sometimes a reservoir tank and one tap stand are provided for each spring with adequately safe yield. These schemes are simple, inexpensive, and can be implemented quickly due to the small scale of the project (thus, they are more likely to be affordable and sustainable).

These systems are not necessarily designed to bring water to the users, but to minimize the risk of contamination. The pipeline length can be increased if additional head is available and the water can be transported closer to the community. This may be practical also if all the users are clustered in one area. The stream sources are generally more turbid and contaminated so intake filters should be in place to reduce the contamination.

Source conservation must be considered!

- No open defecation! Attention especially to upstream clusters.
- Source protection, recharge and overall watershed conservation is best considered immediately when the water source is identified for the scheme.
- Consider bio-engineering for landslide prevention and other soil stabilization structures such as gabion works for both the intake area and the critical locations along the transmission line.
- Plantation and recharge structures such as ponds and pits to cut erosion and to recharge the source.
- Controlling grazing in and around the source to avoid physical damage and erosion, as well as contamination.

Stream water with roughing filters and/or bio-sand filters: Due to unavailability of safe sources near villages at higher elevation, people use water from local streams for drinking purposes. Stream water is very unsafe to drink as it is usually contaminated from physical as well as microbiological agents. A small **roughing filter and/or bio-sand filter** can be constructed between the intake and the reservoir tank to improve the water quality. Maintenance and sustainability of these filters must be considered from the beginning. For the lift schemes, if the stream water is proposed as source, it is mandatory to include roughing filter and/or bio-sand filter in the scheme design.

Rain water harvesting may be the only option for safe water supply in many hilltop locations. Rainwater itself is relatively free from contamination but during the collection and storage there is a potential for physical, chemical and microbiological contamination. In most cases, physical and chemical contamination is easy to control, but microbiological contamination is more difficult. Inadequate maintenance is the major reason found in the past surveys for microbiological contamination of rainwater.

The Government of Nepal is promoting rainwater harvesting technology for remote scattered HHs to meet to 100 % coverage of water supply within in 2017 AD. Rainwater harvesting can support gravity systems with inadequate source yield. There are many technical options for using rainwater.

In the context of the National Drinking Water Quality standard 2062 already in force, water quality examination must be performed in every water supply system source. ENPHO test kit and P/A vial can be used for chemical and microbiological examination. Necessary and appropriate steps (potentially including shock chlorination) shall be proposed to reduce the contaminants if contamination is found. The Water Safety plan must be planned and implemented in all water supply schemes.

For more details: *Design guideline vol. 1-12 DWSS. Construction and Management of Rural Water Supply Schemes, Hari Prasad Sharma, 2065.*

12 APPROVAL OF COMMUNITY ACTION PLAN AND DETAILED DESIGN & ESTIMATE

Introduction

Upon completion of the detailed technical design and financial estimate and all the Preparatory Phase workshops WUSC will organize a mass meeting to finalize the CAP and the design estimate and to get approval from the users. This event is also a **first Public Audit (ref. SBS paper 13)** organised by WUSC. The meeting will ensure that the scheme is both technically and socially acceptable, responding to the needs of all potential users and focused on the unserved. This meeting is very important as it lays the foundation for the sustainability and smooth implementation of the scheme. The meeting is coinciding with first monitoring of the scheme.

Process of CAP and detailed technical design approval

- a) WUSC calls a mass meeting. Make sure that the time and venue of the meeting are suitable for all.
- b) 2/3 of the user households should attend the meeting. The participants should include 50% of women and proportionate share of DAGs.
- c) The Meeting will be chaired by the WUSC chairperson. One of the WUSC members (preferably Secretary) will present the meeting agenda. The agenda should include:
 - Opening/introduction
 - Objective of the meeting/Public audit
 - Presentation of detailed technical design and cost estimation, discussion and approval by users (mass meeting)
 - Lay out plan presentation, discussion and approval
 - CAP presentation, correction, finalization and approval
 - Public auditing of all the works done by WUSC during preparatory phase
 - First monitoring of the scheme using **scheme monitoring book**
 - Validation of the findings of the monitoring team by WUSC/users. The findings must be recorded in the **WUSC register book and in the scheme monitoring book**
 - Minutes presentation and approval
 - Closing
- d) WUSC should also prepare and present a **scheme notice board**, (hoarding board). This board shall include all information like beneficiary households & WUSCs member details with social disaggregated data, social map, layout plan, estimate cost, contributions by different stakeholders and eventually estimated component wise cost. A model "Scheme Notice Board" is provided in **SBS Paper 16: Pre-construction Seminar**.
- e) It is preferable that WUSC member themselves present the CAP (with support from WASH Coordinator) and technical design estimate (with support from sub-engineer)
- f) After the completion of the Public audit, the monitoring team will do the first monitoring using scheme monitoring book guided by the Step-by-Step Manual. The monitoring format will be filled at the monitoring site and signed by the visiting members.
- g) WUSC and users must validate the monitoring team's findings that are recorded in **the WUSC register book and in the scheme monitoring book**.
- h) All meeting participants must sign in the WUSC minute book.
- i) After the mass meeting/Public Audit, WUSC will organise a meeting to prepare documents to be submitted to the Municipality/M-WASH Unit for approval so that the implementation agreement can be signed. The submitted documents should include the following:
 - Copy of approved CAP by public audit/mass meeting
 - Detailed technical design and estimate

- Copy of final layout map of the scheme
 - Minute of the public audit
 - Copy of the monitoring team recommendations
- j) If the public audit and/or mass meeting and/or monitoring team for any reason disagrees to approve the CAP or the technical design estimate, the scheme will not move forward for implementation and will drop from the annual work plan of the Municipality.
- k) The monitoring team will submit the scheme monitoring book to the Municipality.

13 GUIDELINES FOR PUBLIC AUDITING

Introduction

Public auditing is a tool to ensure transparency of activities. It is also a way to notify people about activities that take place in their locality.

Public audit is based on the principle of good governance, with the consent and understanding of all stakeholders. It ensures transparency, accountability and responsiveness, among other good governance elements, towards the people and stakeholders. It values the voice of the beneficiaries, stakeholders, and other interested agencies and individuals.

Public audit should be organized through a mass meeting with participation of most user households. It is a process where WUSC, M-WASH Unit and the community jointly analyse, review and provide feedback that ultimately supports the quality of the activities for sustainable benefits. Public audit is a one-day meeting to be conducted three times during the project cycle:

- First public audit: at the end of the Preparatory Phase
- Second public audit: during implementation
- Third public audit: after the completion of the project works/Implementation Phase

General objectives of the public audits

- Audit the expenditure and activities publicly and approve them in a mass meeting
- Analyse problems faced and their solutions for future reference
- Analyse and identify a proper mechanism for sustainable operation of the scheme
- Ensure the project benefits reach the target groups
- Promote ownership of the scheme through transparency
- Provide an opportunity for information, clarification and complaint sharing by community members if needed
- Assure a proper use of allocated funds

Tools of public auditing

1. Social map
2. List of beneficiaries
3. SWOT analysis
4. Questionnaires
5. Income and expenditure
6. Design estimate
7. Documents related to financial management and other issues
8. Participatory observation
9. Interviews
10. Participatory discussion
11. Feedback

FIRST PUBLIC AUDIT

First Public audit is conducted in the end of the CAP preparation process. A one-day meeting participated by the user households is held when the final layout, design, cost estimate and bill of quantities are ready and the CAP has been finalized. First monitoring of the scheme will be carried out on the same day by the monitoring team.

Objectives

- To present the CAP by WUSC and to get approval by the users.
- To review and discuss the layout, design and cost estimates, to finalize them and finally to get the users' approval.
- To notify the community and concerned stakeholders on the scheme activities and implementation process and progress.
- To form the Procurement committee and to clarify the procurement process
- If users agree, the WUSC will forward the scheme proposal to Municipality for final approval. If users disagree to approve the scheme layout, CAP etc., these should be redefined and if not possible, the scheme should be dropped from the workplan.

Stakeholders/participants

Major stakeholders of the public audit are:

1. WUSC members
2. Representatives of beneficiary HHs (>50% female participation is compulsory and at least 2/3 of HHs should be present)
3. Municipality representatives
4. M-WASH-CC members from the scheme area
5. Municipality level political party representatives
6. Civil society representatives (if any)
7. DCC/Project monitoring team

WUSC will be responsible for organizing the meeting with M-WASH Unit/TSU support. An independent facilitator from the local level will facilitate the event.

Following documents should be updated and brought to the first public audit

1. WUSC minute book
2. Draft CAP of the scheme
3. Design report of the scheme
4. Final layout map of the scheme

Process

- Call a mass meeting. Provide both written and oral invitation at least 7 days before the mass meeting to one male and one female representative from each household including all ethnic/caste groups, WUSC members, Municipality Chairperson and Vice-Chairperson, Ward Chairpersons, as well as to other key persons in the community. Make sure that socially and geographically disadvantaged community members, as well as all clusters are invited to the meeting. This may require extra time from the WASH staff to visit disadvantaged households or persons and encourage them to actively participate, noting that their voice is also important.
- Make sure that the time and venue of the meeting is suitable for all, especially for the women.

- At least 2/3 of the user households and WUSC members should be present in the meeting. At least 50 % of the participants should be women. If women are in the minority or some ethnic/caste groups are not present, postpone the meeting until the representation is adequate.
- Present design, cost estimates, bill of quantities and final technical layout of the scheme for review and discussion.
- Make sure that both men and women understand the design, bill of quantities, and the amount of money to invest for different purposes. Let the WUSC present the CAP. Initiate and encourage active participation and discussion by all.
- Make sure that the users understand the volume of works and the amount of cash that they must contribute.
- Get formal approval by users on CAP.
- All the users should understand the key features of their own scheme.
- WUSC keeps minutes of the meeting and gets signatures of all the participants.
- Encourage the participants including women and all ethnic/caste groups to discuss and ask for clarifications. State clearly that all questions can be asked and that WUSC and the technical staff will do their best to answer.
- The mass meeting will approve the rate of wages and transportation cost considering the scheme implementation.
- The mass meeting will approve the materials procurement plan and Procurement committee (please refer to WUSC Operation Guideline).
- All the important issues raised and discussed should be recorded. All individuals should be actively encouraged to speak up.
- The WUSC should prepare a list of all the participants showing their gender and ethnic/caste group and profession.
- Get the attendance list (signatures) of all the participants present in the meeting.

Reporting

After the completion of the event, an informative report on the public audit will be prepared by the WUSC with facilitation from the M-WASH Unit staff. The monitoring team will prepare a monitoring report.

Tips for the meeting facilitator

- Treat all participants equally and maintain neutrality throughout the event.
- Follow a simple interactive process and use simple language and make the event as interactive as possible. The meeting should be conducted in local language to maximise understanding by all.
- Not only focusing on weaknesses and gaps, try to unearth positive and appreciative aspects, including efforts made so far by the WUSC.
- Encourage participants to provide practical feedback during discussions.
- Try to stay non-defensive and non-judgmental during the process.
- Respect points and comments raised by the participants.
- Manage time to ensure timely completion of the event.

SECOND PUBLIC AUDIT

The second public audit is carried out immediately after the procurement and transportation of non-local materials to the scheme area. This audit is very important as all income and expenditure until the date is discussed and approved by the users in the event.

Objectives

- Presentation of income and expenditure status and approval by users
- Discussion on the procurement process and procedures
- Review of the scheme activities and implementation process
- Review of the scheme progress compared to CAP
- Commitment of WUSC to the users to ensure the scheme is implemented in a transparent way
- Trigger users to sense ownership over the scheme and the activities

Participants

Same as during the first public audit. Before organizing the second public audit, make sure that all the stakeholders receive invitation to the mass meeting at least 7 days before the event.

Following documents should be updated and brought to the second public audit

- WUSC minute book
- Procurement committee minute book
- Received quotations and comparative charts
- All other procurement related documents
- Income and expenditure book
- Design estimate and implementation phase agreement
- Bill voucher file
- Store recording book
- Labour attendance and payment record book (Dor Hajir Faram)

Process of conducting the second public audit

Steps to be followed while conducting the event:

- Before the mass meeting, WUSC shall prepare a statement comparing estimated and actual expenditure.
- Call a mass meeting.
- Present an income expenditure statement including contributions from the Project, Municipality and the users.
- Show receipt vouchers of the expenditures including receipts of the supplier.
- Verify the bills, receipts and other documents (quotations, WUSC meeting minutes etc.) with respect to the presented income and expenditure.
- Allow users to raise their comments (if any) and clarify the comments.
- Discuss the problems faced, if any.
- Request all participants to take part in the discussion and accept the discussed matters if agreed.
- Keep records of the discussion in the minute register and collect signatures of all the participants in the end of the public audit.
- Update the scheme information board if any changes found.
- Finalize the public audit report (as per the format) and collect signatures with WUSC stamp in every page of the report.
- Close the public audit meeting.

Topics of discussion for second public audit

S.N.	Activities	Progress in %
1	How the materials were procured? How the process was decided?	
2	How much cement, pipe, tools and fittings etc. are procured?	
3	What is the unit and total price of the aforesaid materials?	
4	Who were suppliers/manufacturers of the materials?	
5	What were the means of transportation & cost of transportation & storage?	
6	What is the condition of transported materials?	
7	Are materials procured in planned time? If not, justify.	
8	Are the quantity, quality & price adequate? If not, justify.	
9	Is the procurement policy followed up? Are bills, receipts and quotations genuine?	
10	Are the local materials being collected as per CAP? if not, why?	
11	Is community contribution (cash+kind) going on?	
12	Are the decisions made by the WUSC participatory from the GESI aspect?	
13	Has the project board been installed? If not justify.	
14	Are all users (including all clusters and groups) informed regarding the income and expenditure of the scheme? If not, why?	
15	Are book keeping and other financial management documentations maintained? If not, what are the causes, justify.	
16	Is there an equal opportunity for all users to get local employment generated by the scheme construction? If not, who controls such opportunities and why? (if there has been positive discrimination to favour a disadvantaged group, this should be explained)	
17	Are the scheme structures constructed as per the design & estimate? If not, what are the factors of variation?	
18	Is there enough technical and other support by the M-WASH Unit/TSU staff? If not, justify.	
19	Is Step-By-Step followed?	
20	Is Municipality supporting the users as per the Memorandum of Understanding and scheme agreement document/s? If not, why?	
21	What problems have been faced and what solutions have been found? Who has come up with solutions/supported in solving problems?	

REPORT FORMAT FOR SECOND PUBLIC AUDIT

Add rows to tables as needed.

Scheme progress (for second public audit only)

a) CAP vs. achievement

S.N.	Scheme activities planned as per CAP	Date as per CAP	Progress achievement ref. CAP	Causes of not achieving (if any)	Remarks

b). Income and expenditure (endorsed by the mass meeting)

Income and expenditure account should be formulated in the following format and endorsed in the mass meeting in the minute book. Photocopy should be attached with this report.

Income

Sources of income	Cash or materials	Remarks

Expenditure

Expenditure detail	Rate	Quantity	Total
1. Materials (which materials have been procured)			
2. Wages (how much has been paid on which work)			
3. Kind (how much)			
4. Management cost (transportation and others)			

Stock

Description	Amount/quantity	Remarks
1. Cash		
Bank		
Cash receivable (detail)		
2. Materials		

Sundry creditors (payable amount)

Description	Cash/Quantity

Public voices to be captured

Voices of those who cannot express themselves in the mass meetings should still be recorded (if possible, they should write themselves). This group might include those who cannot physically be present in the meeting, such as persons living with a disability, frail elderly and those outside the

community or those who are present but lack confidence to speak. Their voices should be collected on a sample basis using the following template (add rows/space if needed):

S.N.	Name	Designation/Address	Expression	Signature

.....

Prepared by:
 Name:
 Designation:
 Date:

.....

Verified by:
 Name:
 Designation:
 Date:

.....

Approved by:
 Name:
 Designation:
 Date:

Filled by the Municipality WASH Unit/ Technical Support Unit staff:

Key findings/observations:

Recommendations:

Conclusions:

On behalf of the Municipality WASH Unit/ Technical Support Unit:

Name and signature:

Designation:

Date:

THIRD PUBLIC AUDIT

The third public audit is conducted in a mass meeting of the users and other concerned stakeholders at the end of the implementation phase once all the construction works have been completed. The third and final instalment cannot be released before the third public audit has been conducted. The public audit is organized in the same day of third/final monitoring of the scheme. At this point WUSC and users should have already prepared O&M Regulation and formed WSP++ team.

Duration	1 day
Timing	After the completion of all the implementation phase works
Organizer	WUSC with the support of the M-WASH Unit staff and M-WASH-MC
Facilitator	Local independent person (not involved in WUSC and M-WASH Unit/M-WASH-MC)

Objectives

- Audit the expenditures and activities publicly and approve them in the mass meeting.
- Assure proper use of allocated funds.
- Analyse problems faced and their solutions for future reference.
- Analyse and identify proper mechanisms for sustainable scheme operation.
- Promote ownership of the scheme through transparency.

Participants: Same as in the first and the second public audits.

The following documents should be updated and brought to the third public audit

1. WUSC minute book
2. Income & expenditure book and statement
3. Bill voucher file
4. Design report and agreement paper of the scheme
5. Store recording book
6. Labour attendance and payment record book (*Dor Hajir Faram*)
7. Incoming and outgoing letters record file.
8. Visiting register.

Tools of Public Audit

1. Social map
2. List of scheme users
3. Questionnaires
4. Income and expenditure
5. Financial management related documents
6. Participatory observation
7. Interviews with selected users
9. Participatory discussions
10. Feedback session

Public auditing process

Third public audit is conducted at the end of the implementation phase before releasing the final instalment to WUSC. WUSC and M-WASH Unit staff in consultation with M-WASH-MC are jointly responsible for organizing the meeting.

The monitoring team from PSU/PCO/Municipality will visit all the structures from source to tap and confirm the completion of all the activities before the mass meeting. The team should also discuss with female/Dalit and other marginalized beneficiaries, VMW and users to express their opinion on the scheme, WUSC, Municipality WASH staff etc. The voice of such beneficiaries should be captured and documented. All the GESI and HRBA related indicators and questions in the scheme monitoring format should be covered (if there is a need for any further action, it should be written also in the WUSC minutes for future follow up). The meeting should be conducted in local languages to maximise the understanding by all.

Process of conducting the third public audit

Steps to be followed while conducting the event:

- Call a mass meeting and ensure full participation of users and other stakeholders. The invitation should be delivered to the users at least seven days before the event. The invitation should comprise date, time and venue of the public audit. It is also advised to display the invitation in public places such as the Municipality office, schools and other institutions.
- Present basic scheme information such as total beneficiaries, WUSC, O&M fund, VMW etc.
- Present the completed scheme activities and the financial report (refer WUSC operational guidelines for sample formats). The information shall be minuted in the WUSC register before conducting the public audit. The report should include bank balance, cash in hand (mentioning the name of the cash holder), due payment (disaggregated by supplier, skilled labour, unskilled labour, transportation, store rent etc. and followed by the component cost heading of the design estimate). All the expenditures should be compared to the estimated costs according to the heading breakdown as in the design report of the scheme.
- Present the status of the left-over materials with their present value. The meeting should decide on utilization of those materials. The meeting may decide to keep required left over materials for O&M purpose and sell the extra or perishable (e.g. cement) materials to other nearby scheme preferably. If there are no other ongoing schemes in the area, they can be sold to individuals or other institutions. The cost of the sold materials should not be less than the original cost including the transportation cost.
- Present the quantity and status of tools. All the tools are the users' property so they should be kept safely for future O&M purpose. If some of the tools are found lost or broken, the situation should be verified by WUSC.
- Discuss and decide on the mobilization and mode of payment of VMW, water tariff collection, O&M fund mobilization, WSP++ training date and O&M regulation.
- Refer to the second public audit report for suggested discussion topics.
- Open the floor to users, the monitoring team and other stakeholders for discussion.
- Carefully listen the comments and queries of the audience and respond to them. Note the major issues raised by the participants and consider these issues while preparing further action plans.
- Monitoring team shall discuss with the users and WUSC and fill up all required information in the monitoring book, ensuring that women and DAGs and any excluded households or persons are consulted.

- All the discussions and decisions regarding the final approval of the scheme must be recorded in the WUSC minute book.
- Monitoring team will share all the findings and recommendation with the mass meeting. The monitoring team must ensure that the scheme is physically completed and that the scheme planning and implementation process has met the criteria of non-discrimination, participation, accountability and accessibility. If any criteria is not met, this should be minuted. After the discussion, the mass meeting will approve the audit (or not, in the case of an irregularity) and request the final instalment from the Municipality.
- All participants must sign their attendance in the minute book for approval of the minutes.
- WUSC with the support of the M-WASH Unit staff will prepare the final report and submit a copy to Municipality.
- Beside the monitoring book, there is no need to prepare a separate report of the public audit.

An example of a public audit schedule

Timeline	Activities	Responsible
30 min	Registration of participants	Assigned person
	Welcome words and brief on the objective of the mass meeting	WUSC chair
15 min	Preparation of code of conduct	Facilitator
1-1.5 hrs	Presentation as per the contents intended for this mass meeting	WUSC/M-WASH Unit staff
1 hr.	Discussion and feedback	Facilitator
30 min	Presentation of the minutes, commitments and signature collection	Facilitator
30 min	Closing of the mass meeting	

Sample of code of conduct for the public audit

- Do not focus on personal issues or concerns of a single individual
- Do not raise or provoke issues and views blaming an individual
- Listen carefully and respect other people's views and ideas
- Questions should be based on fact and evidence rather than emotion and supposition
- Do not harass others and do not use discriminatory language
- Try to stay non-defensive and non-judgmental during the process
- Make sure the voice of women, poor and DAG households is heard and taken to consideration

14 CHECK LIST FOR FINAL APPROVAL OF SCHEME IMPLEMENTATION

Why this check list?

Municipality WASH Management Committee (M-WASH-MC) on behalf of the Municipality approves the scheme for its implementation before signing the implementation phase agreement. The M-WASH-MC will appraise the scheme based on the available documents as listed below. All activities of the Preparatory Phase shall be completed and the users must have approved the scheme design before seeking for the approval.

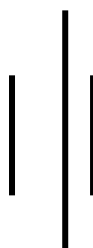
What should be considered before proceeding to the Implementation Phase?

The following basic requirements will be checked and the approval will be included in M-WASH-MC meeting minutes:

- The First Monitoring as per the Step-by-Step for the Preparatory Phase has been conducted and the Step-by-Step Monitoring book is available for this meeting.
- All Preparatory Phase activities as per the Step-by-Step are completed and verified by the First Monitoring Team.
- WUSC has been formed and its registration is completed/in process.
- WUSC composition is representative of the users in terms of caste/ethnic background. About half of the WUSC members are women.
- WUSC bank account is opened and operational, and cash contribution of users both for investment and O&M fund have been deposited on it.
- Municipality contribution as per design report is deposited into the WUSC bank account or the letter of Municipality commitment is available.
- Design estimate of the scheme has been finalized and verified in a mass meeting.
- Any critical issues as raised in the feasibility study and/or by the first monitoring, have been taken into consideration.
- Community Action Plan is prepared and approved by a mass meeting, which is representative of the community.

15 IMPLEMENTATION PHASE AGREEMENT BETWEEN MUNICIPALITY AND WUSC

..... **Municipality/Rural Municipality**
.....**Office of Municipality/Rural Municipality Executive**
.....**Office Location,District**



Rural Water Supply and Sanitation Project in Western Nepal Phase II
(Nepal – Finland Cooperation)

Implementation Phase Agreement Paper
BetweenMunicipality/Rural Municipality and
.....WUSC
Fiscal Year

Name of the WUSC:

Scheme Location:Municipality/Rural Municipality & Ward No.....

Tole/Cluster:

Beneficiaries Household: Population:

Duration of the agreement:

Fromto

Agreement signing date:

Salient features

Scheme name:	
Scheme code:	
Scheme implementation location:	
Scheme type	Gravity / Electric Lift / Solar Lift / Tube well / RWH / Point Source Improvement

Beneficiaries:

Number of beneficiaries	Households	Female	Male	Total population
Dalit				
Adibasi/Janajati				
Disadvantaged Tarai				
Religious minorities				
Others				
Total				

Household categories	Total households
Priority 1: No external support	
Priority 2: Design period over	
Priority 3: Non-functional Phase I	
Others	
Grand total (number of households should match with the number of households in the above table!)	

Proposed Structures:

Type of connection	Total no. of taps	Remarks and other information regarding the connections:
Public tap stands		Minimum number of households per tap stand: Average number of households per tap stand: Maximum number of households per tap stand:
Private connections		
Schools		
Health posts		
Other institutions		

Intake (No:)	CC/DC/IC/BPT (No:)	RVT (No:)	Total pipeline length (m)	Other structures:

Contribution Pattern

Source of funding	Amount in NPR	Percentage (%)
A. Government of Nepal		
B. Government of Finland		
C. Rural Municipality/Municipality		
Sub Total- Municipality WASH Fund (A+B+C)		
D. Users' cash contribution		
E. Users' kind contribution		
F. Others:		
Grand Total (A+B+C+D+E+F)		
User's cash contribution (for O&M Fund)		1%

WUSC Composition

Total number of WUSC:		Male:		Female:	
	Dalit	Janajati	Religious Minorities	Others	
In key positions:					
In members:					

Proposed Instalment to WUSC from Rural Municipality/ Municipality

Instalment	Amount (NPR)	Condition for instalment release
First (30-50%)		After signing the implementation agreement, market survey and procurement process (quotation) approval by WUSC
Second (30-50%)		After submission of expenditure documents after the second Public Audit, measurement book and running bill from TSU and second monitoring visit team recommendations.
Third/Final (20%)		After full completion of scheme works, final evaluation and MB from TSU, third Public Audit and recommendation of third monitoring visit team.
Total (100%)		

Signature of contracting parties:

.....
On behalf of WUSC
 WUSC Chairperson
 Date:
 Stamp

.....
On behalf of Rural Municipality/ Municipality
 Chief Administrative Officer
 Date:
 Stamp

..... Rural Municipality/ Municipality

Office of Municipality/ Rural Municipality Executive

..... **District. No Province of Nepal**

IMPLEMENTATION PHASE AGREEMENT

Name of the scheme:

1. CONTRACTING PARTIES

This contract is made for the implementation of the above-mentioned scheme between:
.....Rural Municipality/ Municipality, hereinafter called Municipality and
..... Water Users and Sanitation Committee, hereinafter called WUSC.
Project represents RWSSP-WN II, Project Support Unit and Project Coordination Office, Pokhara and
TSU represent the Technical Support Unit under the District Coordination Committee.

2. SCOPE OF CONTRACT

The contracting parties agree to undertake necessary action and work to complete the
.....scheme.

The scope of the activities and work are specified in the attached community action plan (CAP) and design report of the scheme. All activities and work shall be carried out in accordance with the "Step-by-Step Manual".

3. CONTRACT PERIOD

The implementation will start on (dd/mm/yy) and will be completed on
(dd/mm/yy).

Municipality may allow WUSC to extend the duration of this contract upon a written request from WUSC. However, Municipality will not cover any additional cost thereof.

4. ROLES AND RESPONSIBILITIES

4a. Roles and Responsibilities of WUSC

The community has the ownership of and full responsibility for the scheme from the date of signing this contract. WUSC shall represent the community as their elected executing body.

WUSC shall be responsible for scheme implementation in accordance with the Community Action Plan (CAP), including the following tasks:

- Management of all the construction activities in a timely manner as specified in the Community Action Plan, which comprise procurement as per specification and transportation of non-local material, collection and transportation of local material, arrangement of road head or site stores, store keeping for construction materials and tools, maintenance of books and accounts of all income and expenditure.
- Procurement of construction materials, pipes, fittings and tools from VAT registered suppliers/manufacturers/firms not exceeding the estimated rate following the procurement process mentioned in the Step-by-Step manual. WUSC is responsible to verify the quality of materials with the support of Municipality WASH Unit staff before delivery from the suppliers/manufacturers. All the procurement related transactions must be publicly audited.

- Conduct regular meetings to follow-up and record the status of work and any possible problems. These site meetings shall be minuted in a site ledger book, and signed by all the participants.
- Conduct mass meetings for public hearing and public auditing and update project briefing board to notify users and concerned bodies of the real income and expenditures of the scheme in a transparent manner. WUSC is responsible to conduct public auditing before the second and final instalment upon completion of the activities of the scheme. WUSC must ensure meaningful community participation in scheme activities including decision making and auditing income and expenditures and quality and quantity of materials. These issues must be discussed and recorded in a public auditing.
- Participate in meetings, seminars and trainings and mobilize community people from all groups, genders and clusters in scheme activities.
- Support and participate in monitoring activities.
- Coordinate with the Municipality WASH Coordination Committee, the Ward WASH Coordination Committee, Project and the Municipality WASH Unit staff as required.
- Cooperate with the Municipality and Project by providing any necessary documents, bills, receipts and vouchers for monitoring and auditing purposes.
- Ensure regular collection of water tariff and maintenance of the Operation and Maintenance Fund; at least 1% of the total estimated cost of the scheme must be collected and placed in the Operation and Maintenance Fund account in a reliable financial institution.
- WUSC shall prepare a Water Safety Plan (WSP++) after the scheme completion.
- Respect the rights of all community members to use water for domestic purposes as a priority over all other uses.

4b. Role and Responsibilities of the Municipality

The Municipality is responsible to:

- release instalment from the Municipality WASH Fund to WUSC's account timely
- provide technical backups to WUSC through the Municipality WASH-Management Committee.
- monitor the performance of WUSC as well as the quality of materials, workmanship and structures.
- monitor that the rights of all community members are respected with regards to water.
- take necessary action for the activities not conducted properly by WUSC.
- consider extending the duration of this contract upon a written request form the Municipality WASH Unit staff. However, the Municipality will not cover any additional cost of the extended period.
- provide necessary support and assistance to WUSC for successful completion of the scheme.

4.c Role and Responsibilities of the Municipality WASH Unit

The Municipality WASH Unit is responsible to:

- monitor and supervise scheme activities and ensure quality of construction and materials.
- ensure community participation in scheme implementation during monitoring visits with the support of TSU.
- Conduct scheme technical evaluation with the support of TSU.
- recommend Municipality for payments to WUSCs based on the recommendation of TSU
- ensure the scheme completion and submission of the completion report to the Municipality WASH Unit.

5. SCHEME COST AND TOTAL COST ESTIMATE

As per the design report, the total estimated cost of the scheme is NPR.

The total estimated cost and contribution sharing is as following:

SN	Description	Cash	Kind	Total	Contributions		
					Municipality	Users	
						Cash	Kind
1	External construction materials						
	1.1 Cement, rod and other						
	1.2 Pipe						
	1.3 Fittings						
	1.4 Pumps and electrical/solar parts						
	1.5 Tools						
2	Local construction materials (sand, stone, aggregate, wood etc.)						
3	Skilled labour						
4	Unskilled labour						
5	Transportation cost						
6	Recharge structures/CCA/DRR						
7	Other cost (WUSC management & scheme information board etc)						
	Total						

The Municipality may approve a revised design and estimate as per the formal on time request of WUSC in case it can be justified, e.g. due to unexpected rise in market price, changed conditions due to natural calamity etc.

6. PAYMENT SCHEDULE TO WUSC

The Municipality shall release fund from the Municipality WASH Fund to the account of WUSC on instalment basis as specified below:

First Instalment: NPR (in words rupees only),

equivalent to 30-50% of the estimated cost which belongs to the Municipality contribution part, shall be released to the account of WUSC by account payee cheque after signing the contract and on submission of proof of a bank deposit of the user's cash contribution. Submission of approval of quotation for material procurement along with agreement with the supplier must be submitted before the release of the first instalment.

Second Instalment:

NPR (in words rupees only),

equivalent to 30-50% of the estimated cost amount which belongs to the Municipality contribution part, shall be released upon submission of proof of expenditure of the first instalment or a satisfactory part of it. The instalment shall only be released after the recommendation of the monitoring team.

Last Instalment:

NPR (in words rupees only)

up to 20% will be released only after:

- evaluation report of the cost as per the work done
- completion of all activities as per CAP
- submission of public audit report
- submission of recommendation of Ward Office and Municipality WASH Unit staff
- approval of Municipality based on the third monitoring visit
- submission of proof of a bank deposit of O&M fund

All payments shall be made within two weeks of the reception of a written request of WUSC in case the necessary requirements are fulfilled. The last instalment will be paid up to 20% of the total cost based on the actual expenditure incurred.

7. TAXES

The WUSC should deduct 1.5% as TDS, while paying to the supplier. This amount will be deducted by the Municipality while paying the final instalment to WUSC.

8. AUDITING

Book keeping of all financial transactions of WUSC will be audited by the users themselves by organizing public auditing at mass meetings. Procurement of construction materials, stock of materials, and payment of skilled/unskilled labour, transportation costs, bank deposits, and in-kind contributions of users will be the main subjects of discussion. The WUSC, with the assistance of the Municipality WASH Unit staff, is responsible to organize the event. Representation of each household is expected in the meeting, however 2/3 of the total households of the scheme area must be present in the public audit (with proportional representation of DAGs and 50% women). The WUSC, with the assistance of the Municipality WASH Unit staff will update the project information board including the total scheme cost after completion of public auditing. Information will be presented in a way that is simple and easy to understand. This may include presenting in local languages where appropriate, to maximise understanding.

9. MONITORING AND SUPERVISION

Municipality will arrange monitoring visits to the scheme as per the Step-by-Step Manual. In addition, Municipality can assign its personnel to supervise the work on site at any time during the duration of the contract. Municipality personnel or monitoring team appointed by the Municipality and the Project have the right to visit the site. Municipality and Project personnel and monitoring team is entitled to have access to any information related to execution of activities under this contract.

Representatives of the Municipality WASH Unit staff and WUSC shall participate in the monitoring. They will assist the Municipality and the Project monitoring team by providing all required information and by actively helping to inspect all the work done by the Municipality WASH Unit Staff and WUSC. The views of the community members should be collected during the monitoring visits.

The Municipality monitoring team shall update a monitoring book on site, and verify it by signatures. Any disagreements between the monitoring team, Municipality WASH Unit staff and WUSC shall be recorded in the monitoring book. The findings made during the monitoring should be validated with the users. In this manner, the monitoring book/report represents conclusions accepted by the

stakeholders involved as well as issues, which need to be solved by competent authority of the Municipality.

In case Municipality and Project monitoring visit has to be repeated as a result of being provided misleading information by the Municipality WASH Unit staff or WUSC, WUSC will be required to pay the cost of such additional visits.

10. TERMINATION OF CONTRACT

Municipality has the right to terminate this contract if it is found that:

- The contract cannot be fulfilled satisfactorily due to poor performance of WUSC.
- Information provided by WUSC or Municipality WASH Unit staff is found intentionally inaccurate or misleading.
- The scheme cannot be implemented within the cost estimate or due to any other reason resulting to considerable delay of work or increase of cost.
- There is mismanagement of funds or materials.
- There is no effective contribution of community resulting in delay of work, loss of material or increase of cost.
- The WUSC fails to maintain site records, books and accounts in a proper manner.

If the contract is terminated by Municipality for a reason beyond the control of the WUSC, all the expenditure till the date of termination shall be paid to the WUSC. In addition, reasonable cost of demobilization shall be compensated. If the contract is terminated for any reason caused by the WUSC, the Municipality shall have the right to withhold the pending or remaining payments and to capture the remaining materials and tools.

11. REDUCTION OF PAYMENT

The Municipality has the right to reduce the payments in case of the activities have been modified or the scheme design has changed resulting in reduction of quality or quantity of work, or if services or materials have not been procured as per the specifications. Final instalment to WUSC shall be released based on the final evaluation of work. Therefore, final instalment may not be equal or more than the amount mentioned in this agreement in all cases.

12. AMENDMENTS OR DISPUTES

The contract parties can change this contract only in writing and approved and signed by all parties.

In case of any dispute all parties shall make all efforts to resolve it. If this is not possible the dispute will be solved as under the prevailing legal system of GoN. It is important that all parties are aware of the avenues of redress available, and where complaints can be made.

13. EXCESS FUND OR MATERIALS

Since the cost estimate is prepared on the basis of assumptions, any leftover material or construction tools at the construction site, if not specifically mentioned as returnable in the design report, shall be handed over officially to the WUSC as property of the community for the operation and maintenance of the scheme.

Any fund for scheme cost not spent as per the design report shall remain as a property of the Municipality WASH Fund. Such surplus amount shall be adjusted while making the final payment to the WUSC.

14. SIGNATURES

This contract is prepared and signed in three copies, one for each contracting party and one for Technical Support Unit of DCC:

On behalf of the WUSC:

Signature:
Name:
Position: Chairperson
Date:
Stamp of WUSC:

On behalf of the Rural Municipality/Municipality:

Signature:
Name:
Position: Chief Administrative Officer
Date:
Stamp of Rural Municipality/Municipality:

Witnessed by:

Municipality WASH Unit Chief/Focal Person

Signature:
Name:
Position:
Date:

Municipality WASH Unit Staff Member

Signature:
Name:
Position: WASH Coordinator
Date:

Annexes:

- a) Community Action Plan, dated
- b) Scheme design report, dated

16 PRE-CONSTRUCTION SEMINAR

Introduction

Once the Implementation Phase agreement is signed between the WUSC and the Municipality, WUSC will start the construction activities. The Community Action Plan (CAP) is the basis for the activities. Briefing WUSC on critical components and underlining the different responsibilities during the Implementation Phase is important to further encourage WUSC to initiate activities. Pre-Construction Seminar enables WUSC to start the materials procurement process, review CAP and mobilize the community for implementation activities.

Duration	1 day
Timing of the event	After signing the Implementation Phase agreement
Participants	WUSC members, Ward and W-WASH-CC representatives from the scheme area
Resource Person	WASH Coordinator, WASH Sub Engineer, WASH Facilitator and local resource persons
Organizer	M-WASH Unit Staff

Objectives

The main objective of the Pre-Construction Seminar is to

- Review CAP.
- Review the procurement plan, rules, guidelines and procedures.
- Inform WUSC members on key terms and conditions of the agreement.
- Prepare WUSC to execute CAP and manage scheme construction activities efficiently.
- Remind the WUSC members of their roles and responsibilities during the implementation phase.
- Review roles and responsibilities of other concerned stakeholders.
- Discuss on operation and maintenance of the scheme.
- Discuss on community mobilization and public auditing.
- Remind WUSC to keep minutes of the decisions made and other records.

Expected outcomes

After this seminar, WUSC will be

- able to implement the scheme activities (both technical and social) as per CAP.
- able to start material procurement and related logistics arrangements.
- able to review and revise the CAP if seemed necessary and follow it in scheme implementation.
- clear about the roles and the responsibilities of all stakeholders
- aware of the importance of transparency of all transactions (financial, decisions, action plan, roles and responsibilities, etc.) and providing clear information to the community

Required materials for the seminar

Agreement paper, Design estimate book, CAP, Step by Step chart, Posters, O&M guideline (summary), Social Mobilization Guideline (summary)

Pre-construction Seminar Program - major contents and session plan

Day	Contents	Time	Methods/Tools
1	Session I Introduction Participants' introduction Objectives and content of the seminar Brief review of previous trainings (preparatory phase)	1. hr	Group introduction, Step-by-Step chart
	Session II Information on key terms and conditions of the Implementation Phase Agreement Roles and responsibilities of stakeholders Discussion on producing minutes/reports of the decisions made by the users Discuss on procedures and time of public audits Review key lessons discussed during the seminar	1.5 hrs	Agreement papers
	Session III Review of CAP Main activities Duration/time Discussion on responsibilities Supervision Need of CAP revision	1.5 hrs	CAP document
	Session IV Management of construction materials, incl. store management Procurement plans, rules, procedures of non-local materials Plan to collect local materials Availability of skilled/unskilled human resources locally and rate of wage and transportation (equal wages for all, preference for paid work, work given to DAGs where feasible) Discussion on quality of materials and structures	2.0 hrs	Technical specification of materials, Procurement guidelines, WUSC Operational Manual, VMW Manual

17 TECHNICAL SPECIFICATIONS FOR MATERIALS AND WORKS

Specification of major construction materials and works

Stone: Stones should be hard, tough, clean and regular shape. Stones for masonry works shall be from a source that has been satisfactorily used for masonry purposes. Round shaped stones excavated directly from the riverbed must not be used. All faces of all stones should be given a convex surface using a rough hammer.

Aggregates: The material should be chemically inert in combination with the used cement, strong, hard, durable, of limited porosity, clean and free from adhering coatings, clay lumps and organics or other impurities that might cause corrosion of reinforced cement or impair the strength or durability of the concrete. If required, all or any portion of the aggregate must be washed thoroughly.

Coarse aggregate should be angular or rounded in shape. Aggregate with high percentage of flaky or elongated particles should be rejected. After twenty-four hours in water, a previously dried sample should not gain more than 10% in weight.

Cement: Cement shall be of Nepal standard or IS standard (markings). It shall be packaged properly with extra bag to avoid loss during transportation and storage.

- All cement used on the works should be the best quality Ordinary Portland cement of approved manufacturer and should comply with the requirements of the current NS. 49-2041 or equivalent Indian or British Standard.
- Cement should be stored in weather-proof stores with raised wooden floors.
- Store should have few windows. Care should be provided that rain water doesn't leak from the roof or get access to the cement bags from door or windows, and the bags should be protected from dampness.
- Cement must not be stored touching wall or floor. It must be at least 1 foot away from wall and stored on a raised wooden platform.
- No softened or re-tempered cement should be used and no crushing or reusing of partially set cement shall be used.

Bricks: Bricks should be well burnt, true to shape and free from cracks, lumps and foreign matter, and the structure when broken, should be uniform and compact.

Timber: Whenever applicable, Sal Wood of the best quality shall be used. In areas where Sal wood procurement is not feasible, and especially in case of the community contribution, the best locally available timber should be used.

The timber should be reasonably straight grained. All timber and assembled woodwork should be protected from weather and stored in such a way as to prevent attack by termites, insects or decay fungi.

Where timber needs to be extended into a wall and/or the ground, they should be thoroughly treated with a wood preservative.

Sand: Fine aggregate, whenever feasible, should be natural sand from river or mines. The sand shall neither be too fine nor too coarse. The sand shall be free from clay, silt, etc. Field testing of sand can be done by rubbing sand between the fingers. Sand containing silt or soil must be washed before using.

Water: Only fresh and clean water free from all deleterious matter and chemically inert should be used for mixing mortar or concrete.

Reinforcement bars: All reinforcement bars should be of Nepal standard and should be new, clean and free from loose mill-scales, dust, loose rust and coats of paint, oil, grease or other coatings. They should be stored in such a way as to avoid distortion and to prevent deterioration and corrosion.

Excavation of pipelines: The alignment of pipeline should be marked with pegs before excavation. The width and depth of the trenches for the different diameters of pipe shall not be less than:

Diameter of pipe (mm)	Width of trench (cm)	Depth of trench (cm)
16 – 50 mm	45	90
63 mm and above	60	90

Roots of trees within the distance of about 0.5 m from the site of the pipeline shall be removed. The excavated materials shall not be placed within 1 meter or half of the depth of the trench, whichever is greater, from the edge of the trench.

Ordinary Concrete: General guide to make listed grades of concrete using nominal mix.

Grade of concrete	Nominal mix (Cement:Sand:Aggregate)	Quantity of water (liters) per 50 Kg cement
M 10	1:3:6	34
M 15	1:2:4	32
M 20	1:1.5:3	30
M 25	1:1:2	26

The water cement ratio should not be more than what is specified in the table. Water proofing compounds shall be used in structures requiring water proofing.

Hand mixing: In hand mixing the aggregate and cement in the requisite proportions plus 10 percent of cement should be brought together and thoroughly mixed in dry state. The quantity of water should not be more than that specified in the table above.

Curing: All cement work including concrete must, after being placed, be suitably protected during the first stages of hardening from the harmful effects of sunshine, drying winds, heavy rain, surface water and shocks. All cement works made with normal setting cement must be prevented from drying out for not less than 7 days by continuous spraying of water or covering with damp sand or any other approved means that may be convenient and effective.

Disinfection of reservoir and pipelines: Whenever possible, reservoirs and the pipelines should be disinfected. The reservoir should be filled with water containing hypochlorite or liquid chlorine solution in such quantity and such strength as will result in a concentration of free chlorine of not less than 10 parts per million. This chlorinated water should be allowed to remain in the reservoir for a minimum period of 24 hours and then flushed out. After the pipelines have been filled and flushed out to remove all debris and contaminating matter they should be filled with chlorinated water of strength as prescribed before and left to stand for 24 hours. After, the pipelines should be flushed and refilled with source/treated water.

HDPE pipes (pipes conforming to NS 40/2042): HDPE pipes shall be supplied either as coils as given below or in lengths of five meters. The pipes may also be supplied in other lengths where so agreed between the supplier and the purchaser. The ends shall be cut at right angles to the pipe axis and shall be plugged or covered.

Pipe Size, mm	Pressure Rating, kg/cm ²	Series	Supply length, m	Inner Coil diameter, m
16	10	V	300	0.50
20	10	V	300	0.50
25	10	V	200	0.70
32	6	IV	200	0.80
32	10	V	100	0.80
40	4	III	5*	
40	6	IV	100	1.00
40	10	V	100	1.00
50	4	III	5*	
50	6	IV	100	1.25
50	10	V	50	1.25
63	4	III	5*	
63	6	IV	50	1.50
63	10	V	25	1.50
All pipes above 63 mm diameter shall be supplied in 5 m length.				

A continuous line between 2 mm to 5 mm wide must be indelibly and clearly marked along the pipe surface according to the following code:

- 2.5 kg/cm² working pressure - red line
- 4.0 kg/cm² working pressure - blue line
- 6.0 kg/cm² working pressure - green line
- 10.0 kg/cm² working pressure - yellow line

Each pipe shall also have the following information marked on it: item number; pipe size - outer diameter; series in Kg/cm²; weight; length; NS, IS, BS, etc., or relevant authoritative standards mark.

GI pipes as per NS 199-2046

The pipe shall be properly galvanised and supplied in standard lengths of 6 meters each. Each pipe shall be provided with a corresponding size of one socket at one end and a plastic ring (cover) at the other end or as agreed. Pipes with deteriorated galvanising coating shall not be accepted.

Non-standard lengths shall be approximately 3 meters in length or as required by the purchaser. One socket to be provided with each pipe at one end and a plastic ring on the other end as mentioned above. All pipes shall be marked as standard.

See table next page.

Description		Unit Weight (kg/m)					
		Heavy		medium		Light	
Inner diameter		Without socket	Working pressure, m	Without socket	Working pressure, m	Without socket	Working pressure, m
Inch	mm						
1/4 "	6						
1/3 "	8						
2/5 "	10						
1/2 "	15	1.45	551	1.22	367	0.952	168
3/4 "	20	1.9	361	1.58	216	1.41	143
1 "	25	2.97	443	2.44	288	2.01	443
1 1/4 "	32	3.84	352	3.14	229	2.58	137
1 1/2 "	40	4.43	309	3.61	201	3.25	154
2 "	50	6.17	296	5.1	204	4.11	123
2 1/2 "	65	7.9	168	6.51	95	5.8	61
3 "	80	10.1	169	8.47	110	6.81	52
4 "	100	14.4	163	12.1	111	9.89	107

18 CONSTRUCTION MANAGEMENT

Objective

This guideline provides checklists to help the planning and day to day organization of a work site operated by WUSC with the guidance of the M-WASH Unit staff.

Checklist before construction

Before construction, the following should be ensured:

- Community Action Plan
- Design report with layout of all structures such as number/location of tap stand, outlets, position and size of reservoir tanks, intake etc.
- A set of layout maps completed with several extra copies for mapping the construction progress
- A set of design drawings with all dimensions
- A fully approved and understood bill of quantity and cost estimates
- A full breakdown of voluntary contributions and paid work
- Availability of support staff from M-WASH Unit/Technical Support Unit
- Clear description of quality standards for the procurement of local and non-local materials

Checklist regarding procurement of non-local materials

Before the procurement, the following should be ensured:

- Clear list of needed tools and materials (based on the design)
- Clear description of quality standards and specifications
- Fully approved and understood bill of quantity and cost estimates
- Trained Procurement Committee
- Title wise quotation papers
- Negotiation and agreement about price
- Consensus among the Procurement Committee about price
- Well packaged materials and organized transportation schedule
- Location for off loading
- Location for storage (intermediary and final)
- Group of porters
- Rain protection for the bags of cement

Checklist regarding collection of local materials

- Fully approved and understood bill of quantity
- Well identified location and quality standards (especially for sand)
- Location for storage
- Group of porters and responsible WUSC member
- Clear schedule for the collection and transportation at the different locations of the scheme.

Checklist for storage of materials

Material requiring protection from rain and secured (padlocked) storage

- Cement bags: stored on pallets or any platform isolating from water leakage.
- Thermo crayons chucks
- Tools
- All fittings and small items

General scheduling

- All tasks clearly understood by everybody such as construction of intake, excavation between point A and point B, construction of reservoir A,....
- Daily schedule defined for each major task
- Manpower and materials allocated for each of the tasks
- One focal/co-ordination person defined for each site/task
- Start the day as early as possible
- Start every day with a short briefing for site/group leaders

Human resources

- Define clearly the tasks
- Balance the skilled and unskilled labour.
- Make sure that enough time is spent explaining what a good work is, even regarding the simplest tasks.
- Insure that the contribution log-sheets are filled up every day for everybody contributing work (paid and unpaid).
- Rotate the tasks to ensure that many people learn the different tasks (also men should carry stones, sand and mortar and women should use spade and shovel and prepare the mortar).
- Arrange the tasks in such a way that minimum cement is wasted.

Mapping, measurements and recording work contributions

Based on the works completed the measurement book (GoN format) should be updated regularly in parallel to the contribution log-sheet.

One contribution log-sheet should be used for every day at every separate work-site to allow a clear follow-up of work progress and cross-check the measurement book.

Monthly, the layout map should be updated with a colour code indicating the completion rate of the particular item (yellow 5 to 20 %, green 20 to 50 %, blue 50 to 80%, brown >80% but not completed, red fully completed).

Checklist for workers' safety

- Workers should be encouraged to wear shoes while working
- Children under the age of 15 should not be providing labour. Participation of teenagers in work should only be considered for light labour, and should not interfere with school attendance. Children should be prevented from using sharp tools for site clearance or participating in other hazardous construction work.
- Safety precaution should be constantly considered but particularly while working on:
 - Steep slope
 - Rock cutting and moving
 - Excavating sand/stone
 - Site clearance
 - Deep excavation
 - Tree cutting

Reference: Design guidelines for community based gravity flow rural water supply schemes, volumes 1-12, Revised 2004, Vol-X, Section–III: General Specification for Construction Works

19 DURING CONSTRUCTION SEMINAR

Introduction

During Construction Seminar shall be organized at the same time with the Second Public Audit and the 2nd Monitoring visit. This gives WUSC a chance to discuss with the monitoring team and the users of any challenges faced by far. The M-WASH Unit staff should organize this seminar when the implementation phase is halfway. The WUSC should be informed to bring all the necessary documents of the scheme e.g. accounts, store records, WUSC meeting minutes, CAP papers, design estimates, etc. In this seminar the WUSC will also prepare itself for the public audit and mass meeting that will be conducted with the **second monitoring** of the scheme the next day or soon after the During Construction Seminar. If particularly vulnerable groups live in the scheme area, such as disabled persons, encourage them to attend the meeting and/or gather their opinions from their houses.

Objectives of the Seminar

- Help WUSC to review and manage CAP.
- Identify and resolve scheme related problems (technical, management, social, sanitation etc.) to ensure the stipulated construction quality and timeframe.
- Request Municipality for the second instalment

Details of the Seminar

Duration: 1 day
Timing: During the second monitoring.
Participants: All WUSC members (including sub-committees, if so formed), Ward representative, W-WASH-CC members and the monitoring team (as observer)

Expected outcomes

- All disputes or problems (e.g., source dispute, structure place dispute social disputes) related to schemes settled or steps initiated for assistance from concerned authorities in this regard.
- Improvement measures planned (if needed) to ensure quality in construction.
- Users are aware of the progress of the scheme.
- Users are aware of their responsibilities and existing challenges.
- Users are aware of the financial situation.
- Previous CAP revised, if necessary.

Materials needed

Scheme design estimate, Scheme Implementation Phase Agreement, CAP, final layout, community map (to check and add information, if so required), poster papers, markers, etc.

Major contents and session plan

Days	Course contents	Time	Activities/Tools
1	Session I Introduction and objectives of the seminar Session II The WUSC presents the progress according	15 min.	Let the WUSC members discuss

	to CAP – is there any need to update or review anything in CAP? Possible problems of the scheme e.g. social, management, store, procurement, sanitation etc. Income/expenditure presentation and approval from the users.	3.5 hr.	first. Ask men and women separately about possible problems and solutions. Make sure that in the end you have the opinions of both in your records.
	Session III Discussion on WUSC's recommendations. Discuss and revise the CAP if necessary. Focus on sanitation, operation and maintenance aspects in relation to the continuity of the program. Check all the records i.e.; store book, account book, meeting minute book, check book etc. Give feedback on book keeping and record keeping of the WUSC. Check the store and quality of materials procured. Ensure they are properly stored.	2.5 hr.	One resource person will check all the records and give feedback in a written form.
	Session IV Conclusion of the day		
		15 min	

Note: The WASH Staff should record all the important issues discussed and decisions made in the seminar and include disaggregated participant data while writing the report to the Municipality. Make sure that the opinions given by women and men are noted separately.

20 PREPARATION OF O&M REGULATION & WSP++ TEAM FORMATION

Introduction

WUSC needs to prepare its Operation and Maintenance (O&M) Regulation to ensure sustainable future of services and functional scheme. Communities supported by RWSSP-WN II prepare two interlinked O&M Plans: O&M Regulation and Water Safety Plan ++ (WSP++). WUSC members get O&M and WSP ++ orientation in the Preparatory Phase Workshop. Hence, the O&M Regulation can be prepared at any time that is convenient for WUSC, but at the latest *before the 3rd monitoring and public audit*. WSP++ Team must be formed before the WSP++ training.

This paper highlights the major contents of the O&M Regulation. For a model O&M Regulation refer to WUSC operational Manual Annex 15 (in Nepali). M-WASH Unit staff will facilitate WUSC in the preparation of O&M Regulation.

O&M REGULATION is a policy paper in which the water users decide on several important aspects of scheme operation and maintenance. Major contents of the O&M regulation are:

- Introduction
- Institutional arrangements: WUSC composition, number and frequency of WUSC meetings and general assemblies, communication between WUSC and water users, reporting and coordination of WUSC
- O&M management: tools and spare parts management, tap groups
- CCA/DRR: Protection of source and scheme structures
- Village Maintenance Worker (VMW): salary, roles and responsibilities
- O&M fund: water tariff, water tariff collection and mobilization, water tariff increase, punishment for neglecting tariff payment, support from cooperatives and financial institutions
- Source and catchment area protection, scheme infrastructure protection, proper utilization of water and punishment for damaging scheme or mishandling water.
- Service level improvement and extension
- Continuation of total sanitation activities
- Supporting agencies and their roles in the Post-Construction Phase

The O&M regulation is prepared by WUSC and approved in a mass meeting during the 3rd monitoring and public audit. Presence of at least 50% women should be ensured in the mass meeting (and representative proportions of ethnic minorities and disadvantaged castes). The document must be accepted and signed by all the users. That document might be revised by the annual general assembly as needed.

Major contents of O&M Regulation (Sample)

Chapter 1 Introduction

- Introductory part of the Regulation includes:
- Name of the regulation such as “*name of WUSC* Scheme Operation and Maintenance Management Regulation “....Date ...”.
- Date of approval by mass meeting
- Definition of various terms used in the document such as WUSC, VMW, O&M, Tap Group; Users; O&M Plan, WSP++; community organization; general assembly (See WUSC manual Annex 15 ; Chapter 1)

Chapter 2 Institutional arrangements

- WUSC composition (50% women and representative proportions of ethnic minorities and disadvantaged groups and adequate geographical coverage)
- number and frequency of WUSC meetings (at least once in a month)
- General assemblies (at least once a year) including participation of all user HHs (at least 75%). In General assembly WUSC presents annual financial and progress report and gets approval from the users. Before presenting the final report to the General assembly for approval, WUSC meeting will discuss and approve the report to be endorsed in the General Assembly.
- All decisions of WUSC meetings and General Assembly will be recorded in Minute Register.
- Reporting: WUSC will report on O&M fund and scheme status to respective Municipality/DCC quarterly and as required.
- Coordination: WUSC will act as an active member of the Federation of Water and Sanitation Users' Nepal (FEDWASUN). WUSC will also coordinate with other service organisations such as Agriculture, Livestock, Soil conservation, Cooperatives, DCC, District Technical Office and District Drinking Water Supply and other offices as required.
- If there is any major damage in the scheme which WUSC cannot manage, WUSC must report to the Municipality/DCC for support.

Chapter 3 O&M management

- WUSC prepares short-term and long-term O&M plan during the WSP++ training to ensure continued water supply service. WSP++ will be part of the O&M Regulation. O&M Regulation must be updated regularly as agreed by the Annual General Assembly. All users must obey the O&M Regulation.
- After the scheme completion, all the tools and remaining fittings/pipes and other materials are collected, recorded, properly stored and managed by an assigned person. Tools and left-over materials and components should be used for the maintenance and repair of the scheme.
- All other materials which can't be use for O&M in the future can be either sold by WUSC and the money can be saved in the O&M fund or must be transferred to other schemes as per the Municipality WASH Unit direction. WUSC inspects the condition of tools at least once a year and replaces/purchases new tools if needed.
- WUSC will assign one person to store all the tools and fittings in a safe place. If VMW needs any tools for scheme O&M, he will take the tools only after signing a receipt form and returns the tools immediately after completing the works to the store. If loss and/or damage of tools found due to mishandlings, WUSC will ask to refund the amount from the respective person.
- WUSC will keep a minimum stock of spare tools/fittings which are easily breakable time to time. Once the fitting is used it must be replaced immediately. WUSC may charge individual HHs for tap fittings.
- When there is a need to purchase items for O&M purposes, WUSC meeting prepares a list of needed items. Based on the list WUSC collects quotation from three registered suppliers and purchases the materials from the lowest bidder without compromising the quality of the goods.
- For proper maintenance of the tap stands, WUSC supports the formation of female tap groups (for community taps only) with representatives of one female of each user's HHs. This group will observe the proper use of water and tap leakage and conduct replacement of broken taps, washer and other small repairs as well as clean tap stand areas. Besides, the group controls excess use of water, drainage systems and does any necessary work to protect the tap.
- Users are not allowed to use tap water for irrigation and kitchen garden if it affects other users/HHs. However, WUSC can decide to manage water for special occasion such as festival, marriage ceremony etc.
- WUSC will charge the users in the following conditions:

- If a tap is broken, tap group can purchase a new tap from WUSC paying the exact price of the new tap. If a broken tap is not replaced within two days after the damage, WUSC will close the water supply to the tap.
- If the tap is kept open when it is not used; the first time WUSC will give warning and the second time WUSC will close the water connection of this tap. For re-connection of the tap, the tap group needs to submit a request letter to WUSC with commitment not to repeat the same incident again. The tap group must also pay a fee of NPR.....
- No users can connect their personal pipe to the tap to deliver water to their own HH. If some users do this, for the first time WUSC will issue a warning letter and capture the pipe used in the tap. If repeated, water supply connection of that tap will be closed. For re-connection of the tap, the tap group shall submit a request letter to WUSC with commitment not to repeat the same incident. The user must also pay a fee of NPR.....
- If any scheme user damages any of the scheme structures, he or she must pay the amount equal to the damage including NPR as fine payment.
- If other than scheme user damages the scheme, WUSC will report to respective Municipality for compensation as per the existing GON/Province rules.
- All users must follow the rules of the O&M Regulation approved by the General Assembly. If anyone violates the O&M regulation, not perform the duties and deny for labour contribution, WUSC will charge fine per day per person NPR..... as a fine payment.
- Protection of scheme structures: WUSC need to perform various activities to maintain safe supply and safe quality of drinking water from catchment to mouth. User's participation and commitment is essential to keep the water safe. Water safety requires various works:
 - Regular cleaning of the intake; plantation in the catchment area; not allowing toilet construction above water source etc.
 - If the pipeline is exposed, WUSC must mobilize the community to bury the pipeline again and do adequate plantation to fight erosion.
 - Control of deforestation and grazing of livestock especially in landslide prone areas
 - For the protection of scheme structures such as collection chamber, distribution chamber and reservoir tanks, WUSC must mobilise the community to build retention walls and gabion boxes to bound soils and rocks between two different elevations (e.g. terraced slopes);
 - For soil conservation: afforestation in areas around landslide prone slopes; use of nets to tie the soil while afforestation is taking place.
 - Catchment protection and prevention of deforestation or other type of catchment degradation, mobilizing plantation campaigns (ensuring suitability of species) and cooperating with community forest projects/forest user groups;
 - Regulation of grazing and collection of fodder and firewood in the spring shed area
 - WUSC organizes regular sanitation and hygiene campaigns to promote safe use of water, handwashing, toilet use etc.

Chapter 4 Village Maintenance Worker (VMW)/Pump Operator

- WUSC will develop VMW selection indicators and inform the users about the selection process.
- Requirements for the VMW selection shall be as follows:
 - Scheme user
 - Age between..... to.....
 - Priority from disadvantaged group and poor HH
 - Motivation in doing social service
 - No plan for migration
- Selection Process

- WUSC will prepare a list of interested persons and interview them. Selected person will be approved in a mass meeting
- The selected person must give a written commitment of work.
- The selected person must be given an appointment letter indicating remuneration, service conditions etc.
- Salary/remuneration of VMW Mr/Ms..... is NPR.....(in words) or(kind) per year/per month or as decided by WUSC.
- Roles and Responsibilities of VMW are:
 - Participate in all WUSC meetings and inform WUSC about the scheme status
 - Proper use and maintenance of tools
 - Inspect the scheme from catchment to taps regularly
 - Inspect the fittings/valves of all the structures regularly
 - Operate small doable repair and maintenance works. For maintenance work beyond VMW capacity inform WUSC and receive external technical support for O&M
 - Clean regularly all scheme structures
 - Motivate user households for scheme maintenance
 - Protect catchment area and motivate community to start an afforestation program
 - Motivate community in sanitation program
 - Perform other duties as advised by WUSC members
 - Take a leading role in WSP++ implementation with the support of WUSC
 - Advise community to reuse tap drainage water (kitchen gardens etc.)
 - Take extra care of the catchment area in rainy seasons

Chapter 5 O&M Fund Mobilization

- WUSC collects NPR..... per tap/per households per month to be placed in O&M fund.
- All users pay water tariff in.... day of each month. If any users default to pay water tariff in a said day, additional NPR.... day rate will be charged as a delay fee of payment. WUSC provides discount for advance payment of water tariff.
- The collected water tariff funds are kept in O&M Fund operated by the WUSC Treasurer. WUSC opens a bank account to deposit water tariff funds in the O&M Fund. (the account can be the same that was opened before signing the implementation phase agreement between the Municipality and WUSC. If this bank, however, is not paying interest and/or is charging administrative fees, it is highly recommended to close this account and seek better financial institution. A cooperative can be an option)
- Due to the inflation, it is not wise to keep the O&M Fund without mobilization for long periods of time. Instead, an adequate amount should be reserved as an emergency fund for urgent repair and maintenance but the remaining funds should be mobilized in the community to gain interest.
- WUSC keeps minimum, NPR..... (in words.....) as a reserved fund for urgent repair and maintenance work. Exceeding funds can be mobilized as per the written demand by individuals/cooperatives with per month/annual interest rate of.....%.
- WUSC makes separate agreement for fund mobilization with any institution indicating terms and conditions, interest rate and time for fund mobilization
- Priority for fund mobilization is given for livelihoods income generation activities and sanitation.
- For toilet construction WUSC provides fund without interest.
- For the increment of O&M fund WUSC and users can organize fund raising activities
- If there is big damage of scheme which can't be covered by O&M fund, WUSC collects cash and/or labour contribution from the users and community organisations with the decision of a mass meeting.
- WUSC can demand budget allocation for O&M from the Municipality budget annually.
- WUSC can open a bank account under local level cooperative or community organisation if these exist at the local level and mobilize O&M fund as per the rules and regulations of these institutions.

Chapter 6 Service level improvement and extension

- WUSC is aware of the technical limitations of a drinking water supply scheme. If the number of beneficiary households increases and additional taps are connected to the scheme, the scheme will not function as per the design. Moreover, no one should connect private tap connection to a scheme which is designed for community taps.
- For any new household that migrates after the scheme completion and has not contributed any cash/kind in the scheme construction, WUSC can provide a permission to use water from an existing community tap by paying NPR.....

Chapter 7 Sanitation activities

- WUSC motivates those households that have not yet fulfilled the total sanitation indicators. WUSC can decide to provide or recommend providing a loan without interest to households for total sanitation purposes.
- WUSC manages to monitor regularly individual, households and community level environment sanitation behaviour including safe use of water. WUSC can mobilize community organisations, female health workers and triggerers for sanitation activities promotion.

Chapter 8 Miscellaneous

- Right of amendment, update and addition of clauses of the O&M regulation is only with the mass meeting of users.
- It is the duty of all scheme users to follow all decisions made by WUSC.
- All or some clauses provisioned under the legislation will be automatically cancelled if they do not comply with the existing laws and the WUSC constitution.

WSP++ team formation

Before the WSP++ preparation, the scheme users must select a WSP++ Team who is dedicated to the preparation, monitoring and verification of WSP++. Members of the WSP++ Team shall take responsibility for the implementation of activities identified in WSP++, although also other users or groups can be named responsible for implementing specific activities. The WSP++ Team must coordinate with other stakeholders to obtain the necessary resources needed in implementing the WSP++ and related activities.

WSP++ Team is selected in a mass meeting as per the following steps:

- Discuss the basis of successful WSP++ in a mass meeting and ensure the users' commitment to prepare and implement WSP++.
- Select the members of the WSP++ Team. The WSP++ Team should consist of scheme users only. The WSP++ Team should include WUSC members, users and VMWs. Other optional members (if available among the users) include representative of the Municipality/Ward-WASH-CC, women health workers or volunteers, teachers and municipality technical person.
- It is mandatory for the WSP++ Team to include the WUSC Chairperson and VMW.
- WUSC Chairperson shall be the WSP++ Team Coordinator.

21 SCHEME COMPLETION SEMINAR

Introduction

At the end of the implementation phase, WUSC will organize the Scheme Completion Seminar. The participants should include all scheme-related sub-committees (example: Procurement committee, monitoring committee etc.) members involved in scheme implementation phase. Also, any interested users, labour and other stakeholders can be invited. The Scheme Completion Seminar will be organized immediately after the WUSC has made all the final payments to all suppliers and workers, and when the WUSC has received all contributions as agreed (from the Municipality, from the users, from any other stakeholders). M-WASH Unit staff will support WUSC to organize all its bills and vouchers for the seminar.

In many cases the final monitoring as per the Step-by-Step process will be conducted at a time when it is still not possible to clear all payments and contributions to the scheme. Scheme Completion Seminar shall focus on the final financial clearance of the scheme. Scheme Completion Seminar can take one full day, or less if everything is well prepared and there are no pending issues or conflicts.

The purpose of the Scheme Completion Seminar is to verify whether the scheme is physically completed and financially cleared.

Objectives:

- To ensure that the scheme is financially cleared.
- To update financial status after receiving all the final instalments and paying all liabilities to suppliers and labours involved in the implementation phase.
- Review the users' cash and kind contributions made during implementation phase.
- Update the inventory of surplus materials after the completion of construction works.
- Sharing of learnings about the scheme implementation.

Major contents of the seminar

WUSC will present:	Important questions to participants
<ul style="list-style-type: none"> — Introduction to the objectives of the seminar & scheme status. — Compiled and properly filed bills, vouchers, receipts and updated bookkeeping. — Status of the store (remaining construction materials and tools), stock entry and management of surplus materials, tools. — Status of the final payments to WUSC from the Municipality and the Municipality WASH Fund (Governments of Nepal and Finland) — Status of the final payments by the WUSC to the suppliers and labour. — Review of users' contribution in the scheme during the implementation phase 	<ul style="list-style-type: none"> — Do all participants agree that the scheme is physically completed? — Do all participants agree that WUSC has received all contributions from the users, Municipality, and Municipality WASH Fund? — Do all participants agree that WUSC has paid all its due payments to suppliers and labour? — Are there any remaining payments to be done or any items left to physically complete the scheme? — Can the scheme be defined as financially cleared and Implementation Phase Completed?

22 WSP++ TRAINING AND PREPARATION

Introduction

RWSSP-WN II approach to water safety planning is called Water Safety Plan ++. One plus stands for O&M, and the other for climate change adaptation and disaster risk reduction. WSP++ is a tool that ensures reliable supply of drinking water of safe quality and adequate quantity with a comprehensive risk assessment and risk management approach. WSP++ is not a static plan, but is reviewed and updated continuously to consider any relevant short- and long-term O&M needs.

WSP++ helps the users to recognize water safety and functionality risks and address them proactively before disasters occur. WSP++ considers also financial sustainability helping the water users to set their water tariff on a sustainable level. Drinking water supply is a service and as paying customers, the users should be able to require for improved services: the tool contains also a Consumer Satisfaction Survey Form that helps the users to report any improvement needs and WUSC to receive feedback.

WSP++ training and WSP++ preparation is the only mandatory Post-Construction phase activity that all Phase II gravity, lift and overhead tank schemes must go through. Water safety of each scheme is under the responsibility of a WSP++ team selected in a user mass meeting. After the training, the WSP++ team has the responsibility to continuously implement, review and update the Plan to ensure both short-term and long-term functionality of the scheme.

WSP++ has six steps: 1) Formation of WSP++ Team 2) System analysis 3) Hazard assessment 4) Plan preparation and implementation 5) Plan monitoring and verification 6) Plan review and reporting. In the WSP++ training, the M-WASH Unit staff will support individual WSP++ teams to conduct a system analysis, to identify potential hazards and to plan control measures.

WUSC reviews its own capacity and the scheme status before organising the WSP++ training following the "WUSC and Water Supply Scheme Self –Assessment Format" given at the end of this chapter.

The following RWSSP-WN II guidelines give a comprehensive introduction to the WSP++ process and work as templates for WSP++ preparation:

Water Safety Planning Guideline for Gravity Schemes with Integrated Operation & Maintenance Plan and Water Tariff Calculation (2015)

Water Safety Planning Guideline for Lift Schemes with Integrated Operation & Maintenance Plan and Water Tariff Calculation (2015)

Water Safety Planning Guideline for Overhead Schemes with Integrated Operation & Maintenance Plan and Water Tariff Calculation (2015)

Objectives

As an outcome of the training, WSP++ team prepares a short-term plan for regular operation and maintenance works and a long-term plan for bigger upgrading works. WSP++ serves as a regular O&M plan considering the requirements defined in the O&M regulation prepared and approved by the water users (see 20. Preparation of O&M Regulation). If the WSP++ implementation requires investment to ensure scheme safety and functionality, WUSC can apply for Post-Construction Phase Investment support (See 23. Post-Construction Investment Agreement).

WSP++ training shall

- introduce the concept of WSP++.

- discuss factors that may affect scheme functionality and water quality including climate change and natural hazards (See 7. Orientation on O&M and WSP++ for details).
- convince WSP++ team to be proactive in the scheme protection, operation and maintenance.
- analyze the water supply system (prepare a community/scheme layout map from the catchment area to households to analyze the scheme safety and recognize potential risk factors and locations).
- test applicable water quality parameters.
- prepare WSP++ based on the risk assessment using the WSP++ format.
- discuss on the importance of water tariff collection and O&M Fund mobilization.
- convince WSP++ team on the importance of continuous implementation, review and update of the WSP++.

Expected outcomes

- WSP++ team understands the concepts of climate change and climate change adaptation, disaster risk, risk reduction and mitigation, water quality, functionality and sustainability.
- WSP++ team understands factors that may affect the water safety and scheme functionality in short- and long-term.
- WSP++ prepared with a comprehensive short- and long-term O&M Plan.
- WSP++ team committed to proactive scheme protection, operation and maintenance and capable to take actions to improve water safety and scheme functionality.
- The community will become less dependent on external help, and more capable to maintain their own infrastructure.

WSP++ TRAINING AND PREPARATION PLAN

Duration	2-3 full days
Participants	WSP++ team and selected WUSC members
Organizer	M-WASH Unit staff
Resource Person	WASH Coordinator and other M- WASH Unit staff
Required Materials	WSP++ guideline, WSP++ flipchart, O&M regulation, Water quality test kit, posters and stationeries.

Major contents and tentative session plan:

Content Day 1	Time	Learning Activities
Session I Opening Session Introduction of participants Expectations of participants Objectives & expected outcomes of the training Brief sharing about the Project and Step-by-Step	1 h	Share of expectations: Participants are given 10 minutes to discuss in pairs about their expectations of the workshop. After, each participant will introduce his/her pair's thoughts to the group.
Session II Introduction to the concepts of sustainability, functionality, climate change, climate change adaptation, natural hazards, disaster risks, disaster risk reduction, disaster risk mitigation and water safety Discussion on participants' experiences and thoughts on these issues: how do they think climate change affects their life now and in the future, what kinds of natural hazards take place in their area, what kinds of disasters do they remember, what kinds of hazards are threatening their scheme, what kinds of disasters these hazards might cause, how can they prevent or mitigate these disasters, what can contaminate water, what kind of consequences can contaminated water have, how can water quality be improved/maintained.	1.5 hrs	The concepts are explained to the participants using posters, WSP++ flipchart and/or PowerPoint. Discussion on the topics and experience sharing.
Session III Introduce the Project WSP++ concept, explain why it is important to protect water all the way from the catchment area to the mouth, explain water quality parameters and how they can be tested, give examples of activities that can be done to improve water safety, explain spring shed management concept and how it can help to protect the water and improve the source yields. Introduce the WSP++ steps and expected outcomes of the WSP++ process.	1.5 hrs	Presentations and discussion. Show WSP++ guideline and let participants familiarize with it. Share the result of the water test conducted in the planning phase (feasibility study). Discuss on the actions that WUSC should take to either improve or maintain the result. Discuss on spring shed management needs of the scheme. Is there a need to include recharge structures in the scheme? What kinds of actions could be taken to protect the scheme from water catchment area to tap? Is there a need for tree plantation, check dams etc?
Session V Analysis of the Water Supply System: list and analyse all the scheme structures, draw community/scheme layout map including all	2-3 hrs	Depending on the schedule, conduct the required water quality tests latest during the field visit. If the schedule is tight, the test can be conducted

scheme components/define water catchment area, source characteristics and land use. This exercise is done with the help of WSP++ guideline and will most probably require field visit.		already earlier so that the results are available the following day for the analysis.
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Content Day 2	Time	Learning activities
Session I Conduct risk assessment using the WSP++ guideline template and the scheme layout/community map as a basis for the analysis. This includes identifying and analysing any direct or indirect risks that might affect safe water supply. Consider both current and potential future risks including precipitation pattern, discharge variability and changes in land use and in population. This exercise will most probably require a field visit.	2h	Consider also the water quality test results in the analysis.
Session II Prepare WSP++ and a monitoring plan. Discuss any required control and mitigation measures to minimize risks and to adapt to changes in the scheme area. Prepare short-term and long-term plans using the WSP++ guideline template.	1 h	See templates and details in the WSP++ guidelines.
Session III Discuss the way forward: how to conduct the continuous monitoring, reviewing, updating and reporting of WSP++. Introduction to the Post-Construction Investment Support.	1 h	
Session IV Discuss the importance of water tariff collection and different ways of O&M Fund collection and mobilization for scheme functionality and sustainability. Present the Consumer Satisfaction Survey Form and how to use it.	1 h	
Session V Closing session Feedback and the way forward Clarify that this has been the last training in the Step-by-Step process and now the community must operate the scheme on their own.	30 min	Repeat the exercise of the beginning of the day but now the participants are given 10 minutes to discuss in pairs about their learning outcomes/feedback of the workshop. After, each participant will introduce his/her pair's thoughts to the group.

WUSC & WATER SUPPLY SCHEME SELF-ASSESSMENT FORMAT

Scheme name: _____

Name of the Municipality and ward/s: _____

Scheme financial completion date: _____ (requirement for PoCo phase)

Format filling date:/...../.....

1. Number of beneficiaries (population and households) – check if any changes compared to the tables in the Step-by-Step monitoring formats)

Number of beneficiaries	Households	Female	Male	Total population
Dalit				
Adibasi/Janajati				
Disadvantaged Tarai				
Religious minorities				
Others				
Total				

2. Overall scheme functionality and service level (tick)

Estimate the scheme functionality	Fully functional	Needs minor repair
	Needs major repair	Needs rehabilitation
	Closed down	
Estimate the water safety	Good, no possibility of contamination	Moderate, likely to be contaminated
	Poor, high chances of contamination	Very poor, contaminated and intolerable
Quantity design flow of the scheme		
How many months a year the scheme delivers the design flow:		
How many months a year there is water in the source/s:		
Maximum water fetching time from the nearest tap stand in minutes:		

3. WUSC representation

WUSC composition	Dalit		Janjati		Religious minorities		Disadvantaged Terai		Other	
	F	M	F	M	F	M	F	M	F	M
Chairperson										
Vice-chair										
Secretary										

Treasurer										
Members										

4. WUSC representation (tick yes or no)

Is there about 50% of women in WUSC?	Yes	No
Is there proportionate representation of all ethnicities/castes?	Yes	No

5. WUSC registration and activity (tick)

Is WUSC registered?	Yes	No
IS WUSC having meetings regularly as per the statute?	Yes	No
Final public audit of the implementation phase held?	Yes	No

6. Village Maintenance Worker / pump operator (tick one or mark the number)

Is there VMW/pump operator working in the scheme?	Yes	No
If yes, how many? (mark the number)	Female:	Male:
Have VWM/pump operator received training?	Yes	No
Is VMW/pump operator paid?	Yes	No
If yes, how much (per VMW/pump operator per month)?		
If no VMW/pump operator in the scheme, is WUSC ready to appoint?	Yes	No

7. Operation and Maintenance fund (tick or mark the number)

O&M fund and maintenance fund (tick or mark the number)			
Has the scheme O&M fund?		Yes	No
If yes, how much as of today?			
Is O&M fund used for repair and maintenance?		Yes	No
Where O&M fund is kept as of today: (tick relevant ones)			
Kept by WUSC in cash	Kept in bank	Mobilized in the community	Kept in cooperatives

8. Water Tariff (tick or mark the number)

Is water tariff collected	Yes	No
If yes, how much? (mention per HH per month or per unit)		
If not water tariff, is WUSC ready to set a tariff?	Yes	No

10. Disaster risks		
Is there a risk of landslides in scheme area?	Yes	No
Is there a risk of flooding in scheme area?	Yes	No
Is there source depletion in the scheme?	Yes	No

11. Other relevant issues to be presented in the WSP++ training (Functionality problems, conflicts etc.)

23 SAMPLE POST-CONSTRUCTION INVESTMENT AGREEMENT

..... Municipality



**POST-CONSTRUCTION PHASE
AGREEMENT**
Fiscal Year

Scheme name:
Ward:
Households:
Population:
Duration of Agreement: From To
Date of Agreement:

1. BACKGROUND

This agreement is signed to ensure sustainable operation and functionality of the (*Name of the scheme*) scheme completed on (*date*).

The objective of the Post-Construction investment support is that at the end of the Post-Construction phase the Water Users and Sanitation Committee will have a technically fully functional scheme with immediate water safety related works completed.

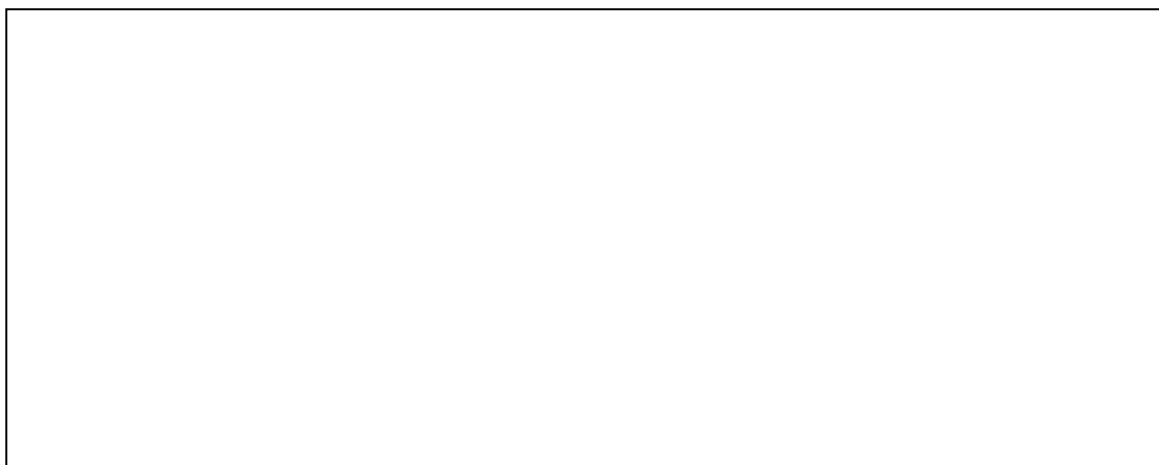
2. SIGNING PARTIES

The agreement is signed between:

- A. Municipality (referred as "Municipality" in this agreement)
- B. Water Users and Sanitation Committee (referred as "WUSC" in this agreement)

3. SCOPE OF AGREEMENT

Under this agreement, the following Post-Construction activities are carried out based on the prepared Water Safety Plan ++.



4. DURATION OF AGREEMENT

The agreement period is effective from to

5. ROLE AND RESPONSIBILITIES OF DIFFERENT STAKEHOLDERS

A. WATER USERS AND SANITATION COMMITTEE (WUSC)

WUSC acts as an executing body representing the beneficiary community. WUSC is responsible for all Post-Construction works carried out in the scheme area such as procurement of construction materials, maintaining the stock of materials, paying for labour and transportation and managing the kind contribution by users. WUSC role and responsibility under this contract shall be, not limited to as following:

- Complete timely and with high performance all activities listed in this agreement.
- Manage scheme level procurement based on the Procurement guidelines provided by RWSSP-WN II.
- Maintain good book keeping and financial transparency.
- Monitor all activities on regular basis in a participatory way.

- Organize public audits and get public approval for all expenditures.

B. MUNICIPALITY WASH UNIT

- Support, monitor and supervise all the activities listed in this agreement to ensure the quality of materials, construction and all the procedures as per the RWSSP-WN II guidelines.
- Support WUSC to ensure timely completion of the activities listed in this agreement.
- Facilitate public auditing meetings.
- Support WUSC in account keeping, store recordings, preparation of income expenditure statements and financial clearance of the Post-Construction activities.
- Ensure proper recording of WUSC and mass meeting decisions.
- Recommend WASH MC to release instalments to WUSCs.
- Monitor all the works and report to WASH MC on all relevant issues.

C. MUNICIPALITY

- Release fund to WUSC account in instalments as specified in this agreement.
- Ensure timely payment to WUSC.

The following Municipality WASH Unit human resources will support WUSC in timely and high-quality completion of the Post-Construction activities listed in this agreement:

Sn	Name	Position	Duration
1		WASH Coordinator	
2		WASH Facilitator	
3		WSST/Asst. sub engineer	

6. COST ESTIMATE OF THE POST-CONSTRUCTION WORKS

As per the design estimate, item-wise estimated cost of the activities implemented within this Post-Construction Agreement:

Item	Estimated cost (NPR)

As per design estimate for the Post-Construction phase, total cost of the Post-Construction investment is NPR.....(in words Nepalese Rupees only).

The total cost is covered as following:

Government of NepalNPR
Government of Finland NPR
Municipality NPR
Total Municipality WASH Fund NPR
Users Kind NPR
Users Cash NPR

7. PAYMENT SCHEDULE TO WUSC

Municipality shall release fund from the Municipality WASH Fund to the account of WUSC in two instalments.

The first instalment, 50 % of the total budget, will be released after signing this Post-Construction Investment Agreement between the Municipality and WUSC. The final instalment, 50% of the total budget, will be released after a monitoring team consisting of representatives of both the Municipality and the Project have monitored the scheme, participated in the public audit and submitted their approving monitoring report to the Municipality WASH Unit.

First Instalment:

NPR (in words Nepalese Rupeesonly), equivalent to% of the cost estimate amount (excluding kind), shall be released to the WUSC account by account payee cheque after signing this agreement. Submission of approval of quotation for material procurement along with agreement with the supplier should be submitted before the release of the first instalment.

Second Instalment:

NPR (in words Nepalese Rupeesonly) up to 50% will be released only after:

- evaluation report of the cost as per the work done
- completion of all the activities as per the Post-Construction action plan
- submission of public audit report
- submission of recommendation by the monitoring team

All payments shall be made within two weeks of the receipt of a written request of WUSC if the necessary requirements are fulfilled. The last instalment will be paid based on the actual expenditure incurred.

8. AUDITING

Municipality WASH Unit and scheme users will audit book keeping of all financial transactions of WUSC in a public audit. Procurement of construction materials, stock of materials, and payment of skilled/unskilled labour, transportation cost, bank deposits, and kind contribution of users will be the main subjects of discussion. WUSC in assistance of the Municipality WASH Unit staff is responsible to organize the event. Representation of each user household is expected in the meeting, however, 75% of the total number of households of the scheme area may finalize the auditing. WUSC in assistance of the Municipality WASH Unit staff will update the project information board including total scheme cost after the completion of the public auditing.

9. MONITORING AND SUPERVISION

The Municipality WASH Unit will arrange joint monitoring visits to the scheme. The final (IV) monitoring which takes place after the completion of the construction works is mandatory but the number of monitoring visits is not limited and should be decided case by case. In addition, the Municipality WASH Unit can assign its personnel to supervise the work on site at any time during the duration of the contract. The Municipality WASH Unit staff or joint monitoring team appointed by the Municipality shall have the right to visit the site at any time. The Municipality WASH Unit personnel

and monitoring team is entitled to have access to any information related to the execution of activities under this contract.

Representatives of the Municipality, the Project and WUSC shall participate in the joint monitoring. The WUSC will assist the monitoring team by providing all required information and by actively helping to inspect all the work done.

The monitoring team shall produce a monitoring report at site, and verify it by signatures. Any disagreements between the monitoring team and WUSC shall be recorded in the monitoring report. The findings made during the monitoring should be validated with the users. The monitoring report represents conclusions accepted by the stakeholders involved as well as issues, which need to be solved by competent authority of the Municipality.

In case the monitoring visit must be repeated because of being provided misleading information by WUSC, WUSC will pay the cost of such additional visits.

10. TERMINATION OF AGREEMENT

Municipality has the right to terminate this Agreement if it is found that

- The Agreement cannot be fulfilled satisfactorily due to the poor performance of WUSC.
- Information provided by WUSC is found to be intentionally inaccurate or misleading.
- The scheme cannot be implemented within the cost estimate or due to any other reason resulting in considerable delay of works or in increase of cost.
- There is misappropriation of funds or materials.
- There is no effective contribution of the community resulting in delay of works, loss of materials or increase of cost.
- WUSC fails to maintain site records, books and accounts in a proper manner.

If the agreement is terminated by the Municipality for a reason beyond the control of WUSC, all the expenditure till the date of termination shall be paid to WUSC.

If the agreement is terminated for any reason caused by WUSC, the Municipality has the right to withhold the pending or remaining payments and to capture the remaining materials and tools.

11. REDUCTION OF PAYMENT

The Municipality has the right to reduce the payments if particular activities have not been undertaken by as specified, the activities have been modified or the design has changed resulting in reduction of quality or quantity of work, or services or materials have not been procured as per the specifications. Final instalment to WUSC shall be released based on the final evaluation of the work. Therefore, final instalment may not be equal to the amount mentioned in this agreement.

12. AMENDMENTS OR DISPUTES

The signing parties can change this agreement only in writing by all parties.

In case of any dispute all parties shall make all efforts to resolve it. If this is not possible the dispute will be solved under the prevailing legal system of Nepal.

13. EXCESS FUND OR MATERIALS

Since the cost estimate is prepared based on assumptions, any leftover material or construction tools at the construction site, if not specifically mentioned as returnable in the design report, shall be handed over officially to WUSC as property of the community for the operation and maintenance of the scheme.

Any funds not spent as per the design report shall remain as a property of the Municipality WASH Fund. Such surplus amount shall be adjusted while making the final payment to WUSC.

14. SIGNATURES

This contract is prepared and signed in two copies, one for each signing party:

On behalf of the WUSC:

Signature:

Name:

Position:

Date:

On behalf of the Municipality:

Signature:

Name:

Position:

Date:

Witnessed by RWSSP-WN II:

Signature:

Name:

Position:

Date:

ANNEXES: A) Community Action Plan of Post-Construction activities, dated
 B) Design report of Post-Construction activities, dated