

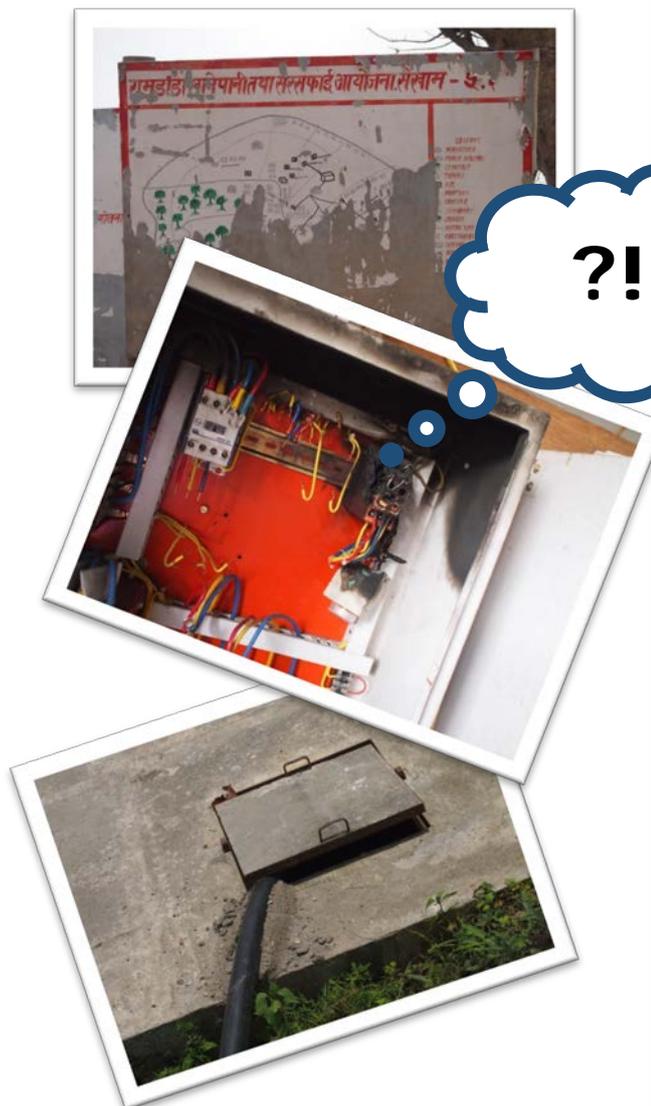


Rural Water Supply
and Sanitation Project
in Western Nepal
Phase II

2015

POST-CONSTRUCTION GUIDELINES

for RWSSP-WN water supply schemes and
VDC & District level activities



Project Support Unit
FCG International
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Water Supply Schemes and
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List of Abbreviations

DDC	District Development Committee
DDF	District Development Fund
DMC	District Management Committee
D-WASH-CC	District WASH Coordination Committee
D-WASH Unit	District WASH Unit of DDC
GESI	Gender Equality and Social Inclusion
HH	Household
HRBA	Human Rights-Based Approach
NGO	Non-Governmental Organization
O&M	Operation and Maintenance
ODF	Open Defecation Free
POCO	Post-Construction Phase
RVWRMP	Rural Village Water Resources Management Project
RWSSP-WN	Rural Water Supply and Sanitation Project in Western Nepal
SO	Support Organisation
SP	Support Person (individual hired by DDC)
TOT	Training of Trainers
VDC	Village Development Committee
V-WASH-CC	VDC WASH Coordination Committee
VMW	Village Maintenance Worker
WASH	Water supply, sanitation and hygiene
WSP	Water Safety Plan
WUSC	Water Users and Sanitation Committee

Foreword

The Post-Construction Guidelines comprise the activities and their working modality to be carried out during the post-construction phase of drinking water supply schemes. The Guidelines include post-construction activities at district, VDC and scheme level thus creating synergies between the different levels and promoting the enabling environment creation for the post-construction activities in district and VDC levels. The main user of the Guidelines are the District WASH Units. Even though these guidelines strongly focus on water supply schemes, they also concern sanitation and hygiene as an integrated WASH approach. After all, the functionality of water supply schemes directly links to achievements made in sanitation and hygiene: lack of water can undermine both sanitation and hygiene.

The Post-Construction Guidelines are developed based on the learnings from the Step-by-Step approach for the rural water supply scheme implementation applied in the Rural Village Water Resources Management Project (RVWMRP) and Rural Water Supply and Sanitation Project in Western Nepal Phase II (RWSSP-WN II). The Post-Construction Guidelines is not a standalone document but rather, supported by the RWSSP-WN II Project Document, Nepal National Sanitation and Hygiene Master Plan (2011) and the various guidelines and other materials prepared by RWSSP-WN Phases I and II:

- ✓ WASH Implementation Guidelines (WASH-IG)
- ✓ HRBA & GESI Strategy & Action Plan
- ✓ Step-by-Step Manual
- ✓ Scheme Monitoring Book - Formats for Water Supply Scheme Monitoring as per the Step-by-Step Approach
- ✓ Water Safety Planning Guidelines for Gravity, Lift and Overhead Schemes with Integrated Operation & Maintenance Plan and Water Tariff Calculation (three technology-wise guidelines)
- ✓ WUSC Operational Manual
- ✓ Recharge Ponds Handbook
- ✓ Solar Lift Scheme O&M Manual
- ✓ VMW Manual
- ✓ District Strategic WASH Plans (DSWASHP)
- ✓ Village WASH Plans (V-WASH Plan) and related (updating) guidelines.

The Post-Construction Guidelines are constant work in progress. Any feedback on the contents of these Guidelines are continuously welcomed. This version will be finalized towards the end of the RWSSP-WN II based on lessons learnt over the coming years in an effort to make this approach truly replicable.

RWSSP-WN Phase II

Pokhara, Kaski District Nepal

December 2015

1 Background to Post-Construction Phase

Rural Water Supply and Sanitation Project in Western Nepal Phase II (RWSSP-WN II) works in 14 districts of Western and Mid-Western regions of Nepal. This bi-lateral project supported by the Governments of Nepal and Finland aims to improved health, socio-economic status and fulfilment of the equal right to water and sanitation for the inhabitants of the Project area. Drinking water projects are supported in 12 districts: the aim is that at the end of Phase II 150.000 previously unserved people benefit from access to improved water supply. It is estimated that RWSSP-WN II will support more than 500 rural water supply schemes by the end of the project period.

Sustainability of the water supply schemes is a key challenge in Nepal and has challenged the government target of universal coverage by 2017. National Management Information Project (NMIP) data (2014) of Government of Nepal reveals that only 25% of the schemes are properly functioning and 36% of schemes need minor repair. It means that the service from remaining about 40% of the schemes is not guaranteed. It proves that current overall water coverage of 84% may come down to around 50% of total population. This highlights the need to plan beyond the physical completion of the schemes, which is manifested in this guideline in the form of post-construction package.

Table 1 Functionality status of water supply schemes in Nepal

Sn	Status	# Schemes	%
1	Properly functioning	10,466	25%
2	Need minor repair	14,875	36%
3	Need major repair	3,791	9%
4	Need Rehabilitation	8,158	20%
5	Need Reconstruction	3,544	9%
6	Non-Re-functional	371	1%
Total		41,204	100%
Source: NMIP Report 2014			

Operation and maintenance (O&M) has been lacking in many community managed water supply schemes in Nepal. Experience shows that true and meaningful community participation is the cornerstone of long-term sustainability and functionality of community-managed projects. Therefore, RWSSP-WN II has developed a comprehensive Step-by-Step procedure to involve the beneficiary community in planning, preparation, implementation, monitoring and evaluation, and in decision making. Participation is entwined in every step of the process, highlighting the role of the water users in activities such as scheme design and layout, procurement of materials, construction, maintaining financial records and public audits. Community participation and related capacity building of Water Users and Sanitation Committees (WUSC) lays the foundation for sustainability of the scheme. The institutional strengthening of WUSC is continued in the *Post-Construction (PoCo)* phase, along with improving the linkage with government and private sectors for support and services.

2 Approach to Post-Construction Phase

The post-construction phase is the last phase in the Step-By-Step process. It can be applied also in the schemes that have not gone through the Step-By-Step process, such as those supported by RWSSP-WN Phase I and those Phase II schemes where the scheme is essentially only about rehabilitation, repair and/or WUSC capacity building that is principally post-construction support. For these schemes the technical teams need to work out the details in close collaboration with WUSCs.

The post-construction activities are mainly targeted at gravity and lift schemes, on the basis that these are piped water supply schemes where failure in one part can affect the entire scheme. Besides the full set of post-construction activities in community managed schemes, improved sanitation, point-of-use treatment and O&M calendar preparation and monitoring orientation shall be organized to rain water harvesting, point source improvement and small gravity (less than 3 taps) schemes.

Figure 1 below shows the components of the post-construction package. Since this phase should be tailored to address the unique situation in each district and scheme, these items are listed here as a menu of options. Not all are relevant in all places, however, in the scheme level the formulation of O&M regulation and Water Safety Plan (WSP++) with integrated O&M plan and necessary technical capacity development are necessary in all community managed schemes. Furthermore, the post-construction phase is not only about the scheme and WUSC specific activities. It is also about the post-construction support services, linking both to governmental and private sector actors and capacity development in district and VDC levels as shown in the below figure.

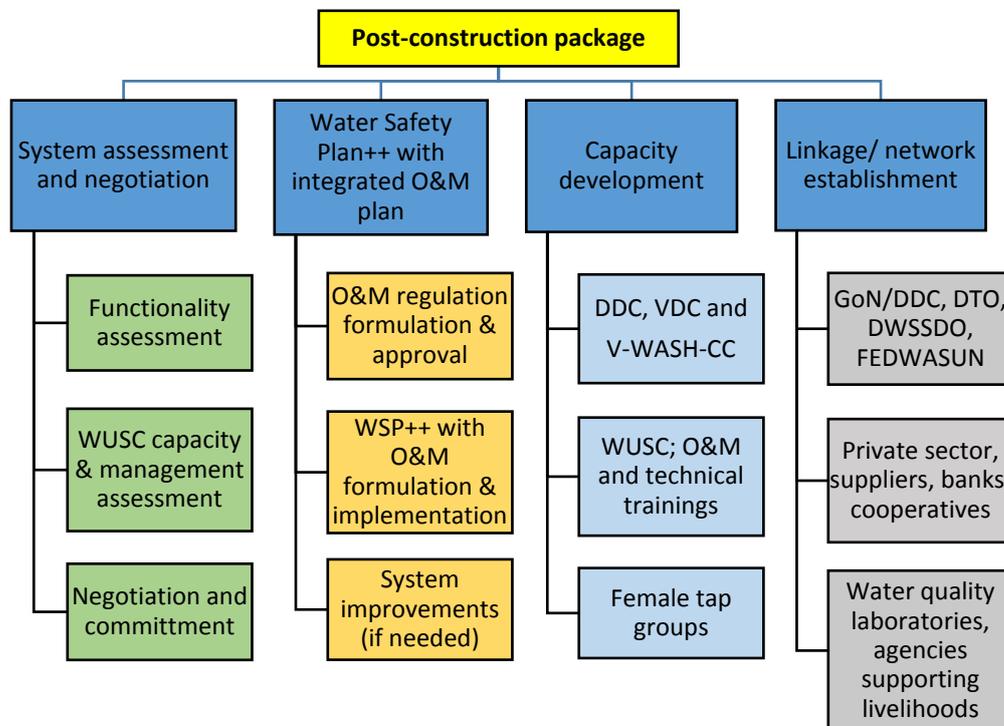


Figure 1 Components of the post-construction phase

Post-Construction Guidelines

Given that the rural water supply schemes are community-based, much of the effort at this point aim at capacitating the WUSCs and water users in basic elements of sustainable operation and maintenance (O&M). This includes networking with government and private service providers for future support and services. A key component of the post-construction approach is the Water Safety Plan (WSP++), in which the concept of safety incorporates provision of safe supply as well as safe quality of water. Service level standards concern both water quantity and water quality, as well as reliability of service; WSP++ is the main tool for sustaining these standards in future. Climate Change Adaptation (CCA) and Disaster Risk Reduction (DRR) are mainstreamed in the WSP++ by giving equal weight on environmental and climate induced risks and watershed issues.

The Post-Construction Guidelines are in line with the human rights-based approach (HRBA) to WASH. It incorporates issues related to meaningful participation of users, contribution, employment generation, equal opportunities and benefit sharing. The differences in between the planning & implementation phases and the post-construction phase are demonstrated in Table 2.

Table 2 Focus of planning & implementation vs. post-construction phases

Planning & implementation phases	Post-construction phase
Community participation	Community owns; sense of ownership; community has to realize the importance of the activities, and is alone responsible for implementation (technical and financial support can be provided on request)
Demand-responsive approaches	User satisfaction – people get good quality and adequate services and are willing to pay for these
Empowerment and capacity strengthening: WUSC procures & develops transparent & accountable practices	WUSC is transparent & accountable; finance and tariff collection at adequate level for basic cost recovery for O&M and for replacement/extensions/’most likely cases that will need to be fixed’
Appropriate technical design, GESI aspects when preparing detailed technical layouts. Accessible designs for all users (elderly, children, differently abled persons)	Clear roles & responsibilities (WUSC, VMW, V-WASH-CC) in O&M of schemes Improving the accessibility
Construction quality, location of the structures & related environmental considerations & works	Water Safety Plan with O&M Plan – implemented and annually reviewed, pays attention to environmental- and climate-induced hazards and watershed; Linkages to government and private sector service providers and other VDC/district level processes
Poverty-focus; serving-the-unserved; inclusion	Fair setting of water tariffs (affordable for all)
Gender equality and social inclusion (GESI) on Participation and benefits sharing	GESI on capacity enhancement. Formation and training of female tap groups. Capacity building and participation of females in all activities.
Training step-by-step, learning-by-doing, on-the-job training, skill development	Continued learning-by-doing, refreshers, peer-networks (e.g. among pump operators, VMWs)

3 Objectives and Outcomes of the Post-Construction Phase

The overall objective of the post-construction phase is to ensure sustainable and quality water services provision through appropriate operation and maintenance system and WUSC management practices. At this time, all schemes supported by the project fund in Phase I and II should be fully functional and provide improved water supply services to all.

The post-construction phase will ensure that the project indicators, against which the RWSSP-WN II progress and impact is measured, are fulfilled. The indicators that are directly linked with the post-construction phase outcomes, their baseline value and target are presented in the table below. In the scheme level, the institutional capacity of WUSC is the key determinant for scheme functionality in future. All WUSCs must have accountable and functional O&M system at the scheme level with O&M regulation, public audits, regular WUSC meetings and annual general assemblies.

Table 3 RWSSP-WN II indicators related to post-construction phase

	Indicator	Baseline	Target
Purpose Indicators	All water supply schemes supported by the project provide functional, improved and safe water services	0 for Phase I & II (none of the schemes have WSP)	100% of Phase I & II supported gravity & lift schemes
	District s' WASH programmes capable to provide support to VDCs, WUSCs and other community groups on a responsive basis in scheme planning, implementation and O&M, showing consistently improving the annual performance.	0 (no annual performance evaluation done)	100% of core districts
Result Indicators	Safe water: # of water supply schemes supported by Project fund in Phase I & II apply a Water Safety Plan with CCA/DRR component.	0 for Phase I & II schemes	100% of Phase I & II gravity & lift schemes
	Institutional capacity: # of WUSCs supported by Project fund in Phase I & II are inclusive and capacitated to provide sustainable services, fulfilling the following criteria: a) WUSC is registered and has statute. b) O&M plan made and applied c) Adequate water tariff defined and collected d) VMW trained and working as needed e) WUSC has proportional representation of caste/ethnic/social groups and 50% women.	0 for Phase I & II schemes Phase 1 baseline: 72% reg./56% statute 39% (made) 51% (any tariff) 46% train/78% work 40% women	100% (approximately 600 WUSCs, including 367 Phase I gravity and lift schemes)
	Improved services: # of water supply schemes supported by the Project fund in Phase I & II provide improved water supply services (Service Level 1 for quantity, access, reliability and water quality) for previously unserved households in programme VDCs.	0 for Phase I & II (Service level not assessed)	100%

Capacity building in the post-construction phase is not limited to WUSC and VMW alone. Other key stakeholders for sustainable water services are V-WASH-CC, D-WASH-CC, DDC, DTO and Federation of Drinking Water and Sanitation Users' Nepal (FEDWASUN), who should enable the post-construction services for WUSCs in future. In addition to local government and line agencies, it is also necessary for the WUSCs to develop networks with financial service institutions and private sector service providers (i.e. solar component and pump suppliers) as maintenance agencies and water quality monitoring agencies.

Figure 2 depicts the key stakeholders and expected outcomes at three levels: A. District, B. VDC and C. Scheme. All these are interlinked horizontally, but do not necessarily depend on each other but rather, are lines of action of their own right.

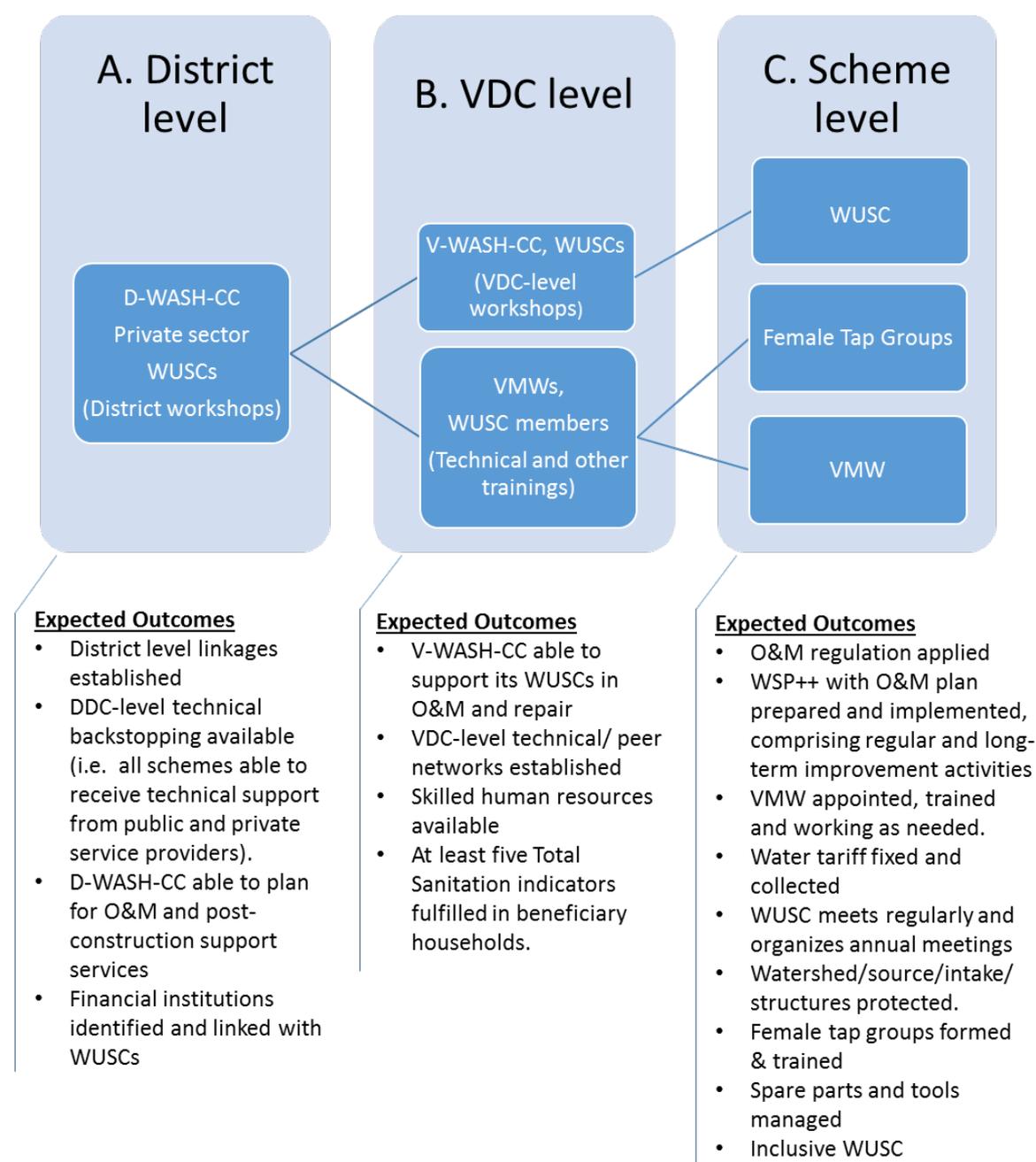


Figure 2 Post-construction phase lines of action and expected outcomes

4 Process and Activities of the Post-Construction Phase

Planning and funding of post-construction activities

All costs required for post-construction phase activities in district, VDC and scheme levels shall be covered from DDF. The activities are clearly identified and budgeted in the respective district annual work plan for each fiscal year. Support Persons (SPs, hired by DDCs to work in the District WASH Unit) shall support and facilitate post-construction activities. District Management Committee (DMC) may hire additional human resources if needed. The Project supports on post-construction Training-of-Trainers to SPs as per request of the district. The post-construction phase agreement between WUSC, DDC and VDC shall be done only if there are investment (hardware) needs for the scheme. Investment needs may arise from WSP++, i.e. if implementation of improvement or CCA/DRR activities requires external financial investments. All software activities, such as post-construction workshops, trainings and WSP++ preparation, can be conducted without post-construction agreement. However, even without the formal agreement, WUSC must be fully committed to the objectives of this phase.

Duration of scheme level post-construction phase

The post-construction phase in the schemes starts immediately after completion of the implementation phase if possible. Once all construction works are completed, final payments are cleared and public audit is done, the post-construction phase begins. The duration of the post-construction phase shall be defined as per the site specific situation and size of the scheme. The period shall be for preparing and planning for the post-construction activities with communities and its successful implementation with public audit. During this period it is assured that the scheme will run smoothly with an appropriate operation and maintenance system prepared by the users, and WUSC will continue WSP++ implementation as their regular activity.

Monitoring and evaluation

District level monitoring of post-construction activities will be done mainly through the district level post-construction follow-up workshop. DMC is responsible to follow the implementation of post-construction activities in the district level. DWASH Unit is responsible to update the scheme and VDC data in the district WASH MIS in terms of prepared water safety plans and other needed information. RWSSP-WN II applies also the Annual Performance Assessment of the district WASH programmes as defined in the MoU between the DoLIDAR and respective DDC on implementation of RWSSP-WN II.

VDC level monitoring will be done through the VDC wide WASH monitoring (annual) carried out by the Monitoring Task Force appointed by DMC (see WASH-IG). VDC wide WASH monitoring will be basis for planning the VDC phase-out from the RWSSP-WN II support. The VDC level post-construction follow-up workshop serves as platform to monitor the progress of post-construction activities in the VDC. DWASH Unit is responsible for that.

Scheme level monitoring will be carried out during the post-construction monitoring (monitoring IV) as per the Step-By-Step Approach (*see Step-by-Step Manual and Scheme Monitoring Books*). The aim is to ensure achievement of the intended indicators in the scheme level (see the expected outcomes in Figure 2). Post-construction monitoring will be

done by the monitoring team as defined in the Monitoring Book after implementing the activities, both software and/or hardware (in the agreement).

Post-construction phase levels

This chapter describes briefly the levels as in the post-construction step-by-step chart (Figure 3). Chapter 5 includes activity specific Papers. All should be planned and budgeted annually by the districts in their work plans, seeking for the best fit for their existing situation. In some cases, scheme-level issues are brought together into a VDC level event; for instance book keeping related training can be organized for a number of WUSCs within a VDC or even in the district level. All activity lines in district, VDC, and scheme levels are ideally implemented at the same time, hence complementing each other and building linkages. However, it may not be possible in all cases and therefore even if some action is not done, for instance at the district level, it should not stop the action in the VDC or scheme levels. See below the levels:

A. District level: The aim is to conduct the events at least once in each district, with follow-up by District WASH Units and Project Support Unit (PSU) on action items presented in these events. The main objective of the district level events is to ensure the future support to VDCs and WUSCs (i.e. technical backstopping, access to finance and technical expertise) from local government/D-WASH-CC and private sector actors.

B. VDC level: The aim is to conduct the events as planned in the first VDC level post-construction workshop held with WUSCs and V-WASH-CC, and as identified for support in each district annual work plans. The outcome is to have an active V-WASH-CC/ VDC that is aware of its role in supporting both sanitation and water supply related sustainability. V-WASH-CCs and its ward-wise representatives (as in Ward Citizen Forums) advise VDC on providing annual trainings and allocating funds for minor repairs and capital maintenance expenditure, in addition to contributions to new schemes.

C. Scheme level: At the scheme-level the main target groups are the individual WUSCs, their VMWs, and Female Tap Groups. The assumption is that not all schemes need the same post-construction phase support, hence, the very first step is the WUSC and scheme self-assessment (C.1) done by the WUSCs themselves. This feeds into the very first event at the VDC-level (B.1).

Scheme type I: overhead tank schemes, lift schemes, medium or large sized gravity schemes (3 or more taps): Complete package of post-construction activities is implemented in these schemes. Additional technical trainings and exposure visits can be organized as necessary based on the scheme assessment and post-construction workshop.

Scheme type II: rainwater harvesting schemes, point source improvement and very small gravity schemes (less than 3 taps), tube wells: Such schemes are either managed by households or small community so limited post-construction activities shall be implemented at scheme level. Orientation on O&M including roof/gutter/jar/PSI cleaning schedule, flushing of first rain water, and point of use treatment shall be organized (designed as case-by-case). In addition, RWH O&M poster shall be provided and orientation for females of each household. The WUSC & scheme self-assessment does not apply to the Scheme type II.

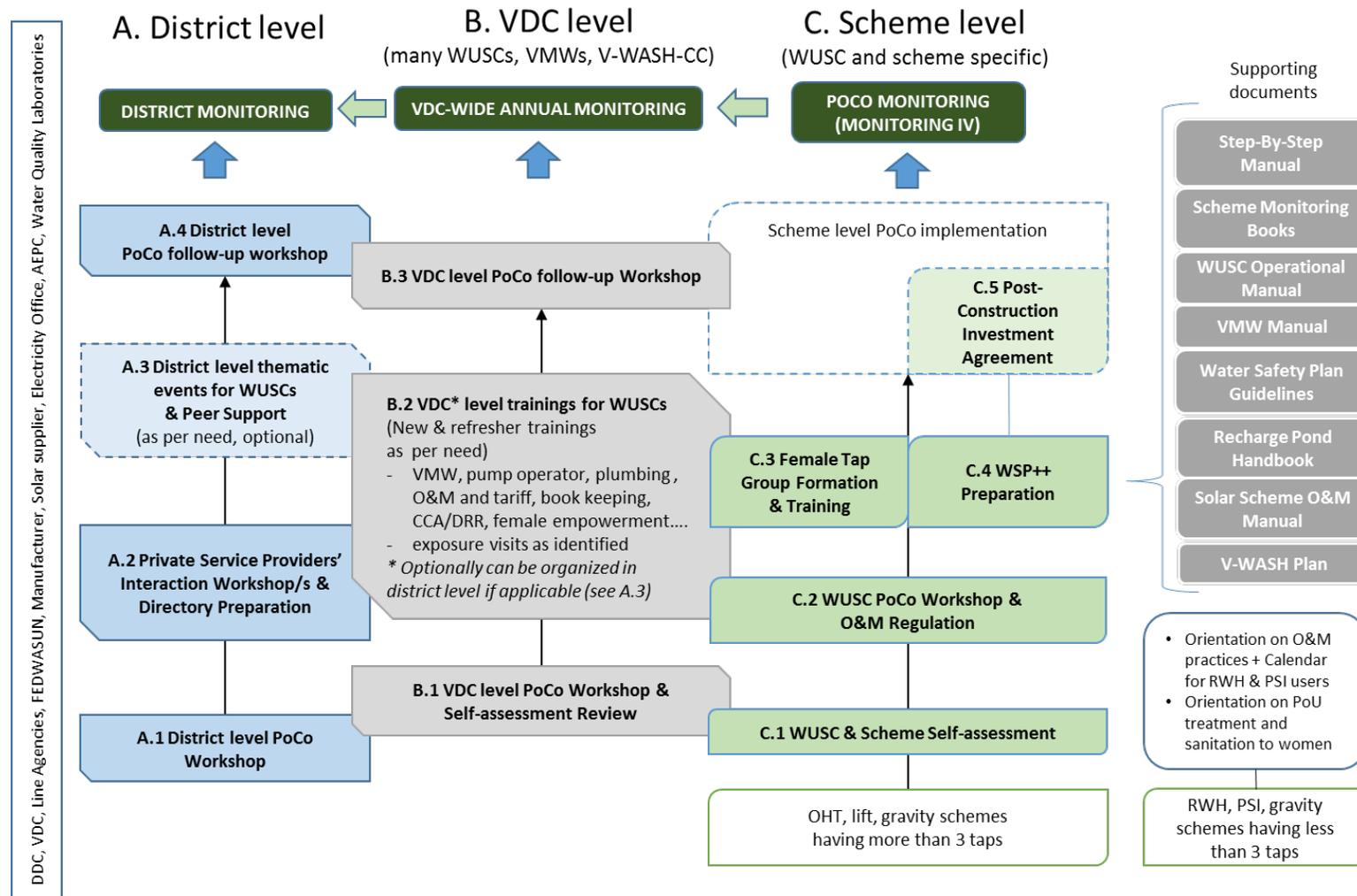


Figure 3 Step-by-step to post-construction phase at different levels

Post-construction phase activities

A. District Level

1. **District level post-construction workshop (Paper A.1):** District level post-construction workshop (1 day) is for introducing the post-construction phase to multi-stakeholder platform, seeking coordinated action from D-WASH-CC, concerned line agencies, FEDWASUN and other relevant stakeholders to improve functionality and sustainability of the schemes – this being potentially beneficial to any water scheme in the district, not only those supported by RWSSP-WN.

Outcome: Action plan for the district level post-construction activities is prepared including private sector service providers' involvement, service directory preparation, capacity building and joint monitoring.

2. **Private sector service providers' interaction workshop/s & directory preparation (Paper A.2):** DDC shall support WUSCs to establish linkage with different private sector organizations for technical and financial services that a WUSC may need to keep its scheme functional. The linkage building is carried out through interaction workshop/s and private service providers' directory preparation. District-specific chambers of commerce and other networks of private providers could be encouraged to get involved.

Outcome: Relevant private service providers linked with WUSCs; service providers know the needs of WUSCs; WUSCs know what is available near them and where to get the services; private service providers' directory prepared and private sector getting also business opportunities directly with WUSCs.

3. **District level thematic events for WUSCs & peer support as identified (Paper A.3)**
Optional: This action item is optional in the sense that the district may decide to organise some trainings and events for WUSCs in the district level instead of VDC level. Practically, these events are described in the VDC level activities with the difference that the participants may be from various VDCs, also those not supported by RWSSP-WN. Exposure visits are considered as per the need and plan. Beside the trainings only for WUSCs, there may be some capacity building events for district level private sector service providers. These will be justified and planned on a case-by-case basis.

Outcome: Trained WUSCs and stakeholders related to post-construction.

4. **District level post-construction follow-up workshop (Paper A.4):** A workshop at district level shall be organized at district level for following-up the post-construction process in different levels. The multi-stakeholder workshop is participated by WUSCs, private service providers, D-WASH-CC and other relevant stakeholders to present the outcomes of post-construction phase in the district and decide on further action based on the lessons learnt.

Outcome: Post-construction process monitored, lessons learnt shared and further action decided.

B. VDC Level

1. **VDC level post-construction workshop (Paper B.1):** One day workshop shall be organized at VDC level for V-WASH-CC members, WUSC representatives, VMWs,

and if possible some relevant private service providers. Post-construction process will be clarified and VDC level activities identified. The invited RWSSP-WN WUSCs (gravity, lift, OHT) should have pre-filled WUSC & scheme self-assessment (see C.1); main findings are reviewed.

Outcome: *Action and monitoring plan for VDC the level post-construction activities including capacity building is prepared.*

2. **VDC level trainings for WUSCs (Paper B.2):** Capacity building of WUSC members and VMWs is the key part of post-construction phase. The needed trainings are ideally identified in the VDC level post-construction workshop (B.1). The training menu includes new and refresher trainings on technical and management issues, and exposure visits. Only selected trainings will be organised. If feasible, the trainings can be organized in district level (see A.3).

Outcome: *WUSCs and VWMs trained on selected PoCo topics.*

3. **VDC level post-construction follow-up workshop (Paper B.3):** V-WASH-CC monitors the post-construction activities including WSP++, O&M, female tap groups, and training activities. In this one-day follow-up workshop, the problems faced by WUSCs shall be discussed and V-WASH-CC shall support WUSCs in resolving them. V-WASH-CC shall facilitate WUSCs to get technical and financial services from private service providers through interaction and service directory.

Outcome: *Post-construction progress monitored and private sector service providers connected with WUSCs.*

C. Scheme Level

1. **WUSC & scheme self-assessment (Paper C.1).** RWSSP-WN gravity, lift and OHT WUSCs (Type I Schemes) will do a self-assessment on their capacity and scheme functionality. This is done by WUSCs by themselves before coming to the VDC level post-construction workshop (see B.1) and/or WUSC post-construction workshop (C.2). The data is used for identifying major post-construction needs.

Outcome: *Self-assessment format filled.*

2. **WUSC PoCo workshop and O&M regulation (Paper C.2)** will be organized for the WUSC and users. The two-day workshop will clarify the existing status of the scheme, orient WUSC & users on post-construction package and prepare O&M regulation (see WUSC Operational Manual). Written commitment of WUSC shall be received/recorded in the minutes to fulfil the following criteria:

- ✓ Reshuffle WUSC according to projects' GESI/HRBA strategy having minimum 50% of women and proportional representation of all caste/ethnic group/settlement.
- ✓ Formulate WUSC statute and register the WUSC under Water Resources Act.
- ✓ Conduct public audit of the scheme implementation in participation of 2/3 of HHs and having proportionate representation of all caste/ethnic group/settlement and 50% women.
- ✓ WSP++ prepared/committed to prepare it.
- ✓ WUSC and VDC commitment to contribute cash and kind for scheme improvement (1% cash and unskilled and local materials as kind; VDC contribution 6% of total cost in cash)

Outcome: *WUSC and users oriented on PoCo, O&M regulation approved, decisions on WSP++ team and possible female tap groups done, verified that the WUSC is registered and have statute.*

3. **Female tap group formation & training (Paper C.3):** WUSC shall facilitate to form female tap groups for each public tap of the scheme, if applicable. The groups are trained for tap stand maintenance and sanitation & hygiene activities. Total sanitation related issues are included as identified useful case-by-case.

Outcome: Female tap groups formed and trained (if applicable).

4. **WSP++ preparation (Paper C.4):** Water Safety Plan (WSP) is one of the key elements for the post-construction phase in the scheme level. WSP++ includes both safe quality and safe supply (quantity and regularity). It integrates O&M and tariff calculation into the plan. See the separate WSP++ guidelines for different technologies. The prepared WSP++ serves as basis for the post-construction investment agreement.

Outcome: WSP++ formats filled and WSP team knows how to implement the plan in practice.

Water Safety Plan++ in nutshell

1. Establish the WSP++ Team from among the users of the scheme.
2. Analyze the water supply system from source to mouth.
3. Identify different hazards that can cause water contamination or otherwise disrupt the safe supply of water, including environmental and climate-induced hazards.
4. Prepare the short-term and long-term WSP addressing the hazards identified.
5. Implement WSP++. It does not benefit anyone without implementation!
6. Monitor the implementation of the WSP++.
7. Review the effectiveness of the WSP++ and plan for any corrective measures to improve it.

5. **Post-construction investment agreement (Paper C.5):** Once the WUSC fulfils the criteria mentioned under C.2 and if there are post-construction investment support needs identified in WSP++ (C.4), the agreement can be signed between the parties. See Paper C.5 for the model agreement. WUSC proceeds into implementation as per the agreement and related community action planning.

Outcome: Post-construction investment agreement signed and implemented accordingly, if such needs identified in WSP++.

GESI & HRBA in post-construction phase

RWSSP-WN II is committed that the WASH programme at districts is implemented according to the GESI & HRBA principles. By human right based practices in WASH refers to "**Right of everyone to sufficient, acceptable, physically accessible and affordable water for personal and domestic use.** It places emphasis on ensuring the involvement and participation of women throughout all steps of drinking water supply implementation realizing the fact that women play a central role in water provision and management. If any of the water schemes become non-functional, it increases the females' drudgery. Therefore, involvement of female in water schemes management is crucial that ultimately support for sustainability of the schemes.

In the Step-by-Step process there is provision for forming a female tap group for deciding tap location, for the operation and maintenance of the tap and maintain sanitation components as well. Therefore, two days capacity building provision for the female tap groups is included in the post-construction phase for the sustainability of the

scheme and maintaining the basic quality of water (refer paper C.4). As per need, there is also provision to organize post-construction related events in VDC or district level for example for female WUSC key members for capacity building and peer support. The HRBA & GESI Strategy and Action Plan published by RWSSP-WN II and RVWRMP II¹ has suggested the following checklist to ensure that GESI & HRBA is taken care during the post construction phase.

Table 4 GESI & HRBA checklist for post-construction phase

Post-construction workshop and activities		
Yes	No	Were female tap groups included in the action plan?
Yes	No	Did Water Safety Plan (WSP) and Operation and Maintenance (O&M) planning sessions have proportionate number of women and DAG representatives?
Yes	No	Does the plan/s consider women's knowledge and recommendations, given women's central role in managing water?
Yes	No	Did the WSP pay attention to those who live in marginal lands that are vulnerable to disasters, i.e. those clusters that are most at risk?
Yes	No	Does the proposed water tariff ensure the right of everyone to sustainable and affordable water for personal and domestic use?
Yes	No	Is there a need to add a source improvement to address possibly left out households that are living within the scheme are but who could not be technically included into this scheme?
Agreement for post-construction activities		
Yes	No	Was commitment towards GESI as described in the Post-Construction Agreement discussed in the signing ceremony?
Yes	No	Are all members of the community still able to access the facility? If not, why not?

CCA & DRR in post-construction phase

Climate change together with land use changes has an impact on water resources, leading to scenarios where there is 'too little or too much water', causing depletion of ground water and water sources on one hand and increasing occurrence of floods on the other hand. A recent study² on water sources in Tanahun district revealed that 65% of all water sources were in declining condition. Comparison of average source yields in 2004 and 2014 shows 50% deduction in point sources' yield and 34% and 22% deduction in stream and spring sources yields respectively; this trend is indeed worrisome!

Different environmental and climate-induced hazards affect water supply in different ways: Landslides cause damage to the scheme structures therefore disrupting water supply entirely on in a part of the scheme; floods or excess runoff can cause damage to structures and also contaminate water; source depletion and dry-up affect the

¹ HRBA & GESI Strategy & Action Plan, RWSSP-WN and RVWRMP, June 2015

² Analysis and Mapping of Climate and Source Yield in Tanahun District, by RWSSP-WN II on 2015.

availability of water. In the hill districts of Nepal, watershed management is a key factor for reducing disaster risk and for maintaining water resources. Degraded catchment can accentuate the adverse impacts of climate change and increase the area's vulnerability to other hazards, whereas well managed catchment can increase the area's resilience.

Water Safety Plans (WSP++) are the main venue for addressing CCA&DRR in the post-construction phase. The WSP guideline gives equal weight on identifying environmental and climate-induced hazards and taking measures to address them, as it gives on prevention of water contamination. Specific CCA&DRR related considerations are integrated in each step of the WSP++, along with suggestions of measures to address these issues.

WSP can also serve as a tool for catchment management in a small scale and through small steps taken by WUSC and users with or without external support. In this regard, the D-WASH Units are recommended to cooperate with the Districts Soil Conservation Offices and Forest Offices for their expertise in implementation. Districts can also plan for VDC or district level workshops for WUSCs on for example catchment management (see A.3 and B.2).

Table 5 CCA & DRR measures in post-construction phase

Hazard	Measures to take (examples)
Catchment degradation	Restoration of vegetation, prevent deforestation, regulation of grazing and collection of fodder & firewood, prevention of soil erosion, gully rehabilitation and runoff management, improved agricultural practices.
Source depletion	Mitigation: Recharge ponds and pits, water catchment improvement, water retention through contour trenches and binding. Adaptation: Collection and storage of surface water and waste runoff, rainwater harvesting, water conservation and reuse.
Floods	Drainage, household water treatment and safe storage, improved sanitation, minimum distance between latrines and water sources and between pit and water table, emergency preparedness.
Landslides and erosion	Control of deforestation and grazing in landslide prone areas, retention walls and gabion boxes, bio-engineering, checkdams.

5 Post-Construction Activity Papers

This chapter includes detailed post-construction activity Papers divided according to the levels. The Papers guide the implementation according to the step-by-step process as described in the Figure 3 earlier and listed in the Table 6 below.

Table 6 Post-construction phase activities

A. District Level	B. VDC Level	C. Scheme Level
A.1 District level post-construction workshop	B.1 VDC level post-construction workshop & self-assessment review	C.1 WUSC & scheme self-assessment
A.2 Private service providers' interaction workshop/s & directory preparation	B.2 VDC* level trainings for WUSCs: VMW, pump operator, plumbing, O&M and tariff, book keeping, CCA/DRR, female confidence building etc., exposure visits as identified (<i>*Optionally can be organized also in district level if feasible, see A.3</i>)	C.2 WUSC post-construction workshop and O&M regulation
A.3 District level thematic events for WUSCs & peer support as identified (<i>optional</i>)		C.3 Female tap group formation and training
A.4 District level post-construction follow-up workshop	B.3 VDC level post-construction follow-up workshop	C.4 WSP ++ preparation
		C.5 Post-construction investment agreement (<i>as per need</i>)
DDC Annual Performance Evaluation	⇔ VDC-wide Annual WASH Monitoring	⇔ 4 th Scheme Monitoring

A. DISTRICT LEVEL

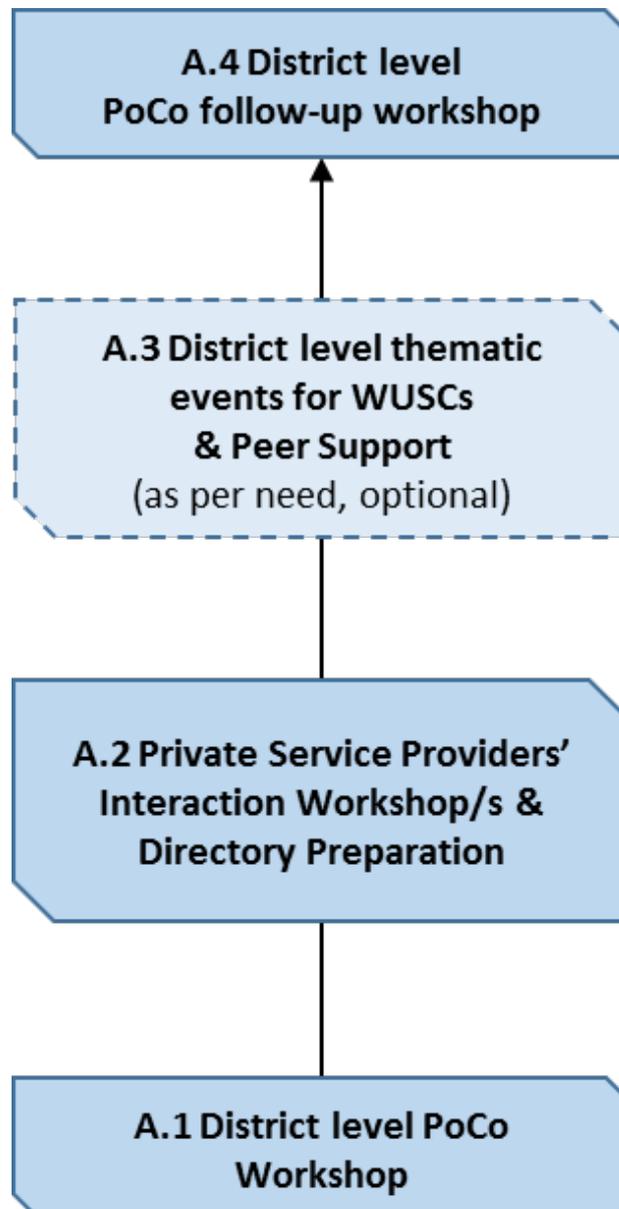


Figure 4 District level post-construction phase activities

PAPER A.1 DISTRICT LEVEL POST-CONSTRUCTION WORKSHOP

Introduction: WUSCs need technical and financial support in post-construction phase to operate and maintain schemes in sustainable way. District level stakeholders and private service providers should also be aware of the services and support required by WUSCs, thus understanding their role in post-construction activities.

One-day district level post-construction workshop is arranged ideally before starting the post-construction activities at the field level. The workshop introduces the post-construction phase to multi-stakeholder platform and seeks coordinated action from D-WASH-CC, concerned line agencies, FEDWASUN and other relevant stakeholders to improve functionality and sustainability of the schemes.

In the workshop different stakeholders will present what they are doing in the area of post-construction and WUSCs will raise up their critical post-construction needs. The participants will prepare an action plan for further post-construction related activities in the district level, including private sector involvement and service directory preparation (see A.2), capacity building (see A.3) and monitoring of the progress (see A.4).

Outcome: Action plan for the district level post-construction activities is prepared including private sector service providers' involvement, service directory preparation, capacity building and joint monitoring.

Objectives of the workshop:

- Develop common understanding among all stakeholders on need and process of post-construction activities and services for improving functionality and sustainability of water supply services.
- Share what is already done related to post-construction in the district (pre-survey) by different stakeholders.
- Know what the main post-construction needs of WUSCs are and their priority concerns included in the district level process.
- The private service providers' directory initiative introduced and agreed.
- Receive commitments from all the stakeholders to support WUSCs.
- Prepare an action plan for further process including private sector involvement, service directory preparation, capacity building and monitoring; tentative dates fixed for the coming events.

Duration: 1 Day

Source of fund: DDF

Organizer: D-WASH Unit

Participants: DWASH-CC Members (FEDWASUN, DWSSDO etc.), FNCCI (district chapter), AEPC, Nepal Electricity Office, Solar and electric pump supplier and manufacturers (if possible), VDC secretary (chair of VDC secretaries' association), WUSC representatives (max 10 representing different technologies), Cooperatives representatives.

Methodology: presentation, discussion, group work

Major contents and session plan:

Major contents	Tentative Time	Important activities
<p>Opening formalities</p> <p>Background and Objectives of the workshop</p> <p>RWSSP-WN brief introduction</p> <p>District status with regards to WUSCs, scheme functionality, critical challenges (e.g. DSWASH Plan, District MIS, district specific NMIP, Census or other data)</p>	1 h	individual introduction and sharing of objective
<p>Introduction of post-construction phase: RWSSP-WN's approach and activities</p> <p>Sharing how the other projects, programmes and organizations approach post-construction support to WUSCs in this district.</p> <p>WUSCs critical post-construction needs presented (by each WUSC representative).</p> <p>Discussion how the different approaches met the real needs of WUSCs by comparing the outcome from various presentations: is the proposed post-construction phase approach & activities responsive to WUSCs needs? Is anything missing? Is there something that is not needed?</p>	2 h	<p>Presentations based on pre-survey</p> <p>Brief presentations by other relevant stakeholders</p> <p>Brief presentations by each WUSC attending this event</p> <p>Compiling the outcome from all into one flip chart</p>
<p>Private sector service providers' (technical & financial institutions) involvement possibilities</p> <p>Service directory initiative presentation</p> <p>Discussion: does the private sector service providers provide the kind of products and services that WUSCs would need? Eg. Are spare parts easily available? Is technical knowledge and support available? What kind of services or products are missing? What is missing from this district and/or its major market areas?</p>	1 h	Presentation and discussion – what kind of service directory would be useful for WUSCs? What kind of services & products are missing?
Action planning and conclusions	1 h	
Closing the workshop	15 min	Closing

PAPER A.2 PRIVATE SECTOR SERVICE PROVIDERS' INTERACTION WORKSHOP/S & DIRECTORY PREPARATION

Introduction: WUSCs are responsible to operate and maintain the schemes after their construction. In this connection additional services might be needed for WUSCs during the post-construction period and they should be well aware about availability of different technical and financial services and products, contact information of service providers, mode of support, costs etc. beforehand so that they can contact private service providers when needed. Water tariff from the users' and possible grant from DDC/VDC may not be enough or even available for covering the major repair cost and therefore financial services should also be considered. In the post-construction phase, WUSCs may establish linkage with bank/cooperatives or other financial institutions through their membership so that they can get loan for major repair of the scheme.

Outcome: Relevant private service providers linked with WUSCs; service providers know the needs of WUSCs; WUSCs know what is available near them and where to get the services; private service providers' directory prepared and private sector getting also business opportunities directly with WUSCs.

Following activities shall be carried out as per need. In the interaction workshop/s the WUSCs and relevant private service providers are invited to interact, share the available services, products and the needs of the WUSCs. As part of the process the private sector service providers' directory will be prepared and distributed to WUSCs. See the following activities to be carried out:

- Interaction between WUSC and solar companies/electro-mechanical service providers, installers and manufacturers, AEPC; water quality testing services etc.
- Assessing the demand and supply of various post-construction and O&M services, skilled human resources; identification of new services and WASH products.
- Interaction between WUSCs and potential financial services, institutions, cooperatives that are interested to support WUSCs.
- Identification of further technical, business and marketing skill trainings to entrepreneurs and marketing events in different levels.
- Collection of data for the service directory.

The interaction workshop/s can also be organized on thematic basis if seen relevant, e.g. one workshop for solar schemes participated by solar related agencies and solar WUSCs, one workshop for electric lift schemes participated by electricity and pump related agencies and electric lift WUSCs. Number and type of meetings shall be decided by DMC. In exceptional cases it can also be organized at regional level.

DWASH Unit will prepare in cooperation with the relevant stakeholders the private service providers' directory for water quality services, solar and electrical pump suppliers, manufacturers, installers and maintenance organizations/ workers, financial institutions, cooperatives etc. The directory can contain also sanitation & hygiene

services to support post-ODF process. The directory serves as a tool to connect entrepreneurs and WUSCs needing the specific services. See Annex 1 for the model directory. Before preparation of the directory it is important to find out if similar directories have been prepared already in the district and whether they can be used for the purpose.

Objectives of interaction workshop/s:

- Introduce WUSCs to private sector service providers and share current and potential issues and problems in schemes
- Get information on name, address, type of support, availability of services & products from private service providers for the directory preparation
- Assess the demand and supply of various post-construction services, skilled human resources, identification of new services needed.
- Receive commitments from private service providers to be involved in post-construction activities.
- Identification of further technical, business and marketing skill trainings to entrepreneurs working with post-construction services.

Duration: 1 Day

Source of fund: DDF

Organizer: D-WASH Unit

Number of events: as decided by DMC depending upon type and number of schemes, separate for each technology and theme.

Participants: Relevant service providers (supplier, manufacturers, repair enterprises, financial institutions), relevant WUSC officials (4 from one WUSC), VMW from each relevant schemes, respective VDC secretaries, DWASH Unit relevant staffs

Methodology: Presentation, discussion

Major contents and session plan:

Major contents	Tentative Time	Important activities
Opening formalities Objectives of the workshop Post-construction phase approach	1 hour	individual introduction and sharing of objective
Presentation by WUSCs on their scheme status, problems and issues.	1 hour	Key issues & problems compiled into a flip chart
Presentation by private sector service providers (technical and financial) on their services and products. Assessing the service gaps. Identification of further capacity building or interaction needs of the service providers.	1.5 hour	Presentation & collection of their information in written. WUSCs key issues & problems from previous session compared to what is available by private sector. What is matching, what is missing?
Open discussion, networking	1 hour	Interaction
Conclusion and commitment Closing the workshop	1 hour	Summarization and presentation with commitment. Closing.

Annex 1: Private sector service providers' directory preparation

Introduction: V-WASH-CCs and WUSCs need technical and financial services in post-construction phase. When they are facing any type of technical problem that need to be fixed or they need financial support for repair and maintenance they should be able to contact to right service providers. Therefore, compilation of the service providers' information including contact details, services, products, also possibly the cost of service shall be compiled in a single directory and distributed to each WUSC, VDC, V-WASH-CC and copies shall be kept in DDC/D-WASH Unit. Service providers' information shall be provided in different chapters in such a way that users can find easily as per their need e.g. solar components, pipe and fittings, electrical and mechanical components, financial institutions etc.

Process for developing the directory:

- Assigned team for the preparation (relevant stakeholders)
- Finding out if similar directories have been prepared in the district and how to utilize them.
- Collection of information through district level interaction meetings, information from manufacturers and institutions, asking information through FNCCI.
- Compilation of the received information.
- Printing in press
- Dissemination (and updating annually)

Funding source: DDF

Sample of Content of Directory:**Chapter A: Electromechanical Components**

Sn	Name of Manufacturer/Supplier or Service Provider	Full Mailing Address	Telephone Number/ Mobile	Service Outlets (name of city)	Contact Person & Contact details	Type of Service/ Product

Chapter B: Solar Components

Sn	Name of Manufacturer/Supplier or Service Provider	Full Mailing Address with website	Telephone Number/ Mobile	Service Outlets (name of city)	Contact Person & Contact details	Type of Service/ Product

Chapter C: Financing Institutions (that Support WSS Scheme Repair and Rehabilitation)

Sn	Name of Financing Institution	Full Mailing Address with website	Telephone Number/ Mobile	Working Area/s	Contact Person & Contact details	Type of Service/ Product

PAPER A.3 DISTRICT LEVEL THEMATIC EVENTS FOR WUSCS & PEER SUPPORT (OPTIONAL)

Introduction: This paper has a set of events and trainings that could be organized for WUSCs in the district level as per the need. See the VDC level Paper B.2 that includes various trainings for WUSCs and other human resources. Some of those trainings can be organized also at the district level so that there are participants from various VDCs and WUSCs if feasible topic wise. That kind of trainings could be for example the book keeping and accounting training, female WUSC members' empowerment, and peer support events where participants are from various WUSCs of different VDCs.

In addition, some exposure visits can be organized in the district level for learning from successful water supply schemes. It might be useful also to orient VDC secretaries about the post-construction phase. It depends on DMC/DWASH Unit how the trainings and exposure visits will be planned and what is the need for the VDCs and specific schemes. See below the list of events that for example can be organized in district level. There is more information on all trainings including the technical ones in the Paper B.2.

Beside the trainings only for WUSCs, there may be some capacity building events for private service providers if DMC/DWASH Unit decides to include technical, business and marketing skill trainings to entrepreneurs working with post-construction services. These trainings will be planned on a case-by-case basis.

Outcome: Trained WUSCs and stakeholders related to post-construction

Some potential events to be organized in the district level (not restricted only to these):

Sn	Trainings	Duration	Participants	Remarks
See Paper B.2.5	Book Keeping Training	2 days	Treasurers, accountants	Only for big private tap connected schemes. Can be organized also at the district level if applicable.
See Paper B.2.7	Female WUSC Members and VMWs; Leadership and Empowerment Training	1 day	Female WUSC members and VMWs	Can be organized also at the district level if applicable.
See Paper B.2.8	Exposure visits	Decided as per the case		Visit to successful schemes for learning.

PAPER A.4 DISTRICT LEVEL POST-CONSTRUCTION FOLLOW-UP WORKSHOP

Introduction: In the district level it is necessary to follow-up that the post-construction process is going ahead and the planned activities are carried out in scheme, VDC, and district level. Also upon completion of Phase II of RWSSP-WN, the lessons learnt on different aspects need to be shared among the WASH stakeholders for feedback. The feedback and suggestions should be taken into consideration in future to sustain the schemes. At the same time the outcome of the workshop will guide DDC/DWASH Unit for supporting WUSCs and if the private service providers have been part of the post-construction phase. The multi-stakeholder workshop is participated by WUSCs, private service providers, D-WASH-CC and other relevant stakeholders to discuss on the post-construction achievements. The outcome of the workshop will also be reflected in the completion report of RWSSP-WN II.

Outcome: Post-construction process monitored, lessons learnt shared and further action decided.

Objectives of the Workshop

- To share the lessons learnt of post-construction phase (including pros and cons of working modality) from different stakeholders' and users' perspective.
- Workshop shall ensure that the post-construction services (technical and financial) are available to the WUSCs as per need.
- Provide recommendation for sustainable WASH services through local governments.
- Document the outcome of the workshop and reflect it in the RWSSP-WN II project completion report.
-

Duration: 1 day

Budget Source: DDF

Participants: Two representatives from one WUCS/VDC (One male + one female), line agencies representatives, post-construction service providers (manufacturers, suppliers, repair enterprises etc.), FEDWASUN, D-WASH-CC members, political party representatives, VDC secretaries, SO/SPs, DWASH Unit staffs.

Methods: The workshop will be conducted in a participatory way. Presentation of general progress made in support of the project in the district followed by group discussions on different aspects. Separate group of WUSCs, line agencies, private service providers, political parties, DMC and D-WASH-CC members, SO/SP will be discussed on specified questions. Following methodology will be applied.

- Presentation of the achievement in the district
- Filling up feed-back questionnaire by each group
- Group work to find out on key questions/issues, group work presentation and plenary discussion

Workshop contents:

Contents	Tentative Time	Important activities
Inauguration session Objectives of workshop	1/2 hr	
Presentation of post-construction achievements in the district including status of completed schemes and post-construction service delivery.	1 hr	The presentation shall include post construction support services and achievements
Filling of feed-back questionnaires and group work on key issues in the specified framework: <ul style="list-style-type: none"> • Group I: Political party representatives • Group II: DMC members • Group III: Private service providers • Groups IV & V: WUSC representatives • Group VI: SO/SP representatives • Group VII: VDC secretaries/V-WASH-CC 	2 hrs	Each group shall have set of questionnaires to discuss.
Presentation of findings	1 hr	The conclusive findings of the workshop shall be included in the report and distributed to the districts for future reference.
Conclusion and Closing	1 hr	

B. VDC LEVEL

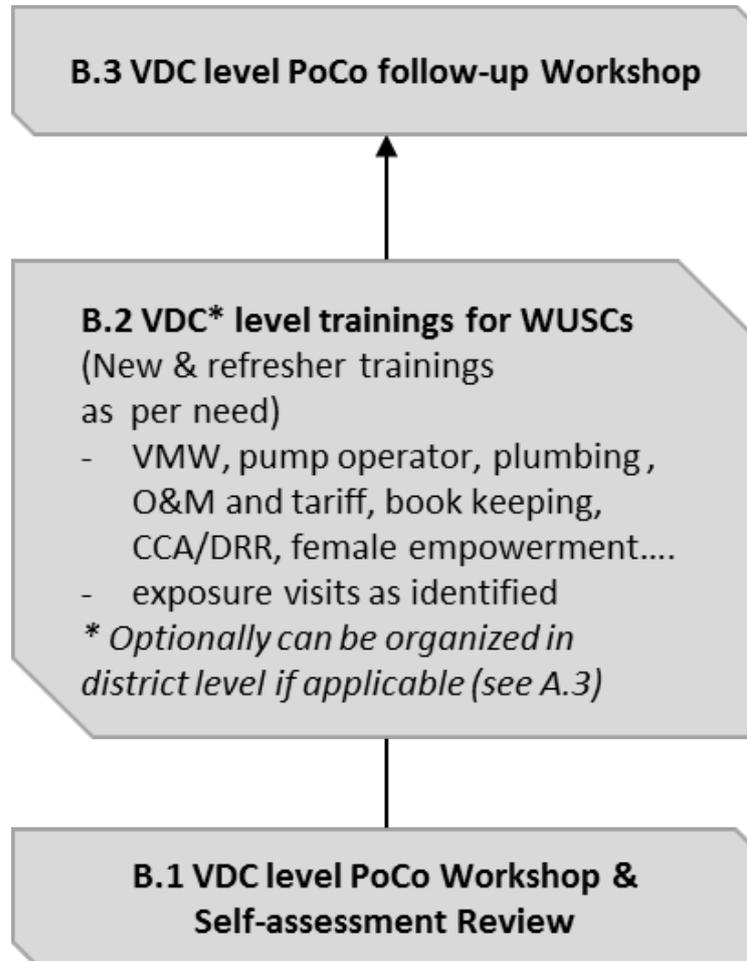


Figure 5 VDC level post-construction phase activities

PAPER B.1 VDC LEVEL POST-CONSTRUCTION WORKSHOP

Introduction: V-WASH-CC's role is to lead planning and monitoring of WASH facilities. V-WASH-CC and WUSCs should realize the need for post-construction activities and agree to fulfil the basic elements for sustainability. Similarly, the private service providers should understand their role in providing services to WUSCs. VDC level post-construction workshop shall be organized to assess the scheme situation, support and service requirements, and training needs, and orient V-WASH-CC and WUSCs on post-construction. Invited RWSSP-WN WUSCs (gravity, lift and OHT) shall bring to the workshop their WUSC & scheme assessment format (see Paper C.1).

The updated/new V-WASH Plans and Scheme Monitoring books for Phase II schemes will be utilized for having information on post-construction needs in the VDC and schemes. Other interested VDC and scheme level stakeholders and relevant private sector service providers can be invited to the workshop to promote VDC-wide post-construction.

Outcome: Action and monitoring plan for VDC the level post-construction activities including capacity building is prepared.

Objectives of the Workshop:

- Discuss and clarify the role of V-WASH-CC on WASH planning following updated V-WASH Plan and status of the schemes
- Review functionality and managerial status of the schemes (see Paper C.1)
- Learning sharing among different WUSCs and VMWs for further planning and implementation of post-construction activities at the scheme level
- Orient on post-construction package and agree on the activities that need to be carried out in scheme and VDC level, including trainings
- Introduce potential private service providers with WUSCs

Duration: 1 Day

Source of fund: DDF

Facilitation: DWASH Unit/SPs

Participants: V-WASH-CC, WUSC members (1 male 1 female; focus on RWSSP-WN lift, gravity and OHT), VMWs, VDC secretary, relevant private service providers (if possible)

Methodology: presentation, discussion, group work

Materials needed: stationeries, posters, papers, markers, pre-filled scheme & WUSC self-assessment formats (see Paper C.1), Scheme Monitoring Books, V-WASH Plan

Major contents and session plan:

Major contents	Time	Important activities
Introduction & Objectives of the workshop	30 min	individual introduction
VDC PoCo status based on V-WASH Plan Sharing functionality and managerial status of the schemes (each scheme will present the status)	2.5 hrs	Scheme wise presentations (10 min). Key issues recorded to brown paper from each presentation. Does the VWASH Plan give a realistic figure on the situation in VDC?
Identification of common issues and training needs	30 min	Discussion on the issues as identified during the previous session. Add training needs and other suggestions for action into that list during the discussion.
Introduction of post-construction phase, approach, activities and process; minimum requirements to be fulfilled by WUSCs for post-construction support	1.5 hrs	Discussion; WUSC composition, public audit, registration etc.
Private sector service providers services (if possible)	30 min	Interaction on what is available and where.
Action and monitoring plan for VDC level activities	30 min	Written action plan
Closing the workshop	30 min	Closing

PAPER B.2 VDC LEVEL TRAININGS FOR WUSCs

Introduction: This paper includes a set of various trainings and exposure visits that can be organized. There might be need of several technical trainings for WUSCs depending on technology and size of the scheme. The Papers 1-8 provide outlines of the trainings. Exact need of the trainings and topics are assessed during the VDC and scheme level post-construction workshops. All listed trainings are not compulsory. It is beneficial to cooperate with relevant district officials and stakeholders, such as CCA&DRR training should be organized in coordination with District Soil Conservation/Forest Office. Relevant linkage building for income generation trainings can be included to improve users' ability to pay for water. In all cases, trainings should be practical, hands-on, and learning-by-doing. Exposure visits related to post-construction issues and well performing water supply schemes can be arranged providing they are included in the district work plans. Technical trainings shall be organized in one of the scheme areas collecting participants from different schemes. Some of the trainings can also be organized in the district level if applicable (see A.5).

Outcome: WUSCs and VWMs trained on selected PoCo topics.

Participants: WUSCs, VWMs (focus on RWSSP-WN lift, gravity and OHT schemes), also other relevant participants as per the decision of DMC/DWASH Unit

Resource Persons: DWASH Unit, SPs & External Resource persons

Source of Fund: DDF

Organizer: DMC, DWASH Unit (If any specific technical or thematic training is identified in any of the schemes, the training also can be managed through training institutions)

Following are the possible technical and thematic trainings, but not limited to:

Ref	Trainings	Duration	Participants	Remarks
B.2.1	VMW Training	10 days	VMWs of the schemes	for gravity and lift schemes; 5 days refresher training
B.2.2	Pump Operator Training	5 days	Pump Operators	Separate for solar, electric and OHT schemes
B.2.3	Plumbing Training	5 days	OHT caretakers	for OHT scheme
B.2.4	O&M and Tariff Training	3 days	WUSC members VMWs	
B.2.5	Book Keeping Training	2 days	Treasurers, accountants	Only for big private tap connected schemes.
B.2.6	CCA&DRR Training	Part I: 2 d. Part II: 3 d.	WUSC and WSP team members, VMWs	Part I: Water re-charge Part II: Low-cost soil conservation.
B.2.7	Leadership & Empowerment	1 day	Female WUSC members + VMWs	Can be organized also at the district level if applicable.
B.2.8	Exposure Visit	Decided as per the case		Visit to successful schemes for learning.

B.2.1 Village Maintenance Worker Training

Introduction: Capable and actively working Village Maintenance Workers are key factors for functionality and sustainability of water supply schemes. Skilled human resources at local level play vital role in facilitating the O&M activities of water supply schemes. In this training the VWMs gain basic skills and knowledge to operate, maintain and repair the scheme.

The objectives of the training: The main objective of the training is to orient and train VMWs to operate, maintain and repair the basic components of the schemes. They will get practical knowledge on construction materials and components, reading the documents, water quality, tariff etc. The package contains overall basic knowledge that VMW can work for the scheme and knows in practice how to maintain and repair it. The focus is especially increasing the technical capacity of the VWMs.

Duration: 10 days for new WMSs (refresher training modified to be shorter)
Venue: One of the scheme areas
Participants: VMWs
Resource persons: DWASH Unit, external and internal resources persons
Funding: DDF

The training content for 10 days basic training for new VWMs:

Day	Content/session	Time
1	Opening, introduction of participants, expectation collection, pre-test, training logistic management and rules, objectives and expected outcomes of training. 10 days training program, roles and responsibility of VMW.	3 h
	Hydrological cycle. Type of water sources. Source conservation. Water Source measurements.	2 h
	Water, Sanitation & Hygiene, What is water? Importance of water for our health. Water pollutants & pollution. Water born diseases. Introduction of sanitation & hygiene issues (basic & Total sanitation). Importance of hand washing & critical times of hand washing	3 h
2	Understanding concept of engineering drawing & measurements Plan, Section and Elevation. Measurement units (mm, cm, metre, inch, feet), Relation between Metric unit and British Unit, Area and Volume calculation	2 h
	Construction Materials/Tools and quality Local Materials (stone, sand, aggregate, water, wood, bamboo etc). Non-local materials (cement, bricks, Rebar, GI wires, pans, pipes). Mason's Tools/their use.	2 h
	Construction work Introduction to Construction work. Earth work (excavation & Filling) Stone/brick masonry (c/s, mud, dry) Overview of simple frame and load bearing wall buildings/structures	2 h

Post-Construction Guidelines

	Water cement ratio, Cement Sand ratio PCC, RCC, Curing, Ferro cement works, Plaster, punning, pointing, Painting, Scaffolding & Form works, Fencing, gabion works, etc.	2 h
3	Theory: Technological options for rural water supply. Water supply system and its components. Private connections/Community taps	2 h
	Practical: laying of foundation of structure/intake/CC/DC/RVT construction,	6 h
4	Theory: Tools/plants used in water supply project. HDPE/PPR Pipes & Fittings used in water supply system (GI, HDPE, PPR)	3 h
	Practical: Construction of structure/intake/CC/IC/DC construction, Making of HDPE fittings i.e. T, Y, reducer and Butt Jointing. Preparation of pipe pieces and fittings	5 h
5	Theory: GI Pipes & Fittings used in water supply system	2 h
	Practical: GI Fittings, Threading GI pipes. Installation of GI fittings in structures as RVT/Taps	6 h
6	Theory: Ferro cement RVT, its benefit and methods of construction, capacities & R-Bars in FCT. (Drawing, fitting and construction procedure of RVT, size and types, Private connections/ Community taps	2 h
	Practical: (different groups for different components): FC RVT, BPT Tap stands, pipe laying/jointing	6 h
7	Practical: Ferro cement RVT, Wash out. Air valve chambers, Tap stands	8 h
8	Theory: Repair, Maintenance and Operation of Schemes, Types of repair & maintenance, Maintenance fund, its importance. Water tariff, collection & use	2 h
	Practical: Observe the structures and procedures of repair & maintenance work in existing WS scheme (nearby)	6 h
9	Practical: Installation of fittings in RVT/Tap stands/Wash out/Air vent/Valve chamber	8 h
10	Water safety plan. Importance/need. Climate change & disasters induced hazards and control measures Water quality, WQ testing, Sample collection for PA vial test	4 h
	Post-test, training evaluation certificate distribution and training closing	2 h

B.2.2 Pump Operator Training

Introduction: Repair and maintenance of pumps of lift water supply scheme is one of the major issues for functionality and sustainability of water supply schemes. Skilled human resources at local level play vital role in facilitating O&M activities of lift water supply schemes. In this context, it is necessary to enhance capacity of the pump operators. They gain additional skills and knowledge to operate, maintain and repair pumps, panel boards and accessories. The participants will be trained through theory and practical sessions and the training will be organized in a scheme specific location. The resource person will facilitate more sessions and some theory sessions as appropriate.

The objectives of the training: The training is to orient and train pump operators to maintain and repair electro-mechanical parts of the pumping system. This will help to enhance their knowledge on handling of the pump and its operation and maintenance. Specifically:

- Provide basic knowledge of submersible pumps and its operation maintenance
- Provide practical knowledge to prepare/repair panel board at local level
- Safeguard measures
- Lightning and its impacts on electrical pumping system
- Provide practical ideas to replacement of parts of panel boards.

Expected results: After the training, the participants will:

- Know all parts of pumps and the whole system
- Safely operate pumps and have knowledge to repair pumps and its parts
- Understand the panel board, its wiring system, prepare panel board locally and repair it
- Support WUSCs to prepare WSP for their scheme along with O&M plan.
-

Duration:	5 days
Venue:	One of the scheme areas
Participants:	Pump operators, relevant VWMs
Resource persons:	DWASH Unit, external and internal resources persons
Organizer:	DWASH unit
Funding:	DDF

Training materials:

Sn	Items	Units	Nos
1	Magnetic Contractor 20 Amp (CHINT) 1yrs coil Warranty	Pcs	3
2	Electric Timer	Pcs	2
3	Overload Rely(12-18 Amp) (CHINT)	Pcs	2
4	VPG (single phase preventer with water level guard)	Pcs	2
5	Volt meter -400 volt (CHINT)	Pcs	2
6	Selector Switch	Pcs	2
7	Ampere meter - 30 Amp (CHINT)	Pcs	2
8	Selector Switch	Pcs	2
9	CT quile- 30 AMP	Pcs	2

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10	Connector 10 pole - 30 Amp	Pcs	2
11	MCCB- 40 Amp (30-50 Amp)(CHINT)5yrs guarantee	Pcs	2
12	Ply wood board 3'*2'- 10mm thick	Pcs	2
13	Auto wire 25mtr roll	Roll	40
14	7/18 Copper wire	meter	30
15	Screw- 1 1/2"	Nos	40
16	Screw- 1"	Nos	40
17	Copper Cable shoes- 6 mm	Nos	60
18	Indicator Lamp	Nos	10
19	On/Off switch	Nos	4
20	Plus/minus screw driver	Set	4
21	Tester	Nos	4
22	Combination Pliers	Nos	4
23	Multipliers	Nos	1

Training content:

Day	Content/session	Time
1	Opening, introduction of participants, expectation collection, pre-test, Training logistic management and rules Objective and expected outcomes of training. 5 days training program, Roles and responsibility of Pump Operator	3 h
	Introduction of water pumps, use and types	3 h
	Working principle of Submersible pumps for lifting water and its components.	2 h
2	Installation and operation of submersible pumps, attentions to be given while running pumps: Vibration, Pressure, Ampere, sound	2 h
	List of pump operators tools and their use	2 h
	Minor/major Problems observed in operating the pumps, their reasons ways of prevention and repair. Theory and practical	4 h
3	Relevant electrical terms and definition: Volt, Ampere, Horse Power, Watt, Watt-hour, Phase, etc.	2 h
	Electrical circuit-complete, incomplete, short, Fuse	2 h
	Transformer, Electrical line and poles, water level sensor (VPG) problems in operation and way of prevention and repair	2 h
	Safety measures in operating electrical equipment	2 h
4	Electric motor control panel (EMCP): Starters, type, Parts of EMCP, Frequent problems observed in EMCP and their prevention and repair. Theory and practical.	8 h
5	Effects of lightening in electrical components of lift schemes, Preventive measures: surge protector/lightning arrestor/earthing	2 h
	Important points to be considered while supplying and receiving pumps. Documents/cat log/specification/warranty, guaranty periods/users' manual etc.	2 h
	Unpacking and Checking, storage, installation/users' training/orientation	
	Post-test, training evaluation certificate distribution and training closing	2 h

B.2.3 Plumbing Training

Introduction: The trend of having private connections is increasing in rural water supply schemes, both in gravity and lift schemes, and particularly in overhead schemes in Terai areas supported by RWSSP-WN. Similarly, the trend of improvement in sanitation condition also demands proper sanitary installation and plumbing. Thus the purpose of a house plumbing system is two-fold: On the supply side, the purpose is to get water for drinking, washing and cooking needs in the specific places of house. The waste side of the plumbing system is intended to get rid of water and waste. Hence, there is a need of local capacity to design, install and maintain drinking water supply and waste removal systems and to help conserve limited supplies of safe drinking water.

Objective of the training: The main objective of the training program is to produce skilled plumbers who could provide plumbing services in private and public buildings and other water supply fittings in different types of schemes, gravity, lift, overhead schemes.

Expected results: After the training, the participants will be able:

- Identify plumbing materials, tools, equipment and fitting materials;
- Handle plumbing related tools and equipment;
- Make various sizes of threads on galvanized iron pipes;
- Join and connect GI, CI and PVC fittings;
- Make various types of polyethylene fittings for joining the pipes;
- Install various types of fixtures in private and public buildings;
- Replace/repair and maintain the sanitary and plumbing installations

Duration: 5 days

Venue: Applicable location

Participants: Village Maintenance Workers and/or selected WUSC members

Resource persons: Sub-Engineers, Water supply and sanitation technicians (External as well as internal)

Organizer: DWASH unit

Funding: DDF

Required tools and materials:

S. N.	Description	Quantity	Unit
1	Hacksaw	5	nos.
2	Pipe cutter	5	nos.
3	Scissor	5	nos.
4	Multilayer composite tube cutter	5	sets
5	Multilayer composite tube bending	5	sets
6	Motion Hammer	5	nos.
7	Spin hammer	5	nos.
8	Ball hammers	5	nos.
9	Pin hammers	5	nos.
10	Pipe vice	5	nos.
11	Bench vice	5	nos.
12	Pipe wrench	5	nos.
13	Adjustable wrench	5	nos.
14	Spanner set	5	nos.

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15	Screw driver different sizes	5	nos.
16	Triangles file	5	nos.
17	Half round file	5	nos.
18	Square file	5	nos.
19	Needle file set	5	nos.
20	Pee files	5	nos.
21	Hook tape	5	nos.
22	Measuring tape	5	nos.
23	Heating plate	5	nos.
24	Blow lamp	5	nos.
25	Safety goggle	5	nos.

Note: Actual quantity will be based on the numbers of participants

Training content and session plan:

Day	Contents	Time
1	Opening Session	2 h
	Introduction of participants	
	Expectation of participants related to plumbing	
	Objectives of training	
	Expected outcome of the training	1 h
	Training Management /training schedule	3 h
	Concept of plumbing and pipe fitting Identification of plumbing materials, fittings, valves, fixtures and handling of basic tools, equipment	
2	Orientation of safety rule	1 h
	Interpretation of working drawing, blueprint and catalogue	1 h
	Measurement of various dimensions	1 h
	Cutting & threading of GI pipe	3 h
3	Cutting and making various joints and fittings of HDPE, PVC pipe and joining with pipe	3 h
	Joining of fittings and valves with pipe, drilling holes	3 h
4	Installation water pump, Connection of ferrule and service pipeline	2 h
	Installation of tap, fixture, angle valve, gate valve, conceal valve, floating valve	2 h
	Installation of multilayer composite tube, various taps, fixtures and shower	2 h
5	Installation of water closet, wash basin, urinal, sink, cistern, shower valve etc.	2 h
	Repair & Maintenance of sanitary and plumbing installations	2 h
	Participants" post-test, training evaluation and closing	1 h

B.2.4 O&M and Tariff Training

Introduction: Capacity development of WUSC is key aspect of the sustainability. WUSCs should clearly understand the need of post-construction phase activities and become able to implement activities. The training is ideally organized at the early stage of the post-construction phase, for example after the VDC level post-construction workshop but before the scheme level post-construction workshop because it includes many basic elements for the post-construction phase and gives background information on O&M regulation formulation, legal provisions and tariff calculation. The participants will be oriented also briefly on Water Safety Plan and CCA/DRR. The training content should be modified according to the knowledge level and stage of the participating schemes. The training shall be organized at VDC level or district level as decided by DMC.

Objectives of the training:

- Orient WUSCs on legal provisions and status of WUSC and its role and responsibilities for sustainable operation and maintenance of the schemes including meetings, annual assemblies, book keeping and public auditing
- Orient on the concept of post-construction and its activities
- Orient WUSCs on key elements of operation and maintenance and held detail discussion on O&M fund, VMW, Spare parts and Tools
- Make WUSCs to understand the importance and method of water tariff fixation and be able to calculate tariff and assess financial sustainability and utilize financial institutions
- Orient on CCA/DRR and water safety plans linked to sustainable O&M
- Orient WUSC on Total Sanitation indicators and prepare action plan to achieve it in the scheme area.

Duration of the Training: 3 Days
Source of Fund: DDF
Organizer: DWASH Unit

Participants: WUSC representatives (2-4 per scheme), VMW (1 per scheme) and VWASHCC member of the area: Maximum participants per group should not be more than 25 people.

Methodology: Presentation, discussion, group work

Materials needed: WUSC & Scheme Self-assessment (C.1); design and estimate of the scheme; CAP chart of the scheme; final layout, community map (to check and add information); posters, papers, markers, etc., WUSC Operational Manual

O&M and Water Tariff Training Contents/sessions:

Session Day	Session I 8:00 - 10:30	Session II 10:30 - 12:00	12:00 - 1:00	Session III 1:00 - 2:30	Session IV 2:30 - 5:00
Day I	<u>Opening</u> Registration Introduction Rule of training Expectation collection Objectives and contents	<u>Institutional Development</u> Presentation of Scheme Status of and functionality by WUSC Local Self Governance Act 2055 and regulation 2056. LBFAR 2064 Water Resources Act 2049 and Regulation 2050 National Policy and Strategy on Rural Water Supply and Sanitation, 2064.	Lunch Break	<u>Institutional Development</u> Meeting Procedure: Meeting conduction method (before, during and after the meeting), Minuting, Agenda preparation and Annual General Assembly, O&M/repair Planning and budgeting and HRBA/GESI aspects	<u>PoCo Concept</u> PoCo concept, activities and method of implementation
Day II	<u>Account and Book Keeping</u> Investment account keeping Water Tariff Repair and Maintenance Preparation of financial reports etc. Public Hearing & Auditing	<u>Operation and Maintenance</u> What is O&M? Management of spare parts and tools. VMW (selection, training, appointment and mobilization) Why O&M Fund?, O&M fund mobilization, establishment and increasing. Financial institutions		<u>Water Tariff</u> Possible repair plan of the scheme Recurrent Scheme Cost Capital Maintenance Cost Water tariff fixation process Exercise on Water Tariff	<u>Water Tariff contd....</u> Possible repair plan of the scheme Recurrent Scheme Cost Capital Maintenance Cost Water tariff fixation process Exercise on Water Tariff
Day III	<u>CCA&DRR, Environment and Conservation</u> Low Cost Conservation Technique for preservation of WS Schemes (Intake, Pipeline, Structure, Tap etc)	<u>Water Safety Plan & O&M Plan</u> Introduction, process, role and responsibilities		<u>Sanitation, hygiene and point-of-use water treatment</u> Total Sanitation indicators Point of use treatment, introduction and demonstration Waste water Management (IG activities)	<u>O&M Regulation of WUSC:</u> Discussion on draft content Method of endorsement and its promulgation <u>Action Planning</u> Planning of post-construction activities, WSP and O&M plan, total sanitation <u>Closing of the Training</u>

B.2.5 Book Keeping Training

Introduction: WUSCs are responsible for financial management and record keeping of the water supply schemes during both implementation and operation. Though the similar training is for WUSCs in the preparatory phase, during the post-construction phase is necessary to refresh and provide further knowledge and skills to manage financial transactions and record keeping, store management focusing more with the scheme O&M issues so that so that the WUSCs can properly manage all as per GON financial regulations.

Objectives of the training is to:

- Provide practical knowledge on financial record keeping (income and expenditure of fund, bank account/cash/advance payments management)
- Review the quality and quantity of materials and provide the practical knowledge on store management (process of entry and issues materials, record keeping of construction materials and tools)

Expected results:

- WUSC is able to properly manage financial transactions (income/expenditure), keep records, and procure the materials and services and manage store (store ledger for consumable and non-consumable materials)
- To maintain record of skilled/unskilled labour and make payment

Duration: 2 days

Participants: Selected WUSC members (Chair, Vice-chair, Treasurer, Secretary)

Organizer: DWASH unit

Resource persons: DDC account officer/support persons/organization

Funding: DDF

Required material: Bills of materials, Design/estimate reports, book keeping/store ledger, Vouchers, Calculator, black/white board/brown paper etc.

Training content:

Day	Content/session	Time
1	Opening, introduction of participants, expectation collection, pre-test, Training logistic management and rules, Objective of the training	1 h
	Basic concept of financial management, Importance of account/record keeping. Relevant GoN acts, laws, rules and regulations. Local government rules and regulations.	2 h
	Procurement: Market survey, Direct procurement/Daily wages, Quotation, Tender	3 h
2	Transportation of materials, store management, Issue of materials and managing the stock book (consumable and non-consumable)	1 h
	Bills, invoices, receipt (Bharpai), muster roll, Bank ledger, Income-expenditure ledger, stock ledger, requisition form, store entry form,	2 h
	Practical exercise in book keeping	2 h
	Participants' post-test, training evaluation and closing-	1 h

B.2.6 CCA&DRR Training - Water recharge and low-cost soil conservation

Introduction: Many hilly areas in Nepal are facing a situation where the water users do not have adequate water despite having otherwise functional water supply system. Many hill springs are in declining condition (their discharge is reducing), which adds to the challenge of providing adequate drinking water for all. The Part 1 of the CCA&DRR training addresses water scarcity by providing means to improve water recharge and to revive springs.

The Part 2 of the CCA&DRR training addresses soil erosion and landslides, which can cause damage to water supply systems therefore making them non-functional. The training content given below is only directional, and it should be modified to the specific needs of communities. The length of the training, i.e. the practical time in field, can be adjusted as needed. It is recommended to contact the District Soil Conservation Office and District Forest Office for technical assistance. External resource persons or specialists i.e. in water recharge topics can be utilized to ensure good quality training. Ideally this training supports also the preparation and implementation of water safety plans by giving practical CCA&DRR knowledge (see C.4).

Objective I: Gain theoretical and practical knowledge how to improve ground water/spring recharge, including field practice

Objective II: Gain theoretical and practical knowledge how to prevent and stabilize soil erosion and landslides

Duration: Part I: 2 days, Part II: 3 days (can be modified as per need)

Venue: Scheme areas or other location applicable for field observation

Participants: Relevant WUSC and WSP team members, VMWs

Resource Persons: Technical persons from District Soil Conservation offices or other specialists (external resource persons), DWASH Unit engineers

Proposed Training Contents:

Days	Content	Time	Learning Activities
PART I: Groundwater recharge to address water scarcity and decline of springs			
1st	Session-I: Introduction Objectives of the Training Problems faced by WUSCs participating in the training Expectation collection	1 hrs	Self-introductions and presentation of scheme issues. List expectations.
	Session-II: Formation of groundwater and springs Main principles of hydrological cycle, how ground water is formed, what is the catchment/ spring shed/recharge area and how land uses in catchment area affect water infiltration and runoff. How catchment condition can be improved.	2 hr	Presentation
	Session III: Types of springs and basic hydrogeology How to define the type of spring (depression, fracture, contact), the retention time of water in the spring,	2 hr	Presentation and discussion

	characteristics of aquifer, dip direction of bed rock.		
	Session IV: Recharge methods How recharge ponds, pits, trenches and other systems function? How to select the best method for a given context – what works where?	1 hr	Presentation and discussion
	Session-V: Recap and closing of the Day		
2nd	Session-I: Field visit to a problem site Study the type of spring, aquifer characteristics and identify recharge area. Identify sites for recharge structures and other catchment improvement practices. Social aspects i.e. land tenure, control measures, requirement for labour		Practical in field
	Session-II: Preparing plan		Practical group work and presentation
	Session-III: Recap and closing of the Day		

Days	Content	Time	Learning Activities
PART II: Soil erosion and landslides			
1st	Session-I: Introduction Objectives of the Training Problems faced by WUSCs participating in the training Expectation collection	1 h	Self-introductions and presentation of scheme issues. List expectations.
	Session-II: Soil Conservation Concept Type of soil erosion & land slide Causes of soil erosion & land slide Effect of soil erosion Preventive measure of soil erosion and land slide Possible soil erosion & land slide during construction of water supply scheme Water supply scheme component protection measures Intake, CC, DC, IC, RVT, BPT, Taps, pipe line	2.5h	Presentation, sharing and discussion
	Session-III: Low cost Soil Conservation Techniques Type of LCSC techniques; Advantage of LCSC techniques Why LCSC is popular nowadays? Why LCSC is effective in water supply and irrigation project sustainability? No grazing in catchment area	2 h	Presentation, sharing and discussion
	Session-IV: Fascines Techniques Use of Fascines; Advantage of Fascines Required material; Species/plant for Fascines Procedure and methods of Fascines	1 hr	Presentation, sharing and discussion
2nd	Session-I: Review of the previous day		Presentation by participants

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	Session-II: Presentation of selected Techniques	4h
	e.g. Fascines, Palisades, Wattling, Brush layering & Brush wood check dam, Hedge rows Use and advantage of a given technique; Required material; Species/plants Procedure and methods of given technique	
	Session-III: Practice of given technique(s) in field	Practical
3rd	Session-I: Practice of given technique(s) in field	Practical
	Closing	

B.2.7 Female WUSC members and VMWs' Leadership and Empowerment Training

Introduction: The post-construction phase is critical for sustainability of water supply schemes. Women continue to play an equal role in the post-construction activities. Non-functional water schemes mean increase of workload and drudgery for women. This training aims to empower women to be more involved and meaningfully participate in the water supply scheme management and leadership. The training focuses on how to mobilize community, motivate and re-activate community, build trust, solve conflicts and source disputes, mobilize financial resources etc. Women have strong role in creating enabling environment for successful scheme management and sustainable water services in the community. This training provides also an opportunity for peer support and networking among the female WUSC members and VMWs.

Objectives of the Workshop:

- Strengthened networking and peer support among the female WUSC members
- Improved skills for mobilizing community, motivating and re-activating community; able to ensure participation of other women and disadvantaged in post-construction activities and further decision making in the scheme
- Gained knowledge how to manage conflicts and source disputes, build trust
- Understand financial transparency and role of public audits, general assembly etc. as key activities to have socially sustainable scheme
- Know the principles of good leadership, inclusive WUSC and how to ensure it
- Understand importance of tariff collection & resource mobilization for O&M
- Learning sharing among female WUSCs members and VMWs for further planning and implementation of PoCo activities at the scheme level
- Able to check if source improvement is needed to address possibly left-out households living within the scheme area

Duration:	1 Day
Source of fund:	DDF
Organizer:	D-WASH Unit
Participants:	Female WUSC members and female VMWs
Methodology:	presentation, discussion, exercise and practical demonstration
Training materials:	Flash card, posters, stationeries, O&M regulation, WSP, etc.
Tentative Content:	

Major contents	Time
Opening formalities, Objectives of the workshop	30 min
Success factors for socially sustainable scheme, GESI/HRBA and role of women WUSC members in post-construction phase	1 h
Community mobilization, participation, motivation and re-activation skills	1 h
Conflict management, source disputes, trust building in community	1 h
Activities ensuring inclusion and good leadership	1 h
Transparency of the scheme, tariff collection, financial resources mobilization	1 h
Closing the training	30 min

B.2.8 Exposure Visit

Introduction: The post-construction phase is critical for long-term sustainability of water supply schemes. In order to motivate WUSC members and relevant stakeholders for improving functionality of water supply schemes, it can be good to organize some exposure visit to some successful and innovative water supply schemes. The participants will learn new ways to manage the schemes and see real-life examples how to improve the functionality, O&M, financial management etc. At the same, WUSCs can learn also about sanitation and hygiene. Exposure visits will be planned as case by case and they are not compulsory. DMC/DWASH Unit will plan them as per the need, relevancy and resources. Also some district level exposure visits can be planned for relevant stakeholders to learn about post-construction related activities, innovations, new practices etc.

Objectives of the exposure visit:

- Increased knowledge of WUSCs members and other relevant stakeholders on successful scheme operation and maintenance in a real-life situation
- Learning and sharing among the WUSCs members for further planning and implementation of post-construction activities at the scheme level
- Strengthened networking and peer support between WUSCs
- WUSCs motivated and inspired to replicate the best practices in their respective schemes.
- Being exposed to new ways of managing the water supply schemes and improving the sustainability through WSPs, female tap groups, O&M practices, CCA/DRR activities, tariff collection, expansion of scheme, financial support arrangements, etc.

Duration:	Decided as case by case
Source of fund:	DDF
Organizer:	D-WASH Unit
Participants:	WUSC members, other relevant stakeholders as planned
Event level:	DDC or VDC level, as applicable
Methodology:	Discussions, observations, interactions

Content of the program is decided as case by case. However the main objective is to interact with successful water supply scheme WUSCs, their communities, V-WASH-CCs and learn from their experience and best practices in WASH and replicate them through the post-construction phase.

PAPER B.3 VDC LEVEL POST-CONSTRUCTION FOLLOW-UP WORKSHOP

Background: Once the post-construction phase is started in the VDCs, regular sharing among the WUSCs is necessary to establish common understanding and learn from each other. V-WASH-CC also monitors the progress and status of the schemes through the workshop. Interaction with different service providers (technical, financial etc.) can be done during the workshop. Also the results of district level post-construction activities such as the private service providers' directory (see A.2) should be presented in the VDC level. Also the relevant private service providers should be invited to the workshop for interaction with WUSCs. Minimum of one follow-up workshop shall be organized in the VDC to reflect the learnings, progress, and feedback about the trainings, and plan the next steps.

Outcome: Post-construction progress monitored and private sector service providers connected with WUSCs.

Objectives of the workshop:

- To review the progress of post-construction activities including construction works in the schemes
- Discuss on issues and possible solutions
- Reflect the outcomes from the VDC and scheme level activities, collect feedback and plan the next steps
- Interact with private service providers
- Present the district level post-construction outcomes, such as the private service provider directory.

Duration: 1 day

Participants: V-WASH-CC, WUSC members (1 male, 1 female), VMWs, VDC secretary, private service providers as per need

Resource persons: SPs will facilitate the workshop

Funding: DDF

Methodology: presentation, discussion, group work

Materials needed: stationeries, posters, papers, markers, post-construction agreement paper, action plans, WSPs, private service providers' directory etc.

Major contents:

Major contents	Tentative Time	Important activities
Introduction Objectives of the workshop	30 min	individual introduction and sharing of objective
Presentation of the progress and issues by each WUSCs	2 hrs	Scheme wise presentation & discussion; compilation of WUSC-wise issues
Discussion based on the list common issues (as collected in the previous session). Finding out the solution & do-able action forward; feedback	30 min	List out in brown paper; active self-reflection: What is common in between WUSCs, what is not? What may be the reasons, and corrective actions?
Presentation of the available services by private sector service providers; Introduction of the Service provider directory	2 hrs	
Review post-construction VDC level action plan	30 min	Training needs
Closing the workshop	30 min	Closing

C. SCHEME LEVEL

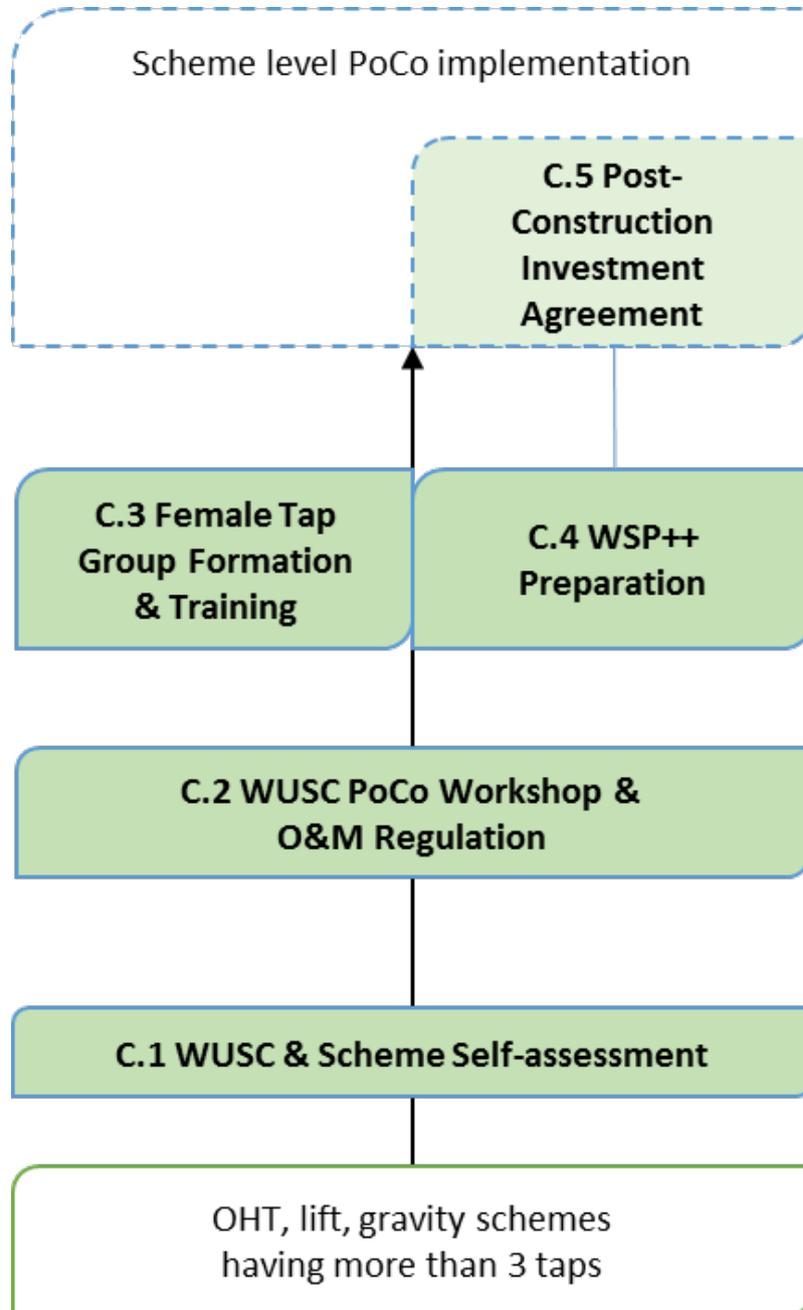


Figure 6 Scheme level post-construction phase activities

PAPER C.1 WUSC & SCHEME SELF-ASSESSMENT

Introduction: For assessing the WUSC & scheme status in the beginning of post-construction phase, WUSCs will do a self-assessment on their capacity and scheme functionality. This should be done by WUSCs themselves before coming to the VDC level post-construction workshop (see B.1) and/or WUSC post-construction workshop (see C.2). Scheme status will be discussed during the workshops. Later on the whole scheme will be thoroughly assessed during the WSP++ preparation. WUSC will reply as per their knowledge and the data will be verified and corrected with the support of SPs as part of the WUSC post-construction seminar. The format will provide initial information about the major post-construction support needs (hardware, trainings). Additional information about the RWSSP-WN Phase II schemes is available in Scheme Monitoring Books.

Outcome: Self-assessment format filled.

WUSC & Scheme Self-assessment Format:

Scheme name: _____

Name of VDC & wards: _____

Construction completion date: _____

Format filling date: 20...../0.....

1. Scheme Type (tick one type)					
Gravity	Lift	Overhead tank	Rainwater harvesting	Point source improvement	Tube-well

2. Number of beneficiary households (total)

3. Overall scheme functionality (tick)		
Fully	Partially	Closed down

4. WUSC representation (tick yes or no)		
Is there 50% of female in WUSC?	Yes	No
Is there proportionate representation of all ethnicities?	Yes	No

5. WUSC registration and activity (tick)		
Is WUSC registered?	Yes	No
IS WUSC having meetings regularly?	Yes	No
Final public audit of implementation phase held?	Yes	No

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6. Village Maintenance Worker (tick one or mark the number)		
Is there VMW/s working in the scheme	Yes	No
If yes, how many? (mark the number)	Female:	Male:
Have VWMs received training?	Yes	No
Is VMW paid?	Yes	No
If no VMW in the scheme, is WUSC ready to appoint?	Yes	No

7. Operation and maintenance fund (tick or mark the number)			
Scheme has O&M fund?		Yes	No
O&M fund used for repair and maintenance?		Yes	No
O&M fund as: (tick relevant ones)			
Kept by WUSC as cash	Kept in Bank	Given as loan in community	Kept in cooperatives

8. Water Tariff (tick or mark the number)		
Is water tariff collected	Yes	No
If not water tariff, is WUSC ready to start	Yes	No

9. Water Safety Plan (WSP) (tick yes or no)		
Has WUSC been trained on WSP?	Yes	No
Has WUSC prepared WSP?	Yes	No
Is WSP implemented?	Yes	No

10. Disaster risks		
Is there a risk of landslide 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. Issues to be presented in VDC or WUSC level post-construction workshops (Construction issues, remaining works, functionality problems, conflicts etc.)

PAPER C.2 WUSC POST-CONSTRUCTION WORKSHOP AND O&M REGULATION

Introduction: The WUSC post-construction workshop and O&M regulation preparation will be organised for the WUSC and users ideally after the VDC level post-construction workshop (B.1). The 2-day workshop will focus on the existing progress and how to make the scheme sustainable. It will clarify the required elements of the post-construction phase and form the linkage with the VDC level post-construction activities. During the post-construction workshop the SPs shall organize WUSC meeting and observe all records like WUSC minutes, public auditing records, book keeping, design report of scheme and other relevant documents and identify the capacity gap of WUSC and needs for further trainings (see B.2). The first day will focus on reviewing the WUSC & scheme assessment (see C.1) and orientation about post-construction package. WUSC will be oriented on O&M regulation and they shall prepare a draft O&M regulation (see below).

Outcome: WUSC and users oriented on PoCo, O&M regulation approved, decisions on WSP++ team and possible female tap groups done, verified that the WUSC is registered and have statute.

The content of the first day orientation shall be modified accordingly if the VDC level post-construction workshop (B.1) and/or O&M and tariff training (B.2) have been arranged earlier. The second day will focus on approving the O&M regulation and deciding on further activities regarding female tap groups and WSP preparation (WSP team formation). Written commitment of WUSC shall be received/recorded in the minutes to fulfil following criteria:

- Reshuffle WUSC according to projects' GESI/HRBA strategy having minimum 50% of women and proportional representation of all caste/ethnic group/settlement.
- Formulate WUSC statute and register the WUSC under Water Resources Act
- Conduct public audit of the scheme implementation in participation of 2/3 of HHs and having proportionate representation of all caste/ethnic group/settlement and 50% women.
- WUSC and VDC commitment to contribute cash and kind for scheme improvement (1% cash and unskilled and local materials as kind; VDC contribution 6% of total cost in cash)
- WSP++ prepared/committed to prepare it.

WUSC will discuss on model **O&M regulation** and prepare the draft. The mass meeting shall approve it. All commit to obey the regulation. An example of O&M regulation is included in the *WUSC Operation Manual*. The regulation major content:

- Institutional Arrangements: composition, meeting, general assembly, reporting and coordination of WUSC
- O&M Management: WSP and O&M Plan, tools and spare parts management, female tap groups, proper utilization of water and punishment for mishandling
- Conservation and CCA/DRR: Source protection, pipeline and structures, management and protection of the water catchment (e.g. plantation)

- VMW: appointment, salary and role and responsibilities
- O&M fund: water tariff, fund increase and mobilization, support from cooperatives and financial institutions for major repairs and service extension
- Sanitation and Hygiene activities

Objectives of the WUSC post-construction seminar and O&M regulation:

- Review and verification of the existing scheme situation (C.1), sustainability aspects, O&M, institutional capacity
- WUSC are aware of their future role in operation, maintenance, repair and overall management of the scheme, and post-construction phase
- To know the main post-construction elements and plan for them (required mass meeting decisions for female tap groups and WSP++ preparation)
- Formulation and approval of O&M regulation by mass meeting
- Identify further capacity building needs of WUSC (fed into the VDC level)
- Get written commitment of WUSC and users to fulfil the criteria

Duration: 2 Days

Participants: Day I: WUSC members, VDC representatives, V-WASH-CC member of the scheme area, Day II: Mass Meeting of the users + Day I participants

Facilitators: Field Coordinator, Sub-Engineer and other field staffs

Source of Fund: District Development fund (DDF)

Methodology: The method of the workshop will be based on discussion, presentation, and experience sharing; participatory monitoring of O&M.

Materials: WUSC & Scheme self-assessment (see Paper C.1); Scheme Monitoring Book (Phase II schemes); Design and estimate of the scheme, final layout, community map; Posters, papers, markers, etc.

Major contents and session plan:

Day	Contents	Time	Activities
1st	I. Introduction of the objectives of the workshop	15 min	Filling up questionnaire based on the previous monitoring report and final documents (if not done earlier, see C.1) Presentation and discussion
	II. Identification of Scheme Status: <ul style="list-style-type: none"> • WUSC & Scheme self-assessment (verification of data from C.1) 	1 hr	
	III. Orientation to WUSC on: <ul style="list-style-type: none"> • Criteria to be fulfilled for post-construction phase • O&M regulation formulation and implementation • Water tariff • Female tap groups formation • Water Safety Plan ++ • Post-construction investment agreement • Capacity building needs • VDC level post-construction activities • Post-ODF activities, towards Total Sanitation 	4 hr	

PAPER C.3 FEMALE TAP GROUP FORMATION & TRAINING

Introduction: Women are the primary users and managers of water. If any of the water schemes become non-functional, it increases the females' drudgery. Therefore, involvement of female in water schemes management is crucial; and it ultimately supports sustainability of the schemes. The major role of the female tap group is to ensure proper utilization of tap water, use of waste water in kitchen/home gardens, cleanliness of taps and surroundings. The tap group will carry out also minor repair and maintenance of the tap stand. The group members will be trained on sanitation and minor repair. It also supports income generation activities and regular water tariff collection. As part of the female tap group formation and training, linkage building for the relevant income generation trainings can be considered as per requirement in order to improve users' ability to pay for the water (see B.2). Female tap groups are applicable only for the scheme with public tap stands; therefore they may not be needed in all schemes.

Outcome: Female tap groups formed and trained (if applicable)

Formation of the tap groups: A female tap group shall be formed for each public tap. They represent the beneficiary households using the tap (one female member/household). The group shall prepare an action plan for the use of tap, application of O&M regulation, taking care of the tap and surrounding cleanliness and collecting water tariff. The group shall meet regularly (in agreed duration) and minute the discussion and decisions. Besides, the group shall identify their income generation potentialities and propose to respective agencies in support of VDC and V-WASH-CC.

Objectives of the training:

- Increase knowledge of women on O&M and their roles and responsibilities
- Make aware on different structures of the DWS scheme
- Make aware on the typical problems in the schemes and how to fix them (such as replacing washers; fixing leakages; changing other fittings)
- Know the basics of scheme and tap operation
- Know what is in the O&M related policy/regulations
- Be aware about Water Safety Plan
- Have ideas how to use the drainage water from tap stands to benefit gardens and trees; and if interested, how to set up micro-irrigation systems for the kitchen gardens – these applications are an additional incentive for O&M of the system

Training duration: 2 days

Funding source: DDF

Participants: All members of the female tap groups

Training place: Scheme area

Facilitator: Support Persons, WUSC chair and VMW, Resource person for livelihood related session

Methodology: presentations, discussions, practical demonstrations, exercises

Training materials: O&M plan and water safety plan; O&M policy /regulation; health related materials; flash card, posters; stationeries, water tap, pipes and tools for exercise, scheme layout plan etc.

Female Tap Group Training

Session	Session I 10:00 - 12:00	Session II 12:00 - 2:00	2:00 - 2:30	Session III 2:30 - 5:00
Day				
Day I	<ul style="list-style-type: none"> - Registration, Introduction and openings - Brief on scheme layout and its components - Key aspects of O&M and discussion on O&M Plan, WSP and O&M Regulations 	<ul style="list-style-type: none"> - Scheme O&M and Minor Repair Need - Discussion on frequently damaging parts and practical problems in the scheme such as; <ul style="list-style-type: none"> - Intake, Structures, Pipeline, Taps and its solution 	Tea Break	<ul style="list-style-type: none"> - Practical Session - Use and repair of Tap - Adjust Control Valve - Air cleaning from pipe - Cleaning water taps - Drainage management
Day II	Revision <ul style="list-style-type: none"> - Sanitation and Hygiene - Current practices - Key sanitation messages - Detail discussion on 5 key Indicators of Total Sanitation - Point-of-use water treatment - Hand washing exercise 	<ul style="list-style-type: none"> - Use of Water and Livelihood possibilities - Operation and Maintenance - Waste Water Utilization: How? - Livelihood potentialities using water - Practical exercise on identified livelihood option (The livelihood option should be pre-identified by SPs and manage resources person accordingly) <p>Action Plan Preparation</p> <p>Closing of the Training</p>		

PAPER C.4 WSP++ PREPARATION

Introduction: Water Safety Plan (WSP++) is a tool for ensuring 1) safe supply of water in terms of scheme functionality and water quantity, and 2) safe quality water in terms of water being free of bacterial and chemical contamination. The objective of this participatory training/preparation process is to support WUSCs to prepare WSPs for their schemes, i.e. going through the system analysis, identification of hazards and planning activities or control measures. As an outcome of the training and preparation process, WUSC has filled the formats that consist their WSP++, i.e. the short-term plan for regular operation and maintenance works and small improvements, and a long-term plan for bigger improvement and upgrading works. See the separate WSP++ guidelines for different scheme technologies.

The WSP automatically serves as a regular O&M plan taking into account the requirements defined in the O&M regulation prepared and approved in the WUSC post-construction seminar (see C.2). SP/SOs will support individual WUSCs to prepare a WSP for their scheme as hands-on exercise in the field. After the WSP++ has been prepared, it is the responsibility of the WUSC to continuously implement and monitor their WSP. In addition, the well prepared WSP provides the necessary information for the post-construction investment agreement if external support is required for the implementation of the chosen activities (see Paper C.5).

Outcome: WSP++ formats filled and WSP team knows how to implement the plan in practice.

Objectives: WSP++ is for ensuring 1) safe supply of water in terms of scheme functionality and water quantity, and 2) safe quality water in terms of water being free of bacterial and chemical contamination. The possible post-construction investment needs are identified in WSP++.

Duration: Three Days (3 Days), for larger schemes the time can be extended

Participants: WSP team members (must include WUSC chairperson and VMW)

Resource Persons: DWASH Unit, WSP resource/focal person

Materials:

- Scheme design, estimate, layout etc. documentation, Monitoring Book etc.
- *Water Safety Planning Guidelines for Gravity, Lift and Overhead Tank Schemes - With Integrated Operation & Maintenance Plan and Water Tariff Calculation* (separate technology wise guidelines)

Model training and preparation process in the scheme level: (can be modified according to the size of the scheme if the field observation takes more time)

Post-Construction Guidelines

Day	Content	Time	Activities
1st	Session I: Introduction Objectives of the Training Training Content and Logistics, Expectations collection	1 h	Through game or self-introduction List expectations.
	Session II: WSP++ Concept Purpose of WSP is to ensure A) Safe supply in terms of scheme functionality and water quantity and B) Safe quality of water. Six steps of WSP – step 2 (system analysis) and step 3 (identification of hazards) will be completed during the training, and based on that the WSP will be formulated.	1 h	Presentation, sharing and discussion
	Session III: Water quality What is the importance of clean water? How does water get contaminated? What are the water quality parameters?	1,5h	Presentation, sharing and discussion
	Session IV: Climate change and water availability; Catchment degradation and landslides. Do they have adequate water around the year? What are their experiences in changing climate pattern or extreme weather events? What about landslides? Are these posing a risk to water supply? How do different land uses in the catchment affect infiltration and recharge of ground water?	1,5 h	Presentation, sharing and discussion
	Session V: System analysis Water supply system from catchment to taps - ensure that everyone understands the purpose of different components. They should also understand the concept of water catchment, signs of catchment degradation and how this affects water supply. Fill the format 3.	2 h	Presentation, sharing and discussion
	Session VI: Recap and closing of the Day		
2nd	Session I: Identification of hazards in the catchment and scheme area. Visit the scheme from catchment to taps and identify risks of water contamination and human-, environment- and climate-induced hazards that can affect continuity of water supply. Take water quality samples from intake and taps.		Field investigations
	Session II: Scheme & catchment map Draw a scheme layout maps that show different components, houses and the water catchment area and land uses in the catchment. Mark possible hazard points or areas in the map. Fill in format 4.	2 h	Practical group work
	Session III: Water quality tests Decide which water quality parameters (other than P/A of coliform) should be tested. Carry out these tests and record the findings in format 5.	1 h	Practical (water quality tests)
	Session IV: Preparation of WSP - hazards Discuss and note down different hazards to WSP formats 6a and 6b (short- and long-term plans) based on the hazard	1h	Practical group work

	assessment (done on previous day).		
3rd	Session I: Measures to take under WSP – water quality Measures to ensure safe water quality in future. Water treatment methods and use of chlorine to clean the system.	1,5h	Presentation, discussion
	Session II: Measures to take under WSP – environmental- and climate induced hazards Measures to address problems like water scarcity and landslides. These include catchment improvement (e.g. regulating grazing, restoring vegetation), water recharge & retention and bio-engineering.	1,5h	Presentation, discussion
	Session III: Preparation of WSP – activities Discuss and write down activities to address hazards in WSP formats 6a and 6b. Presentation of the plans.	3h	Practical group work, presentation
	Closing of training		

PAPER C.5 POST-CONSTRUCTION INVESTMENT AGREEMENT

(Sample agreement – do check for the relevant items and xxx-markings when editing the final agreements in each case)

Outcome: Post-construction investment agreement signed and implemented accordingly, if such needs identified in WSP+ +.

Government of Nepal

Ministry of Federal Affairs and Local Development

Office of District Development Committee

.....



POST-CONSTRUCTION PHASE

AGREEMENT

Fiscal Year

Scheme Name	VDC/Ward	Households	Population
Total			

Duration of Agreement: From To

Date of Agreement:

1. BACKGROUND

This agreement is signed to ensure sustainable operation and maintenance of the scheme construction completed on with the joint funding from Government of Nepal, Government of Finland, District Development Committee (DDC), Village Development Committees (VDC) and users. DDC expects that the community and Water Users and Sanitation Committee (WUSC) as its representative will operate and maintain the scheme.

At the end of the post-construction phase the WUSC will (xxxx leave only relevant items xxx):

- have a technically fully functional scheme with immediate water safety related works completed;
- have prepared and are implementing WSP++, and therefore have also O&M plan prepared and water tariff calculated; following the O&M regulation;
- have established functional appropriate management practices in line with the principles of good governance, gender equality and social inclusion;
- have established female tap groups (if applicable) and trained them;
- have received both financial and technical management refresher trainings as needed;
- have a plan of action of sanitation and hygiene, with immediate items that can be taken within this agreement period; and
- have considered the multiple-use of water options and its link into income generation and livelihoods activities, with a plan of action as appropriate in the specific scheme context

2. SIGNING PARTIES

The agreement is signed between;

- A. District Development Committee (referred as "DDC" in this agreement)
- B. Village Development Committee (referred as "VDC" in this agreement)
- C. Water Users and Sanitation Committee (referred as "WUSC" in this agreement)

3. SCOPE OF AGREEMENT

Under the agreement, following activities (xxxx leave only the relevant items into agreement, cut out all that are not going to be done or are not relevant xxx) are supposed to carry out based on the prepared Water Safety Plan ++ and other relevant activities agreed by WUSC during post-construction workshop, attached design and estimate of post construction related construction/repair works.

Activities of Post Construction Phase (xxx leave only relevant items in each case xxx):

A. Sanitation and Hygiene related

1	Continuation of Total Sanitation activities to sustain Open Defecation Free (ODF) status
2	Construction, proper use and regular maintenance of institutional/school toilets
3	Construction of solid waste disposal pits (organic and non-organic)
4	Vessel drying rack construction
5	Smokeless stove construction
6	Water purification at household level
7	Regular monitoring of activities

C. Operation and Maintenance (O&M) and Water Safety Plan (WSP++)

1	Implementation of improvements defined in WSP++ (see also B.)
2	Participatory monitoring of WSP and O&M Plan
3	Review and update of the plan in annual general assembly
4	
5	

B. Climate Change Adaptation & Disaster Risk Reduction (CCA/DRR) related activities

1	Management of fodder and water protecting plant saplings
2	Plantation in watershed area and source catchment
3	Construction of recharge ponds or other recharge options (as appropriate)
4	Other source protection works (as per need)
5	Protection work of all other structures, selected bio-engineering
6	Re-filling of pipeline trenches annually and plantation of grass over pipeline
7	Low cost/biological conservation works in potential landslide area
8	Diversion of runoff water

WUSC agrees to meet following indicators by the end of this post construction phase agreement period:

- WUSC organized annual general meeting and its registration renewed annually.
- WUSC formulated and implemented O&M regulation of WUSC.
- WUSC implemented the prepared WSP++ integrating O&M plan and regularly monitored them.
- Adequate water tariff agreed and raised regularly.
- VMW/PO(s) trained, appointed and regularly worked.
- The WUSC has 50% of female representation (including at least one person in executive committee member position) and proportional representation of all caste and clusters; WUSC meets regularly.
- Users getting 45 lpcd (or as designed) within 15 minutes round trip without having any biological contamination. Other water quality problems are addressed as appropriate (lime, arsenic, turbidity).
- Water taps for school and public places constructed and are in access of elderly people, children and disable people. Soap for hand washing available near institutional/public toilets.
- All the beneficiary households have safe toilet, vessels drying rack, solid waste disposal pit and access or used water is properly drained.
- All the households apply water purification techniques.
- All the households practiced hand washing in critical time.

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)

The WUSC acts as an executing body representing beneficiary community. WUSC is responsible for all activities carried out in the scheme area. WUSC has responsibility to complete all planned activities; in this connection major role and responsibility under this contract shall be, not limited to as following:

A.1. Management related

- Formulate a post-construction action plan and implement the activities
- Organize WUSC meetings regularly and discuss on O&M aspects of the scheme
- Manage proper storage of tools of the schemes.
- Procure, store and manage spare parts for the scheme with the support of Village Maintenance Worker (VMW) and technician
- Participatory monitoring of all the activities in regular basis.
- Maintain book keeping of the scheme
- Organize public audit and get approval of all expenditures

A.2 Water Safety Plan ++ (with O&M plan and water tariff defined)

- Implement the formulated WSP++ (including O&M Plan), and monitor and update it
- Include females in tap groups and activate them through action planning, implementation and monitoring
- Mobilize community people for plantation and other protection works around water source and watershed area.
- Re-fill pipeline trenches after each rainy season and plant grass over pipeline to protect from soil erosion.
- Appoint trained VMW and manage salary for VMW
- Prepare O&M regulation, endorse from mass meeting and implement it

A.3 Others

- Prepare status of household toilets, vessel-drying *chang*, solid waste disposal pits (separate for biodegradable and non-degradable) and support for implementation in remaining households.
- Promote smokeless stove construction
- Organize different awareness raising activities
- Report on scheme status to VDC

B. SUPPORT PERSON OR SUPPORT ORGANIZATION (SP/SO)

- Organize VDC and scheme level capacity building as per need and plan
- Facilitate WSP++ preparation and implementation process
- Assist WUSC in O&M regulation formulation, implementation and monitoring process
- Facilitate public auditing meetings and WUSC general assembly
- Facilitate to form female tap groups
- Organize water use, sanitation and hygiene and basic O&M training to female tap groups
- Organize community and VDC level training and awareness related activities in the field
- Participate in WUSC meeting and facilitate the meeting

Post-Construction Guidelines

- Support WUSC keeping accounts and store records and support to prepare income expenditure statements to submit to the mass meeting.
- Support WUSC to solve the problems encountered during implementation of activities.
- Facilitate district level monitoring team as per Step-By-Step monitoring
- Support in financial clearance of the post construction activities
- Coordinate and support smoke less stove construction work

Following human resources will be involved in post-construction phase (xxxx only relevant persons xxxx)

Sn	Name	Position	Duration
1		Field Coordinator	
2		Sub Engineer	
3		Health Promoter	
4		WSST	

C. DISTRICT DEVELOPMENT COMMITTEE (DDC)

- Release fund to WUSC and SO in instalments as specified in this agreement.
- Monitor the performance of WUSC, SO/SP and quality of structure and capacity building activities.
- Organize official monitoring at fields ensuring timely payment to WUSC and SO.
- Extend the duration of the agreement as requested by WUSC with justified reason without increasing the cost of the phase.
- Support WUSC to coordinate with other line agencies for implementing income generation, livelihood activities and relevant CCA/DRR activities
- Facilitate WUSC to be organized under FEDWASUN/to join FEDWASUN

D. ROLE AND RESPONSIBILITIES OF DTO/D-WASH UNIT

- The DTO/DWASH Unit is responsible to:
- Monitor, supervise the activities and ensure quality of construction and materials.
- Make technical evaluation of the schemes.
- Recommend DDC for payments to WUSCs and SO/SPs
- Ensure completion of the scheme and report to the DDC/DMC

E. ROLE AND RESPONSIBILITIES OF VDC

- Match the VDC fund to WUSC account as per agreement.
- Monitor and evaluate implementation of activities and performance of SO/SPs and WUSCs and recommend to DDC for corrective measure
- Recommend to DDC for final payments of WUSC and SO/SP
- Share the experiences of WUSCs of a completed scheme to educate other WUSCs
- Support communities to enhance livelihoods, to improve water supply and sanitation facilities and generate fund.
- Allocate budget from VDC for O&M fund of critical schemes.
- Provide overall assistance to WUSC in mobilizing the local resources and getting necessary permits or approvals from the local authorities needed for smooth implementation of the scheme.

F. ROLE AND RESPONSIBILITY OF V-WASH-CC

- Participate in monitoring of post-construction activities.
- Coordinate with DDC, VDC and WUSCs.
- Mobilize local resources and support to WUSC for implementation of the scheme
- Support WUSC in income generation activities and relevant CCA/DRR activities

6. SCHEME COST AND TOTAL COST ESTIMATE

As per design report and capacity building plan for post construction phase total cost of the post construction phase of the scheme is NPR.....(inn words Nepalese Rupees). The total scheme cost includes "Technical" and "Software" costs in cash and kind.

7. CONTRIBUTION OF DIFFERENT PARTIES

The contribution of different parties is as follows:

WUSC (Community):

cash	NPR.....
in kind	NPR.....
Total from community:	NPR.....

District Development Fund (DDF)

Government of Nepal	NPR.....
Government of Finland	NPR.....

(xxxName of District) District Development Committee NPR.....

Total from DDF: NPR.....

VDC (Cash) NPR.....

Total from VDC: NPR.....

8. PAYMENT SCHEDULE TO WUSC

The DDC shall release fund from DDF to the account of WUSC on instalment basis as specified below:

First Instalment:

NPR (in words rupeesonly), equivalent to 80% of the cost estimate amount (excluding kind), shall be released to the account of WUSC by account payee cheque after signing the agreement. Submission of approval of quotation for material procurement along with agreement with the supplier should be submitted before release of first instalment.

Second and final Instalment:

NPR (in words rupeesonly) up to 20% will be released only after:

- evaluation report of the cost as per the work done
- completion of all the activities as per post construction action plan
- submission of public audit report
- submission of recommendation of VDC and SO/SP

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

9. AUDITING

Users itself organizing public/social auditing mass gathering will audit book keeping of all financial transactions of WUSC. 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 for discussion. WUSC in assistance of SO/SP is responsible to organize the event. Representation of each Household (HH) is expected in the meeting however, 75% of the total HH of the scheme area may finalize this auditing. WUSC in assistance of SO/SP will update project information board including total scheme cost after completion of public auditing. The WUSC shall organize similar annual mass meeting for public auditing and review of scheme status.

10. MONITORING AND SUPERVISION

The DDC will arrange monitoring visits to the scheme. In addition, the DDC can assign its personnel to supervise the work on site at any time during the duration of the contract. The personnel of DDC or monitoring team appointed by DDC shall have the right to visit the site, SO/SP office and site office at any time. DDC personnel and monitoring team is entitled to have access to any information related to execution of activities under this contract

Representatives of SO/SP and WUSC shall participate in the monitoring. They will assist the DDC monitoring team by providing all required information and by actively helping to inspect all the work done by SO/SP and WUSC.

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

In case district monitoring visit has to be repeated as a result of being provided misleading information by the SO/SP or WUSC, the SO/SP or WUSC will be required to pay the cost of such additional visits.

11. TERMINATION OF AGREEMENT

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

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

If the agreement is terminated by DDC for a reason beyond the control of the SO/SP or WUSC, all the expenditure till the date of termination shall be paid to the SO/SP and WUSC.

If the agreement is terminated for any reason caused by the SO/SP or WUSC, the DDC shall have the right to withhold the pending or remaining payments and to capture the remaining materials and tools.

12. REDUCTION OF PAYMENT

The DDC has the right to reduce the payments if particular activities have not been undertaken by SO/SP as specified, the activities have been modified or the design 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 or more than the amount mentioned in this agreement in all cases.

13. 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 as under the prevailing legal system of Nepal.

14. 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 DDF. Such surplus amount shall be adjusted while making the final payment to the WUSC.

15. SIGNATURES

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

On behalf of the WUSC:

Signature:

Name:

Position:

Date:

On behalf of the VDC:

Signature:

Name:

Position:

Date:

On behalf of the DDC:

Signature:

Name:

Position:

Date:

Witnessed by:

District Technical Officer (DTO)

Name:

Position:

Date:

RWSSP-WN II:

Name:

Position:

Date:

- ANNEXES:** A) Post construction Phase action Plan dated
 B) Design report of post construction dated