

**RURAL VILLAGE WATER RESOURCES
MANAGEMENT PROJECT (RVWRMP)
NEPAL**
(Nepal-Finland Cooperation)

STEP-BY-STEP MANUAL

FINAL DRAFT

(This Step-by-Step Manual is prepared for execution of the activities funded under the District Water Resource Development Fund (DWRDF) established under each District Development Committee of the Project Districts. District Sub-Projects and Support Organisations should follow this Manual on mandatory basis while executing the activities).

Government of Nepal
Ministry of Local Development
Department of Local Infrastructure Development and Agricultural Roads
(DoLIDAR)

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Foreword

This Step-by-Step Manual gives detailed descriptions, guidelines and models for carrying out a scheme cycle process adopted in Rural Village Water Resources Management Project (RVWRMP). This Manual guides User Committees, Support Organizations, District Development Committees, District Management Committees and other district level stakeholders and project staff in carrying out the project activities in standardized, comprehensive and systematic manner.

The Manual is arranged into different papers giving detailed models and instructions for carrying out important activities in the project implementation process. These models and guidelines should be taken as an important reference by all stakeholders; however, the District Management Committee (DMC) can in special circumstances propose small adjustments, without deviating from the main objective, to better suit the specific situations in the different districts.

The Manual capitalizes on the 15 years experience of the Rural Water Supply and Sanitation Support Program in Lumbini zone (1990-2005) and has been reviewed during the 2 first years of implementation of the RVWRMP.

A broad spectrum of contributors have enriched these guidelines; engineers & social scientists as well as information management specialist paid a lot of time and attention to its writing. The actual feedback from the Users Committees and Support Organisation was also included. The recent socio-political focus of decentralization, gender promotion and inclusion of disadvantaged groups has shaped many elements of this guideline.

The success of this manual will depend on its users who are encouraged to discuss it thoroughly during the implementation process with the goal to provide a more accurate and easier document for the benefit of the rural population served by the infrastructure development.

The authors of this manual will be most rewarded by its observance during the project and its eventual integration by other partners in the water sector.

Rural Village Water Resources Management Project (RVWRMP)
Dhangadhi

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LIST OF ABBREVIATIONS

ADB	Asian Development Bank
ADB/N	Agricultural Development Bank / Nepal
AEPC	Alternate Energy Promotion Center
CBO	Community Based Organisation
CBWSSSP	Community Based Water Supply and Sanitation Sector Project (ADB)
CM	Community mobilisation / mobiliser
CO	Community Organisation
DDC	District Development Committee
DDF	District Development Fund
DEDF	District Energy Development Fund
DIDC	District Information and Documentation Center
DSCO	District Soil Conservation Office
DMC	District Management Committee
DLGSP	Decentralised Local Governance Support Programme
DOI	Department of Irrigation
DoLIDAR	Department of Local Infrastructure Development and Agricultural Roads
DTO	District Technical Office
DWSS	Department of Water Supply and Sewerage
DWRDF	District Water Resources Development Fund
EIA	Environmental Impact Assessment
EURO	Euro
FCHV	Female Community Health Volunteer
FG	Functional Group
GESI	Gender Equality and Social Inclusion
GOF	Government of Finland
HDI	Human Development Index (UNDP)
Helvetas	Swiss Association for International Development Cooperation
GON	Government of Nepal
HRD	Human Resource Development
IDA	International Development Association (World Bank)
IEE	Initial Environmental Examination
LDF	Local Development Fund
LDO	Local Development Officer
LNGO	Local Non-Governmental Organisation
LSGA	Local Self-Governance Act 1999
MFA	Ministry for Foreign Affairs of Finland
M&E	Monitoring and Evaluation
MG	Mothers' Group
MH	Micro hydro
MLD	Ministry of Local Development
MOEST	Ministry of Environment Science and Technology
MOE	Ministry of Education
MOHP	Ministry of Health and Population
MOWR	Ministry of Water Resources
MPPW	Ministry of Physical Planning and Works
NGO	Non-Governmental Organisation
NPC	National Planning Commission

LIST OF ABBREVIATIONS (Cont.)

NPD	National Project Director
NPR	Nepalese Rupee
NWSC	Nepal Water Supply Corporation
NWSSCC	National Water Supply and Sanitation Coordination Committee
O&M	Operation and Maintenance
PC	Project Coordinator
PCO	Project Coordinator Office
PSU	Project Support Unit
PWD	Public Works Directives
REDP	Rural Energy Development Programme
REDS	Rural Energy Development Section (also DDC: REDS)
RVWRMP	Rural Village Water Resources Management Project (The Project)
RWSSSP	Rural Water Supply and Sanitation Support Programme (Phase III)
SO	Support Organisation
TA	Technical Assistance
TL	Team Leader
UC	User Committee
UG	User Group
UNDP	United Nations Development Programme
USD	United States Dollar
VDC	Village Development Committee
VMW	Village Maintenance Worker
WARM-P	Water Resources Management Project (Helvetas)
WB	The World Bank
WDO	Women Development Office
WRA	Water Resources Adviser
WSD/(SD)O	Water Supply Division/(Sub-Division) Office
WUC	Water User Committee
WUMP	Water Use Master Plan

PROJECT INTRODUCTION

Rural Village Water Resources Management Project (RVWRMP) started its activities in October 2006 and will continue till the end of August 2010. RVWRMP works in nine (9) hilly/mountainous districts of the Far- and Mid-Western Nepal. In addition, arsenic mitigation activities will be carried out in Kailali district. The main objective is to improve the quality of life of the local people, improve environmental conditions and increase opportunities to rural livelihoods, through rational, equitable and sustainable practices of water resources planning and use. The overall budget of the project is NPR 1274 million, equivalent to EUR 13.7 million.

The project districts have been ranked either as “poor” or “very poor” in the UNDP’s Nepal Human Development Report 2004. According to the same report, the annual per capita income varies between USD 125 in Dailekh and USD 242 in Dadeldhura. Average adult literacy rate is between 20% (Humla) and 40% (Baitadi), while female literacy is as low as 5% in Humla and reaches just 23% in Baitadi. Some 43% of the total population has access to tapped drinking water systems. Sanitation services are practically non-existing. There is also high demand for irrigation systems development.

The project idea is to develop the use of water resources on the basis of comprehensive Water Use Master Plans (WUMPs) to be prepared for 80 priority VDCs selected by DDCs. WUMPs will be prepared by the concerned VDCs and the communities themselves, facilitated by social Support Organizations and technical consultants. Community Organisations (CO), comprised of representatives of all the households in each settlement, will be the backbone of the inclusive approach of the Project; separate COs will be formed for women and men of the community and special attention will be paid on inclusion of women, Dalits and other vulnerable groups in the COs and at the VDC-level in Water Resources Management Committees (WRMC). After preparation of WUMP, the people’s own priority schemes will be implemented by User’s Committees (UCs), with the help of local support organizations (SOs), and the COs will form a basis for people’s participation in all project activities and the sustainability of the schemes. In this way the project aims at ensuring active and meaningful participation of women, Dalits and other deprived groups in all phases of the project, from planning to post-construction, and at creating ownership and sustainability at the local level.

The **overall objective** towards which the RVWRMP will contribute is:

Improved quality of life, environmental conditions and increased opportunities to improve rural livelihoods in the Mid- and Far Western regions through rational, equitable and sustainable use of water at the village level.

This general objective will be met by means of Integrated Water Resources Management, i.e. optimal development and use of available water resources, protection of scarce resources and tapping the economic value of water for the well-being and welfare of people using these resources. Water will thus be used as means for balanced social and economic development to benefit rural communities. Living standards of the the excluded groups will be raised by improvements in agricultural production and creating other income generating activities.

The attainment of the overall objective will be verified by means of the following indicators:

- *Quality of Life indicators: Improved health conditions, improved housing conditions.*
- *Environmental Improvement indicators: Quality (and volume of water) in existing natural water bodies are maintained (or improved). Solid wastes are properly collected and disposed of (i.e., not dumped near river banks).*

- *Economic Growth and Opportunity indicators: Improvements in agricultural productivity and variety of crops (including kitchen gardens) in project villages. Presence of new income generating activities in project area.*

Project Purpose:

The **Purpose** of the RVWRMP is to contribute to the attainment of the overall objective through:

- *Increased availability of water resources with improved institutional capacity for planning, management and use of resources.*
- *Improved access to safe drinking water supplies and sanitation services.*
- *Increased availability of irrigation services.*
- *Increased use of micro hydro (MH) power potentials.*

The project will improve quality of life and living standards of people living in the participating VDCs and villages, which express an interest and a willingness to contribute (financially and in kind) to the development of water resources projects in their community (demand driven basis). The RVWRMP will support overall institutional capacity for water resources management and directly support capital improvements for drinking water supply, irrigation and household sanitation services. In development of micro hydro (MH) facilities the priority will be given to those villages which do not have any other means of access to drinking water supply. At same time MH will be utilised to develop other income generating activities. MH development will be supported by the World Bank/UNDP-financed Rural Energy Development Project (REDP) and the AEPC.

Project Approach

The project **approach** is based on the following key principles and tools: (i) holistic approach – comprehensive, multi-sector planning and preparation process; (ii) bottom-up approach – community mobilization and inclusion; (iii) participatory approach – promotion of ownership of all members in the community; (iv) income generation – entrepreneurship promotion; (v) coordination – linkage with other ongoing sector projects; and (vi) multiple use of water – water resources management. In the Project, inclusion of the poorest, Dalits, other vulnerable groups, both women and men, is a cross-cutting foundation to build on.

The project aims at effectiveness (optimal, hygienic and consistent use of water and sanitation facilities to maximize benefits and minimize negative consequences over an extended period of time), sustainability (ownership and capacity of all members of the community, and at the agency level, to maintain service and benefits without detrimental effects on the environment, even after the project has been phased out) and replicability (building the capacity to duplicate the processes and benefits of a set of development activities in new locations after their effectiveness has been demonstrated in limited geographic areas).

This Manual is meant to serve as a tool to UCs and SOs and to all those involved in facilitating UCs to plan and implement the schemes. Other, not directly scheme related, activities carried out by the Project are not covered by this Manual but are presented in other Project Guidelines. Roles and responsibilities of each stakeholder involved in the scheme activities are highlighted in this Manual. All the steps are summarized in the Step-by-Step Flow Chart (Annex 1). The Manual will serve as a helping tool to all stakeholders in establishing sustainable water resources utilization systems.

DESCRIPTION OF THE STEP-BY-STEP PROCESS

STEP	Responsibility of
<p><u>PLANNING PHASE</u></p> <p>1. Selection of Project VDC DDC selects the project VDCs according to criteria given by the project, assistance and provision of relevant data by the DMC/PSU.</p> <p>2. Agreement between VDC/DDC Agreement for WUMP preparation in the Selected VDCs. <i>Model of VDC-DDC agreement is given in Paper 5 of this Manual.</i></p> <p>3. CM Selection, CO formation and SO selection</p> <ul style="list-style-type: none"> • Immediately after VDC-DDC agreement VDC will select CM and it will be facilitated by DMC. • Two COs (of male and females) should be formed with representation from all households at cluster level. Mass meeting elect the working committee of COs. • SO(s) will be selected for each Project VDC according to SO selection criteria for Baseline Data collection before and during WUMP preparation and to support the WUMP preparation and implementation of schemes after WUMP completion. <p>4. Baseline Data Collection and WUMP Awareness Campaign Before the preparation of WUMP in the project VDC Baseline Data will be collected at the same time the CMs and SO(s) are responsible to conduct a WUMP awareness campaign in the VDC. The exhaustive Household Survey covers demography, ethnicity, assets, income, sanitation, education, health The WUMP awareness campaign will prepare the community for acting knowledgably and responsibly during the Water Use Master Plan and propagate the need of a complete water sources inventory. It will initiate the delineation of clusters of houses sharing common water access (sub-committee base) and prepare a reflection regarding the water access priorities.</p> <p>More details are presented in this Manual in: Paper 10 - Baseline Data Collection, Paper 11 – Baseline Data Collection Formats and Paper 12 - WUMP Awareness Campaign.</p>	<p>DDC, DMC, PSU</p> <p>VDC, DDC</p> <p>VDC, DDC, DMC</p> <p>CMs, SO(s)</p>

STEP	Responsibility of
<p>5. WUMP Preparation, Finalization, Approval and Endorsement</p> <ul style="list-style-type: none"> ➤ Project Support Unit Dhangadhi will manage appropriate Consultant and SO to carry out Water User Master Plan, including Geographic Information System related to water sources and usage, sanitation, settlements etc. of selected VDC/s of the districts. Mass meeting will elect the working committee of COs (Male and Female) from all clusters followed by formation of WRMC represented from COs of all clusters of the VDC. ➤ Selected consultant and SO will carryout data collection, social mapping and need identification work at cluster level. ➤ Social mapping will be followed by need identification and planning of priority schemes for all the usable water sources for the area of a CO/WRMSC. ➤ All the existing and potential water sources should be measured and technical evaluation of existing drinking water/irrigation schemes done. Geo referencing of water sources, clusters, location of local materials should be taken carefully. Technical data will be collected using prescribed format in close co-ordination of COs/WRMSCs. ➤ All the information should be collected by conducting mass meeting and consultation with community members, including women, poor and deprived people representing all castes and ethnic groups, and from community leaders, teachers etc. by means of social mapping and mass meetings. A list of people met and consulted should be prepared. ➤ Capacity Building Training will be provided to WRMC and COs/WRMSCs. ➤ After the data processing, situation analysis report and map on topographic map will be prepared. ➤ Participatory planning workshop at VDC level will be organized to plan the water resource program as per the situation analysed. The workshop will be participated by WRMC, representatives of COs, VDC, agencies operating in the VDC and key political leaders. The workshop will propose the draft plan for WRM development within the VDC. ➤ WUMP Report, prepared by the SOs, based on field assessment information, needs and priorities, and the planning workshop will include a comprehensive source inventory and a priority list of the water related schemes in a VDC. <p>DMC coordinates the WUMP preparation activities and provides support and field presence.</p> <p>For further details on WUMP preparation process refer to “WUMP Preparation Guidelines.”</p>	<p>Consultants/ SOs/ VDC</p>

STEP	Responsibility of
<p><u>PREPARATORY PHASE</u></p> <p>7. Preparatory Phase agreement between DDC/VDC/SO</p> <p>Agreement to carry out Preparatory Phase activities can be signed if the findings of the monitoring confirm to the criteria and the WUMP is endorsed by the DDC. Preparatory Phase activities of a scheme are broadly categorized into social and technical components. The works can be entrusted to one or two SOs depending upon the capability and interest of the organization(s).</p> <p>DMC prepares papers for a tri-partite agreement for Preparatory Phase activities of a scheme, which is signed by the DMC on behalf of the DDC, representative of the concerned VDC and the SO and witnessed by WRMC and WRA. The financial proposal agreed between SO(s) and DDC forms the basis for Preparatory Phase Agreement.</p> <p><i>Note: Detailed contribution pattern (including MUS) are provided in the Implementation Guideline</i></p> <p>Sample for Preparatory Phase Agreement is provided in Paper 17 of this Manual.</p>	<p>DDC, VDC, SO(s)</p>

STEP	Responsibility of
<p>8. Community Mobilization, Formulation of the Scheme, Formation of Users' Committee</p> <p>In the Planning Phase various social mobilization interventions have already taken place. In this phase beneficiary community will be further prepared for the scheme activities by conducting various PRA exercises:</p> <ul style="list-style-type: none"> • Community resource mapping; • Wealth ranking; • Awareness raining and training activities; • Formation of User Committee(s). <p>In RVWRMP users are regarded as the real managers/owners of a scheme. Sustainability of a scheme largely depends on the effective functioning of users and their representatives in implementation and management of scheme. Therefore, selection/election of the UC office bearers should be done properly.</p> <ul style="list-style-type: none"> • The number of members in a UC is determined by the users themselves in a range of 7 to 11 depending upon the size of a scheme and population to be served by the scheme. • The scheme area should be roughly divided in the manner that ensures the representation of each settlement/clusters and caste/ethnic groups. • A separate meeting with men and women should be organized to select their representatives. All the caste/ethnic groups and clusters with at least 2/3 of the households should attend the meeting. • Minimally, equal number of participation of male and female will be ensured in the formation of Users' Committee and at least one female member shall be in key position. • Proportionate representation of all castes and ethnic groups should be ensured. • After the women have selected their representatives, a mass meeting of the all users should be organized to form a UC. VDC representatives, SO representatives and social workers such as FCHVs, TBAs and teachers should also be invited in the meeting. Members are selected/elected in the meeting. Key positions and their corresponding role and responsibilities should be agreed among the selected/elected members and get endorsed in the mass meeting. • Representation of one woman and one man from at least 2/3 households should be in the meeting. • UC should be registered under Water Resource Act, 1992. SO supports UC to have sample of constitution/legislation and in process of registration. A sample of constitution to be prepared for the registration of the UC can be found in the "General Guideline for Users Committee" prepared by the National Planning Commission, GoN. <p>Procedures of UC formation and roles of the office holders are given in Paper no. 21.</p>	<p>Social SO, CMs</p>

STEP	Responsibility of
<p>9. Other Preparatory works</p> <p>This step includes different training activities for UC and the community as well as sanitation activities and preparation of Layout Plan and Detailed Technical survey of the Scheme.</p> <p>The training activities during this phase include:</p> <p>9.1.1 UC Orientation 9.1.2 HSE for FCHV/MG & UC 9.1.3 Gender and Social Inclusion Training 9.1.4 WR and Environment 9.1.5 Financial Management 9.1.6 Community Action Planning 9.1.7 Solid Waste Management 9.1.8 Livelihoods and Income Generation training</p> <p>Sanitation activities include:</p> <p>9.2.1 Selection of Households 9.2.2 Identification of Institutions 9.2.3 Demonstration Latrines Construction</p> <p>Layout Plan and Technical Survey:</p> <ul style="list-style-type: none"> • SO should assist the UC to prepare a draft Layout Plan to be discussed and finalized in a mass meeting inviting the concerned VDC officials and user households • The mass meeting to decide on the Layout Plan should be organized with the participation of <ul style="list-style-type: none"> ➤ 2/3 of the households representing all castes and clusters of the proposed scheme area ➤ at least 50 percent women present in the meeting. ➤ if the presence of the women is less than 50% and 2/3 households are not represented, the meeting should be postponed for the day convenient to all concerned. <p>The following aspects included in the Layout Plan should be agreed by the meeting:</p> <ul style="list-style-type: none"> ✓ Number of taps/wells/outlets ✓ Location of main structures ✓ Pipeline/canal alignment <ul style="list-style-type: none"> • Tapstand locations should be decided by women. Participation of at least one woman from each household is mandatory in this event. • The SO should facilitate the discussion, present different options and explain the impact of choosing each option. • The Layout Plan should be approved by the mass meeting. In case the Layout Plan is not approved in the meeting, the SO has to facilitate the redefinition of the scheme. The scheme process will not continue, if the users do not approve the Plan even after its redefinition. <p>The Layout Plan will be finally confirmed after the Technical Survey.</p>	<p>SO(s), UC, CMs</p>

STEP	Responsibility of
<p>10. Detailed Design, Bill of Quantities and Cost Estimate</p> <ul style="list-style-type: none"> • After completion of data processing work, detailed design is done based on population to be covered, source yield, demand per capita per day, topography and soil conditions. Detailed design of a scheme should be done as per the Design Guidelines given in Papers 41 to 46. • Once the design has been prepared, Bill of Quantities for each component is calculated based on the norms and standards of GoN. It includes volume of works, materials (local and non-local) and labor (skilled and unskilled) needed for the scheme. • Costing of the items is done based on the district rates. Materials not specified in district rates are estimated using prevailing market rates. Costing of a scheme is compiled in separate sheets for each component. <p>Finally, Design Report of a scheme contains Bills of Quantities with materials and labor breakdown, cost of materials, labor, transportation, sanitation activities, total cost, contributions and cost per capita. Management cost for UC as per the provision made in the Regulations of the Self-Governance Act, 1998 should be also included in the cost estimate.</p>	<p>Technical SO</p>
<p>11a. Preparation and Approval of Community Action Plan (CAP)</p> <p>After the layout, technical design and cost estimate have been prepared, the users should decide whether they agree with the proposal. If accepted, a Community Action Plan (CAP) is prepared and a mass meeting of the users organized for approval. A Monitoring team also attends the mass meeting as part of second monitoring.</p> <ul style="list-style-type: none"> • With the assistance of SO staff, the UC should draft a CAP clearly indicating the What, When, Where, Who and How of the activities planned for the Implementation Phase. The activities to be included in preparation of CAP include: <ul style="list-style-type: none"> ➤ Collection of local materials, ➤ Collection of cash contribution from the users and from the VDC ➤ Purchase of non-local materials and transportation ➤ Construction of different structures and labor contribution to the scheme • Decision about the CAP should be made in a mass meeting in participation of men and women from each household. The SO in supervision and consultation of UC should provide the draft CAP to the participants well ahead of the meeting. The CAP will cover the full work plan and budget for scheme implementation. • The users should decide whether they agree with the proposal. If accepted, the scheme process will move forward, if not the scheme will be redesigned. <p>The CAP together with the technical design and estimate forms the basis for the Implementation Phase Agreement.</p>	<p>UC, SO(s), CMs</p>

STEP	Responsibility of
<p>Monitoring Visit II During CAP Approval At the same day of mass meeting when layout of the scheme, Training, design and BOQ and community action plan. Monitoring Team should participate in the finalization of CAP. If the Team finds flaws in the design report, they should suggest improving it as per the norms and standards required for approval.</p>	DDC / DMC/ PSU
<p>11b. Final Approval by DDC</p> <p>DMC should check the following aspects before making recommendations on the scheme proposals to DDC for approval:</p> <ul style="list-style-type: none"> • Accuracy of technical design, Bill of Quantities and cost estimates • Registration of UC and opening of its bank account • Cash contribution (O&M fund and Investment fund)from users is collected and deposited in the bank account of UC • Full compliance of contractual responsibilities in Preparatory Phase Agreement by SO. • Completion report of Preparatory Phase prepared by SO. • Commitment letter of VDC for investment 	DDC
<p><u>IMPLEMENTATION PHASE</u></p> <p>12. Agreement for Implementation Phase:</p> <p>Implementation Phase starts after signing of agreement among UC, SO, VDC, DDC, and VWRMC. The agreement should be signed by respective chairpersons of UC, SO and VDC or their designates and DDC Secretary. Before the agreement can be signed, the SO has to make sure that the UC is registered and has opened a bank account where the O&M fund together with the capital contribution is deposited.</p> <p>Model Agreement for Implementation Phase is given in Paper 50 of this manual.</p>	UC, DDC, VDC, SOs

STEPS	Responsibility of
<p>13. Implementation of Activities</p> <p>Implementation Activities include construction works, trainings and seminars and Income generating activities</p> <p>Construction:</p> <p>13.1.1 Procurement of materials 13.1.2 Transportation 13.1.3 Local Material collection 13.1.4 Store Management 13.1.5 Construction</p> <p>UC holds sole responsibilities of financial management, procurement and implementation of the scheme. Collection of local materials and procurement of non-local materials, transportation, store management etc. take place before the commencement of construction works. Support and assistance should be provided to the UC in collection of local materials, purchase of quality construction materials, supervising the quality workmanship, maintaining proper accounting and bookkeeping. Such activities should be closely guided, supervised and monitored in time by SO.</p> <p>UC meeting should be held regularly and Minutes of the meeting maintained.</p>	<p>UC, SOs</p>
<p>Monitoring Visit III</p> <p>After collection of local materials and procurement of non-Local Materials:</p> <p>Visit should be made after the procurement/collection of construction materials by the UC, which takes place after the first installment for construction of scheme from the DDC. Checking quality of the construction materials, bills, procurement process, book-keeping and mobilization staff for construction activities is done during this monitoring.</p>	<p>DDC / DMC/ PSU</p>

STEPS	Responsibility of
<p>14. Post Construction Seminar and Public Auditing</p> <p>Preparation of the future plan to ensure the sustainability of the scheme is the main objective of the post-construction seminar. At the same time Public auditing of the completed scheme is conducted. This seminar is planned for two days. The first day is used for planning, participated by all user households of the scheme, and the second day for training of UC and VDC members. The training is to provide knowledge and skills to translate the plan into action in future.</p> <p>The plan should include:</p> <ul style="list-style-type: none"> • Operation and maintenance of scheme, likely problems and their solutions • Water tariff collection from the users • Remuneration mechanism to the Village Maintenance Worker • Mobilization of O&M Fund for productive activities • Continuation of HSE activities <p>Training contents include:</p> <ul style="list-style-type: none"> • Availability of resources for development of the community • Ways and methods to tap the resources <p>The plan should be finalized in a mass meeting. The UC should present status of income and expenditure and the materials in the store in detail to the mass. Users will approve the income and expenditure as well as the impact of the scheme will be assessed in the seminar. Plan and necessary regulations for the mobilization of revolving loan fund is also prepared/endorsed during the meeting. The villagers may also plan an inauguration ceremony.</p>	VDC, UC, CMs, PSU
<p>Monitoring Visit IV</p> <p>During post construction seminar (After completion of scheme):</p> <p>This visit is to make to ensure the completion of all proposed activities of implementation phase (including quality of construction works, Book keeping, store management, SO performance, quality of training, transparency/public audit and step-by-step follow up).</p> <p>The main objective is to make the final evaluation of the construction cost and make final payment to UC and SO upon confirmation of completion of the scheme and full compliance to contractual obligations by SO and UC. The 3rd installment for the SO is paid only after this monitoring visit ensures the quality of their work.</p> <p>SO should prepare Implementation phase completion report and submit to DMC</p>	DDC / DMC/ PSU

STEPS	Responsibility of
<p><u>POST-CONSTRUCTION PHASE:</u></p> <p>15. Agreement on Post-Construction Phase The agreement between UC, VDC, DDC and SO will be continued (or a new SO assigned) for the post-construction activities. The agreement will be based on the updated CAP. A new SO is necessary if the performance of the previous one has not been fully satisfactory, or, if specific skills or knowledge is needed to complement those of the previous SO.</p> <p>Model Agreement for Post-Construction Phase is given in Paper 72 of this Manual.</p>	UC, CMs, SO, PSU
<p>16. Post-Construction Activities</p> <p>16.1 Review of CAP 16.2 Management and O&M of schemes by UC 16.3 Follow-up of O&M activities 16.4 Scaling up Income Generating Activities 16.5 Strengthening Saving & Credit Systems 16.6 Environmental Sanitation Activities 16.7 Training/Capacity Building 16.8 Support Visits and Studies</p> <p>UC responsibilities during post-construction phase:</p> <ul style="list-style-type: none"> • The UC and the users together hold the responsibilities of future operation and maintenance activities with the assistance of the trained Village Maintenance Worker, who will assist in technical matters. • If the UC is willing to mobilize the O&M Fund, it will be provided support and assistance (advisory service and training and also linking them to formal rural credit institutions) by the Project. Creation of a Revolving Fund may also form part of activities during this phase and the Project will extend its advisory service upon request to the UC. • Source and slope protection activities e.g. plantation of trees around the water source will be the responsibility of users on continued basis. 	<p>UC/ SO UC VDC/ SO CM/ CO PSU/ WRA UC/ SO SO/ PSU PSU</p>
<p>Monitoring Visit V</p> <p>After 6-12 months of completion of scheme: to promote proper operation and maintenance of system, equitable mobilization of O&M fund, continuation of health, sanitation and income generation activities.</p> <p>Main objectives of this monitoring are to asses: is the UC still active, are water tariffs still collected regularly, are VMWs paid and actively working and is the scheme physically still working.</p> <p>If problems are found the monitoring team should propose corrective activities to ensure the sustainability of the scheme.</p>	DDC / DMC/ PSU

OVERVIEW OF GSI INTEGRATION IN THE PROJECT CYCLE

PHASE	ACTIVITIES	GESI INTEGRATION
Planning	1. VDC selection	<ul style="list-style-type: none"> Based on a number of criteria: <p>Poverty status, remoteness (distance from road head), female illiteracy rate and no. of female headed households, percentage of excluded groups and situation of WSS facilities.</p>
	3.1. CM selection	<ul style="list-style-type: none"> One female and one from DAG. Criteria for women and DAGs will not be adhered to strictly (i.e. education level).
	3.2.CO formation	<ul style="list-style-type: none"> Separate COs of male and female in each cluster.
	3.3.SO selection	<ul style="list-style-type: none"> Additional score to NGOs having women and DAG members as staff and in their executive body. SO teams in RVWRMP working areas have at least one female and DAG.
	4.0 Baseline data collection	<ul style="list-style-type: none"> Data is disaggregated by sex, caste, ethnicity, age, religion to the accepted levels of the project.
	5.0 WUMP	<ul style="list-style-type: none"> Mass meeting (i.e. social assessment / needs identification) must have representation of each HH (1 female/1 male) with at least 75% of HHs present, 50% women and proportionate representation by DAGs. Separate women and men's groups for social and resource mapping and needs identification exercise.
	5.1 WRMSC / WRMC formation	<ul style="list-style-type: none"> The WRMSCs and WRMCs will have 50% female members and proportional representation from Dalit and other excluded groups. Confidence building workshops/trainings may be provided for Dalits and women separately to ensure maximum representation on the COs/WRMSCs/WRMCs.
Preparatory	8. UC formation	<ul style="list-style-type: none"> 50% representation of women and proportional representation of DAG Minimum of one key position on UC should be female and one DAG (i.e. Chair, Vice-Chair, Secretary, Treasurer). Separate meetings for women and men to select their UC representatives.
	9.1. Training activities	<ul style="list-style-type: none"> Various trainings arranged for UCs (i.e. UC Orientation, HSE, GESI, Financial Management, CAP, Solid Waste Management, SL and IG). Efforts will be made to promote importance of increasing women and DAG representation and participation throughout these trainings. <p>Other interventions include:</p> <ul style="list-style-type: none"> Attention paid to inform all UC members and arrange time and venue suitable for women and poor HH members. Special focus on promoting women and DAG representation on UCs. Local language used if applicable. Support and coordination to find literacy training opportunities for women and DAGs.

PHASE	ACTIVITIES	GESI INTEGRATION
Preparatory	9.2. Sanitation and Environmental Conservation	<ul style="list-style-type: none"> HSE orientation/training will target women as active agents, but men will also be encouraged and involved in hygiene promotion. Wealth ranking to finalise the amount of contribution to be contributed by each household and amount of subsidy to be supported from the project. Those households identified as 'very poor' will receive free latrine components up to the plinth level (i.e. pan, pipe, cement). Support for latrine construction is provided for female-headed households and households with elderly and disabled members.
	9.3. Water Supply and Irrigation	<ul style="list-style-type: none"> Separate meeting for women and Dalits is held to decide the location of the tap stands (and irrigation and micro hydro schemes). In each cluster the participation of at least one woman from each HH is mandatory. Graded system will be promoted and encouraged for O&M fund as well.
	11. CAP preparation and approval	<p>The quorum for the meeting should be as follows, otherwise the meeting should be cancelled and held at another time:</p> <ul style="list-style-type: none"> Representation of one female and one male member from at least 2/3 of the user households and proportionate representation of DAG households. 50% women representation.
Implementation	14.1. Construction works	<ul style="list-style-type: none"> 33% of the paid jobs reserved for women. 50% of the paid jobs reserved for the ultra poor and DAGs.
	14.2. Training and seminar	<ul style="list-style-type: none"> Women and DAGs will be given priority when selecting candidates for skilled training opportunities (i.e. LLB, RWH mason, VMW, etc.). 50% of skilled training opportunities are reserved for DAGs.
	14.3. Income generating activities/Sustainable livelihoods	<ul style="list-style-type: none"> Revolving Fund Management Committee will be established with representation of at least one woman (from WRMC) and a DAG member. Priority for lending given to COs with members from poorest households, members of DAG and women COs. Priority for IGS/SL training opportunities given to women, the poorest households and individuals from DAG groups.
	15. Post construction seminar and public auditing	<ul style="list-style-type: none"> Users' representation must be 50% women and proportionate representation of DAGs. 75% of all households must be present for meeting to be held.
Post Construction	16. Post construction activities	<ul style="list-style-type: none"> Special focus will be given to poor and excluded for income generation activities. Women and DAGs will be given priority for support visits. Ensure that at least 2 women participate. Identification of other trainings should include women and DAG participation based on their needs and interests. O&M activities should include assessment of poorest HHs' ability to pay.

PHASE	ACTIVITIES	GESI INTEGRATION
Post Construction	Monitoring	<ul style="list-style-type: none"> • All the monitoring teams from the central level to scheme level should try to include at least one female member. • Assess issues of continued access and benefits to women and DAGs and identified economic opportunities for the poorest.
	Coordination & Networking	<ul style="list-style-type: none"> • Establish coordination, partnerships and networking with relevant actors in both water and non-water sector to promote GESI issues (i.e. WDOs, other NGOs/CBOs, private sector, federations such as FEDWASUN and representative organisations of women, Dalits and Janajatis that are present in the working districts).

Step 1 – Selection of VDCs

GUIDELINES FOR SELECTION OF PROJECT VDCs

Total 80 VDCs from nine project districts will be selected by respective DDCs, based on the following criteria. Number of working VDCs in each district will be decided and agreed through regional coordination meeting.

Based on the latest available information, assessment of all VDCs will be done and priority list of the VDCs will be made by DMC. Considering the reliability of the existing information at the district level, a team nominated by the DDC will assess the real situation of the VDC by organizing community meeting at VDC level and recommend DDC for the project execution. The VDC selection will be made on following criteria;

1. Poverty Status
2. Existence of Dalit and minority groups
3. Women literacy and number of widows/separated women
4. Remoteness
5. Situation of water resources facilities e.g. Drinking water & sanitation, energy/hydropower and irrigation.
6. Clustering of VDCs – selection of adjacent VDCs, when these are seen some of the most needy according to other selection criteria.

The VDC scoring least score will get first priority. The list will be discussed and VDCs will be selected during district level stakeholders meeting to be organized in the district. The meeting will be participated by DDC, district level WR sector agencies, Top prioritized VDCs, political party representatives and other relevant agencies/institutions. The forum will be utilized to orient concerned partners about RVWRMP. Key issues to be assessed during stakeholders meeting are:

- Report of the situation of assessment team
- Competency/Relevance of secondary data adopted for VDC assessment.
- Willingness/Commitment for contribution of the VDCs for the implementation of water resource programme.

Name of selected VDCs will be duly approved by DDC.

- Number and selection of project VDCs in a district will be based on:
 - priority ranking of all 409 VDCs
 - clustering of VDCs – selection of adjacent VDCs, when other selection criteria are also met
 - performance of DDC on execution of RVWRMP activities including proper use of allocated funds

Step 2 – Agreement between VDC and DDC

Translation from Nepali

Memorandum of Understanding

Between

District Development Committee

And

Village Development Committee

To implement Rural Village Water Resources Management Project

Government of Nepal and Government of Finland have signed to implement Rural Village Water Resources Management Project under ministry of local development, department of local infrastructure development and agriculture road. The project covers 9 hilly/mountainous districts in the Mid- and Far- Western Regions of Nepal. Additionally project will implement arsenic mitigation activities in Kailai district. The project started its activities in October 2006 and will continue till the end of August 2010. The overall objectives of the project is to improve quality of life of local people, improve environmental conditions and increased opportunities to rural livelihoods through rational, equitable and sustainable practices of water resources planning and use. The project idea is to develop the use of water resources on the basis of comprehensive water use master plans (WUMPs) to be prepare 80 priority VDCs selected by DDCs (nine districts). The agreement has signed between two governments on September 1, 2007.

District Development Committee is the executive agency of the project at district level and the Memorandum of Understanding has been made between Rural Village Water Resources Management Project and District Development Committee on for implementing the project. Water resources are not used only for drinking water supply but it should be use for multiple purposes through community participation in planning, implementation and monitoring.

Rural Village Water Resources Management Project will support preparation of Water Use Master Plan of this VDC. The WUMP will be basic document for overall water use and sanitation planning and will identify communities priority needs classify by various use categories such as drinking water supply, small Irrigation, energy production and environment protection. The project will support technical and financial on priority based water resources activities implementation under budget and time constrain of the project and also coordinate with other donor agencies to implement identified WUMP activities.

Following the MoU term and condition agreed between DDC and Project, District Development committee (hereafter called DDC) and Village Development Committee (hereafter called VDC) have signed on this MoU under following terms and condition based on RVWRMP project document. With the purpose to enhance the water resources development activities within the project area, all concerned parties, being accountable to the public as provisioned in LSGR 2056 and LFAR 2056, shall work to cooperate with each other and shall remain committed to improve sectoral services and to insure access of poor, women, dalit, back trodden group and Janjatis and

to achieve the objectives spelled out in the project document signed and approved by government of Nepal and Finland and all parties hereby have agreed to establish this MoU as follows:

1. Objective

- To support on preparation of WUMP for identification of multiple use of water resources related activities (Women, vulnerable group and dalits will participate since planning phase).
- Based on Community needs and priority, Support to develop concept and strategy on rational, equitable and sustainable use of water at village level.
- Based on identified activities in WUMPs, coordination and support mechanism will be developed among VDC and other stakeholders to implement the activities.

2. Role and Responsibility

Village Development Committee is the executive agency of water resource sector at the village level thus, Water Use Master Plan is their own plan. The main responsibilities of VDC shall prioritization; seek financial resource and mobilization, implementation, monitoring and evaluation of identified schemes based on WUMP. In addition, to accomplish the water resources management projects activities, VDC and DDC's role and responsibilities are as follow:

A. Planning Phase (preparation of WUMP)

A.1 Role and responsibility of Village Development Committee:

- Shows commitments to implement Water Resources programmes
- Signs the agreement with DDC to prepare the WUMP.
- Involves, monitors and supports in WUMP preparation processes
- Appoints CMs and mobilizes their work in the project activities
- Supports in formation of Water Resources Management Committee at VDC level and other sub committees as necessary by ensuring the representation of all cast and gender.
- Support in data collection work and monitors the activities (*ongoing process*)
- Ensure the representation of all ethnic groups in proportionate rate and equal representation by gender in all activities of WUMP.
- Register the Community Organisation (CO) or support to register as per Water resources act or LSGA.
- Owns the WUMP and incorporates in the VDC periodic plan
- Approves WUMP through VDC council
- Recommends WUMP to DDC for endorsement

A.2 Role and responsibility of District Development Committee:

- Signs the agreement with VDCs
- Select local support organisation for WUMP preparation and support to UC for schemes implementation.
- Monitors WUMP preparation practices and provide feedback to WRMC and Support organisation (SOs)
- Ensure equitable participation and representation in all activities.
- Facilitates VDC in CM selection process
- Verifies water resources inventory
- Endorses WUMP in DDC council. Seek and mobilize the financial resources to implement the prioritize activities.

B. Preparatory Phase;

B.1 Role and responsibility of Village Development Committee:

- Signs the agreement of the preparatory phase with DDC and SO to implement prioritized schemes as identified in WUMP.
- Supports in forming UC for democratic and inclusive representation.
- Supports UCs in registration under Water Resources Act.
- Actively participates in monitoring of preparatory phase activities including Community Action Plan (CAP) process.
- Monitor the activities of SO and evaluate their performance.
- Supervise and evaluate work performance of community mobilizers.
- Support to enhance the capacity of COs and monitor their activities.
- Provides written commitment to DDC for cash contribution as project guidelines.

B.2 Role and responsibility of District Development Committee:

- Signs agreement of preparatory phase with VDC and SO
- Releases agreement amount on instalment basis from DWRDF to SO's account
- Monitors and evaluates performance of SO and preparatory phase activities
- Assists UC for registration under District Water Resources Committee.
- Formulate policy for detail design and cost estimation of activities (special case if needed).
- Provides technical backups to UC and SO
- Approves scheme and Community Action Plan.
- Monitors proper follow up of step by step procedures and implementation guidelines regarding the activities of preparatory phase

C. Implementation and Post construction Phase;

C.1 Role and responsibility of Village Development Committee:

- Signs on agreement.
- Matches the VDC fund to UC account as per agreement.

- Monitors and evaluates implementation activities and performance of SOs and UCs and recommends to DDC for corrective measure
- Recommends to DDC for final payments of UC and SO
- Shares the experiences of UCs of a completed scheme to educate other UCs
- Supports to communities to enhance livelihoods, to improve water supply and sanitation facilities and generate fund

C.2 Role and responsibility of District Development Committee:

- Signs the agreement with VDC, UC and SO.
- Releases instalment to UC's and SO's account timely
- Extends duration of the agreement of SO and UC as recommends by DMC.
- Discontinue the SOs involvement as per recommendation of DMC.
- Prepares agreement papers and necessary documents
- Monitors the activities and recommends DDC for payment
- Ensures completion of the activities
- Provides technical backups to UC and SO.
- Monitors and evaluates implementation activities and performance of SOs and UCs.
- Recommends to DDC to take action against the SO if performance find unsatisfactory.
- Signs on agreement.
- Assists to prepare agreement documents
- Monitors, supervises the activities and ensures quality of construction and materials.
- Makes technical evaluation of the schemes.
- Recommends DDC for payments to UCs and SOs

3. Financial management:

VDC should contribute the cash from its fund to implement the following water resources activities.

VDC cash contribution Technology wise:	Contribution (Cash)
a) Water resources activities	
• Gravity Flow (Piped) Water Supply	NPR 100/person
• Rainwater Harvesting (6.5 ^{cum})	NPR 500/Household
• Irrigation system (conventional)	NPR 150/Ropani
• Irrigation system (non-conventional)	2% of non-local materials cost without transportation
• Micro-hydro	NPR 100/person
• Gravity water supply system with non-conventional irrigation system	NPR 150/person
• Micro-hydro with Irrigation system	NPR 100/person

• Micro-hydro, Irrigation and Gravity water supply system	NPR 150/person
b) Household Latrine	
• Two Pit Latrine	NPR 300/Latrine
• Single Pit Latrine	NPR 150/Latrine
C) Institutional Latrine	
• School Latrine	2% of the total cost
• VDC/Health Post and • Other Institutions	50% of the total cost
D) Arsenic mitigation (Kailali only)	
• Arsenic Bio-Sand Filter	NPR 100/household

User committee is main responsible to implement water resources activities at village, so DDC will transfer fund into UC's bank account directly.

Monitors and evaluates the completed schemes in time for the final payment of UC.

After the completion of implementation phase VDC will support in water use and other activities within the VDC and one of the community mobiliser services should be continued at VDC to support community organization for mobilizing saving and credit activities. VDC will seek the resources to continue her/his services.

4. Others

4.1 After the monitoring of project activities, if the implementation works is not accordingly to MOU and norms DDC has the right to stop full or partial implementation fund.

4.2 Project can withdraw from VDC, if VDC couldn't fulfil the terms and condition according to MOU.

4.3 This MOU will apply until the project period. The contract parties can change this contract only in writing and approved and signed by all parties. In case of any dispute all parties shall make all efforts to resolve it. If this is not possible the dispute will be put on Project steering committee to solve and its decision will be the last decision.

5 SIGNATURES

This MOU is prepared and signed in two copies, one for each contracting party:

On behalf of the VDC

On behalf of the DDC:

Signature:.....

Signature:.....

Name:

Name:

Position:

Position:

Date:

Date:

Witnessed by: VDC

Witnessed by: RVWRMP

- 1
- 2
- 3
- 4
- 5
- 6

Annexes:

- A) Implementation Phase Proposal, dated
- b) Community Action Plan, dated
- c) Design Report of the scheme, dated

Step 3 – SO selection, CM selection and CO formation

GUIDELINES FOR SELECTION OF COMMUNITY MOBILIZERS

To harness the dormant potentiality of people in the community, provide technical and social guidance, and mobilize the community for common interest and need, a cadre from local community is required; so called community mobilizer. **“A person who assists in achieving the objectives of RVWRMP with full commitment and in full faith is referred to as genuine cadre.”**

Number of CMs would be 1-2 depending upon the area/geographical location of VDC and number of households in the VDC to be served.

Qualification and Criteria for Community Mobilizer:

At least grade 8 passed for female candidate but SLC passed would be preferable. But in case of male candidate, minimum qualification would be SLC passed. The criteria required are:

- Permanent Residence of same VDC.
- He/She should be interested and willing to work and stay with community.
- He/She should be politically neutral.
- He/She should be smart and physical fit to travel within VDC.
- He/She should be unemployed. Preference will be given to deprived, Dalit.
- In case of female, married women will be preferred.

For providing the opportunity to female and Dalit in the recruitment of CM, qualification criteria will not followed strictly.

Among two CMs, one CM should be from Dalit/Deprived groups and one a woman. In case of only one CM, female of Dalit/DAG will be recruited.

Both CMs should be selected from **JAGDAMBAS**.

Selection Process:

VDC and local community should affirm the accountability of CMs. This task should be completed:

- ✓ Discuss the criteria of CMs and modify some criteria as per local requirement during familiarization of RVWRMP at VDC.
- ✓ Publish the notice
- ✓ Conduct written and oral test.
- ✓ Get the endorsement of selected CMs from DMC

Roles of Community Mobilizer:

- Sensitize the community and assist them to organize through basic elements of RVWRMP social mobilization.
- Provide assistance in collection of data and information during WUMP preparation.
- Provide support during training, workshop organized at VDC level/scheme/CO level.

- Create conducive environment for the WUMP preparation and implementation of scheme.
- Conduct regular meeting of WRMC.
- Organize saving, credit and book keeping training for the managers.
- Organize leadership development training for the chairpersons.
- Provide technical backstopping to COs regularly.
- Support COs/UC to keep transparent account
- Assist to identify poorest of poor in COs and empower them through affirmative actions
- Attend regular meeting organized at DDC and prepare monthly and other reports as per need of project.
- Assist and support WRMC to get formalization under existing laws of government.
- Maintain the account book at WRMC level.
- Act as a secretary of WRMC and establish financial linkages with bank if loan funds are not adequate to fulfill the need of CO members.
- Open the WRMC account in the near by bank and conduct reconciliation regularly.
- Perform any other tasks to achieve the goal and objectives of RVWRMP.

GUIDELINES FOR FORMATION OF COMMUNITY ORGANISATIONS

First Step (first dialogue-part-1)

The first dialogue of social mobilization is to sensitize the local community people on the importance of organization to undertake various activities on integrated water resource management and for socio-economic development that helps to improve their lives. In mass sensitization, it is mandatory that at least one male and one female member of each household attend the meeting. The community mobilizer and other team members of RVWRMP conduct the first dialogue with community people. It is a two way communication. The purpose of the mass sensitization is to:-

- Make the community people aware of the need and importance of water resource management and community development.
- Motivate local community people to come together and form COs for socio-economical development.
- Sensitize them on the importance of capital (money) and explore the ideas to generate the internal capital.
- Discuss the characteristic and quality of chairperson and manager to run the organization smoothly.

The following tools are used during mass sensitization:

- Drawings, cartoons, photos of single effort/collective effort: These help people to understand and realize why they should be organized.
- Practical events: Ask one member of community to lift the heavy stone, and then ask 4-5 members to lift the stone. Ask the difference. They realize the importance of organization.
- Cite the successful story of community based organizations.

Community mobilizer should provide some time to discuss on the basic six elements of RVWRMP among themselves. Once they select chairperson and manager unanimously. Then perform part second of first dialogue which is **recognition of Community Organization**.

Step-2 (First Dialogue, part-2) Recognition of Community Organization.

During the formalization of community organization, Community Mobilizer along with WRA/project team members meet the community people and hold dialogue to test if the following situations prevail or not:

- **Test of partnership:-** Test whether or not all agree to the terms and conditions spelled out in the RVWRMP implementation guideline.
- **Consensus test:-** Test whether or not the chairperson and manager are selected by consensus.
- **Accountability test:-** Check whether or not every one takes responsibility for the chairperson and manager's honesty.
- **Aptitude test:-** Check whether or not the manager has the required aptitude for account keeping and whether or not chairperson is capable of integrating the whole settlement/village and bringing poor and other deprived groups forward.
- **Commitment test:-** Check whether or not the chairperson and manager are committed to live in the village and serve the village rather than migrate elsewhere.

If the above conditions prove as satisfactory, then perform following actions:

- Commencement of the Community Organization (CO) to all present in the meeting should be announced.
- Provide information to CO members regarding the rights and duties of Chairperson, managers and members themselves (Annex-1) and clarify that chairperson and manager do not hold power rather the sovereignty lies with the CO members.
- Assist CO members to decide on the date, time and place to conduct regular CO meeting and advise them to ensure that this date does not get changed. The date, time and place should be acceptable and convenient to all members of the community; especially the demands and restrictions of women, dalits and other vulnerable groups should be taken into account.
- Teach them how to hold meeting (annex-2) and minute in the register (sample of minute book is in annex-3)

If the above conditions are not met, then following actions are performed:

- Re-sensitize the community members on the importance of organization.
- Discuss the quality and characteristics of chairperson and managers.
- Give some time to discuss and identify the appropriate person /cadres in the community.

If the community has identified the persons for chairperson and manager, then perform the dialogue and test to get satisfy with above conditions.

Process of performing the test

Community Mobilizer/other team member should recall the importance of organization in context to integrated water resource management, environment, sanitation, capital formation, women's empowerment and skill development. The CM should be insured that all community people should understand clearly basic elements of the RVWRMP social mobilization. If they all are agreed on the terms and conditions spelled out in the RVWRMP guidelines, then perform the following actions to test the consensus based decision in selection of chairperson and manager, his/her aptitude, accountability and commitment:-

- ✓ Bring the selected chairperson and manager in front of community people.
- ✓ Are you all agreed to the terms and conditions of RVWRMP? **The reply of community member should be "Yes"**
- ✓ Ask, do they posses the quality and characteristics that we discussed in previous meeting? **Reaction of the community member should be "Yes"**
- ✓ Ask, who selected them? **Reply should be "We"**
- ✓ If they inappropriate, who will be responsible? **Reply should be "We"**
- ✓ Who will evaluate their performance? **Reply should be "We "**

After that ask the following to chairperson and mangers:-

- ✓ Why did they select as chairperson? *(Most often, the answer is everyone wanted me the chairperson, so how could I refuse their request. I have to carry out this responsibility)*
- ✓ Why did they select as manager? *(Most often, the answer is everyone wanted me the manager, so how could I refuse their request. I have to carry out this responsibility)*

After this process, the community organization will be given formal recognition and CO should conduct regular meeting, and saving. On next day, the recognized CO will be recorded in VDC.

Option2. Where 80-90% households are covered through approaches and principles of social mobilization by other agency

Role of RVWRMP

- Identify the support agency and establish Terms of Partnership (TOP) to implement the programme.
- Ensure status of community organization
 - i. Active, passive and defunct COs.
 - ii. Identify who are left out (income poverty, ethnicity point of view)
- Sensitize the community members of passive and defunct COs in VDC and re-organize them.
- Assist missing households to join in the existing CO to reap the benefit of RVWRMP.
- Then initiate the preparation of WUMP mobilizing and sensitizing existing COs.
- Manage community mobilizer of same VDC to work. if Community Mobilizer (CM) is outsider.

Option3. Where less than 80% households are covered through approaches and principles of social mobilization

Role of RVWRMP

- Check whether support agency is still working in the VDC or not. If yes, then perform the activities spelled in option two.
- If not, then perform following :
 - Recruit community Mobilizer (CM) of same VDC and provide training on approaches and principles of social mobilization.
 - Sensitize community members on Social mobilization and RVWRMP modality.
 - Cover all the potential households.
 - Organize CMC (chairperson and managers conferecne) and initiate the preparation of WUMP through the mobilization and sensitization of COs.
 - WUMP preparation and Social mobilization process can be initiated simultaneously.

Role of Community Organization (COs)

The active participation of all Community Organizations in WUMP preparation, implementation, construction phase and benefit sharing of the programme leads to the emergence of self-governing institutions of the community members at the grassroots. Generally, a community organization performs a number of functions. The important functions are listed below:-

- Conduct regular saving and credit scheme and mobilize saving for undertaking different income generating activities.
- Identify their needs related with water resource management, environment and sanitation management.
- Nominate and send genuine member on consensus based decision, to participate in village Water Resources Management Committee (WRMC).
- Maintain all the decisions made during the meeting, in the minute book.
- Form various Users Committees (UC) as per need and feasibility.
- Assist UCs to generate the O & M fund regularly.

- Mobilize local resources to support in the implementation of scheme.
- Encourage and motivate their members to participate in the health and sanitation campaign.
- Perform the affirmative actions to empower poorest of poor in the CO.
- Conduct participatory monitoring of CO.
- Formulate the plan and implement different activities as per need and feasibility.
- Establish functional linkages with UC, WRMC, VDC/DDC and other development agencies.
- Select appropriate member for the trainings organized by the project.
- Establish coordination and linkages with other COs at the cluster or at VDC.

Initiating Capital Formation through internal Savings

- CO member should be made aware that it is mandatory for everyone of them to deposit certain amount of saving during each meeting of CO. Saving amount should be determined as per the capacity of the poorest of poor households in the community.
- The members and managers should be explained about the process to be followed while collecting savings and documenting the records. The saving and attendance register and passbook (annex-4 & 5) should be handed over to CO and community mobilizer teaches about them.
- To mitigate the cash holding risk, members should be encouraged to open bank account through joint signatory. They should decide who would operate the bank account.
- Members should be made aware that before mobilization of saving for lending to their members, they have to formulate policy about loan size, interest rate, repayment period.

GUIDELINES FOR SUPPORT ORGANIZATIONS (SO) SELECTION AND PERFORMANCE EVALUATION OF SOS

SO is needed for baseline data collection, WUMP awareness campaign and WUMP support as well as to implement the RVWRMP scheme related activities, where User Committee needs social and technical support in different phases as per the nature of works. Support Organizations will help and facilitate the UCs in managing and implementing the schemes. Private organizations (NGOs, engineering consultant, local clubs, Mothers' Groups, User Committees/associations or other community organizations) can be engaged as a SO. Depending upon the requirement, close co-ordination will be established among other government and non government agencies working in the VDC. DMC may decide to collaborate with such agencies, which have established network and proven excellent social mobilization work in respective VDCs.

To facilitate UCs to implement scheme activities, SO will be selected on the basis of their experience on social mobilization, implementation of water resource activities and human resources capabilities. For hiring the SO, different option will be looked out as per their strength in the district.

Option 1: District/region based SOs that could facilitate in social mobilization as well as technical (civil engineering) works and have well experienced human resources in water resource development sector (district based SO will get high priority).

Option 2: In case of lacking the technical (civil engineering) strength of SOs in the district, DMC may separate the scheme works as social and technical. Local SO may facilitate in social activities of the schemes and technical work will be facilitated by DTO technical staffs (Engineer and Overseer level) with technical backup support from PSU. In such case DTO provides engineer and overseer level service to the scheme implementation (one overseer from DDC/DTO and one from PSU will be exclusively deployed in each district) and Water resource technician (WRT) level human resource will be mobilize by selected social SO.

Option 3: For the schemes such as micro-hydro that requires highly professional technical human resource, DMC will invite separate technical and financial proposal from experienced consultants on MHP to facilitate technical works for scheme implementation. DMC may also hire experienced contractor to construct the micro hydro project. For hiring the consultant and contractor, Government of Nepal rules and norms will be followed. Alternatively, DMC may decide to make an agreement and assign the works related to MHP to Rural Energy Development Section (REDS) which shall bear the whole responsibility and facilitate UC to implement the scheme as per the rules and regulation of AEPC/REDP.

Selection process

SOs will be selected on competitive basis. DMC is responsible for the selection process in the district. The selection process shall be transparent and follow the procurement rules and guidelines of the local governments (DDCs).

Basic Criteria for SOs

The pre-requisites to apply for pre-qualification to be engaged in the Project activities shall be as:

- Must be registered under GON as an NGO or a consulting firm.
- Must have Personal Account Number registration.
- Must have its account audited each year and must submit the last 2 years audit report
- Must have at least two years of experience in implementation of participatory projects in rural water and sanitation and/or community development in the recent past and must submit best example of their works.
- Newly established SOs lacking two years of track record but staffed with adequate professionals in required disciplines having at least five years' experience can also apply for corresponding pre-qualification.
- Must have own professional staff and support staff or in a position to engage these staff.
- The organization must be based in the respective district or have branch office in the district.
- The previously pre-qualified SOs willing to apply for the present work are only required to submit copies of renewal of registration and certificate of audit of preceding year.
- To ensure inclusion, SOs with female/disadvantaged group staff will have an advantage.

Pre-qualification methodology

DDC will invite applications for PQ process from interested SOs by publishing a notice in local/regional or national newspaper and on the DDC notice board. DMC will provide PQ format to applicant organization to furnish information to DDC. District based or regional SO having branch office in the district may apply for the pre-qualification process.

The DMC has the authority to disqualify those SOs from the PQ process, whose past performance has been below acceptable level.

Evaluation of information submitted by the SOs will be the main basis for pre-qualification of organizations. PQ process will be done by DMC applying the following parameters and scoring system (Detailed marking system is provided in Annex- 6.1).

;

Parameters	Maximum Scores
General information	10
Experience of organization	15
Organizational set-up	25
Available human resource	50

Evaluation will be made based on the marks obtained by the organization from the evaluation of their information and office visit (if needed). The information will be evaluated based on their submitted documents. To pre-qualify the organization the minimum score should be 60 marks. If the required number of SO could not secure the minimum marks, notice will be published again. If none of the SOs secures minimum marks in second attempt, DMC may consider to pre-qualify those SOs scoring at least 50 marks or may seek PQ applications from regional/ national level organizations. Name list of the pre-qualified SO will be published in DDC notice board.

Technical Proposal

DDC shall publish a notice for submission of technical proposals from the pre-qualified SOs. The SOs shall submit a technical proposal for social works but if they have technical (civil engineering) capabilities, they may apply for the technical works also. Evaluation of technical proposal is the main basis for selection of organizations. If required number (at least 3) of SOs fails to submit the technical proposal for technical works, evaluation will be made excluding the marks of technical human resources and comparative chart will be made accordingly.

To get a technical support in highly professional technology, DMC may seek to get support from outsider consultant also. In such a case, DMC may call the proposals and negotiate as per project guidelines with them for technical support in the scheme implementation

Evaluation of technical proposals will be done by following parameters and scoring system (Detailed marking system is provided in Annex- 6.2):

Parameters	Maximum Scores
A. Pre-Qualification score	10
B. Specific experience on water resource activities	10
C. Qualification and experience of proposed personnel	40
D. Quality of proposal	10
E. Interview of proposed human resource	30

Selection of support organization for particular scheme will be made based on the mark obtained by the organization from the evaluation of technical proposal. Evaluation will be made transparently based on the documents submitted by the organization. To select the SO, minimum score should be 60% marks. If the required numbers of SOs can not secure minimum 60% marks, notice will be published again to get the technical proposals from already pre-qualified SOs. If none of the SOs secures minimum marks in second attempt, DMC may consider to select those SOs scoring at least 50 marks.

After evaluation of the technical proposal, DMC will negotiate with the highest scoring SOs to finalize the staff's rate based on their staffs qualification and experience. The rate of the staffs should be within the limit set by project. In general cases, only one SO will be engaged in one VDC.

The SO selection process will be done by DMC in close consultation with VDC and it should be endorsed by DDC. Terms of reference for preparing technical proposal will be provided for competing organizations.

SOs to work for RVWRMP schemes are expected to have their own staff. In case of need for hiring from outside, officially authorized leave for the duration of the specific phase is mandatory for the staff working for government or government owned corporation or company. This shall be made sure before signing of any agreement with the SO.

In case of any staff mobilized for schemes fails to prove the minimum qualification and experience, the SO contract shall be terminated. The persons proposed for specific job must work in scheme. Any kind of replacement will not be entertained. In case of situation not under control of the SO, DMC may approve the replacement with due consideration of qualification, experience and competency of newly proposed staff, in written request of the SO. None of the full time proposed staffs will be allowed to work in other organization or job.

Team composition, desired qualification and experience of staff and maximum rates for human resources are presented in the table below:

Type of Staff	Minimum Qualification	Minimum Experience	Rate per Month NER
A. Social human resource			
Team Leader	Bachelor's Degree in Any discipline	Two years in organization management	15,000-20,000
Field Coordinator	Intermediate Degree in Any discipline	Two years in rural development activities	10,000-15,000
Health Promoter	AHW/CMA/ANM	Two years in rural areas.	7,000-10,000
Account Assistant	Intermediate in Commerce	Two years' experience in Book Keeping and Accounting	9,000 – 12,000
B. Technical human resource			
Engineer	Bachelor's Degree in civil engineering	Two years in design and supervision of water resource activities	15,000- 20,000
Overseer	Intermediate Degree in civil engineering	Two years in design and supervision of water resource activities	12,000- 15,000
Water Resource Technician	Eight years of schooling and Certificate of relevant basic training	Two years in implementation of water resource activities	7,000 – 10,000

Remoteness allowance: A remoteness allowance will be provided according to GoN rules for the SO staff working in the most remote districts. For detailed table on allowances see next page.

4.1.1. Frequency of pre-qualification and technical evaluation

The pre-qualification followed by technical evaluation of organizations should be done once only for selection of an SO to work in a new VDC. Second best pre-qualified SO may replace the terminated one. Pre-qualification is not required again.

Refer to *Implementation Guideline and SO Selection Guideline & ToR of SOs* for more details.

Translated from Nepali version
REMOTE ALLOWANCE CHART OF GoN

Post	Ka group (Humla /Bajura)			Kha Group (Bajhang/ Darchula)			GA Group(Achham, Dailekh)			Gha Group(Dadeldhura/Doti/Baitadi)			Nga Group		
	District headquarter and within 6 miles	District headquarter and within 6 to 12 miles	12 and more miles away from District headquarter	District headquarter and within 6 miles	District headquarter and within 6 to 12 miles	12 and more miles away from District headquarter	District headquarter and within 6 miles	District headquarter and within 6 to 12 miles	12 and more miles away from District headquarter	District headquarter and within 6 miles	District headquarter and within 6 to 12 miles	12 and more miles away from District headquarter	District headquarter and within 6 miles	District headquarter and within 6 to 12 miles	12 and more miles away from District headquarter
Peon	2,250	2,365	2,590	1,800	1,890	2,070	1,350	1,420	1,555	700	895	980	350	370	405
Non Gazeted Officer fourth Class	2,475	2,600	2,845	1,980	2,080	2,275	1,485	1,560	1,710	800	840	920	390	410	450
Gazeted Officer third Class (Junior WRT/HP)	2,700	2,835	3,105	2,160	2,270	2,485	1,620	1,700	1,865	910	1,000	1,095	430	450	495
Non Gazeted Officer second Class (WRT/HP) Sub overseer, Asst Nurse midwife (Anami or Aaheba)	3,075	3,230	3,535	2,460	2,585	2,830	1,750	1,840	2,015	1,025	1,105	1,210	480	505	550
first Class (Overseer, Field coordinator, Health Assistant or with	3,675	3,860	4,225	2,940	3,085	3,380	2,100	2,205	2,415	1,225	1,285	1,410	565	595	650
Gazeted Officer third Class (Engineer, Team Leader /Bachelor level education)	5,625	5,905	6,470	4,500	4,725	5,175	3,350	3,520	3,855	1,500	1,575	1,725	790	830	910

Support Organization Performance Evaluation

Introduction

The Support Organizations (SO) are the closest link between the beneficiaries and RVWRMP. The SOs are contracted by the Project to provide community mobilization, training, Water User Master awareness, confidence and capacity building, survey, design & construction supervision.

Some organizations that are not capable to provide construction overseer or engineer are hired only for the community mobilization and training purposes.

Each SO team works in one VDC for the whole duration of the contract. One SO may have several teams working in several VDCs. In one VDC several water/sanitation/soil protection schemes are to be prepared and build during the SO assignment.

Typically an SO team comprises: one field coordinator, one health promoter, one water resources technician, one overseer.

Double evaluation – staff skills and team output

The performance evaluation involves two methods:

- One focuses on the observation of essential skills displayed by the post holders such as :
 - Communication skills
 - Leadership & charisma
 - Reporting capacity
 - Reliability regarding financial matters
 - Survey, design, construction supervision capacity

Each staff member will receive periodically a score reflecting the observed skills

- The other method focuses on the execution of the scheme cycle. Each step of the cycle is evaluated base on its completeness, conformity, satisfaction/retention. Each scheme is visited according to the monitoring & evaluation schedule and the level of completeness, conformity, satisfaction/retention are evaluated by a team of RVWRMP & GoN staff.

Both methods deliver scores which can be aggregated to judge the overall performance of the SO as a whole as well as the performance of individual staff.

The methods also allow a comparison of the SO and correlations can be explored (cost & performance analysis, allocation of incentives based on performance....)

SO staff skills evaluation

The SO staff should evaluated based on observation by the WRA / WRE during their interactions at field and office level. For that effect, WRA/WRE keep accurate diary of their observation regarding behaviours and attitude of the SO staff. The opinion of Community Mobilisers and Users Committees are also collected during the various interactions.

The following questionnaire if filled up by the WRA/WRE

1. Attendance at duty station * Score 1 to 10 the regularity and continuity of presence at the duty station
2. Communication ability - attitude & behaviour * Score 1 to 10 the attitude regarding communication, respect, engaging smile, attention to the request....
3. Local language skills * Score 1 to 10 the local language skill

4. Capacity to plan the activities * Score 1 to 10 the planning capacity as observed during the regular meeting
5. Capacity to report about the activities * Score 1 to 10 the capacity to deliver accurate and timely report about the activities
6. Performance as a trainer * Score 1 to 10 the capacity to act as a trainer/resource person/facilitator as observed during the various UC training/orientation
7. Leadership capacity * Score 1 to 10 the capacity to motivate, stimulate and convinced the villagers to participate & contribute
8. Conflict mitigation capacity * Score 1 to 10 the capacity to mediate conflict, dispute, antagonisms and generate consensus and cooperation
9. Reliability regarding financial matters * Score 1 to 10 the reliability regarding financial matters (clarity of disbursement, local price quotation, bills submitted to DDC)

The urgency of an eventual replacement is also evaluated on 1 to 10 scale.

The forms are filled up online for immediate processing.

Scheme cycle evaluation

The scheme cycle phases: preparatory-implementation and post-construction are supposed to result in specific activities as described in the Project Implementation Guideline and the Step-by-Step Manual.

Each activity should be scored on:

- Completeness – is the bulk of the activity delivered, no delivery scores 1, a full delivery scores 10
- Conformity – is the activity delivered according to the specifications or ToR, a complete disrespect scores 1, a full conformity scores 10
- Retention – applies for training only. A small test of 4 to 5 trainees should be conducted to establish the score (1 to 10)
- Satisfaction – applies to item which deliver directly a service to the beneficiaries such a tap, a toilet, an irrigation outlet, an electrical connection. All taps should be scored exclusively by the women using specifically a particular tap.

The following tables show the scoring to be collected for a typical Water Supply & Sanitation scheme.

More sub-forms are required to write down the scores for each tap stand. At least 20 toilets have to be observed for completing the toilet scoring.

Support Organisation evaluation

District : VDC

VDC Code :

Name of SO:

Name of Scheme:

Scheme code:

Monitoring Team:

Date of monitoring:

SN	Activities	Criteria			Total Marks received
		Completeness	Conformity	Satisfactory/retention	
1	Planning Phase	Score	Score	Score	
1.1	Planning Phase Proposal	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO	
1.2	Rapport Building with community people	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
1.3	Formation of Community Organisation	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
1.4	HHs Survey work	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO	
1.5	Water Resources Management Committee formation	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
1.6	CBT training	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
1.7	Social Assessment - SO support	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO	
1.8	Technical Assessment - SO support	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO	
1.9	SC level Planning - SO support	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO	
1.10	VDC level Planning - SO support	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO	
1.11	SO staffs Attendance in site	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO	
1.12	Reporting	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO	
1.13					
1.14	Total Scores				

2	Preparatory Phase	Completeness	Conformity	Satisfactory/retention
2.1	Planning	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
2.2	Users Mass Meeting	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
2.3	User Committee formation	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
2.4	Scheme Layout	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
2.5	Collection of O&M fund	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
2.6	Survey	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
2.7	Drawings	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
2.8	Design,	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
2.9	Cost Estimate	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
2.10	Bill of Quantity	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
2.11	CAP training	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
2.12	Book Keeping Training	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
2.13	HSE Training	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
2.14	Local resource mobilization	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
2.15	Sanitation Awareness Campain	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
2.16	Public hearing	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
2.17	CAP Preparation	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
2.18	UC registration/open bank a/c	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
2.19	Staffs Attendance in site	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
2.2	Communication with stakeholders	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
2.21	Site office management	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
2.22	Coordination with VDC & VDC level institutions	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
2.23	Reporting	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
2.24		1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
2.25	Total Score			

3	Implementation Phase	Completeness	Conformity	Satisfactory/retention
3.1	Implementation Phase Proposal	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
3.2	Planning of the activities	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
3.3	CAP implementation	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
3.4	Procurement process of non local materials	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
3.5	Transportation of non local materials	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
3.6	Collection of Local materials	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
3.7	Store Management of local/non local materials	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
3.8	UC book keeping	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
3.9	Trainings/ Seminars for UC/users	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
3.10	LLB and VMW training	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
3.11	Intake construction	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
3.12	WRT construction	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
3.13	BPT construction	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
3.14	DC construction	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
3.15	Tap stands construction & water delivery	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
3.16	Pipe line construction	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
3.17	Family Toilet construction	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
3.18	Institutional Toilet construction	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
3.21	Sanitation Awareness Campaign	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
3.22	Public/social Auditing	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
3.23	Staffs attendance in site	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
3.24	Communication with stakeholders	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
3.25	Coordination with VDC & VDC level institutions	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
3.26	Reporting	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
3.27		1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	
3.28	Total Score			

4	Post Construction Phase	Completeness	Conformity	Satisfactory/retention
4.2	O & M fund Management	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
4.3	UC Book Keeping	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
4.4	Trainings/mass meeting	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
4.6	Income Generation Trainings	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
4.7	Structure maintenance	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
4.8	Mobilization of VMW / LLB.	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
4.9	Staffs attendance in site	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
4.10	Reporting	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
4.11	Adequate delivery of water at users level		1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10
4.12	Absence of design & construction defect	1 2 3 4 5 6 7 8 9 10	1 2 3 4 5 6 7 8 9 10	NO
	Total Score			

GUIDELINES FOR USE OF PARTICIPATORY METHODS

1. Introduction

Participation means that all stakeholders are involved and participating in a common exercise, whether it is planning, designing, implementing or monitoring and evaluation project activities.

Participatory methods such as Participatory Reflection and Action (PRA) (formerly known as Participatory Rural Appraisal), Stakeholder Analysis, Participatory Social Assessment, Beneficiary Assessment and Participatory Monitoring and Evaluation, are used to generate, share and analyze information with the local people. All participatory methods/approaches mean learning from and with people. Outsiders (interviewers, researchers, and surveyors) just play a role of facilitator. As full participants in the appraisal, local people are empowered to share, use, enhance and analyze their own knowledge and skills.

2. When to Use Participatory Methods

Participatory methods/approaches should be used during the whole project cycle, from the Planning Phase to Post-Construction Phase. Participatory methods should be used for

- Basic information collection (during WUMP and in Baseline Data Collection)
- Analyzing the information
- Need identification and prioritization (WUMP)
- Planning activities (WUMP)
- Monitoring activities
- Evaluation of the project impacts
- Non project development activities.
- Village development planning and urban slum water and sanitation projects.
- PRA tools have been widely used in the information collection at the identification stage of project cycle like forestry, drinking water, irrigation, agriculture and other projects.

For any kind of project participatory methods and approaches are very useful tools because as a bottom-up approach they:

- assure information is generated directly from the people themselves about their own social, economic and cultural environment
- widen the understanding about how people perceive their environment
- tell what are their attitudes and practices and knowledge in the project-related field
- tell what are the problems, needs and priorities of the women and men of different castes and ethnic groups
- find out the local human and physical resources available for development activities

This information will be used again together with people to

- dig out problems/constraints faced by the communities and also seeks possible solutions.
- make action plan of their needs and priorities.

- plan and prioritize the water resource utilization in sustainable manner in the WUMP and to design the prioritized schemes to be as socially inclusive as possible
- plan how the local human, physical and financial resources can be mobilized in project activities
- find out the ways to solve the project-related problems and needs
- monitor the effectiveness of the schemes and the project
- evaluate and analyze the wider impacts of the project activities
- Discuss about the cost and benefit sharing
- Discuss about the future plan

3. How to use participatory methods to collect information

There is a huge variety of possible participatory approaches/techniques to collect information. The most important thing is that the local women and men from all castes and ethnic groups and all other stakeholders are directly involved in the process. Assumption and guesses are not enough (even in a case when a surveyor thinks that she/he already 'knows').

Participatory tools are used to learn from people in a participatory process where all the stakeholders are involved. They can be broadly grouped into mapping, ranking, diagram and dialogue. Social mapping, resource mapping, transect walking, mobility mapping etc are in the mapping group, while wealth ranking and preference ranking fall under the ranking group and seasonal calendars, Venn diagrams, flow diagram, pie charts and time lines are in the diagram group. Semi structured interviews and focus group discussions are grouped into dialogue. PRA process can be taken as a heart and the tools and techniques are the other parts of the body.

For example, following methods are used:

- open-ended questions
- structured questionnaires
- group discussions
- visual aids to generate discussions, e.g. pictures, maps, diagrams, drawings etc.
- preparation of community maps, resource maps, mobility maps etc.
- transect walks and general observation (discussion) with people
- Wealth ranking

Use of different participatory techniques depends on the purpose of the study. For basic social and economic data collection this Project uses community maps (social mapping) and questionnaires, for water source analysis transect walks and joint observations with local people can be used.

Process

1. Call a meeting in village, cluster or tole as per appropriate to all, e.g. persons listened by villagers in matters of day to day life (health, agriculture, water resources, sanitation situation, religious and other community level activities). This is the initial step with the communities so it helps for rapport building
 - Assurance of equal participation of both men, women and all ethnic groups of the community is must
 - The time and venue should be suitable for both women and men and all ethnic groups and castes.
2. In the meeting facilitators should prepare a list of participants showing their name, sex, civil status, occupation, ethnic groups/caste, age and literacy status. They should also record in

the end of meeting the process of meeting, i.e. which issues/concerns were expressed especially if contradicting each other, and why was that. They should also identify the people who were more active in discussions, and who were not (e.g. male/female, young/old, ethnicity/caste, profession)

3. Explain the meaning of the meeting.
4. Explain the technique to be followed in the meeting to the participants. The facilitator can use multitude of participatory tools and techniques to meet the expected result of the meeting.
5. Let people interact, plan and decide. Listen and make notes of important points, facilitate when needed.
6. Conclude the process

Role of the facilitator and the local people

The facilitator (outsider/researcher) should have the following attributes:

- Respecting and valuing attitude towards local community members
- Mastering local language and culture
- Knowing about the working environment, also outside the community or group
- Group control skills, also in crises situations
- Flexible mastering of participatory methods
- Healthy self-respect, ability to withstand errors and will to learn
- Reliability and independence
- Commitment to the welfare of the community or group and a ability to bare responsibility

Facilitators should:

- Create informal and relaxed atmosphere
- Distribute information
- Make learning situations possible by showing interest in what the people (women and men) say and do and by supporting creative discussion
- Select tools and methods and adapt them to specific situations
- Activate the participants
- Support the learning process and the development of the locals skills and knowledge by encouraging and asking more (but not interfering or promoting her/his own ideas)
- If relevant information is missing lead the discussion to topic
- If necessary, help to find further information and training
- Have patience – do not rush or interrupt
- Use objective/best judgment at all times.
- Watch, listen and learn – do not lecture (to see that no groups controls the discussion and if necessary divide the group into smaller focus groups)
- Protect equality and inclusion of all the participants in the discussions

Whereas the community people themselves:

- Map and do things

- Show and point to issues
- Measure and define
- Inform and discuss
- Categorise, explain and analyse
- Plan and decide
- Monitor and evaluate
- Supervise and criticize

Often facilitator is pushed towards controlling or leadership, but must try to avoid making or controlling the decisions.

Step 4 - Baseline Data Collection and WUMP Awareness Campaign

GUIDELINES FOR BASELINE DATA COLLECTION (HOUSEHOLD SURVEY)

The household survey covers the following topics:

- composition
- ethnicity
- wealth group
- assets
- education
- agriculture production
- income
- credit
- sanitation

The complete questionnaire is presented in Paper 10 of this Manual. It is also translated in Nepalese language. For each household one pre-printed number is present on the questionnaire and on 2 identical household cards (one to be used by the household head and the other by his/her spouse). This number will help to trace the involvement of the household in meeting, training, work/kind/cash contribution and reception of water supply, irrigation, electricity services.

One instruction sheet for the household questionnaire has been prepared in Nepalese language.

TASK DISTRIBUTION ON HOUSEHOLD SURVEY

Forms/questionnaires printing and organisation of the data flow

The forms are printed by the PSU in Dhangadhi and instruction in both English and Nepali are prepared by the HRD/M&E Specialist, Planning and M&E specialist, Management of Information System Specialist.

The content of the questionnaire has been agreed with Gender Specialist, Livelihood Specialist, Health and Sanitation Specialist.

Household level data collection

The questionnaires are printed and buddle in book of 50 HH. The questionnaire is 2 page long. Each questionnaire has a pre-printed number which is also repeated on the household card to be delivered to each enumerated household.

One copy of each questionnaire is to be filled as a carbon copy and kept in the bundle book. The other is to be tear off and sent to data processing.

The task to interview each household should be preferably assigned to the Community Mobilisers as they are more knowledgeable about the households' status but in VDC with a population superior to 500 households, the task should be shared with the Support Organization (SO).

Once the forms have been filled and the household card distributed, the SO should verify that no household has been omitted and that all the forms are handed over to the WRA.

As noticed during the CM training, some CM may not be sufficiently literate to fill the questionnaires rapidly. In such case, the SO personnel should interview the households maybe with the help of the CM as translator/convener.

A tally between the nbr of questionnaire books distributed and the number of questionnaires returned should be performed when the forms are returned to the WRAs.

Missing forms should be properly reported.

Household Survey data processing

The database has been designed by the MIS specialist assisted by the M&E/HRD specialist.

The data introduction should be contracted qualified service providers who could be :

- the SO if qualified
- regional/district based service providers
- Kathmandu based data processing firm in case of insufficient local capacity

Supervision and quality control will rest on the MIS specialist assisted by the M&E/HRD specialist.

Report preparation and dissemination

The MIS specialist assisted by the M&E/HRD specialist and the network support officer will prepare a comprehensive report with table and analysis. The database should be made available online.

For more information on the RVWRMP's comprehensive monitoring concept refer to the Implementation Guideline.

BASELINE DATA COLLECTION (HOUSEHOLD SURVEY) **FORMAT**

HH characterization for exhaustive VDC database – Preprinted code

1.1 LOCATION

District code : VDC code : WARD Number :

Village code : Village name :

Cluster code : Cluster name :

1.2 COMPOSITION

HH head surname :

HH head given name :

HH head year of date : BS

HH head gender : M F

Nbr adult male in the HH incl HH head :

Nbr adult female in the HH incl HH head :

Nbr male children 0 to 5 years old :

Nbr female children 0 to 5 years old :

Nbr male children 6 to 12 years old :

Nbr female children 6 to 12 years old :

Nbr male children 13 to 18 years old :

Nbr female children 13 to 18 years old :

Nbr male adult 60 + :

Nbr female adult 60 + :

All male :

All female :

1.3 ETHNICITY

HH head ethnic group :

Other ethnic group in the HH (1) :M/F

Other ethnic group in the HH (2) :M/F

1.4 Wealth group

Based on wealth ranking : very poor.....poor.....medium.

1.5 Assets

1.5.1 Cultivated land (local):

Ropani :.....

Aana :.....

Paisa :.....

1.5.2 Other land (local):

Ropani :.....

Aana :

Paisa :

1.5.3 Land in city (not Kathmandu)

Yes/No

1.5.4 Land in Kathmandu

Yes/No

1.5.5 Main building

Brick/Concrete w cement roof : Yes/No

Brick/Concrete w corrugated sheet roof : Yes/No

Mud mortar house/dry stone w corrugated GI sheet roof : Yes/No

Mud mortar house/dry stone w /slate roof : Yes/No

Mud mortar house w mud roof : Yes/No

Mud mortar house w thatch roof : Yes/No

Temporary shelter : Yes/No

1.5.6 Cow shed / animal shed

Brick/Concrete w corrugated sheet roof : Yes/No

Mud house w corrugated sheet roof : Yes/No

Mud house w thatch roof : Yes/No

Temporary shed : Yes/No

Below main habitation : Yes/No

1.5.7 Livestock

Horse : Nbr.....

Mule : Nbr.....

Donkey : Nbr.....

Buffalo : Nbr.....

Cattle : Nbr.....

Goat : Nbr.....

Sheep : Nbr.....

Pig : Nbr.....

Poultry : Yes/No

1.5.8 Female owned assets

Building : Yes / No , Land : Yes / No, Livestock : Yes / No

1.6 Education

Literate male adult : Nbr.....

Literate female adult : Nbr.....

Nbr male children 6 to 9 years old enrolled in school :

Nbr female children 6 to 9 years old enrolled in school :

Nbr male children 10 to 12 years old enrolled in school :

Nbr female children 10 to 12 years old enrolled in school :

Nbr male children 13 to 16 years old enrolled in school :

Nbr female children 13 to 16 years old enrolled in school :

Nbr male children > 16 years old enrolled in school :

Nbr female children > 16 years old enrolled in school :

1.7 Agriculture production

Produced cereal/grain cover :

0 to 3 months, 4 to 6 months, 7 to 9 months, 10 to 12 months, >12 months

1.8 INCOME

Sale of cereal/grain : Yes / No

Sale of vegetable : Yes / No

Sale of milk/ghee : Yes / No

Sale of live animal : Yes /No

Sale of eggs : Yes / No

Wage earning in VDC male: Yes / No

Wage earning in VDC female : Yes / No

Wage earning in Region male: Yes / No

Wage earning in Region female : Yes / No

Wage earning outside Region but in Nepal male : Yes / No

Wage earning outside Region but in Nepal female : Yes / No

Wage earning outside Nepal male : Yes / No

Wage earning outside Nepal female: Yes / No

Cottage industry w male only : Yes / No

Cottage industry w male & female : Yes / No

Cottage industry w female only : Yes / No

Permanent job male : Yes/No

Permanent job female : Yes/No

Harvest/sale of non-timber forest product : Yes/No

Sale of fishes : Yes/No

Portage and goods transport : Yes/No

Retailing : Yes/No

1.9 Credit

Access to formal credit : Yes/No

Interest rate charged :

Outstanding loan with formal credit institution: Yes/No

Access to local money lender credit : Yes/No

Interest rate charged :

Outstanding loan with local money lender : Yes/No

1.10 Sanitation

Access to a permanent latrine : Yes/No

Regular use of permanent latrine : Yes/No

Access to a temporary latrine : Yes/No

Systematic hand washing after defecation : Yes/No

Systematic hand washing before meal : Yes/No

Regular use of temporary latrine : Yes/No

Latrine are too costly : Yes/No

Free defecation is not injurious to health : Yes/No

1.11 Cow dung collection

Use of pit with urine collection : Yes/No

Use of hype near the house : Yes/No

Un-displaced litter : Yes/No

Cow dung cake for fuel : Yes/No

1.12 Pigs dung collection/ management

Free roaming pigs : Yes/No

Permanent stabulation with un-displaced litter: Yes/No

Permanent stabulation with collection of dung and litter : Yes/No

Agriculture use of pig dung/litter : Yes/No

WATER USER MASTER PLAN

AWARENESS CAMPAIGN

1. OBJECTIVE

- Prepare the community for acting knowledgably and responsibly during the Water Use Master Plan.
- Propagate the need of a complete water sources inventory
- Delineate clusters of houses sharing common water access
- Prepare a reflection regarding the water access priorities.

2. TIMEFRAME AND SYNCHRONISATION

The Water User Master Plan Awareness Campaign should be conducted during the period preceding the deployment of WUMP consultant.

It should occur in parallel with the household survey.

It should start at least two months before the deployment of WUMP consultant (around December).

3. RESPONSIBILITIES

WRAs should initiate the process soon after the selection of the Community Mobilisers.

The Community Mobilisers and the Support Organisation should use the frequent interactions related to the Household Survey to inform the population regarding the forthcoming WUMP.

At least one large audience event should be convened by the VDC secretary, CM and SO to signal the importance of the forthcoming WUMP.

Step 5 – Water Use Master Plan Preparation, Finalization, Approval and Endorsement

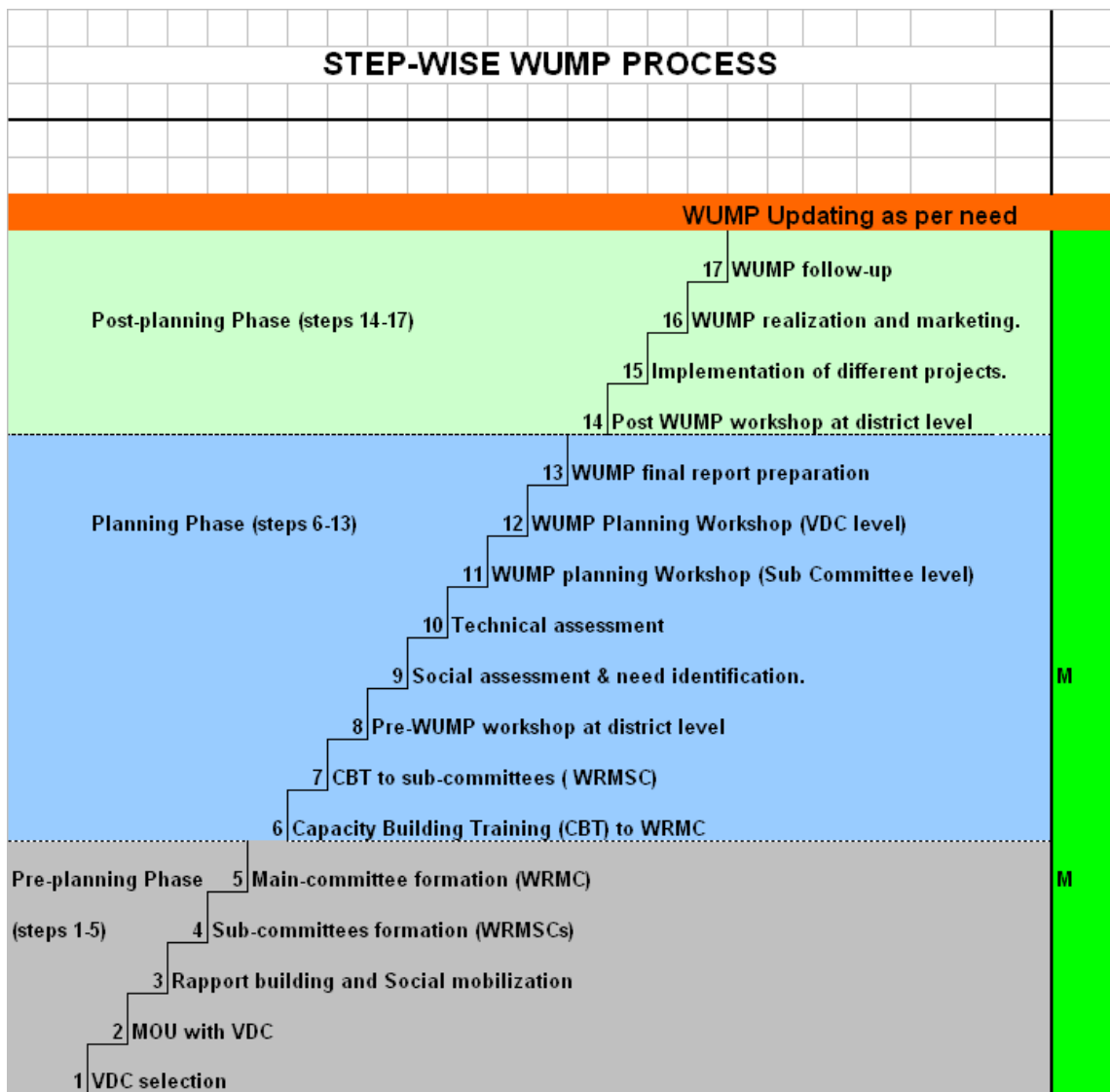
SHORT DESCRIPTION OF THE WUMP PROCESS

Water Use Master Plan (WUMP) identifies the existing use of water resources in a VDC and makes a plan for integrated use of water through rational, equitable and sustainable use of water. Preparation of WUMP is a participatory process lead by a VDC. It will be prepared by the villagers with support of consultants/NGOs.

The WUMP is the basic document for overall water use and environmental sanitation planning and for identifying communities' priority needs classified by various use categories such as drinking water supply, irrigation, micro-hydro power production etc.

The objectives of preparation of WUMP are,

- Exhaustive inventory of water resources and water uses
- Identification of baseline data and potential interventions
- Prioritization of potential activities in water sectors
- Promoting sustainable investment in water sectors



M= Monitoring

WUMP Preparation Steps

Step	Process	Responsible
1. VDC Selection	<ul style="list-style-type: none"> ▪ VDCs will be selected by RVWRMP process (refer-VDC selection process of RVWRMP. Paper 4 of this Manual.) 	DDC/ RVWRMP PSU
2. MOU with VDC	<ul style="list-style-type: none"> ▪ Initiate for MOU between the VDC and the DDC to prepare WUMP and implement RVWRMP activities in VDC. (refer-MOU process of RVWRMP. Paper 5 of this Manual.) 	VDC/DDC PSU/ WRA (facilitate)
3. Rapport Building/ WUMP awareness	<ul style="list-style-type: none"> ▪ WUMP Awareness Campaign conducted by SOs and CMs during household survey. (refer – Paper 12 of this Manual.) ▪ Make an action plan for VDC/ cluster/tole /village/ CO (as needed) level orientation program, based on lacking points from WUMP Awareness Campaign (Orientation program content-Annex -1) ▪ As per VDC level action plans, one day WUMP Conceptual orientation to every ward/cluster/tole and CO level. ▪ Make an action plan for formation of WRMSC during the orientation period. ▪ Beginning of social study (Social data collection for WUMP) onwards by using appropriate PRA tools and IEC materials. (refer – WUMP Preparation Guideline - Social data collection formats) ▪ WUMP/Sanitation motivation campaigning. ▪ Display and distribution of the posters/Pamphlets/leaflets etc. ▪ Home visit by CM. ▪ It is also possible to conduct confidence building workshop/training separately to Dalit and Women for maximum representation in the WRMSC /COs / WRMC of Dalit cluster or ward wise. 	CM/ SOs/ WRAs
4. Water Resource Management Sub Committee (WRMSC)/ CO formation	<ul style="list-style-type: none"> ▪ Conduct mass meeting with every household representation at ward/cluster level (maximum representation of women. Dalit and excluded group) ▪ Refresh / revision of WUMP concept to the community peoples. ▪ Formation of 5-9 members WRMSC with female- 50% and proportional representation from Dalit and other excluded groups. ▪ Describe role and responsibility of WRMSC - (roles and responsibilities of WRMSC/CO and Annex -2) ▪ Select representative to WRMC from the WRMSC/COs. ▪ Household selection for Demo toilet construction? 	CM/ Consultant/ SOs

<p>5. Water Resource Management Committee (WRMC) formation</p>	<ul style="list-style-type: none"> ▪ Formation of 13-25 members WRMC. ▪ Committee members will be selected from representatives of WRMSC/COs. ▪ VDC chair, vice-chair and secretary will be automatically in the same post of WRMC and it should represent majority of VDC body. (At present context of without authorized VDC body, chair or coordinator will be selected from WRMC member). ▪ Committee will be comprised with female- 50% and proportional representation from Dalit and other excluded groups. ▪ One advisory committee will be formed from representation of active political parties at VDC level. ▪ Refresh/revision about WUMP concept to the WRMC members. ▪ Describe role and responsibility of WRMC - (roles and responsibilities of WRMSC/WRMC. Annex -2) ▪ If needed, it is possible to have representatives from neighboring VDC in WRMC, it will help to implement the schemes of WUMP without conflict. 	<p>CM/ Consultant/ SOs</p>
<p>6. Capacity Building Training (CBT)/ WUMP Preparation Training to WRMC</p>	<ul style="list-style-type: none"> ▪ Conduct five days Capacity Building Training to WRMC within VDC or appropriate place. (Content annex- 3) ▪ Its objectives are to: <ul style="list-style-type: none"> - Capacitate the WRMC member in preparation and implementation of the WUMP. - Promote practical knowledge and skill to social mapping exercise, assessment, need identification, prioritization and planning process. - Enhance knowledge about water resources management and water act, decentralization, leadership development, management, communication, development, participation, gender and social inclusion and sanitation. ▪ Observation tour also can be organized to the WRMC members in successful WUMP VDC. 	<p>SOs/ Consultant/ WRAs</p>
<p>7. Capacity Building Training (CBT) WUMP Preparation Training to to WRMSC</p>	<ul style="list-style-type: none"> ▪ Conduct 2-3 days Capacity Building Training to WRMSC at local level. (Content annex – 4) ▪ Its objectives are to: <ul style="list-style-type: none"> - Capacitate the WRMSC member in preparation and implementation of the WUMP. - Promote practical knowledge and skill to social mapping exercise, assessment, need identification, prioritization and planning process. - Enhance knowledge about water resources management and its act, decentralization, leadership development, management, communication, development, participation, gender and social 	<p>SOs/ Consultant/ CM</p>

	inclusion and sanitation.	
8. Pre WUMP workshop	<ul style="list-style-type: none"> ▪ Conduct one day pre WUMP workshop at district level with WRMC representatives, and all district level stakeholders and water related agencies (GO/NGO/INGO). ▪ Any one WRMC chairperson/ coordinator will chair the workshop. (Content annex-5) ▪ Its main objectives are to: <ul style="list-style-type: none"> - Deliver the detail information about water use master plan (WUMP). - Details of WUMP being prepared in VDCs. 	WRAs/PSU
9. Social assessment (social/resource mapping exercise and water related need identification)	<ul style="list-style-type: none"> ▪ Conduct mass meeting with every household representation (at least 75% of HH must be represented) at each and every ward/cluster/CO level (50% representation of women, and proportionate representation of Dalit and excluded group is a must.) ▪ Social study/socio-economic data collection work is started from step 3. ▪ Facilitate on social and resource mapping exercise. (Separate groups for men and women if necessary.) ▪ Focus in water resources and verify with collected data. Necessary materials and guidelines for mapping exercises (refer -WUMP Preparation Guideline) ▪ Facilitate to community for water related need identification or preparation of proposed plan of the cluster, based on integrated water resources management concept. (Separate groups for men and women if necessary.) (Annex -6) ▪ It will be better to involve technical team to make technical assessment more easy. 	SOs/ Consultant
10. Technical Assessment	<ul style="list-style-type: none"> ▪ Based on social assessment data and need identification or preparation of proposed plan of the community, a technical team will assess all technical aspect for the potential use of sources based on integrated water resources management concept. ▪ It should be involve WRMSC members and social assessment team. ▪ Prepare a draft plan of potential use of each every source.(refer – WUMP Preparation Guideline-Technical assessment formats) 	SOs/ Consultant
11. Planning workshop at WRMSC /CO level	<ul style="list-style-type: none"> ▪ A one day planning meeting will be conducted at WRMSC/CO level. ▪ Conduct a mass meeting with every household representation at each and every WRMSC/cluster/CO level 	SOs/ Consultant

	<ul style="list-style-type: none"> ▪ Present social and technical preliminary findings. ▪ Verify of the social and technical data. ▪ Facilitate to community for preparation of final planning based on technical feasibility at cluster level. ▪ Facilitate to community for prioritization of their plan with the basis of hardship, possibility, technical feasibility, mobilization of local resources and willingness of community. ▪ In the basis of this workshop, a draft WUMP report of WRMSC/CO level will be prepared by technical team. ▪ Encourage raising the voice of women, Dalit and excluded group during the planning period. (Proportionate representation of women, Dalits and excluded is a must in all planning meetings. (formats, annex-6)) 	
12. WUMP Planning workshop at VDC/WRMC level	<ul style="list-style-type: none"> ▪ A three days planning workshop will be conducted at VDC level for prioritization and finalization of VDC level WUMP. (For detail refer to WUMP Preparation Guideline and for content annex-7) ▪ Participants will be all members of WRMC and advisory committee, other key persons as needed and available. ▪ Present social and technical findings in WUMP planning workshop of the VDC. ▪ Verify of the social and technical data. ▪ Facilitate to participants for prioritization and preparation of final WUMP of the VDC. ▪ Facilitate to participants for prioritization of their plan in the basis of hardship, possibility, technically feasible, mobilization of local resources and willingness of community through the effective method of prioritization. ▪ Encourage raising the voice of women, Dalit and excluded group during the planning period. ▪ Facilitate to participants for preparation one year detail and five year periodic plan of the VDC. ▪ Identify the potential resource organization for implementation of WUMP with in the district. ▪ Initiate to categorize the resources for scheme implementation (internal or external). ▪ Take a commitment with the WRMC as well as active political parties to implement of WUMP in future. 	SOs/ Consultant/ WRAs/PSU
13. WUMP Preparation and approval from VDC and DDC council	<ul style="list-style-type: none"> ▪ Preparation of final WUMP by Social / technical consultant team based on the consensus of planning workshop. ▪ WRMC will initiate to take approval or endorsement for WUMP from VDC and DDC council. RVWRMP will support for it. (Papers 14 and 15 of this Manual) 	SOs/ Consultant
14. Post WUMP coordination	<ul style="list-style-type: none"> ▪ Conduct one day post WUMP workshop at district level with WRMC representative (of VDC where 	WRAs/PSU

<p>workshop/ Presentation of WUMP at district level</p>	<p>WUMP was prepared) and all district level stakeholders and water related agencies/ resource organizations (GO/NGO/INGO).</p> <ul style="list-style-type: none"> ▪ Any one WRMC chairperson/ coordinator will chair the workshop. (Refer to WUMP Preparation Guideline) ▪ Its main objectives are to: ▪ Deliver the detail information about all schemes under water use master plan of respective VDC. ▪ Facilitate to interact between WRMC and resource organizations for implementation of schemes under WUMP. ▪ WRMCs will try achieving commitment from resource organization for implementation of Prioritized schemes. 	
<p>15. Water Resource Implementati on activities</p>	<ul style="list-style-type: none"> ▪ Implementation of water resources projects by RVWRMP based on prioritization of the WUMP. ▪ Policies of RVWRMP will be followed for implementation of water resources projects. (Refer Project Implementation Guideline of RVWRMP for norms.) 	<p>RVWRMP/ DDC</p>
<p>16. Water Usages mobilization and support workshop.</p>	<ul style="list-style-type: none"> ▪ WRMC/VDC will be responsible for implantation of WUMP projects. ▪ WRMC will initiate to mobilize internal/local resources and coordination to other resource organization for implementation of WUMP projects. ▪ RVWRP will support for it. 	<p>Resource Organization</p>
<p>17. WUMP follow- up and update</p>	<ul style="list-style-type: none"> ▪ WRMC/VDC will be responsible for update and follow-up of WUMP. ▪ WRMC/VDC will initiate to organize yearly one day coordination meeting at district level for the implementation of WUMP projects based on follow-up results. ▪ RVWRMP will support to provide the follow-up formats and necessary questionnaires. 	<p>WRMC/RVW RMP</p>

जलश्रोत व्यवस्थापन समितिको भूमिका तथा जिम्मेवारी (Role and responsibility of WRMC)

- गा.वि.स.को जलउपयोग गुरुयोजना तयारीका लागि सामाजिक अनुसन्धान समस्या पहिचान, प्राथमिकिकरण तथा श्रोत पहिचान प्रक्रिया सञ्चालन गर्न आवश्यक कार्यक्रम तालिका तयार पारी उप-समितिहरु तथा समुदायिक सस्थाहरुलाई सुसूचित गराउने ।
- जलश्रोत व्यवस्थापन उप-समिति/सामुदायीक सस्थाहरुलाई गुरुयोजना तयारीका लागि गर्नुपर्ने विभिन्न क्रियाकलापमा सहभागी हुन सक्रिय तथा सचेत गराउने ।
- जलउपयोग गुरुयोजना तयारीका क्रममा सञ्चालन हुने तालिममा भाग लिने तथा तालिममा सिकेका कुराहरु उप-समिति तथा समुदायलाई सिकाउने
- जलउपयोग गुरु योजना, योजना तर्जुमा गोष्ठीमा सहभागी भई योजनाको प्राथमिकरण गर्न सक्य भूमिका निभाउने ।
- जलउपयोग गुरुयोजना तयारी पछि गा.वि.स. र जि.वि.स.को परिषदबाट गुरुयोजना अनुमोदन/स्वीकृत गराउने ।
- जलउपयोग गुरुयोजना तयारी पछि जिल्लास्तरिय समन्वय गोष्ठीमा सहभागी भई गुरुयोजनामा भएका योजनाहरु प्रस्तुत गर्ने ।
- गुरुयोजनामा प्रस्तावित योजना कार्यान्वयनको लागि गा.वि.स. र जि.वि.स. लगायतका विभिन्न सरकारी तथा गैरसरकारी संस्थाहरु संग सम्पर्क कायम गरी समाधानका उपायहरु खोज्ने ।
- सहयोगी सस्थाहरुद्वारा सञ्चालित योजनाहरुका लागि आवश्यक संरचनाहरु निर्माण गर्न समुदायलाई नैतिक तथा सामाजिक सहयोग गर्ने ।
- जलश्रोत व्यवस्थापन उप-समिति/सामुदायीक सस्थाहरुलाई जलश्रोत व्यवस्थापन कार्यक्रममा सहयोग र मार्गदर्शन गर्ने ।
- जलश्रोत व्यवस्थापन उप-समिति/सामुदायीक सस्थाहरुका गतिविधिहरुको अनुगमन गर्ने, संचालित कार्यक्रमहरुको अनुगमन गर्ने ।
- जलउपयोग गुरुयोजनामा प्राथमिकतामा परेका योजना वा कार्यक्रममा गा.वि.स. बाट पनि समानुपातिक आर्थिक रकम मिलान गर्ने परिपाटिलाई निरन्तरता दिदै जानपर्नेछ ।
- जलउपयोग गुरुयोजना अन्तरगतका योजनाहरु एक वर्षे र पाच वर्षे आवधिक योजना अनुसार कति, कुन कुन र कसरी सम्पन्न भयो र कति बाकी छन् आदि कुराहरुको अनुगमन गरी अभिलेख तयार गर्ने ।
- आवश्यकता अनुसार जिल्ला स्तरिय समन्वय गोष्ठीको आयोजना गर्ने ।

जलश्रोत व्यवस्थापन उपसमिति/सामुदायीक सस्थाको भूमिका तथा जिम्मेवारी (Role and responsibility of WRMSCs/COs)

- एकिकृत जलश्रोत व्यवस्थापन कार्यक्रमको उद्देश्यलाई समुदायमा प्रसार गर्ने ।
- जलउपयो गुरुयोजना तयारीका संचालित हुने सामुदायिक भेला, अन्तरक्रिया, गोष्ठी बैठक आदि आयोजना गर्न सहयोग पु-याउने
- सामाजिक अनुसन्धान (समस्या पहिचान, प्राथमिकिकरण, श्रोत पहिचान आदि) प्रक्रियामा सक्रिय भूमिका निर्वाह गर्ने
- गा.वि.स.स्तरिय जलउपयोग गुरुयोजना तयारीका लागि उपसमिति/सामुदायीक सस्था स्तरीयरुपमा पहिचान भएका जलश्रोत सम्बन्धि अतिआवश्यक कार्यमा समुदायका सदस्यहरुलाई सर्वसम्मत गराई योजना तर्जुमा गर्ने ।
- मूलसंग सम्बन्धित विवाद आएमा सुल्झाउन मध्यस्थता कायम गर्ने
- जलश्रोत सम्बन्धि सम्पूर्ण सुचनाहरु जलश्रोत व्यवस्थापन मूल समितिलाई जानकारी दिने
- जलश्रोत सम्बन्धि उत्प्रेरणा गर्ने तथा कार्यान्वयनका लागि पहल गर्ने
- समुदायमा कार्यान्वयन हुने योजनाका सबै गतिविधिहरुमा समुदायका सदस्यहरुलाई सक्रियरुपले भाग लिन लगाउने
- सरसफाई सम्बन्धि उत्प्रेरणा कार्यका लागि समुदाय भेलाहरुको आयोजना गर्ने
- नमुना चर्पी बनाउन सरसल्लाह दिने
- चर्पी निर्माण गर्न उत्प्रेरण गर्ने र सम्भार तथा प्रयोगको अनुगमन गर्ने

Session Plan for Capacity Building Training (CBT) to WRMC

DAY	SESSION - 1	SESSION - 2	SESSION - 3	SESSION - 4
1	<ul style="list-style-type: none"> • Opening & Welcome • Introduction • Setting Ground Rules • Expectation Collection 	<ul style="list-style-type: none"> • Introduction of WARM-P, Helvetas and RVWRMP, FINNIDA. 	<ul style="list-style-type: none"> • WARM Concept & Approach • WARM Chair • WUMP preparation Flow Chart 	<ul style="list-style-type: none"> • Water Use Master Plan • WUMP planning & Coord. Wsp. • WARM Experience
2	<ul style="list-style-type: none"> • Review of day – 1 • Role & Responsibility of WRMC & WRMSC 	<ul style="list-style-type: none"> • Development Concept • Concept of Community Organisation 	<ul style="list-style-type: none"> • Role of CO in Community Development • Community Participation 	<ul style="list-style-type: none"> • Communication • Motivation
3	<ul style="list-style-type: none"> • Review of day - 2 • Decentralisation & Self Governance Act 	<ul style="list-style-type: none"> • Local Resources Identification and Mobilisation 	<ul style="list-style-type: none"> • Decentralisation & Self Governance • Leader, Leadership • Meeting procedure. 	<ul style="list-style-type: none"> • Water Resources Act • VDC Act • VDC Planning Process
4	<ul style="list-style-type: none"> • Review of day - 3 • <u>PRA</u>: --Wealth Ranking, -- Seasonal Calendar -- Social Mapping 	<ul style="list-style-type: none"> • Practice of Social mapping • Source yield measurement • Need Identification & Prioritisation 	<ul style="list-style-type: none"> • Participatory Planning and Implementation • Conflict Management 	<ul style="list-style-type: none"> • Gender and Social inclusion.
5	<ul style="list-style-type: none"> • Review of day – 4 • Health & Sanitation -Introduction and importance 	<ul style="list-style-type: none"> • Water born disease • Prevention of waterborne disease. • HIV AIDS 	<ul style="list-style-type: none"> • Action Plan • Feedback • Evaluation 	<ul style="list-style-type: none"> • Closing

Session Plan for Capacity Building Training (CBT) to WRMSC

SN	SESSION - 1	SESSION - 2	SESSION - 3	SESSION - 4
1	<ul style="list-style-type: none"> • Opening & Welcome • Introduction • Setting Ground Rules • Expectation Collection 	<ul style="list-style-type: none"> • Introduction of WARM-P, Helvetas and RVWRMP, FINNIDA. 	<ul style="list-style-type: none"> • WARM Concept & Approach • WUMP preparation Flow Chart 	<ul style="list-style-type: none"> • Role & Responsibility of WRMC & WRMSC • Development Concept • Concept of Comm. Organisation
2	<ul style="list-style-type: none"> • Review of day – 1 • Role of CO in Community Development • Community Participation 	<ul style="list-style-type: none"> • Decentralisation & Local Self Governance • Water Resources Act 	<ul style="list-style-type: none"> • Participatory Planning and Implementation • Gender and Social inclusion. • Leader, Leadership 	<ul style="list-style-type: none"> • Communication • Motivation • Local Resources Identification and Mobilisation_
3	<ul style="list-style-type: none"> • Review of day - 2 • <u>PRA</u>: --Wealth Ranking, -- Seasonal Calendar -- Social Mapping 	<ul style="list-style-type: none"> • Source yield measurement • Need Identification & Prioritisation 	<ul style="list-style-type: none"> • Health & Sanitation -Introduction and importance 	<ul style="list-style-type: none"> • Water born diseases • Closing

WUMP team introduction workshop

1. Background

This guideline assumes that:

- 2 Community Mobilisers have been selected and trained by RVWRMP before the arrival of the WUMP team
- One Support Organization has been appointed by RVWRMP before the arrival of the WUMP team
- The VDC Household Survey is nearly completed
- A first delineation of the clusters has been attempted by the SO/CM
- Community Organisation and Water Resources Management Committee are formed or nearly formed

The WUMP team is appointed for its skills in water resources inventory, Geographic Information System, social priority ranking, pre-feasibility design and estimate, reporting.

2. Objective

The basic objectives of the workshop are as follows:

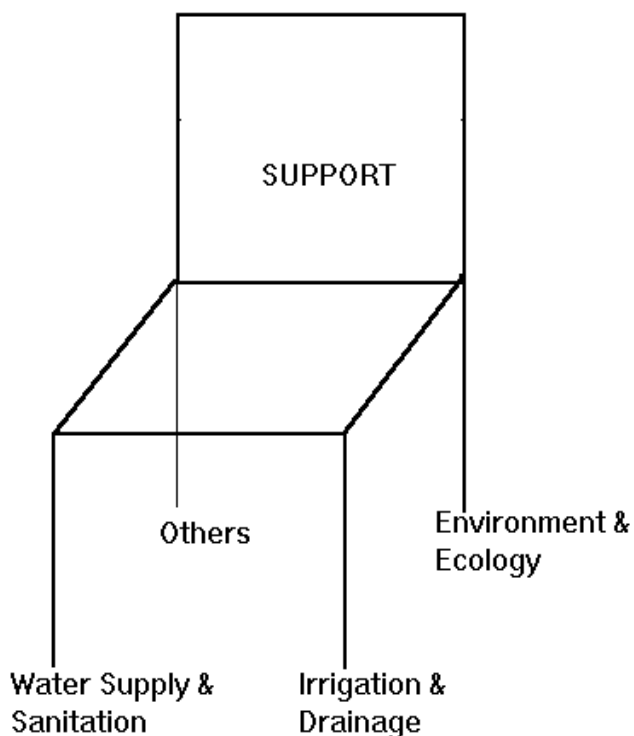
- To present the overall program module to the future participants.
- To clarify the time schedule and the respective roles

3. The Program of the Workshop

- Registration
- Introduction
- Welcome to the participants
- Presentation
 - WUMP concepts and vocabulary
 - WUMP steps
 - WUMP timeframe
 - WUMP team and individual responsibility
 - Updates from the CM and SO regarding
 - Cluster delineation
 - Sub-committee formation
 - Logistics
 - Timeframe

4. Open Discussion

5. Closing



THE WARM CHAIR

Water supply and anitation	Irrigation and Drainage	Environment and Ecology	Others
<ul style="list-style-type: none"> ▪ Source improvement/Kuwa renovation ▪ Piped water supply ▪ Personal hygiene ▪ Domestic cleanliness ▪ Latrine construction and proper use ▪ Repair/rehabilitation ▪ Environmental sanitation ▪ Rain water harvesting 	<ul style="list-style-type: none"> ▪ Proper drainage of waste water and use of overflow water ▪ Micro-irrigation for kitchen gardening (MUS and MIT for home) ▪ Drip irrigation ▪ Canal irrigation ▪ Canal improvement ▪ Repair/regabilitation 	<ul style="list-style-type: none"> ▪ Source conservation ▪ Forest management including nursery ▪ Grazing land identification ▪ Gully control ▪ Stream bank stabilization ▪ Terrace improvement ▪ Landslide treatment 	<ul style="list-style-type: none"> ▪ Water powered mills ▪ Electricity generation ▪ Water for cottage industries ▪ Water for livestock raising ▪ Fishery ▪ Recreational ponds ▪ Religious ponds

VDC level Water Use Master Plan-Planning Workshop

Background:

Water Use Master Plan (WUMP) planning Workshop is a very important activity that comes as fourteenth step in WUMP stepwise Flow-Chart. Social and Technical assessments are done before going to this exercise.

Conceptually WRMC has to organize this workshop with some logistic support from RVWRMP. Generally a lead role is expected from the chairperson of WRMC to make the workshop as participatory as possible.

Team involved in social and technical assessment should also participate in the workshop. There will be various teams comprising some staff from RVWRMP, SOs, CM, Consultants, all WRMC and Advisory committee members and other key people invited by WRMC of the VDC.

Objectives of the workshop:

- to share the findings of the Social as well as Technical Assessments
- to verify the findings of the assessments by WRMC
- to acquaint participants of workshop more with Integrated Water Resource Management (IWRM) concept and philosophy
- to prepare a five year Action Plan by prioritizing the activities identified
- to prepare a one year detailed Action Plan for the current year
- to classify support required (internal/external) for their implementation
- to prepare a list of potential collaborative

Workshop Duration: The workshop duration will be generally of three days

Methodology:

- WRMC chairperson will play a lead role
- RVWRMP staff will facilitate the sessions
- There will be a maximum number up participatory exercises
- Consultant (Social & Technical team) will present their findings
- A steering group could be formed to streamline the sessions
- Technical consultant team will document all reports with support.

Workshop agenda:

- Objectives of the workshop
- WARM Concept and Philosophy
- Steps done so far
- Presentation of Social Assessment
- Presentation of Technical Assessment
- Prioritization of activities identified
- Identification of potential collaborative
- Follow Up Action Plan
- Approval or commitment from workshop participants.
- Closing

जलउपयोग गुरुयोजना कार्याशालामा प्रयोग हुने फारामहरु

पांच वर्षे कार्य योजना (२०५८ - २०६२)

क्र.सं.	योजना	श्रोत		सम्पन्न वर्ष	संभावित सहयोगी संस्था
		आन्तरिक	वाहय		
१					
२					
३					

एक वर्षे योजना कार्यक्रम (२०५८)

क्र.सं.	योजना	श्रोत		त्रैमासिक लक्ष			जिम्मेवार	संभावित सहयोगी संस्था
		आन्तरिक	वाहय	प्रथम	दोश्रो	तेश्रो		
१								
२								
३								

अनुगमन कार्य योजना

ज.व्य.समिति			ज.व्य.कार्यक्रम		
क्र.सं.	गतिविधि	मिति	क्र.सं.	गतिविधि	मिति
१			१		
२			२		
३			३		
४			४		

FINALIZATION OF WUMP AND APPROVAL BY VILLAGE COUNCIL

The WUMP of the VDC will be prepared from bottom up process with exhaustive participation of each households of the community. The VDC/WRMC plays a leading role for preparation and approval process.

1. Focus group level planning with shared water resources, social and economic similarities and gender
2. Planning discussion separately with female CO
3. Planning at CO level (combined workshop participated by both female and male COs) – filter and prioritization
4. Compilation of CO level planning and debate at VDC/WRMC level – debate, filter, prioritization and design
5. Draft WUMP report preparation
6. Presentation, verification, discussion and correction
7. Final WUMP preparation
8. Approval from VDC/WRMC and recommendation to Village Council for final approval
9. Final approval from Village Council

WUMP ENDORSEMENT BY DDC

After approval from village council, the VDC/WRMC will present their WUMP in a district level workshop participated by DDC bodies, political parties and sector agencies for endorsement of their plan in district level planning and ultimately to the national strategic planning. This dissemination workshop in district level is also intended to mobilise investment of sector agencies in the VDC. The approved WUMP will be kept in a data bank of DDC/DIDC for mobilisation and update.

The DDC will endorse the WUMP of the project VDCs in District Council.

Step 6 – Annual Implementation Planning Based on WUMP

GUIDELINE FOR ANNUAL IMPLEMENTATION PLANNING BASED ON WUMP

In general, Water Use Master Plan prepared by VDC follows the procedures for formulation and implementation of plans in water resources sector of a village development committee. Further, WUMP also forms a sound basis for formulation of periodic plans of local bodies as it contains a long list of prioritized schemes for development of water sector of selected VDCs on the basis of poverty, remoteness, hardship and inclusion of disadvantaged communities. Thus WUMP provides a set of genuine schemes to be included in annual implementation plan of the sector. Accordingly, DDC and concerned VDCs shall make annual implementation plan based on WUMP and shall also invite other sector agencies, donors and other organizations to include schemes from WUMP under their annual implementation plan.

Bottom-up Annual Planning process

According to the provisions of LSGA, each village development committee needs to formulate periodical plan for at least five years for the development of its area. The formulated periodical plan contains the long term aims, objectives and working policies of the plan, physical infrastructure and services, facilities of the village development area, resources mobilization and possibilities of income generation, cost involvement of governmental and private sector and works to be carried out by the VDC. In consultation with the sector committees of DDC, sector program needs to be included in the periodic plan.

The VDCs are required to prepare the annual plan on the basis of periodic plan. The VDC are required to send necessary guidelines for programs to be launched at ward level utilizing the estimated resources for next fiscal year within the first week of Paush to each ward committees. Ward committees organize an interaction and discussion program with the concerned organizations, UCs, NGOs and residents of the ward. The meeting so held identifies and determines the priority of project or program. The list received from ward committees are scrutinized and submitted to VDC within the second week of Paush.

The village development committee, considering its resources, means, technical capacity and feasibility of the projects/programs received from the ward committees, clarifies (in consultation with the concerned sector bodies) which activities are to be included in the village development project and which ones are to be recommended to be launched from the district level body and submits the same to the village council. The Village Council scrutinizes and approves the project by the end of Paush, giving clear direction regarding whether the project has to be launched by the resources and means of the VDC itself or to be launched by external support. If the project is beyond the resources, means and capacity of the VDC, the sector program and priority order of the projects to be launched from the district level and central level shall have to be determined and forwarded, within second week of Magh.

A planning meeting for the formulation of Ilaka level projects is organized which determines the sector priority order of the projects received from VDCs of the area and forward them to DDC and the concerned sector committees within the third week of Magh.

The sector wise planning formulation committee classifies the projects received from various Ilakas into district level and central level projects, determines the priority order of such projects and forwards them to the integrated Planning Formulation Committee within the first week of Fagun.

The Integrated Planning Formulation Committee discusses on the projects received from sector Planning Formulation Committee and looks upon the complementary and supplementary relationship amongst the projects, may change, add, reduce and may change priority order of projects as per necessity and submit to the DDC within second week of Falgun.

DDC analyzes the recommended projects by Integrated Planning Formulation Committee in the light of GON policies, guidelines, target of periodic plan, land use map, master plan, working capacity and efficiency, environmental impact and the balance amongst the areas and finalizes such projects with determination of sector wise priority order, if required and submit them to District Council within third week of Falgun each year.

District Council has to take decision of passing the District Development Plan within the last day of Falgun and forward the decision and documents relating there to National Planning Commission and ministry within the 10th of Chaitra.

The DDC are required to include in its budget and programs the projects approved by District Council subject to guidelines and policies given by NPC and various ministries of GON for launching them with priority.

In summary, annual planning (for the next fiscal year) cycle in rural areas consists of:

- Communities plan and propose activities to VDC through ward committees by second week of December.
- VDC compiles, scrutinizes and prioritises community proposals (using WUMP as one of the key planning tools); VDC council approves the annual program by end of January.
- Ilaka level programs are compiled and prioritized by the 1st week of February
- DDC compiles, scrutinize, prioritize and District Council passes annual plan by second week of March each year.

Annual Planning in RVWRMP

Principally, RVWRMP supports this planning process and tries to integrate district Project planning into the cycle. DMC is responsible to follow-up and facilitate annual planning process in the RVWRMP working areas (VDCs). Schemes prioritised in the

WUMPs are the basis for water sector planning in project VDCs. However, in RVWRMP DDC has some flexibility to plan and revise plans based on actual needs – within the limits of the Project budget for a Fiscal Year.

RVWRMP promotes utilization of Water Use Master Plans in annual planning, both among local bodies and among donors/ projects/ NGOs/ INGOs working or aiming to work in the concerned VDCs.

From time to time WUMP should be reviewed and up-dated by the VDC to reflect changed circumstances in the VDC. It is recommended that VDC should regularly update it's WUMP at least for 5-year period planning.

Step 7 – Preparatory Phase Agreement

**Government of Nepal
Ministry of Local Development
Office of the District Development Committee**

.....

**Rural Village Water Resources Management Project
(Nepal-Finland Cooperation)**

**Preparatory Phase Agreement Paper
(sample format)**

Fiscal Year

Name of the Scheme

Location

VDC:....., Ward. no:.....

Tole/Cluster:.....

Number of HHs:.....Number of beneficiary.....

Name of support organization

Social

Technical

Duration of the scheme:

OFFICE OF THE DISTRICT DEVELOPMENT COMMITTEE
..... DISTRICT

PREPARATORY PHASE CONTRACT

1. CONTRACTING PARTIES

The District Development Committee, district (hereinafter referred to as DDC), Village Development Committee of and the support organisation (hereinafter referred to as SO) have entered into a contract to undertake the Preparatory Phase activities of the following scheme(s):

<u>Name of the Scheme(s)</u>	<u>VDC, Ward and Cluster:</u>
.....
.....
.....

2. SCOPE OF CONTRACT

Under this contract both parties agree to undertake the work in accordance with:

- * This Preparatory Phase Contract
- * Preparatory Phase Proposal
- * Step-by-Step Manual prepared for water resources and sanitation schemes

3. CONTRACT PERIOD

The Support Organisation will start the work on (dd/mm/yy) and will complete all activities under this contract by In case of longer time needed to do the work agreed in this contract, the SO will not be paid more than amount stipulated under this contract.

4. ROLES AND RESPONSIBILITIES OF SO

The SO is responsible to:

- facilitate Community Organizations (COs) to form Users committees based on democratic and inclusive representation
- facilitate UC on preparing legislation (Bidhan) and registration under Water Resources Act
- conduct different trainings and facilitate to UCs for selection of participants including VMW, Rainwater Mistri, LLB/Mason.
- facilitates in scheme layout and UC meetings
- conduct detail technical survey
- prepare design and BOQ of scheme according to district rate and technical norms.
- coordinate among the stakeholder and submit the monthly progress reports to DDC.
- facilitate to Community Mobilizers (CMs) for COs activities with in the scheme area.

- submit the final reports of preparatory phase including design and estimates of the scheme to DDC.
- attend the meetings of UC.
- provide information on the salient features of the Preparatory Phase activities to the VDC, Water Resources Management Committee and Water User Committee.
- discuss all plans relating to the preparatory phase activities according to the Step-by-Step manual in all clusters of the communities concerned and also with VDC.
- maintain baseline data on health, technical and socio-economical field
- prepare and submit the Implementation Phase Proposal consisting of:
 - Part A. Community Action Plan
 - Part B. Technical design, bill of quantities and financial proposal
(endorsed by the entire community at a mass meeting)
- appoint competent full time staff of as well as part time staff. One staff to work in the scheme should be female.

The full time staff shall include:

<u>Type of staff:</u>	<u>Name:</u>	<u>Sex</u>	<u>Duration:</u>
1.			
2.			
3.			

The above full time staff of the SO should be on site and/or engaged in the scheme activities. They are not authorised to undertake other work of any nature without the prior permission of the DDC.

The part time staff of SO shall include:

<u>Type of staff:</u>	<u>Name:</u>	<u>Sex</u>	<u>Duration:</u>
1.			
2.			
3.			

- maintain the attendance in the community by its staff. These documents must be available in the community for inspection during the field monitoring visits. Once the UC has been formed and trained, the time sheets shall be certified by the UC.
- request the DDC for written approval in case it wishes to make changes in the staff proposed earlier. In case an unauthorised change of staff is found, no payments will be made.
- maintain book keeping and bank accounts of the fund received for the scheme(s) from the District Water Supply and Sanitation Development Fund and provide any information requested by DDC for monitoring purposes at all times.
- submit monthly progress reports of the activities and completion of work, as well as the expenditure statements, as per the requirements, to the DDC. The report shall include all the problems encountered and how they were solved.
- report immediately to DDC, WRMC and VDC about any problems that can not be solved at the site between community and SO. SO shall similarly report immediately

about any significant matters that may influence completion of work within the agreed time or cost.

- identify the exact position of the following infrastructures (tap, intake, junction or diversion, cross drainage structures, aqueduct, fall, toilet, rain water harvesting jar, arsenic filters, section requiring supporting walls, siphon, super-passage). A GPS coordinate will be recorded and reported.

5. ROLES AND RESPONSIBILITIES OF DDC

The DDC shall:

- release agreement amount on installment basis from DWRDF to SO's account
- monitor and evaluates performance of SO and preparatory phase activities
- extend duration of the agreement of SO as recommended by DMC.
- assist UC for registration under District Water Resources Committee.
- provide district rates and norms to SOs for design report preparation of schemes and fix the optimum ceiling of rate of construction materials
- approve scheme and Community Action Plan.
- ensure that SO staffs are deputed as proposed and following professionalism
- monitor proper follow up of step by step procedures and implementation guidelines regarding the activities of preparatory phase

6. ROLES AND RESPONSIBILITIES OF DISTRICT TECHNICAL OFFICE (DTO)

The DTO shall:

- support UCs and SOs in technical matters.
- conduct a technical feasibility, survey and design reports of schemes, If SO could not able to provide technical human resources.
- checks design reports and suggest for improvement if needed
- recommend to DDC for the payment of SOs.

7. ROLES AND RESPONSIBILITIES OF VDC

The VDC shall

- provide written commitment to DDC for cash contribution as per project guidelines.
- support in forming UC based on democratic and inclusive representation.
- support UCs in registration under Water Resources Act.
- register COs as per Local Self Governance Act
- monitor performance of SOs and CMs
- participate actively in monitoring activities

8. CONTRACT AMOUNT

The SO will be paid the amount of Rs. (in words only) for the Preparatory Phase. This will be financed entirely from the District Water Supply and Sanitation Development Fund (DWSSDF).

9. PAYMENT SCHEDULE

Payments will be made to the SO's bank account on instalment basis as follows:

First Instalment:

An amount of Rs. (in words Rupees only) relating to 33 % of the total value of this contract upon signing of the contract.

Second Instalment:

An amount of Rs. (in words Rupees only) relating to 33 % of the total value of this contract upon completion of the following works:

- * community resource map
- * orientation to UCs about RVWRMP
- * formation of UCs
- * layout plan and baseline studies on health, technical and socio-economic data
- * submission of the UC minute book till date.

Third/Final Instalment:

An amount of Rs..... (in words Rupees only) relating to 34 % of this contract upon completion of registration of the UC, Community Action Plan, Detailed Design, Bill of Quantities and Cost Estimates, training reports and submission of Implementation Phase Proposal in satisfactory manner.

Prior to making a request for the second and third instalment, the SO together with the community, WRMC and the concerned VDC will evaluate the status, progress of the activities undertaken/being undertaken, in relation to the Preparatory Phase proposal and the Step-by-Step Manual.

The request for the second and third/final instalments should accompany a statement of the account of the budget and expenditure as per the DDC guidelines.

10. PAYMENTS FOR MONITORING AND SUPERVISION

DDC will pay the travel cost and night allowance to the DDC staff and/or DMC members participating in the monitoring visits of the scheme from the DWRDF, administrative budget as per LBFAR.

11. TAXES

Respective SOs are responsible for tax payment as imposed by GoN

12. FINANCIAL AUDITING

Auditing of books and accounts will be the responsibility of the SO as per the rules and regulations pertaining to the Act it is registered to. SO is recommended to have a separate book keeping, record keeping and financial statements for the transactions under this contract.

13. MONITORING AND SUPERVISION

The DDC/DMC will arrange monitoring visits to the scheme as per the Monitoring Manual. In addition the DDC/DMC can assign its personnel to supervise the work on site at any time during the duration of the contract. The personnel of DDC/ DMC or monitoring team appointed by DDC shall have the right to visit the site, SO 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 and UC shall participate in the monitoring. They will assist the monitoring team by providing all required information and by actively helping inspect all the works done by SO as required.

The DDC monitoring team shall produce a monitoring report at the site, and verify it by signatures. Any disagreements between the monitoring team and SO 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.

In the event that the DDC has to repeat monitoring visits, prior to payment, as a result of being provided grossly inaccurate information by the SO, the SO will be required to pay the costs of such additional visits.

14. TERMINATION OF CONTRACT

The DDC shall have all rights to terminate the contract and/or withhold the release of the remaining funds to the SO, after the signing of this contract if it is found that:

- the contract can not be fulfilled satisfactorily due to the poor support and performance of the SO
- pre-requisite information supplied by the SO were inaccurate and provided with the intention of misleading the DDC.
- there is no effective and inclusive participation of the users in the preparation of the Implementation Phase Proposal.
- unauthorised replacement of SO staff.
- SO fails to submit progress reports and financial statement in stipulated time.

If the contract is terminated by DDC for a reason beyond the control of SO (e.g. source disputes, others), all the expenditure till the date of termination shall be paid to SO. In addition, reasonable cost of demobilisation shall also be compensated.

In case of termination of the contract with SO for any reason, DDC shall have the right to withhold the pending or remaining payments.

In the event of the termination of the contract with the SO, the DDC reserves the right, with the consent of the VDC and UC, to enter into new contract with another qualified SO to complete the required activities.

15. REDUCTION OF PAYMENT

The DDC has the rights to reduce the payment or deduct payments in case of particular activity(ies) have not been undertaken by SO as specified, the activities have been modified on reduction of quality or volume of work, or services as per the contractual obligations.

16. AMENDMENTS OR DISPUTES

The contracting parties can change this contract only in writing and when approved and signed by the parties.

In case of any dispute, both parties shall make all efforts to resolve it. In case the dispute cannot be resolved, the dispute shall be solved under the prevailing legal system of GoN.

17. SIGNATURES

This contract is prepared into two copies, one for each contracting party. An additional copy of the contract will be forwarded to the concerned VDC.

Signed on behalf of SO:

Signature:
 Name:
 Designation:
 Date:

Signed on behalf of the DDC:

Signature:
 Name:
 Designation:
 Date:

Signed on behalf of VDC:

Signature:
 Name:
 Designation:
 Date:

Witnessed by: (RVWRMP)

Signature:
 Name:
 Designation:
 Date:

Witnessed by: DTO

Signature:
 Name:
 Designation:
 Date:

Witnessed by:

Signature:
 Name:
 Designation:
 Date:

Annex:

Preparatory Phase Proposal, dated:

Step-by-Step Approach Manual for RVWRMP, dated.....

Step 8 - Community Mobilization for Scheme Activities, Formulation of the Scheme and Formation of User Committee

COMMUNITY MOBILIZATION AND FORMULATION OF THE SCHEME WITH THE COMMUNITY

Already before this step, in the Planning Phase, various social mobilization interventions have taken place, including among other things:

- Formation of Community Organizations (CO);
- Recruitment and training of Community Mobilizers (CMs);
- Formation of Water Resources Management Committee (WRMC) and sub-committees;
- Various awareness raising and capacity building activities;
- Informal communication and interactions during baseline data collection and WUMP field work.

Beneficiary community will be further prepared for the scheme activities by conducting various PRA exercises:

- Community resource mapping;
- Wealth ranking;
- Awareness building and training activities;
- Formation of User Committee(s).

In RVWRMP users are regarded as the real owners and managers of a scheme. Sustainability of a scheme largely depends on the effective functioning of users and their representatives in implementation and management of scheme. Therefore users and user communities are most important decision makers regarding RVWRMP schemes from planning to post-construction. In the pre-construction phase users are prepared for the coming scheme activities and they can decide on final formulation of the scheme based on the local social, cultural and geographic conditions and their priorities. All the decisions must be participatory and special attention is given to include at least proportionate number of women, Dalits and other excluded groups in all decisions, trainings and capacity building events.

More details of some of the activities conducted during this step are given in papers 19, 20 and 21 of this Manual.

GUIDELINES FOR COMMUNITY MAPPING

1. Introduction

Community mapping is one of the important participatory tools, used for collecting basic information of a community. It is a visual method of showing the relative location of households and the distribution of different social strata (such as male, female, adult, child, landed, landless, literate, and illiterate etc) together with the social structure and institutions of an area. In the Project, a community implies the area to be served by proposed water resources management schemes such as water supply and sanitation, irrigation and micro hydro. Scheme area may consist of villages, depending upon its size and scale. This tool involves local men and women including all ethnic groups to create a pictorial representation of their community in the form of a map. It may be necessary to prepare the community maps in separate groups for women and men in places where the women are clearly shy/afraid to speak up in public, especially in front of men.

The materials required for community mapping are: totally locally available materials such as ash, sand, stone, small bricks, leaves, sticks, coal and chalk etc. It also depends according to the level of community and access of other materials. Some of the materials like pencil, drawing paper, color pen, etc. can also be used if available in the site and if appropriate to all.

2. Application of Community map

- Showing data on community layout, infrastructure, demography, ethno-linguistic groups etc
- Identifying different social groups using locally defined criteria and assessing the distribution of assets across social groups
- Learning about the social institutions and the different views local people might have regarding those institutions.
- Shows boundary of a particular place.
- Identifying available local and natural resources.

3. Process

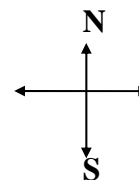
1. Walk around in the village and discuss with local people including by all representatives of women/men, children and adult including all Dalit/Indigenous and others about the important features like existing wells/taps, sanitation situation, settlement pattern, social strata etc., before drawing the map. This exercise helps for rapport building with the communities.
2. Call a community meeting. The time and venue of the meeting should be convenient to the women and all ethnic groups. Representing of all clusters and various castes/ethnic groups are encouraged to participate in the meeting. Equal participation of women, men and all ethnic groups is required in the meeting. In the meeting facilitators should prepare a list of participants showing their name, gender, occupation, ethnic /caste groups and age by clusters using the attached table.
3. When working with the group, the facilitator should begin by introducing themselves and explaining clearly the objectives and agenda of the meeting, what the participants are

- expected to do and why? Check that the local analysts understand and feel comfortable with what will be discussed.
4. First decide what type of area the map will show or any limitations such as a village, an indigenous ancestral domain, a watershed, and so on. Social maps begin as physical maps of the residential area of a community.
 5. With the help of local analysts, select a suitable place and medium, such as on the ground using locally available objects such as stones, seeds, sticks, leaves and colored powder, coal etc.
 6. After rapport building with the communities, ask the local analysts to start by preparing the outline or boundary of the map. Initially facilitate to the analyst to draw a simple village map showing some village borders. Then after ask the analyst to identify and draw on map other institutions and landmarks that are important to them. These might include religious buildings, schools health centers, community centers, and other public and business buildings, type of households, sanitation facilities.
 7. Then ask for the location of all houses in the community. The analysts can then mark the houses in different colors to indicate which belong to households of different well-being categories. The map can also be used to identify houses that belong to people from different social categories (such as ethnicity, female headed-households, and large households; people with special functions).
 8. If the map is being drawn on the ground, ask the local analysts to start making a copy on to paper (indicating which direction is north) once the broad outline has been established, making necessary amendments and additions as they go along.
 9. Do not lead, just assist when asked, and facilitate to draw a map by the communities.
 10. When map is completed on the ground, make sure all the components are there. If not, ask the villagers to put them in place. Then a villager or facilitator will copy it on the paper.
 11. Once the map has been completed, use it as a basis for conducting semi-structured interviews on topics in interests and for enabling local analysts to conduct their own discussions and analysis.
 12. Check again that the local analysts know how the information will be used. Ask the analysts to reflect on the advantages, disadvantages and the analytical potential of the tool. Finally the local analysts for their time and effort.
 13. Houses with household owner's name and population (women, men, and children/ adult), key persons' houses can be indicated with special marks.

4. Information to be included in the maps

The following information should be on the social map:

1. Area boundary of the Community including cluster names and their boundaries.
2. Geographical features e.g. mountain, forest, river, road, cultivated land, grazing land, community land and its use, available sources of sand and gravel, its distance from village, etc.
3. Name and location of water sources
4. Name and location of spout presently in use,
5. Location of existing pipe system/water supply system,
6. Location of infrastructure like School building, VDC building, Temple, Health Post building, trail, Suspension / Suspended bridge, Hydro power, Irrigation schemes, Water mills, Development organisations, Local groups, etc.
7. Location of resources like jungle, cultivation land, river.
8. Institutions (school, health post, VDC building, bank and other organizations).
9. Other important centers of the community, e.g. temples, park, mass gathering/ meeting place, market place, shops, etc.
10. Houses with household owner's name, caste/ethnic group and population (women, men, and children), key persons' houses can be indicated with special marks.
11. Ranking of the households into three categories according to wealth, eg. Moderately poor, poor and very poor.
12. Latrines.
13. Dumping places of the community.
14. Demarcation of Community boundary
15. North direction should be indicated on the map, e.g.:



16. All the symbols should be explained in right bottom corner of the map.
17. Name of the VDC, ward number and cluster name (of which map is drawn) should be written on top of the map.
18. Need of water related projects like drinking water, irrigation, micro hydropower, etc as identified by the communities.
19. Social priority of the water related project need of COs/sub-committees

20. Proposed structures locations should be marked on it later.
21. Total number of households indicating female headed households, population (men, women, total), taps, toilets, etc., can be written on the left corner or bottom of the map or on additional sheet.
22. Number of people (female and male as well as Dalit, Janajati and Others)
23. Other, if any.

GUIDELINES FOR WEALTH RANKING

1. Introduction

Wealth ranking is one of the most important tools of PRA, used for categorization of wealth of a community. It is a method for collecting and analyzing data on perceptions of wealth differences and inequalities in a community and for identifying and understanding local indicators and criteria of wealth, well-being and poverty. In the programme, a community implies the area to be served by proposed water resources management schemes. Scheme area may consist of villages, cluster or hamlet depending upon its number of the population. This tool involves local people representing by all ethnic communities including both men and women to participate in the meeting. The meeting will focus on economic and poverty status of the benefited communities.

2. Application of wealth ranking

- Understanding socioeconomic differences within communities.
- Understanding local perceptions of and criteria of wealth, well-being, and inequality in a community.
- Categorizing households or social groups into different locally perceived economic or more general well-being categories.
- Exploring differences in how different people have access to and use resources.
- Identifying target group members before a project, programme, or policy is changed or implemented, or to determine the extent to which targeting has proved successful after the event.
- Local concepts of wealth, economic, and well-being status
- Economic and well-being profile of a community
- Social stratification at the community level
- Ownership of or use rights to productive assets.

3. Process

1. Walk around in the village and discuss with local peoples including both women and men and all caste ethnic communities about important features like existing wells, sanitation situation, settlement pattern /housing, socio economic situation and their cost and benefit sharing etc. The facilitator talking informally to people, learning about the geography of the community and their well-being status. This step is rapport building of communities.
2. Call a community meeting. The timing and venue of the meeting should be convenient to the women. The people representing all clusters/household and various, castes/ethnic groups should be in the meeting. Equal participation of women, men, adult and children is required in the meeting. Before the meeting facilitator with the help of communities should prepare a list of participants showing their name, gender, ethnicity, and age by clusters using the attached table.
3. Explain the objectives of the meeting, what the participants are expected to do and why?
4. Ask the people about their economic condition of the communities through mass meeting. It is just for brainstorming to acquire knowledge.

- To make easier, the community should be requested in a mass meeting to identify the criteria or indicator for the well-being assessment. Here the role of facilitator is just to facilitate to define the indicator. All indicators should be defined by the communities.

Here is an example of well-being categorization:

The facilitator should work with the communities in a mass meeting. The facilitator asks to participant to nominate key informant from the participant. The facilitator should give a broad description of wealth ranking using local terms and ask the key informant to list out the name of all households in a card one by one separately.

After nomination of the key informant tell him/her to pick a card and insist them to read out the name of cards off one by one. He/she then group the cards in piles. Here he/she should ask to the floor to put the name in which piles the picked name should be placed. The key informant should discuss each pile in turn by turn with reasons for putting each household into the pile. Here the facilitator role is to facilitate in the meeting and clarify about the community's queries.

When cards all have been grouped, the key informant should read through each pile and give a chance to change his/her mind if they have and finalized the categorization of household.

Make a note of the names of households in each pile and number of piles produced. Generally the common practice of grouping/category is 3-5.

An example of indicator setting or grouping

Category	Indicators
Moderately Poor	Having more than 3 ropani of land, food sufficiency for whole year, moderate house
Poor	Having less than 3 ropani of land, food sufficiency for more than six months but less than 12 months, poor health condition, children are not going to school
Very Poor	Landless, disabled food sufficiency for less than 6 months, depend upon daily wages and main occupation is labour

The facilitator should summaries concisely and accurately. The community should internalize about their wealth status. In this way, this exercise can be done on the ground. This type of exercise can also be done verbally as well.

The materials required for wealth ranking are: pencil, brown paper, etc.

3. Information to be included in the wealth ranking

- Number of household of the community.
- Total number of household owner's name and population (women, men, and children, adult) key persons' houses can be indicated with special marks.
- Ranking of the households into categories according to wealth ranking, categorized by the meeting, eg. Moderate, poor and very poor etc.
- Name of the VDC, ward number and cluster name.
- Other, if any.

GUIDELINES FOR USER COMMITTEE FORMATION

1. Introduction

To accomplish the tasks related to a water resources management schemes such as water supply and sanitation, irrigation and micro hydro etc. it is not possible to mobilize all the users all the time in the various steps of implementation. Therefore, a few members are elected from the users through mass meeting. Such members of users will form a User Committee. The User Committee (UC) will be responsible to the users for various tasks related to their schemes, and will facilitate implementation of the scheme. The Gender and Social Inclusion provision ensures fifty percent representation of women and proportional representation of excluded groups in User Committees and at least one female member shall be in key position.

The National Planning Commission has prepared a guideline for User Committees, which is very useful and can be used as a reference in RVWRMP schemes as well.

2. Roles and responsibilities

In RVWRMP the water users are both the managers and the owners of their scheme. They will be involved in every step of the scheme cycle. The UC is the representative body of the users. In other words, the UC is the main executive body to plan, manage, implement the scheme and maintain it after completion also responsible for future sustainability and reliability. Success of the scheme depends largely on the capacity of the UC.

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

- Hold meetings regularly and frequently.
- Play an active role in the different steps of the water resources management schemes.
- Collect local cash contribution for scheme implementation
- Co-ordinate with DDC/VDC/SO/WRMC/CO/CM and the users.
- Operate, repair and maintain the scheme in the post implementation phase.
- Generate O&M fund and mobilize it for income generating activities when appropriate.
- Keep and update the records of scheme related transactions.
- Prepare scheme progress reports and financial statements; submit reports to the DDC and present them to the users.
- Manage the resources, such as materials and workforce.
- Procure the non-local materials needed for the scheme, manage the store for them, use them properly in construction work, keep remaining material for future O&M and keep the records of all these transactions.
- Keep the users informed and develop ownership feeling among them.
- Promote hygiene and sanitation activities in the community.
- Promote environmental protection of water sources
- Solve all disputes that arise in the project, including source disputes.
- Be accountable to the users and the funding agencies.
- Formulate new rules and regulations if needed, and ask the community approval for them in mass meetings.

3. Composition of the UC

The UC is acting on behalf of the whole scheme area. Therefore, it is good to think beforehand what kind of UC composition represents the community in the best possible way. The project recommends following guidelines:

- a) In general, the UC consists of seven to eleven representatives depending upon the size of a community to be served with water resources management facilities. This includes: chairperson, vice chairperson, secretary, treasurer and three to seven members. A UC with more than eleven members may not be efficient anymore in making decisions.
- b) Women are the primary users of water so their expertise is necessary in the UC. They have rich knowledge about the water resources management. Therefore their role in UC is must and vital. At least half of the UC members are required to be women. If there is an uneven number of the UC members, quota of women can be rounded either up or down. For example if there are seven members, either three or four have to be women. Women should hold the position of either a chairperson or a vice chairperson as well as other key positions in the UC.
- c) The UC should have a balanced representation from each ethnic group/ caste and cluster/settlement. The provision ensures proportional representation of excluded groups in UC. If the UC members come only from one ethnic group or one cluster they may not be supported by the whole community. An imbalance between different ethnic groups and clusters in the UC can create problems in various steps of the project cycle.
- d) There should be only one committee per scheme.

4. General requirements for representatives of the UC

The users are free to select any woman, man or ethnic groups they assume of being able to carry out the duties as a UC representative. However, only an active and trustworthy UC will be able to implement the project successfully. The project expects that the UC representatives should:

- Be cooperative and sociable.
- Be free from political squabbling.
- Have reputation as a reliable person in the community.
- Be able to motivate the users
- Be able to cooperate with the community in a democratic way.
- Be able to organize enough time to do the work.
- Have sound health, be energetic and smart.
- Have high social morale.
- He/she permanent resident in scheme area and have no plans to migrate.
- He/she mentally stable and quick in decision making.
- He/she matures enough and interested in organizational activities.
- Gender sensitized.

5. Procedure to form the UC

A) Call a mass meeting and put agenda of the meeting. Be sure that representation and participation of the participants. Start dialogue with participants about their daily activities that help for rapport building with the communities. After rapport building, move to agenda and facilitate to the communities about the User Committee formation. Let communities discuss about their candidates and selection and the meeting will split in two groups of women and men.

B) A separate meeting should be organized for women and men to let them select/nominate of their UC members among themselves, using the above mentioned criteria.

C) After nomination of both men and female candidate, both male and female gathered together in the joint meeting and they discuss and decide the final member in UC by representing of all ethnic/caste groups and 50% women representation. Also the meeting ensures key positions of the UC members whether is it covered or not if not the meeting again insists to revise UC member and encourages to form gender balance and inclusive UC. Finally the women and all ethnic groups will have an opportunity to hold key position in the UC.

D) During the mass meeting of UC formation the representatives invited for the meeting are:

- One female and one male representative from every household.
- VDC representatives
- SO representative
- Catalysts such as FCHV, teachers, TBAs etc and others.

E) Make sure that the time and venue of the meeting is suitable for all. House to house information (written/verbal) should be provided to all women and men. All ethnic groups/castes living in the community as well as all clusters should be informed in the meeting. At least 2/3 of the households should be present in the mass meeting. If there are less representatives or if women are in a minority in the group, postpone the meeting until the representation is adequate and equal. Collect information about the participants in the attached format.

F) Users mass meeting should elect their representatives in a socially/inclusive balanced and democratic way. Both men and women can select their representatives in the mass meeting according to the above mentioned criteria. If there are not enough interested men, women can have more places in the UC. The composition of the UC has to be endorsed by the mass meeting.

G) After electing the representatives for the UC, the mass meeting will approve and decide how the portfolios will be divided among the representatives. Women should hold at least the position of either chairperson or vice-chairperson and proportionately representation of all ethnic/caste groups.

H) To get a legal status, the UC should be registered under the Water Resource Act.

I) The committee should obtain approval from the users' mass meeting, which should be held at least once a year.

J) The UC makes a constitution with rules and regulations with the help of SO. An example of a constitution can be found from Paper 22 of this Manual and in the NPC booklet.

6. Terms of reference for UC members

Chairperson

- Lead the UC effectively.
- Call UC meetings regularly
- Chair the meetings.
- Implement UC meeting decisions; accomplish tasks given by the UC and practice power in doing so.
- Operate UC bank account jointly with UC treasurer.
- Care and control UC belongings.
- Co-ordinate with the users, UC, SO, VDC, DDC and RWSSSP.
- Give the chair to UC vice chairperson on his or her absence.

Vice chairperson

- Act as a chairperson when the chairperson is absent.
- Co. ordinate with the users, VDC/SO

Secretary

- Conduct day to day administrative and secretarial work effectively.
- Arrange UC meetings according to the UC chairperson's announcement.
- Keep the minutes of meetings and make them available to UC members and other concerned agencies.
- Prepare scheme progress reports, during the implementation phase.
- Prepare minute and circular to all UC members

Treasurer

- Operate the UC bank account jointly with the chairperson.
- Monitor and control UC financial matter.
- Keep and update records on UC's financial transactions.
- Prepare the financial reports and maintain transparency in UC accounting system.
- Present financial reports in UC meetings and in the yearly water users mass meeting.
- Manage the accounts for auditing.
- Assist the chairperson taking care and controlling the UC belongings.

Members

- Monitor the scheme implementation situation.
- Play an active role in different steps of scheme implementation.
- Perform various tasks as agreed in the UC
- Collect fund from the user
- Motivate user

Unofficial translation

LEGISLATION OF DRINKING WATER AND SANITATION USERS COMMITTEE

Preamble

Requirements of the village can be fulfilled by implementing local development activities in a participatory way among the villagers. To address the requirements of the villagers implementing drinking water and sanitation programmes at their premises, establishment of an autonomous service motive users committee is felt necessary. The committee is expected to assess the needs of the villagers, select, implement and monitor the programmes along with other required activities. Therefore all villagers have agreed to set up a system to mainstream the activities launching “Legislation of drinking water and sanitation users committee”. Users Committee is formed following the legislation as bellow:

Name of the committee:drinking water and sanitation users committee
 District:.....VDC.....Ward no.....

Chapter-1 Introduction

- 1. Short name and beginning:** Name of this legislation will bedrinking water and sanitation users committee 2064 or 2065 or 20....
- 2. Definition:** Meaning of words used in this legislation will be as per the following:
 - Act -Water Resources Act 2049.
 - Group - Group of all users benefiting the services under this UC.
 - Rule - Rules developed by UC under this legislation.
 - Committee - Users committee formed under this legislation.
 - Member of UC - Chair, Vice Chair, Treasurer, Secretary and other members of UC
 - Officials of UC -Chair, Vice Chair, Treasurer and Secretary only
 - Chari man - Elected chair man under this legislation.
 - Sub-Committee - Sub –Committee formed under Users Committee & legislation
 - Support Institution - NGO helping in social mobilization and technical matters.
 - Donor - Financially supporting GOs, NGOs and INGOs
 - Users - Benefiting people of the scheme under this UC
 - Area - Geographical coverage within which the UC will be delivering services. Water resources of the scheme area
 - Scheme - Programme being operated by the UC under this legislation.
 - Service fee - cash, assets or others collected from the users on monthly/yearly basis against consumption of services of the scheme as administered by the UC under this legislation.

3. Logo and Stamp: Logo and Stamp of the UC will be as per the following.

Description of logo:

Description of stamp:

4. Office: Office of the committee will be stationed at.....

Chapter -2 Objective

5. Objective of Users Committee: Ensuring the existing law, main objectives of the UC will be as per the following.

- 5.1 Organize UC members of drinking water and sanitation project being implemented in their own area.
- 5.2 Identify and implement the need of the village to meet the requirement of the users
- 5.3 Participate all users in all development activities being implemented in their own area.
- 5.4 Carry out regular operation and maintenance activities of the completed schemes and ensure equal distribution of the benefit among the users.
- 5.5 Arrange capital, labour and other means required for selection, preparation and implementation of the scheme being launched in their own area. Ensure mobilization mechanism of the resources.
- 5.6 Programme and the policy of the committee will depend on the decision of the committee underlying this legislation.

Chapter – 3 Users Committee

7. Formation of Users Committee: Following process will be followed in formation of UC:

- 7.1 Mass meeting will form the UC. At least 7 days notice should be given to all users (male and female) comprising the information of venue, date and time for the mass meeting. The mass meeting venue should be appropriate to all participants.
- 7.2 Proportionate representation from all clusters of the project area should be ensured in formation of the UC.
- 7.3 There should be proportionate representation of all castes, ethnicity and gender in the UC.
- 7.4 It is mandatory that at least 75% of the total representatives participating in the mass meeting should be from benefiting HHs of the scheme area while forming the UC. Further 50% should be female of the total participants.
- 7.5 Separate female and male mass meeting will be organized to ensure equal participation in the UC. Selection basis will be 1:1 from each separate mass meeting to ensure 50% participation of women in the UC.
- 7.6 Even in the case of already organized UCs, above conditions require to be applied.

8. Meeting of Users Committee:

- 8.1 The UC meeting will be held as per the scheduled time by itself.
- 8.2 Agenda, date, time and venue in written will be circulated among the UC membersbefore holding the UC meeting.
- 8.3 Quorum for holding meeting is% of the UC members. 50% of the total UC members may hold the meeting in the second time if the quorum is not met in the first time.

9. Role, Responsibility and Rights of the Users Committee: Role, responsibility and rights of the UC will be as mentioned below:**9.1 Planning Phase:**

- Organize users mass meeting
- Identify and prioritize needs and inform it to the respective agency
- Support the team working for feasibility study
- Ensure cash and kind contribution for the scheme consulting users of the scheme area.
- Discuss with VDC for required information
- Prioritize the needs identified and carry out feasibility study of the scheme.

9.2 Preparatory phase:

- Organize users mass meeting
- Keep the users informed about the scheme
- Prepare social map and collect required data
- Organize users mass meeting for resource map of the scheme
- Register Users Committee
- Collect cash from the users
- Open bank account in the name of the UC
- Participate in training and seminar
- Prepare Community Action Plan (CAP)
- Discuss on cost estimate, CAP and resource map among the users and send it to the respective agency
- Select Village Maintenance Worker for regular operation and maintenance of the scheme and inform to the respective agency.
- Sing Implementation Phase Agreement

9.3 Implementation Phase:

- Organize pre construction seminar and discuss on cost estimate, implementation phase agreement, CAP and other issues seemed necessary
- Collect local construction materials
- Purchase construction materials, manage inventory thereof and mobilize skilled and unskilled labours
- Mobilize community contribution in different activities of the scheme

- Analyze and review of the income and expenditures, progress of the scheme and organize mass meeting at least 3 times during the project period to endorse the income and expenditures from the mass meeting.
- Approve income and expenditures of the scheme conducting public auditing in the presence of mass meeting of all users and submit the report of this auditing to the respective agency together with work completion report.
- Maintain book keeping of income and expenditure of cash and materials in a transparent way

9.4. Post Construction phase:

- Establish a norm to collect water levy/fee for regular operation and maintenance (O & M) of the scheme and decide remuneration of the village maintenance worker
- Collect O & M fee regularly
- Carry out regular operation and maintenance activities of the scheme
- Store tools and fittings in advance to meet the urgent requirement of the scheme
- Mobilize O & M fund as per established norms
- Ensure that health and sanitation activities are continued in the scheme area
- Monitor the scheme regularly and report on the situation of the scheme to the concerned VDC
- Organize mass meeting at least once a year to approve all income and expenditures incurred during the year.
- Inform concerned VDC for any intolerable problem of the scheme which cannot be solved by the UC itself and go for solution.
- Consult VDC and DDC for service extension of the scheme and take action accordingly.

Chapter 4

Role, Responsibility and Rights of the UC members

10. Role, Responsibility and Rights of UC Chair person:

Follow all rules, responsibilities and rights as assigned by the committee

Chair the UC meeting and cast deciding vote only if needed

Enhance coordination and support in collecting resources to meet the objectives of the UC.

Manage daily operation of the scheme activities.

Call UC meeting as deemed necessary.

Collect and finalize agenda for UC meeting.

Implement the decisions made by the UC.

Manage resources coordinating government and non government organizations.

Enhance participation of the users for the scheme activities.

Take care of assets of the scheme.

Authorize chairmanship to the vice chairman or other UC member in the absence.

11. Role, Responsibility and Rights of UC Vice-Chair person:

Work as chairperson in his/her absence.
Support in other activities as stipulated in the UC manual.
Carry out the activities as assigned by the committee.

12. Role, Responsibility and Rights of UC Secretary:

Carry out office management activities to effectively implement the decisions of the committee.
Provide required logistic support to the UC
Minute decisions made in the UC meeting.
Acknowledge the decisions of UC meetings to each committee member.
Keep records related to implementation of the scheme and notify it in the UC meeting.
Support in enhancing participation in execution of the scheme.
Follow other activities as assigned by the UC.

13. Role, Responsibility and Rights of UC Treasurer:

Handle financial transactions of the scheme.
Submit income, expenditure and budget of the scheme to UC and get approval thereof.
Collect receivable amount of the committee and reconcile the financial transaction.
Perform other activities as assigned by the committee.
Auditing of the transaction
Ensure proper book keeping of income and expenditure of cash and kind including materials related to the users, donors, DDC, VDC etc.
Keep records on how cash, kind and materials have been used and who much is balance.
Take responsibility of cash, kind and materials received for the scheme and reconcile as suggested by the UC.
Support in enhancing participation of the users.

14. Role, Responsibility and Rights of UC members:

Monitor implementation activities of the scheme.
Ensure cash, kind and materials required for implementation of the scheme.
Enhance community participation as needed
Keep the users informed on the situation of the scheme regularly.
Perform other activities as assigned by the UC.

Chapter 6 Financial Management

15 Financial Resources:

15.1 Cash received in terms of support/aid from institutions as per contract and agreement.

Cash received from users in terms of service fee and support.

Cash and physical resources received in terms of support from government/non government organizations and local donors.

15.4 Cash, kind and materials received from public participation.

16. Current and Fixed Assets Management:

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

17. Treasury/Fund Management:

17.1 The committee will have its separate fund for all required expenditures.

17.2 Bank account will be operated by joint signatures of any two UC members as assigned by the UC.

17.3 Fund will be utilized under the supervision of the treasurer as provisioned by the UC.

17.4 The committee will carry out periodic monitoring and supervision of fund to ensure proper utilization and may instruct treasurer for further improvement.

17.5 Mobilization, book keeping, auditing and other processes of fund will be done as per rules and regulations administered by the UC.

18. Cash, Labor and Material Management Process:

Cash, labor and materials required for the activities of the UC will be managed by the users and donor institution. Kind contribution required for the scheme will be managed locally. Donor institution will provide only the things (cash, labor, and materials) which can't be supplied by the users.

19. Management of Cash, Labor and Materials for Implementation of the Scheme:

Required cash, labor and materials for implementation of the scheme will be managed based on the numbers of beneficiaries. Quantity of consumption users require and service expected from the scheme will be taken into consideration while managing the aforesaid contribution.

20. Management of Cash, Labor and Materials for Operation and Maintenance of the Scheme: All cash, labor and materials required for operation and maintenance of the scheme will be collected from the users or a treasury/fund will be established collecting service fee regularly. Service fee will be charged as decided by the UC. Book keeping will be maintained for such collection. Cash will be collected from those who are unable to contribute labor contribution

21. Auditing:

- 21.1 An auditor appointed by the UC meeting will audit the transaction of the scheme on its completion.
- 21.2 Audit comments and reports will be submitted to the concerned agency.

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Varia**

22. Election of the UC: Members of the UC shall be elected by the users mass meeting.

23. Ineligibility of the candidatures: candidates having the following conditions will not be eligible for UC members:

- 23.1 Candidates below 21 years old.
- 23.2 Candidates medically certified to be mentally abnormal.
- 23.3 Candidates convicted from criminal cases.
- 23.4 Candidates working against UC.

24. Vote for Disbelief: Vote for disbelief can be submitted against any candidates of the committee. 2/3 votes of the committee members may cancel the membership of any UC member.

25. Revision of the Legislation: 2/3 of the committee members may edit or revise the legislation if felt necessary but should be approved by the concerned agency before implementation.

26. Rule and Regulation: UC may develop new rules and regulations based on the legislation of the committee.

27. Progress Report of the Committee: The committee will produce and provide reports as asked by the concerned agency.

28. Other things related to the objective and programme of the committee:

- 28.1 An advisory committee can be formed comprising important persons from VDC, donor agency and society.
- 28.2 The advisory committee will advise UC in implementation of development activities and producing policies.
- 28.3 UC will take approval of objectives changed from the concerned agency before implementation.

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

30. Penalty/Punishment: To maintain discipline among the committee members, penalty provision is made as per the following:

30.1 UC will penalize the members not attending the UC or UC meeting without prior information or justifiable reason. Repetition of such absences from the same member may require more punishment. Punishment modality will be decided by the UC.

30.2 UC may penalize users not contributing their participation as decided by the UC or UC meeting. *And for further action, ref. 30.1*

30.3 Any loss or damage caused by anyone else will be recovered by the concerned member/s or UC will decide to recover any loss or damages from the concerned member.

31. Settlement of Expenditure: All income and expenditures should be settled upon completion of the scheme.

32. Handing over of the scheme to UC: Completed schemes will be handed over to the UC after settlement of income and expenditures.

33. Reformation of the Committee: In the case of completed and handed over schemes, roles and responsibilities of the existing UC will be supposed to be ended. Users will form new UC through election.

34. Service delivery mechanism: Upon completion of the scheme, service delivery of the scheme will be started. Service fee may be collected from the users for services delivered.

35. Operation and Maintenance of the scheme: Regular operation and maintenance activities will be carried out to sustain the scheme.

36. New UC will be formed if the existing UC members don't work in favor of the users.

37. UC may sign the agreement with government or non government agencies for implementation of the scheme.

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

39. VDC representatives should be participated in the UC or UC meeting.

GUIDELINES FOR USER COMMITTEE MEETING

1. Introduction

All the development activities in the communities involve a lot of decision making, which has both direct and indirect effects on the whole community. These decisions should be made collectively by the users or by their representative body. Decisions made by only one influential community member are easily biased, and do not necessarily benefit the community as a whole. In favor of sustainable development in the community the decision making should be democratic.

A water resources development and management project has many phases that all demand active participation of the community and the UC. Especially in the beginning, the UC needs to meet often to develop a stable basis for the future activities.

Important things to keep in mind are:

- The UC should hold meetings regularly. During the implementation phase more meetings are needed than before and after implementation of a scheme.
- The chairperson should call a UC meeting within 7 days if at least half of the UC members make a written request for that.
- Decision-making should be based on the needs and desires of all users.

2. Objectives

The objectives of the UC meetings are to:

1. Discuss problems and exchange various ideas, views and experiences among the UC members. The information should also be disseminated to the users.
2. Make collective decisions on various issues and problems in planning, management, implementation, operation and maintenance of the scheme.

3. Process

Before the meeting:

Either the chairperson or the majority of the UC initiate the meeting and draft an agenda. The initiator(s) should inform all the UC members on agenda, time, date and venue of the meeting. It is recommended that he/she sends an invitation letter or other means of information well before the meeting to ensure that all members are properly informed. Timing and venue of the meeting should be suitable for all members.

During the meeting:

The meeting should be organized according to the following guidelines:

- The chairperson will chair the meeting and lead the discussion according to the agenda.
- The secretary will keep the attendance.
- At least half of the UC representatives should be present.

- The chairperson or secretary will review the previous decisions and achievement since last meeting.
- Each item on the agenda will be discussed and further action will be decided if necessary.
- Other issues outside the agenda can be discussed if the meeting so decides
- If the meeting deviates from the agenda, the chairperson will break the discussion and lead it back to the items on the agenda.
- The chairperson should encourage all participants to present their opinions.
- The secretary will take notes on key issues and the decisions for the minutes.
- The final draft of the minutes should be presented to the members. Any clarifications and corrections to the minutes should be made as soon as possible.
- If all members present agree with the minutes, they should be signed by all. The chairperson will sign all pages of the minutes at the top and at the bottom.
- Before closing the meeting the members should decide date, time, venue and tentative agenda of the next meeting.
- The chairperson will formally announce the closing of the meeting.

After the meeting:

- * A copy of the minutes should be provided to other persons or institutions if necessary.
- * Members will perform and follow up the tasks agreed in the meeting.
- * Members will inform users on decisions made in the meeting.

A Meeting Log Sheet model is attached to this paper as ANNEX 1.

MEETING LOG SHEET

ANNEX 1

Log SHEET NO :.....(Preprinted)

Organization/association/User Committee Name :

.....

ASSOCIATION/USER COMMITTEE REF NUM.....

Date.....Location :

Meeting AGENDA

.....

.....

.....

MEETING CATEGORY

WUMP	Water rights	Saving/credit	Other general issues
WS Construction	WS Maintenance	WS fee collection and finance	Other WS related issues
Irrigation scheme construction	Irrigation scheme maintenance	Irrigation scheme fee collection and finance	Other irrigation scheme related issues
Hydro Power Construction	Hydro Power Maintenance	Hydro Power fee collection and finance	Other hydro power related issues

Minutes reference NO.....

PARTICIPANTS :**LOG SHEET NO**

Female		Male	
Name	HH ID	Name	HH ID
1		1	
2		2	
3		3	
4		4	
5		5	
6		6	
7		7	
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9		9	
10		10	
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32		32	
33		33	

GUIDELINES FOR BOOK KEEPING TO UC

BOOK KEEPING AT UC LEVEL

1. Introduction

Every committee that deals with money has to keep a written record of all its financial transactions. Systematic bookkeeping includes exact information on various incomes and expenses. It shows to whom payments have been made, when, for what purpose and what is the financial position after each transaction. This information allows a committee to budget and make realistic plans for future activities. Both a committee itself and concerned authorities need the book-keeping also for monitoring the use of money.

2. Objectives

The objectives of the UC book keeping are to:

1. have a permanent record of each financial transaction.
2. provide reliable information of the financial position of the UC
3. provide information for the financial decision making
4. conduct public hearing/auditing
5. provide information for auditing

3. Importance

Many stakeholders: DDC, VDC, SO, WRMC, CO, UC and users are involved in the RVWRMP. Every partner has a certain financial role, and each of them also wants to have a clear picture of the financial situation. It is very important that the UC has a good knowledge in bookkeeping and keeps written record of all its incomes and expenses. Systematic bookkeeping is especially important in RVWRMP because the implementation funds go directly to the UC bank account based on the progress of work.

In this project users are the owners and UCs are the implementer of the scheme. They are involved with the RVWRMP both physically and financially. Because the users invest their own money to the project, they are interested and entitled to know in every step of the project, how their money is used. The UC has to keep a clear record of all financial transactions and make the records available to users and auditors whenever needed.

Financial reports should be in a written form, clear and reliable to show all concerned. Verbal and unclear financial reports may hamper the program. This also may lead to distrust and disputes among the users as well as with concerned authorities. Therefore proper book keeping is needed.

4. How to keep the records?

Government of Nepal has several formats to keep and update records of transactions. However, the UC does not have professional staff for this purpose and dealing with many papers may be confusing also to water users. UC is recommended to keep and update the basic records with the use of a minimum number of forms:

- Bank ledger - Sample 1

- Cash Book - Sample 2
- Stock Book for material records, Expandable and non-expandable – Sample 3a, 3b

5. Who will keep the records?

The UC, as provisioned in their statute will have the main responsibility of recording all transactions and keeping the financial records updated. This responsibility should be taken into account when selecting a suitable person for a UC treasurer. It is also recommended that all members of the UC know how to keep records updated. The Support Organization should assist the UC frequently in book keeping/record keeping.

6. Reporting

The scheme implementation fund will be released from District Water Resources Development Fund to the UC account for scheme implementation. The money that users invest in the scheme, VDC contribution and the District Water Resources Development Fund will also be deposited in this account. Part of the money will be an advance from the DWRDF according to the scheme progress. Users' committee in assistance of support organization, will submit monthly expenditure statement of fund as prescribed in this guideline. DMC has right to ask for financial and progress report as and when needed.

The UC should submit original bills and receipts along with financial statement to clear the respective advance and get new installment/final payment from the DWRDF.

7. Public Review/Hearing

Public auditing will be conducted at least 2 times during implementation. UC is responsible to conduct public hearing in consultation with SOs and DMC. First hearing will be conducted upon completion of design/estimate. Scheme board, indicating all component wise cost estimate will be maintained at this time. Second hearing will be completed after procurement of materials. Representation of all respective users is mandatory in public hearing.

8. Public/ Community Auditing:

The final audit will be done when the scheme is completed. When final monitoring team will agree on completion of the scheme, technical personnel of SO/DTO will measure the quantity of works and verify UC's book keeping and prepare the final measurement book (MB). The scheme expenditure shall be approved from the "Public Auditing". The final payment will be made as per the final measurement book conceded by the public auditing.

Representation of users and the decision made during public hearing and auditing must be recorded in the minute book

Sample Ledger for User Committee

Sample - 1

Bank Ledger

Name of the scheme:.....

Bank Account No.:...

Date	Particulars	Vr no /ref.no.	Amount Deposited "Rs".	Amount Withdrawn "Rs".	Balance "Rs".

Sample - 2

Income and Expenditure Ledger (Cash)

Name of the scheme:.....

S.N. of bills	Date	Description of Transaction	Income "Rs"	Expenditure "Rs"	Balance "Rs"	Signature

Sample 3 (a)

Stock Ledger

(Expendable Materials)

Name of the scheme:.....

Type of Material:..... Unit :

S.N.	Date	Quality of materials	Purchased Quantity	Unit	Expended Quantity	Balance	Signature

Sample – 3 (b)

Stock Ledger

(Non-Expendable Materials)

Name of the scheme:.....

Name of Material:..... Unit :

S.N.	Date	Quality of materials	Purchased Quantity	Unit	Expended Quantity	Balance	Signature

Step 9 – Other Preparatory Works

GUIDELINES FOR ORIENTATION TRAINING TO UC

Background

User's Committees are established as the main managerial bodies for the scheme. They are fully responsible for community involvement at all stages of preparation and construction, and are responsible for the continued operation and maintenance after completion of the scheme. So orientation on RVWRMP and the scheme activities is the most important part to UC. While implementing the scheme activities, the UC has to follow norms, conditions and approaches of the project. This guideline aims to acknowledge and share brief information to UC for scheme implementation.

Duration: 2 day.

Participants: All members of UC

Resources person: Team Leader, Field Coordinator, Health Promoter of SO

Organizer: SO

Objectives:

Objectives of the seminar are to:

- acknowledge about RVWRMP
- orient the UC members on their roles and responsibilities on scheme activities
- share roles/responsibilities of other stakeholders
- share HES and GSI policy of RVWRMP

Training contents and schedule:

Day	Content	Time	Activities
1	1st session: <ul style="list-style-type: none"> • Introduction • Objective of the training • Expectation of participants 	1 hrs	Self introduction/ICE break Flash cards/Game etc Presentation of project briefing chart
	2 nd session Brief introduction of RVWRMP <ul style="list-style-type: none"> • Introduction • Step by step approach • Water Use Master Plan, its features • GSI (Concept, traditional norms, values-reality verses practices, GSI in RVWRMP, tools and techniques, barriers to GSI etc) 	20 min 40 min 40 min 1.5 hrs	Present step by step flow chart WUMP steps GSI related materials IEC materials-HSE
	3 rd session <ul style="list-style-type: none"> • HSE 	2 hrs	

2	1st session:		
	<ul style="list-style-type: none"> • Revision 1st day • Contribution pattern of DDC, VDC and UC • Funds flow mechanism 	30 min 1.5 hours 0.5 hour	Resource persons should encourage the participants Repeat the contribution time to time while discussing Present step by step and funds flow chart
	2nd session		
	<ul style="list-style-type: none"> • Roles and responsibilities of UC chairperson, Vice Chairperson, Treasurer, Secretary and members • Roles/responsibility of DDC, VDC, WRMC, SO and Community Mobilizer 	1 hr 1 hr	Encourage participants to be more active Present step by step flow charts/ chart of stakeholders responsibility
	3 rd session		
	<ul style="list-style-type: none"> • Operation and maintenance of the scheme • Monitoring of the activities 	45 min 30 min	Repeat the contents one by one related to chair, vice chair etc.
	4 th session: Evaluation/closing	30 min	

Materials required

- Project briefing chart
- Step by step flow chart, WUMP step/IEC materials
- Fund flow chart
- Cost sharing chart
- Chart of roles and responsibility of various stakeholders
- Others as required

Methodology

- Explanation and discussion

Expected outcomes:

- UC members become aware on RVWRMP approaches and its working modality
- UC members understand their roles and responsibilities
- UC members know about roles/responsibilities of other stakeholders
- UC members become aware on HSE and GSI

HSE TRAINING TO USER COMMITTEE

Introduction:

After orientation & GSI training, SO (Support Organization) will organize Environment/HSE training to UC members in the village. Support Organization is suggested to include in charge of Sub Health Post, as a resource person in the training, as far as possible. Support Organization should have the summary report of base-line data (Health). Information regarding existing situation of village should be shared with the participants.

Duration: 1 Day

Participants: All Users Committee members.

Organizer: Support Organization

Resource Person: Field coordinator, Community Mobilizer/health motivator & Health Post in charge of concerned Sub health post

Objectives: The immediate objectives of training are to;

- aware UC members about their role in scheme area in HSE activities.
- aware importance of hygiene Education, Sanitation & Water in people's health.
- motivate UC members to be a role model in use of latrine & cleanliness in the scheme area.

Expected outcome: After this training participants will;

- Understand the importance of HSE & Water in people's health
- Use the latrine by 80% of trained participants. (UC members)
- Plan for continuation of HSE activities in scheme area. In this process UC will make plan during post construction and also provide to VDC. UC will create the pressure to VDC to provide support in this regard.

Source of Fund: DWRDF

Required Materials:

HSE related flash cards (all sets), Step-by-Step, Handouts, Flow-chart, Stationeries, Video (if possible)

Days	Content	Time	Learning Activities
1 st	<p>Session I Opening Session</p> <ul style="list-style-type: none"> • Introduction of participants • Expectations of participants • Objective of the training • Expected outcome of training <p>Session II</p> <ul style="list-style-type: none"> • Review of previous training • Review present role as a UC in scheme area <p>Session III</p> <ul style="list-style-type: none"> • Warm up • Existing common health and sanitation problems and their causative factors: <ul style="list-style-type: none"> • Water borne • Water related • Environmental • Defecation practices (participants view) • Explain existing health problems according to base line data • Preventive aspects of mentioned diseases • Water Quality Issues <p>Session IV Fecal oral contamination Water/Fecal borne disease</p> <p>Water borne: Cholera, Diarrhea, Dysentery, Poliomyelitis, Typhoid, Worms Water Washed: Scabies,</p>	<p>30 min</p> <p>30 min</p> <p>1 hr.</p> <p>1 hr.</p>	<p>Self: through game</p> <p>Let them to write in card. Who can not write facilitator will assist</p> <p>Explanation</p> <p>Brain Storming; List all diseases and causative factors expressed by the participants.</p> <ul style="list-style-type: none"> • Summarize at last • Refer baseline data/ WUMP Findings <p>Discussion through poster</p> <ul style="list-style-type: none"> - Discussion; - Discuss if there are any such cases like polio, - Discuss with case study.

	Conjunctivitis, Ringworm Water Related: malaria, Encephalitis, Dengue fever, Filarisis		
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	<p>Session II Warm up Preventive measures</p> <ul style="list-style-type: none"> • Use of safe water (Source to mouth) • Source protection • Soil Conservation • Water storage <p>Use of safe latrine</p> <ul style="list-style-type: none"> • Importance of latrine • Types Sulav, Eco-San • Cost • limitations • Use of Waste pit • Use of drainage and soakage pit for waste water • Washing platform • Personal hygiene; washing bathing <p>Session III Warm up Brain Storming and tentative plan of action for environmental sanitation activities in scheme area</p> <ul style="list-style-type: none"> • Latrine construction (Participant's own latrine and in the community) • Mass awareness (How & Where) <p>VII Closing</p>	<p>1 hr</p> <p>1 hr</p> <p>1 hr</p>	<p>By participant, O&A</p> <p>Explanation through flash card /poster i.e. what is sanitation?</p> <p>Explanation through poster Relate design of WSS</p> <p>Importance of latrine Paper poster - use of latrine types of latrine</p> <p>Paper poster- clean house</p> <p>Discussion</p> <p>Participants should fix the tentative time to build own latrine (if not)</p>
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SCHOOL TEACHERS' WORKSHOP ON ENVIRONMENTAL SANITATION

Introduction:

School is important institution to involve in environmental sanitation program and teacher has influential role in this regards. National guideline has focused environmental sanitation through school to community (School Led Total Sanitation -SLTS)

In the context of Nepal, school is the first place where children (students) get formal education in hygiene and sanitation. There is a compulsory subject on hygiene and sanitation up to class VII. The subject includes basic knowledge of hygiene, sanitation, behavioral aspects and daily practices e.g. personal hygiene, use of latrine, etc.

School is the place where children spend a significant amount of time, next to home. As the school age (6-16 years) is an age of learning and curiosity, it is the right time to learn hygienic habits and to change behavior to lead healthy life. This is the main aim of the hygiene course in school. But in practice, it is considered as an easy subject to pass through, rather than as an essential knowledge in daily life.

Schoolteacher is one of the main educator, motivator and facilitator for students to learn and practice the hygienic behavior. Students follow and obey them if the teachers give instructions properly. Therefore, well-qualified and trained teacher in the subject matter is important. Training to schoolteacher, provision of water supply & sanitary facilities is essential. The content is modified with focus on sanitation aspects. The main concept of the training is to focus on mobilization of the students and teachers to improve the sanitary situation in the schools. In this process the hygiene and sanitation related messages could be disseminated to the community too.

Duration: 2 days

Participants: All teachers (by rotation)

Resource Person: Field Coordinator of, health promoter & Field coordinator.

Organizer: SO

Objectives:

The immediate objectives of the training are to enable teachers to:

1. Understand the importance of health, hygiene and sanitation course.
2. Understand the cause and prevention of water and fecal borne diseases.
3. Mobilize students and teachers to improve and maintain proper sanitary conditions (proper use of latrine, water supply facility and clean surroundings) in schools.
4. Organize and increase educational activities and practices on hygiene and sanitation among students and parents e.g. public awareness campaign, exhibition, essay or drawing competitions, role-play, drama etc.
5. Be a model in use of latrine and cleanliness.

Expected outcomes: After this training;

- Participants of concerned school will prepare a immediate plan of action to improve sanitary condition of their respective school.
- Participants (more than 80%) will use latrine at their home will be a role model.

Required Materials: (refer check list of materials for training)

- Papers, marker pens
- Posters, charts of: Hand washing, Use of latrine, Design of latrine
- Models of latrine (if possible)
- A set of materials to be supplied to schools (refer list)

Day	Content	Time	Teaching/Learning Activities
1 st	Session I Opening Session <ul style="list-style-type: none"> • Introduction • Objectives • Expectation of participants • Expected outcome of the training 	30 min	Welcome program Sanitation game Training objective Written
	Session: I Importance of School Sanitation Program	1 hr	Explanation with national guideline of National Sanitation Action Steering Committee / DWSS.
	National sanitation and school sanitation policy (SLTS)	1 hr	
	Environmental Sanitation program of RVWRMP	1hr.	Refer Env .San. guideline of RVWRMP
	Session: II Existing situation of school Existing sanitary condition of school area, facilities Session III Common health problems of students Problems to implement sanitation activities in school. Effective measures for implementing sanitation activities	30 minutes.	Discuss Explain according to findings of WUMP/ baseline. Group work in 3 group & presentation
2			
2 nd	Session : I Review of previous day	30 min	Participants
	Session I Preventive measures; Fecal oral contamination Importance of hand washing Importance of latrine	1.30.hrs.	Explanation & discussion with poster, chart
	Latrine construction ;hh school Different designs of latrines; design & its cost estimate of school latrine. Drainage/Platform	1 hr	Show poster / chart of design and discuss

	<p>Soakage Pit/Waste Pit</p> <p>Session II Indicators of sanitation; Model school: building, water supply, latrine, waste pit, drainage, clean classroom, clean surrounding, clean student & teachers, regular routine of student teachers for cleanliness, operation & maintenance fund for latrine, water supply & buildings etc</p> <p>Session III How to make effective school sanitation program;</p> <ul style="list-style-type: none"> ▪ Pre-planning ▪ Use of local resource ▪ Mobilize student/ Bal club ▪ Construction of latrine waste pit/drainage ▪ Supervision ▪ Use of IEC materials ▪ Involvement of guardian ▪ Mass campaign activities <p>Session III Sanitation plan of action of school</p> <p>Closing</p>	<p>1 hr</p> <p>30 min</p> <p>1 hr</p> <p>30 min</p>	<p>Explanation and discussion</p> <p>Explanation & discussion</p> <p>Group work</p> <p>CLOSING</p>
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ग्रामिण जलस्रोत ब्यबस्थापन परियोजना

विद्यालय शिक्षकको लागि स्वास्थ्य, सरसफाई तथा शिक्षा सम्बन्धी तालिम

पूर्व परिक्षाको प्रश्नावली

समय: २० मिनट

१ तालिम किन आवश्यक छ?

- क. स्वास्थ्य सम्बन्धी बानीमा व्यवहारिक परिवर्तन ल्याउन
- ख. सीप विकास गर्न
- ग. तोकिएको कम प्रभावकारी ढंगले सम्पन्न गर्न
- घ. माथिका सबै

२. सरुवा रोग भन्नाले के बुझिन्छ ?

- क. एक व्यक्तिबाट अर्को व्यक्तिमा सर्ने
- ख. जनावरबाट मानिसमा सर्ने
- ग. एकै पटकमा धेरै मानिसलाई आक्रमण गर्ने
- घ. एक व्यक्तिबाट अर्कोमा नसर्ने

३. कुन चाहिँ सरुवा रोग होइन?

- क. लुतो
- ख. कमलपित्त
- ग. उच्च रक्तचाप
- घ. पोलियो

४. कुन चाहिँ रोग दुषित पानी तथा सरसफाईको कमीको कारणले लाग्ने रोग होइन ?

- क. जुका
- ख. आउं
- ग. मधुमेह
- घ. टाइफाइड

५. कुन चाहिँ रोग दुषित पानी तथा सरसफाईको कमीबाट उत्पन्न हुन्छ ?

- क. मधुमेह
- ख. उच्च रक्तचाप
- ग. माथिका दुवै
- घ. पोलियो (बालपक्षघात लुलो लंगडो)

६. नेपालमा वार्षिक कति बालबालिका भ्रूणप्रेषणको कारणबाट मर्दछन् ?

- क. ३६०००
- ख. ३००००
- ग. २८०००
- घ. २६०००

७. नेपालको बाल मृत्युदर कति हो ?

- क. १६५ - १००० जिवित जन्म
- ख. १२५ - १००० जिवित जन्म
- ग. ९५ - १००० जिवित जन्म
- घ. १०५ - १००० जिवित जन्म

८. नेपालको साक्षरता प्रतिशत कति छ ?

- क. ६५५
- ख. ५३५
- ग. ४५५
- घ. ७०५

९. पाठयोजना कसले तयार पार्दछ ?

- क. प्रधानाध्यापक
- ख. कक्षा शिक्षक
- ग. विषय शिक्षक
- घ. विद्यार्थी टोली नेता

१०. पाठयोजना कहिले तयार पार्नु पर्दछ ?

- क. शैक्षिक सत्रको शुरुमा
- ख. १ महिना अगाडी
- ग. कम्तिमा १ दिन अगाडी
- घ. १५ दिन अगाडी

११. सुचना, शिक्षा तथा संचार सामाग्री महत्पूर्ण हुन्छ किनकि,

- क. विद्यार्थीलाई सिक्नमा आकर्षित गर्छ
- ख. अध्यापनमा सहयोगी भूमिका निभाउंछ
- ग. विद्यार्थीलाई छलफलमा सक्रिय सहभागी गराउंछ
- घ. माथिका सबै

१२. विद्यालयको चर्पीका सरसफाई को बाट गराउनुपर्छ ?

- क. शिक्षक
- ख. शिक्षक र विद्यार्थी
- ग. पियन र विद्यार्थी
- घ. शिक्षक, विद्यार्थी र पियन

१३. विद्यालय उमेरका बच्चाहरूको मुख्य स्वास्थ्य समस्या के के हुन्?

१.

२.

३.

४.

५.

१४. के विद्यार्थीलाई विद्यालयको चर्पी सफाई कार्यमा परिचालन गर्न संभव छ ? छ/छैन
छैन भने किन ? छ भने कसरी ?

१.

२.

१५. विद्यालय शिक्षक, विद्यालयलाई समुदायमा सरसफाई र चर्पीको प्रयोगको लागि एउटा नमूना बन्न सम्भव छ
/ छैन, कसरी ?

	छ	छैन
१		
२		
३		

१६. विद्यालय सरसफाई कार्य योजना तयार गर्दा को को सहभागी हुनुपर्दछ ?

क. प्रधानाध्यापक र शिक्षक

ख. शिक्षक र विद्यार्थी

ग. अभिभावक र शिक्षक

घ. माथिका सबै

ग्रामिण जलस्रोत ब्यबस्थापन परियोजना
विद्यालय शिक्षकका लागि स्वास्थ्य, सरसफाई तथा शिक्षा सम्बन्धी तालिम
विद्यालय सरसफाई कार्यक्रम: सरसफाई सम्बन्धी कार्ययोजना

विद्यालयको नाम:

ठेगाना:

Name of school:

Address:

क्र.सं. (S.N.)	के गर्ने (What)	कहिले गर्ने (शुरु/सम्पन्न) (When start/Completion)	कहाँ गर्ने (Where)	कसरी गर्ने (How)	कसले गर्ने (When)	सहयोगी (Assistance from)	कैफियत (Remarks)

तयार गर्ने:

मिति:

मिति:

GENDER EQUALITY AND SOCIAL INCLUSION TRAINING TO USER COMMITTEES (UC)

Background:

RVWRMP promotes gender equality and social inclusion in its activities, such as water supply, sanitation, irrigation and micro hydro schemes, aiming to minimize the social discrimination among the communities. Many User Committees are formed in the villages and the UC members are considered as key persons of the scheme.

To empower them gender and social inclusion awareness is a must in the communities and for members of UC. Therefore one day Gender and Social Inclusion training is planned to User Committee members to be organized by the Support Organization at scheme level. During this training, SO will assess and discuss the representation of women and ethnic groups in UC and their role if needed. If not, they will insist to have 50% women representation in UC and proportionate representation of ethnic groups.

Duration: 1day

Participants: All UC members (Chair, vice chair, secretary, treasurer, all members) and invitee members if necessary.

Resource Person: Field coordinator of SO (2 person full time), Community Mobilizer.

Organizer: SO

Objective:

- Sensitize UC members in Gender and Social Inclusion concept and importance of GSI in Water Resources Management programme and activities.
- Make them able to understand UC members about Step by Step activities in WRM Scheme and GSI integration
- Aware UC members about their role to increase women and all ethnic groups' participation in UC and other activities of the scheme.

Expected Outcome:

- UC members will be sensitized on Gender and Social Inclusion
- UC members will understand the step by step activities and take their responsibility accordingly from GSI prospective.
- Women and all ethnic group's participation in mass meeting, like layout plan, CAP and other meetings and trainings will be increased in the field. 50 %(minimum).
- UC will review the women's representation to make sure 50% women and proportionate representation of all ethnic and indigenous groups (if not already).

Source of fund: Scheme Fund (DWRDF)

Required Materials:

Step by step chart, brief introduction paper of RVWRMP, UC manual of GoN, Flash cards, Posters and chart of GSI, HSE, Stationeries handouts in nepali gsi video/audio etc.

Gender and Social Inclusion Training to User Committee

Day	Content	Time	Methodology
1st	Session I <ul style="list-style-type: none"> Recap of the previous day Situation Analysis of GSI 	15min 30 min	By participant Explanation and discussion
	Session II <ul style="list-style-type: none"> Existing practices of GSI and its causes 	30 min	Brainstorming
	Session III <ul style="list-style-type: none"> Concept and clarity on Gender and Social Inclusion Barriers of GSI 	1 hrs	Explanation and discussion
	Session IV Gender and Social inclusion approach in RVWRMP <ul style="list-style-type: none"> WHY GSI in RVWRMP GSI instruments of GSI integration at Step by step procedure 	1 hrs	Explanation and discussion
	Session VI Role of UC in GSI	30 min	
	Session VII <ul style="list-style-type: none"> Back home GSI action plan End of the session	30 min	Explanation and discussion

WATER RESOURCES AND ENVIRONMENT TRAINING TO UC

The topics of this training are touched upon in other trainings given to UC (eg. HSE training and technical trainings), but a separate training will be given if necessary for further awareness raising on broader environmental issues, such as soil conservation and watershed management.

Introduction

Technology means nothing unless replicated by the intended target groups. Individuals and communities have faced a land management issue of one kind or the other. They have therefore sought idea and possibilities to solve the issue and have developed and applied the idea in a way most suitable for them, given the prevailing conditions and resources available. The main of promoting low cost soil conservation and management is to bring change in community members' behavior to wards SCWM by persuading them to adopt. The challenges to meet the objectives are to identify those successful low cost conservation practices and to extend them in similar areas, or to teach/facilitate people to learn from each other, or to persuade people to adopt them.

Strategies

Strategies to promote LCSCWM are categorized into two. One the regarding the staff and second is regarding the user committee. This training enrich the knowledge and skill of the RVWRM and SOs staff as well as the UC members to utilize and promote the local resources that were previously underutilized in a traditional way or not utilized at all and will be focused on only locally available resources on the whole.

Low Cost Soil Conservation and Watershed Management (LCSCWM)

The low cost Soil conservation measures are characterized by affordability, use of local materials, easy to use, easy to maintain, stability for long term and environment friendly.

Objectives

At the end of training, the participants will able to:

- Familiarize with the concept of low cost soil conservation measures
- Explain commonly used LCSCWM techniques and activities and their importance
- Design different conservation activities as a package
- List and apply different extension methods in the promotion of the LCSC techniques and
- List, select and explain the importance, uses and propagation techniques of various vegetative species used for conservation independently or integration with other activities.

Methodology

This training program will be conducted in an informal environment, where participants would enjoy the opportunity to share the experiences and feelings. A variety of participatory and learner centered approaches will be applied. Training will be based on the adult learning principles. Improved Lecture, brainstorming, case study, probing and questioning will be frequently used to enhance learning practice. Learning by doing approach will be followed wherever possible with exercises, group tasks and group

discussions. Apart from this different energizer, games will be played to create the training environment more lively and interesting.

Training Contents

Day/s	First Session	Second Session	Third Session	Fourth Session
ONE	<ul style="list-style-type: none"> Opening Introduction of participants / RPs / Guests Briefing on the facilities Set training norms Objectives of the training 	<ul style="list-style-type: none"> Participants expectation Pre-test of participants 	Introduction and importance of low cost soil conservation measure	Conservation technique (Fascine, Palisade and Wattling)
SECOND	Conservation technique: (Bamboo Planting, Grass Sowing / Planting, Conservation plantation)	Conservation technique: (Retaining wall, Brushwood / loose stone check dam, Brush Layering , Rip-rap)	Conservation technique : (Conservation tillage , Cover crop)	Conservation technique : (Agro-forestry)
THIRD	Conservation Activities: (Gully and landslide treatment)	Conservation Activities: (Torrent control/stream bank protection)	Conservation Activities : (Irrigation channel and water sources improvement)	Conservation Activities: (On-farm conservation, Fruit tree planting, Silvo pastoral improvement)
FOURTH	Practical field exercise on LCSCWM measure			
FIFTH	Promotion of Low Cost Soil Conservation and Watershed Management measures	Conservation activities (Nursery and appropriate species)	<ul style="list-style-type: none"> Role of UC in the LCSCWM Post test 	<ul style="list-style-type: none"> Training Evaluation Training Auditing Closing

Resource Person/s

- Expert/Consultants on low cost soil conservation and watershed management from out side to trained RVWRMP and SOs staff in order to later they will be organised and monitor such an training and the activities as well in their respective VDC/districts.
- SOs staff, WRAs, and PSU Experts resource person will also be invited.

Duration:

It will be 5 days training program having 20 maximum sessions. However, it could be adjusted according to the RVWRMP norm and needs as well.

Participants:

- First, RVWRMP and SOs staff will get the training from out external experts in order to later they will be organised and monitor such a training and the activities as well in their respective VDC/districts.
- District event for all the UC members and others.

Organizer

- First event by RVWRMP-PSU
- District events by SOs and possibly WRAs

Source of Fund

- First event by RVWRMP
- District events by Scheme fund (DWRDF)

Expected outcome

After this training, RVWRMP and SOs staff and UC members are will:

- Explain the concept of low cost soil conservation measures and its importance
- Survey and design of needed LCSCWM techniques and activities
- Provide appropriate methods in the promotion of the LCSC techniques and
- Explain the function, advantage, steps of propagation techniques of different vegetative species used for soil conservation.

FINANCIAL MANAGEMENT AND BOOK KEEPING TRAINING TO UC

Introduction

Since the investment fund from DWRDF directly goes to UC account for scheme implementation, UC has to purchase required materials of the scheme, manage store and maintain the records of the income and expenditures systematically as per implementation guideline. Therefore UC needs to be aware on procurement, store management and book keeping procedures through this training.

Duration: 3 days

Participants: All UC members

Resource persons: Field Coordinator, Accountant, Overseer, Community Mobilizer of SO and DDC accountant if possible

Organizer: SO

Objectives:

The objectives of the training are to:

- capacitate UC members for recording income and expenditure properly.
- enable UC members to keep records of construction materials (tools/fittings etc).
- teach UC members to keep account of skilled/unskilled labor wages and kind contribution
- acknowledge financial policies/rules of GoN
- make aware UC members on quality of construction material and importance thereof.

Expected result

After this training, UC members are will:

- record income and expenditures of financial transaction and maintain store ledger
- maintain record of skilled/unskilled labor payment and kind contribution as well
- follow financial policies/rules of GoN

Required materials

Copy of design estimate, Preparatory phase agreement, Step by Step follow up chart, sample of book keeping/store ledger, formats, Calculator, black/white board/brown paper etc

Training schedule

Training has to be conducted following the schedule outlined in the table below:

Days	Course contents	Time	Activities/Tools
1	First session: <ul style="list-style-type: none"> • Introduction • Objective of the training • participants' expectation Second session: <u>Funds flow mechanism</u>	1 hour 2.5 Hours	Game Fund flow Chart Contribution chart Agreement papers O&M guideline

	<ul style="list-style-type: none"> • Brief introduction on DWRDF • Contribution of VDC and Users • others <p>Third Session: <u>Release of payment to UC's a/c</u></p> <ul style="list-style-type: none"> • Discussion on terms and conditions of the agreement • Installment processes • support documents and filing thereof • Investment (construction materials) • Operation and Maintenance fund 	2.5 hours	
2	<p>First session:</p> <ul style="list-style-type: none"> • Review of 1st day sessions <p><u>Existing rules/regulations of GoN</u></p> <ul style="list-style-type: none"> • Procurement process • quotation process • Tendering process • Market price analysis • Auditing process <p>Second session: <u>Material quality and market</u></p> <ul style="list-style-type: none"> • Details on pipes, fittings, tools, cement, sand, steel rod and others • Potential manufacturers, suppliers, transporters <p><u>Store management</u></p> <ul style="list-style-type: none"> • Pipe and fittings, tools, cement, local materials 	<p>2 hours</p> <p>3 hours</p>	<p>Procurement guideline</p> <p>Pictorial books on tools/fittings/pipes and construction materials</p> <p>List of manufacturer's name</p>
3	<p>First session:</p> <ul style="list-style-type: none"> • Review of 2nd day sessions <p><u>Scheme cost and book keeping</u></p> <ul style="list-style-type: none"> • Cost, construction materials, transportation, labor wages 	3 hours	<p>Design/estimate</p> <p>District rate chart</p> <p>Sample of ledgers (cash/Bank/store)</p> <p>Reporting formats</p> <p>Monitoring guideline</p>

DESIGN/ ESTIMATE AND CAP TRAINING TO USER COMMITTEE

Background:

Two days training to UC members will be organized by SO in preparatory phase. This training is important to UC to prepare Community Action Plan in a democratic way. After this training UC will organize a mass meeting of users to prepare and finalize the CAP of implementation phase specifically. Monitoring team is supposed to visit scheme during CAP preparation and finalization. CAP format is included in this content. A copy of CAP should be attached with agreement paper of implementation phase.

Duration: 2 days**Participants: All UC members and others****Resource Person:** Field coordinator of SO (2 person full time), Community mobilizer/health motivator, overseer/engineer of the site.**Organizer: SO****Objective:**

To make UC members able to;

- Understand the design and estimate of the scheme.
- Understand the importance of CAP
- Prepare CAP of the scheme, according to provided format.

Expected Outcome:

- Understand about the detail design and estimate of the scheme.
- Prepare CAP (as provided format) of the scheme through mass meeting.
- Apply the CAP in implementation of scheme.

Source of fund: Scheme Fund (DWRDF)**Required Materials:**

Design/estimate report of schemes, Format of CAP, UC manual of GoN, Step by step chart, Step by step manual, financial record keeping formats of RVWRMP, handouts and posters and chart

Days	Content	Time	Methodology
1st	Session I Introduction of participants Review of previous training Expectation of participants Objective of training Expected outcome of training	1 hrs	Self introduction Explanation
	Session II Explanation of design and estimate in detail Structure to be constructed Estimated cost(components, skill labor, unskilled labor, sand, cement etc)	2:30 hrs	List the expectations expressed by participants and make conclusion Explain according to design and estimate of scheme Refer layout paper
	Session III Process of project formulation Gender and Social Inclusion issues to be considered in scheme implementation	1:30 hrs	Group exercise/explanation and discussion
	Session IV Environmental conservation Source protection; (tree plantation around source (gravity) and fencing.) Avoid unnecessary activities, which disturb the environment during construction of component eg trench digging for pipeline Construction of toilets, waste pits, drainage etc	2 hrs	Explanation

Day2	Contents	Time	Methodology
	Session I Recap	30 min	From participant
	Session VI Community Action Plan(CAP) What is CAP? Importance of CAP in WS/S scheme How to prepare CAP List of actions to be planned (as per scheme types) How to run activities as per CAP? How to review CAP(if needed)	3 hrs	List the expectations expressed by participants and make conclusion as per objectives Explanation and discussion Group exercise
	Session VII Resource mobilization Identification of local resource person (skilled and unskilled), local materials etc	1 hrs	Discussion
	Session VIII Supervision and monitoring of activities and workmanship What, Who, How	1: hrs	Explanation and discussion
	Session IX Closing Session Feedback & closing	30 min	Feedback written

TRAINING ON INCOME GENERATION AND SUSTAINABLE LIVELIHOODS

Background

Bearing in mind the alarming poverty in the scheme area, RVWRMP has aimed to support in income generation and livelihood promotion (IGSL) activities by mobilizing local resources. UC is responsible to support community people in all aspects of the project activities. Therefore UC members need to be aware in mobilizing the resources at local level and thereby transfer skills among the other CO/UC members.

This training will enrich awareness of the UC members to utilize and promote local resources that were previously underutilized in a traditional way or not utilized at all and will be focused on only locally available and obtainable resources in general.

Duration: 1 day

Participants: All UC members (better to include VDC secretary, WRMC members of the scheme).

Resource persons: All SO staff (Team Leader, Field Coordinator, Community Mobiliser, Overseer)

Organizer: SO

Objectives:

Main objectives of this training are to:

- make aware UC members understanding value of local resources
- encourage UC members to cultivate high valued crops
- enhance capacity of UC on saving and credit
- make aware UC members on economic value of their existing resources

Expected outcome:

- Participants understand general idea on mobilizing local resources
- UC members initiate IG activities/entrepreneurship development activities
- UC members will share the experience among other CO members and encourage for action

Required Materials: Step by step flow chart, IGSL guideline (summary)/Chart, List of possible activities to be conducted with local resources,

Day	Contents	Time	Learning activities
1	<p>Session-1 Opening session</p> <ul style="list-style-type: none"> • Introduction of participants • Expectation of participants • Objective of training • Expected outcomes of the training <p>Session-2 Brief introduction on:</p> <ul style="list-style-type: none"> • Income generation (What is income ? what participants know, How they are practicing) • Sustainable Livelihoods (what livelihoods mean? what participants know and how they are practicing) <p>Session-3</p> <ul style="list-style-type: none"> • Revise 2nd session introducing the contents • How to get more income? discuss on: (Income –Expenditure= Saving?) or (Income – Saving= Expenditure?) • Misuse of income on un-productive works • Mobilization of fund (CO and others) <p>Session-4</p> <ul style="list-style-type: none"> • Discussion on cash crops (high value crops) • Farming cereal, citrus, vegetables and its economic value. • Marketing of the products <p>Session-5</p> <ul style="list-style-type: none"> • What is Entrepreneurship? (Micro enterprising activities) • Discuss on commercial use of local products) • What is NTFP? Use and importance of available NTFPs. • Animal health care/processing and marketing the products • Coordination for the activities <p>Closing</p>	<p>1 hr</p> <p>1 hr</p> <p>1 hr</p> <p>1 hr</p> <p>1hr</p>	<p>Discussion, IGSL guideline/chart</p> <p>Papers on IGSL List of possible activities (Enterprises development activities)</p>

GUIDELINES FOR PREPARATION OF LAYOUT

1. Introduction

A layout is a diagrammatic scheme plan, in which all the features and components of the scheme are displayed indicating their location and route, e.g. roads, paths, house locations, existing wells, other infrastructure etc.

The layout will be prepared in a mass meeting where all users will discuss and decide, what they think is the best scheme layout. The meeting can also plan further activities. Since women are mainly responsible for fetching water, a separate women's meeting in each cluster will decide the tap stand locations. The SO will assist in all the meetings and make clear to users what are the different possibilities. The locations of the structures and pipeline route will be confirmed after the Technical Survey and re-discussed if not found technically feasible. Tools needed for the meetings are layout plan chart and the community map drawn during basic data collection (for reference).

2. Process

Call a mass meeting of all users. One female and one male representative from each household should be invited to the meeting as well as VDC chairperson and vice chairperson. Make sure that the time and venue of the meeting are suitable for all. Ensure that information (oral/written) about the meeting is given to all women and men. All ethnic groups/castes living in the community as well as all clusters should be well represented in the meeting. At least 2/3 of the households of the proposed scheme area should be present in the mass meeting. At least 50 % of the participants of the meeting should be women. If there are less representatives or if women are in a minority in the meeting, postpone the meeting until the representation is adequate and equal.

Present tentative layout plan for discussion. Provide both women and men with necessary information on all technical issues. Let the users design the layout plan, which should include the following information:

1. South-North direction
2. Villages, clusters, institutions
3. Paths, trails, roads
4. Forest, rivers, mountains
5. Existing infrastructure and proposed infrastructure
6. Source (intake)
7. Collection, Interruption, distribution chambers
8. Transmission Main (Main Pipeline)
9. Break Pressure tanks
10. Distribution Pipeline
11. Number of tap stands in each cluster

Mark the locations of the main structures, reservoir tanks, distribution chambers, etc. also on the community map. Get users' approval of the layout plan and record all the discussed issues about the design. Get endorsement from all the users present in the meeting.

Call a women's meeting in each cluster to decide the location of the tapstands/offtakes within one week after the mass meeting. There should at least one female representative from each

household in the cluster. Mark the location of the tapstands/wells/offtakes also on the community map.

Prepare a list of the participants in the meeting in the attached format. Underline the characteristics of those who did not participate in the meeting.

The location of the structures and pipeline route will be confirmed after the technical survey. In case the locations agreed by the users is not technically feasible, the new location should be discussed with them again.

ORGANIZATION OF SANITATION MASS AWARENESS ACTIVITIES

To disseminate key messages to all intended households and beneficiaries, different will be carried out through postering, radio program, street drama, folk songs, demonstrations, training, inter-action, national sanitation campaigns etc. Local festivals and other event will be taken as opportunities for mass awareness. Similarly, schools, women groups, local youth groups and local indigenous groups will be mobilized at village level in this regards. Residential trainings organized at village level will look opportunity to organize such mass awareness activities.

Advocacy:

Advocacy for HES will be assured at all levels through DDC, VDC, schoolteachers, health posts and field based staffs and other. The main elements of advocacy will include;

- Importance of environmental sanitation in human life
- Responsibilities and commitment of stakeholders.
- Sharing of local resources
- Self- reliance for sustainability

Organization of National and international campaigns:

National sanitation action week campaign will be organized as guided by national sanitation action steering committee every year. UN has declared 2008 as Sanitation Year. RVWRMP will include special / innovative activities with consultation of concerned project districts and VDCs. Provision will be for all districts for such creative/ innovative activities e.g. Eco- San village as pilot scheme.

GUIDELINES FOR PRIORITIZATION OF HOUSEHOLDS AND IDENTIFICATION OF INSTITUTIONS FOR LATRINE CONSTRUCTION

Household:

The latrine construction activity is an important aspect of RVWRMP. It involves a series of trainings, workshop and campaigns before starting of construction. The number of latrines to be built will be based on WUMP / plan of VDC (as per capacity to match Rs 300 per household). Users committee and beneficiaries will decide which household will receive latrine and when. Similarly, wealth ranking will finalize the amount of contribution to be contributed by household and amount of subsidy to be supported from project. This exercise will be carried out as per step -by- step scheme cycle. Use and operation & maintenance aspects are crucial part of investment in latrine so the benefiting household should be well motivated and prepared in advance in this regard.

Institution:

School sanitation program is not only important but essential aspect of environmental sanitation. The local institutions/ schools will be assessed during WUMP process. Further, baseline data collection will review (if needed) the situation. VDC will prioritize based on its plan and ability to match the fund. Of the total estimated amount of latrine VDC should match 2 % for school and 50 % for other local institutions. The physical facility for school sanitation includes water supply (if needed), latrine, and urinal and wash basin. These provisos will be opened to those schools which ensure the source of fund for operation, maintenance and proper use of built structures. Before construction of latrine, teachers, student and management committee will be prepared and oriented.

CONCENTRATION ON ENVIRONMENTAL ASPECT OF SANITATION

For the purpose of study, some innovative programs will be launched (e.g. Model of *Eco-san village and eco-san latrine*). Similarly, joint effort will be initiated with district level partners etc. Such activities will be started based on district situation and in a flexible manner. The eco -san village concept will include following different components;

- Sulav or eco-san latrine.
- Solid- and liquid waste management; includes waste pit, drainage etc.
- Vermi-compost/ other compost manure
- Improved oven.
- Biogas.
- Plantation; water source friendly, environmentally friendly.
- Kitchen garden.
- School sanitation program.

Different technological options should be user's friendly and will include the general aspects to prevent water quality specifically.

SOIL CONSERVATION AND WATERSHED MANAGEMENT

For achieving the sustainable development of water resources, the project idea is to develop the multiple uses of water resources on the basis of comprehensive Water Use Master Plan (WUMP) to be prepared by the selected priority VDCs and communities. Taking into environmental consideration to fulfill the organization objective of the project soil conservation and integrated watershed management should result in improvement which can provide step by step work for the promotion of the activities while preparing WUMP in the VDCs to meet the long term requirement of social, technical and ecological sustainability.

In recognition of critical situation of soil erosion and watershed degradation in the regions, RVWRMP is planning to assist in maintaining ecological balance by reducing pressure from natural hazards through conservation and development of important watersheds in order to maintain land productivity, reduce soil erosion and contribute in development infrastructure protection by scientific management of watersheds.

Approach

In order to address the above problems, following approach for Soil Conservation and Watershed Management is urgently needed which can fulfill the RVWRMP overall purpose:

- Make sure proper land use by rational land use planning.
- Carry out integrated programs to tackle erosion problems taking the watershed area as the unit of planning, implementation and management.
- Ensure the multiple uses of land and water to fulfill diverse needs.
- Operate/Implement Soil Conservation and Watershed Management (SCWM) programs in line with the integrated watershed management approach.
- Set up linkages and networking with all other related sectors like forestry, agriculture, livestock, water and land resources.
- Ensure people's participation through conservation education and demonstration of appropriate technologies.
- Protect watersheds (e.g. upstream of hydroelectric dams, irrigation systems) and riverbanks through plantation and the other conservation measures.
- Enhance capacity of local peoples including concerned stakeholders working in the project VDCs by providing knowledge, skills, and technologies related to various aspects of SCWM through trainings and workshops.

Community's Participation

RVWRMP has emphasized its holistic approach for the people's participation in making the SCWM programs sustainable and people centered/oriented. RVWRMP guideline provides for the formulation of Community Organisation (CO), Water Resources Management Subcommittee (WRMSC) and Water Resources Management Committee (WRMC) to mobilize people to carry out all soil conservation and watershed management activities and to implement them through the local user. The community people themselves decide during Water Use Master Plan (WUMP) preparation what kind of conservation activities could be implemented in their settlement/village/VDC. The level of participation varies depending upon

the nature and scale of works. The community people themselves decide during WUMP preparation that what kind of conservation activities could be implemented in their settlement/village/VDC. Based upon above approach, RVWRMP can develop the elements for people's participation in SCWM programs such as:

- Identify activities that are conservation as well as need oriented, and profitable to the individual and community.
- Plan and identify the measures/activities at grass root levels during VDC level WUMP preparation.
- Make the budget and the RVWRMP policy and guidelines transparent to the local peoples.

Soil Conservation and Watershed Management Program/Activity

The project aims to enhance the livelihood security of communities by improving soil conservation and water watershed management, and agricultural production. It supports decentralization by building the institutional capacity of its partner organizations and monitors the implementation of government policies, strategies and practices for the effective management of resources in the mid and far western regional project districts. In order to mitigate RVWRMP overall organizational objectives in line with the approach and guidelines, RVWRMP can include the following SCWM programs for conservation measure/activity:

1. Land Use Development Planning

Land use development and improvement plans based upon scientifically assessed land capability are the basis for rational utilization and management of watershed resources. These plans will be prepared by following the RVWRMP guidelines. The main activities will be carried out under this program are a) Watershed prioritization during WUMP preparation process b) Watershed management planning while making WUMP and c) Technical service for land use development during planning and implementation.

In this regard, mapping of water resources and their use and putting the results in extensive database will be useful for identification of priorities for environmental protection, conservation and mitigation as well.

2. Land Productivity Conservation

Productivity conservation programs are those which help to develop and improve productivity of the land through appropriate land use management on the basis of land capabilities such as on-farm conservation, agro-forestry, fruit tree planting, and fodder/grass plantation are part of the land productivity conservation program.

3. Development Infrastructure Protection and Development

Development infrastructure protection programs are those which help to protect and stabilize the basic development infrastructures such as reservoirs, irrigation and others with the aim of improving the economic life of the development infrastructure. Irrigation channel improvement and stream bank protection/torrent control come under this program.

4. Natural Hazard Prevention

Natural hazard prevention programs aim to protect life, property and natural resources from natural hazards. The major activities will be carried out under this are gully treatment,

landslide treatment, torrent control/stream bank protection, conservation pond construction/rehabilitation and water source protection come under the natural hazard prevention program.

5. Community Mobilization/Empowerment for Soil Conservation & Extension Program

These programs are designed to rise up the awareness level of community members, develop their knowledge, skills and motivate them to participate in SCWM activities. The programs includes under this is to group identification and formation, demonstration, conservation education, training and extension, and interaction and visits. The main income generating activities related to land and water resources are Bee-keeping, private nursery, vegetable growing. Thus, it will be good, if we provide knowledge and skill on the same for livelihood improvement.

6. Nursery Establishment and Seedling production for Soil Conservation & Watershed Management Program

This program aim to provide knowledge and skill about Nursery construction and seedling production techniques in the local level in order to carry out the plantation activity demanded and site specific seedling by themselves. Nursery is a place, where seedlings of plantable size are produced either from seed or other vegetative parts under favorable condition. Experience indicates that quality of planting stock and selection of appropriate species are the reasons for successful soil conservation and watershed management plantation. In order to produce good planting stock following consideration must be made:

- Selection of suitable species (as mentioned in appropriate species) for the site and demanded by communities fulfilling their basic needs
- Sowing seed/seedling at correct time and in an appropriate way and
- Selecting quality planting stock (seed, seedlings, cutting, stem and rhizome)

For more details refer to the Project's Soil Conservation and Watershed Management Guideline and Working Strategy of Soil Conservation and Watershed Management 2061 (Bhutatat ra jaladhar samrchan bibahag ko karyabidhi 2061).

GUIDELINES FOR TECHNICAL SURVEY

1. Introduction

The basic components of rural water supply, irrigation and MUS systems are: intake, canal alignment, transmission line alignment, collection chamber, interruption chamber, distribution chamber, reservoir, offtakes and tap stand in gravity, and depth in water table and safe water in case of ground water system.

The exact position of various structures, their size and series are confirmed only after the detailed design of a scheme. Basic data for the design are obtained from the technical survey, which includes desk study and field work. This survey forms the basis for design of schemes.

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

This survey is a technical study of the differences in level and distance between the source and the command area and along a proposed alignment. It presents the collected data in the form of a plan and a longitudinal profile.

To have sufficient knowledge about the proposed scheme, coverage area and the social aspects, the SO survey team should study the information collected during the WUMP and baseline data collection when available before starting the survey.

The survey team should have the layout plan proposed by the community and the cluster wise proposals of tap stand locations made by the women as the basis for the survey.

Community participation is important in rural water resource schemes. Both women and men and all ethnic groups/castes in the community have the right and should participate in the survey as well as in the decision making process, within the limits of technical options. Especially women's participation should be encouraged and their decision about tap stand locations should be adhered.

Location for most structures and alignment should be roughly fixed during the very beginning of the actual survey in the field.

The survey works will form the basis for the technical design of the scheme.

A survey team should be led by an experienced engineer or overseer. The community members should provide support and assistance when needed by the survey team.

2. Desk study

The desk study is the detailed study of available information to get a general idea about the scheme area. Necessary information should be taken to the field for instant reference. The survey team should study:

- 1) All the information gathered during the WUMP and baseline data information sheets
- 2) The topographical maps of the area, the satellite imagery and ortho-photo when available, the Digital Terrain Model when available
- 3) The recommended design parameters for schemes selected.

3. Field work

The community plays a major role in the technical survey of the water supply scheme. Both women and men and all ethnic groups/castes in the community have the right and should take part in the decision

making process within the limits of technical options. The SO survey team should discuss with the UC, and women and men at the very beginning of their fieldwork. The UC and users should help the SO team during the survey while fixing the location for structures, selecting alignment, etc. The SO survey team should complete the following steps:

1) **Reconnaissance (rec.):**

SO team should:

- a) Measure the source.
- b) Reconfirm that there are no source disputes in the community.
- c) Fix the approximate sites for components and measure height differences, using altimeter, to see if the proposed sites are possible. The survey team should consult the community about these matters.
- d) Fix the approximate alignment for pipeline in co-operation with the community.

2) **Detailed survey:**

The detailed survey is done to find out the differences in level between the various places in the scheme area, and the distances between the different structures.

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

Abney level:

- ✓ If the terrain is steep enough.
- ✓ If the scheme is small - in general with the pipeline not exceeding 1500 m.

Automatic level:

- ✓ If terrain has a gentle slope.
- ✓ If level difference is critical as measured with altimeter.

Theodolite:

- ✓ In cases other than the above specifications.

3) **Processing of field data:**

Field data should be processed using the equations mentioned in the survey record sheets.

4) **Plotting and presenting the processed data:**

Once the survey data have been processed, the plan and the longitudinal profile can be made. Recommended scales are:

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

5) **Preparing the data for feeding the design software:**

Field book data and calculated level will be introduced in the design software

Reference books:

B. C. Punmia: Surveying, Volume I, II and III.

Irrigation Water Management: Training Manual No. 2 - Elements of Topographic Surveying
FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
a manual prepared jointly by C. Brouwer and A. Goffeau J. Plusjé M. Heibloem
FAO Land and Water
Development Division
FAO 1985

GUIDELINES FOR COLLECTION OF CASH FOR INVESTMENT AND GENERATING O&M FUND

1. Introduction

Both the UC and users need guidance and training in operation and maintenance (O&M). The SO should help UC to build their capacity in managing the finances, store, and O&M fund efficiently. The UC should also be guided to find support for fund resources and technical guidance in case of major repairs from outside.

The UCs will select Village Maintenance Worker (VMW) for gravity flow systems to perform the future O&M function. The DDC will facilitate the on-the-job training to VMW and WUC. Dalit and women should increasingly be considered and selected to participate in the training and UC will provide priority to Dalit and women while hiring for these posts.

2. Cost sharing policy for Investment by community:

In RVWRMP modality, users contribute cash for construction cost before the commencement of implementation of scheme. The rates for various technologies are presented in the following table.

Table-1: Drinking Water Supply, Irrigation and Micro Hydro Scheme (Individual and Multiuse systems)

Technology	Users Cash contribution in Rs
Piped Water Supply Scheme	Rs. 500/tap
Rainwater Harvesting for Drinking Water Supply (6.5 m ³)	Rs. 100/HH
Conventional Irrigation System	Rs. 100 /Ropani
Non-conventional Irrigation System	Rs. 150 /HH
Micro Hydro	Rs. 500 kW
Piped DWS + Non conventional Irrigation System	Rs. 750 /tap
Micro Hydro + Irrigation system	Rs. 1000/kW
Micro Hydro + Irrigation + DWS	Rs. 500/kW + Rs. 50 per ropani + Rs. 500 per tap

User Committee will collect **up-front** cash from users and deposit in UC bank account by the end of preparation phase and obtain bank statement before entering into implantation phase agreement. DDC/DMC will ensure the investment cost sharing by UC and VDC before implementation phase agreement.

3. Community contribution policy for O&M activities:

Funds are needed to keep the water supply system in running condition after completion of the schemes. Therefore, establishment of the O&M fund should start immediately after collection of cash contribution for investment fund according to the policy outlined in Table-1 above from the users. Regular collection of water tariff from the users in order to raise the size of the fund. The O&M fund will be administered by UC (chairperson and treasurer) by opening a separate bank account. The UC is responsible to organize the payment for the services of the VMW/ as well as the costs required for maintenance purpose.

In addition to cost sharing of construction cost of any scheme, users contribute cash for maintenance fund for various repair works including remuneration cost of VMW. These costs are necessary for the sustainability of scheme. Following table presents Community contributions for Maintenance and repair work for various technologies.

Table-2: Drinking Water Supply, Irrigation and Micro Hydro Scheme (Individual and Multiuse systems):

Technology	Users O&M Cash contribution in Rs
Piped Water Supply Scheme	Rs. 500/tap
Rainwater Harvesting DWS (6.5 m ³)	Repair and Maintenance will be done by individual HH
Conventional Irrigation System	Rs. 25 /Ropani
Non-conventional Irrigation System	Rs. 50 /HH
Micro Hydro	Tariff rate of electricity consumption will cover O&M fuction
Piped DWS + Non conventional Irrigation System	Rs. 750 /tap
Micro Hydro + Irrigation system	Rs. 1000/kW + 25Rs/ropani for O&M
Micro Hydro + Irrigation + DWS	Rs. 100/kW + Rs. 25 per ropani + Rs. 500 per tap

UC will start collecting O&M fund from preparation phase. As discussed and agreed during preparation of Community Action Plan for O&M fund collection, UC may collect this amount on monthly installment and collected amount will be deposited in O&M Fund account of UC before third installment payment of Implementation Phase contract.

Ways and methods of fund raising for O&M purpose

The community has to find a way to collect money for the O&M Fund. In doing so, the community may choose one of the following options or devise its own collection system:

- a. Equal contribution from each household.
- b. Contribution by size of a family.
- c. Contribution based on land holding size or according to some other factor indicating economical status of the household.

The UC, upon the consensus of the all the users, may mobilize the O&M fund for income generation or other lucrative purposes, however keeping some reserve fund in the account to meet immediate maintenance need of the scheme. The interest earned should be higher than the interest earned from a bank. Loaning for productive activities among the users will be more effective use of O&M fund. Interest charge against the loan will be decided together with the users in a mass meeting.

4. Matching Fund policy for O&M activities:

RVWRMP has policy to support UC to generate O&M fund at scheme level from various source. One of the sources is the matching of up to equal amount of O&M fund collected by UC but not exceeding the upper limit of amount for various technologies shown in Table -2 above.

RVWRMP-TA fund may provide an equal matching contribution to the O&M fund generated by UC based upon UC performance and scheme status assessed during post construction phase. This matching fund will be provided on installment basis which is presented in the following table.

SN	Condition	% of matching Fund
1	After three months of Post construction phase agreement between SO, UC and DDC	25
2	After six months of Post construction phase agreement	25
3	After 12 months of Post construction phase agreement	50

The assessment of indicators will be done during Post construction phase by MONITORING TEAM before granting O & M support fund from the Project.

See Paper 77 of this Manual for detailed UC performance evaluation criteria.

Estimated amount of O&M matching fund will be included in the implementation phase agreement and paid by DDC/DMC only at the time of third installment payment of Implementation Phase Agreement.

Step 10 – Detailed Design, BOQ and Cost Estimates

DESIGN GUIDELINES FOR

WATER SUPPLY SCHEMES

1. OBJECTIVES

This document proposes criteria to design community based small to medium scale gravity water supply schemes. The objective is to establish a uniform design approach for implementing community based water supply schemes. The objectives are (i) to reduce the prevalence of water and sanitation related diseases and (ii) to minimize the hardship in collecting water.

Here is presented a summary of design concepts and parameters. Full detailed norms and formulas are available in DESIGN GUIDELINES FOR COMMUNITY BASED GRAVITY FLOW RURAL WATER SUPPLY SCHEMES CBWSS Vol I to 12

2. DESIGN STRATEGIES

The design of a community-based scheme should consider a number of issues. These relate to the type of system; whether it is to be open or closed whether the supply is to be continuous or intermittent and whether to provide provisions for future expansion. Systems combining water for domestic use and irrigation are also envisaged and promoted.

The basic concept is to provide decentralized storage tanks (often more than one) to supply water to smaller population groups via public/private stand post.

The designer must focus on :

- a) optimal use of the available resources and
- b) minimize operation and maintenance requirements
- c) keep the construction within acceptable limits

The fundamental guideline is to provide small water supply schemes catering to small population. Even in one scheme, it is suggested that more than one storage tank should be provided to supply smaller group of standpost users.

When a gravity flow scheme is not feasible, alternate provision such as rainwater harvesting and improvement of point source (spring) must be investigated. Spring protection guards against possible contamination. This is a principal option in mountain and hill communities where water is available nearby. It costs a fraction of gravity flow schemes and requires only simple and virtually cash free maintenance.

All components of the gravity water supply scheme are important. However, special care should be taken while surveying and designing the intake. A good intake must ensure that the source is not affected, there is no leakage and contamination possibilities are minimized. Each intake should be properly designed by undertaking detailed survey of the site to help appropriate construction.

Even though, water treatment is generally desirable for domestic water supply, the scope for treatment of water in rural water supply schemes is limited. Treatment involves additional investment and skilled manpower for complex operation and maintenance. The level of responsibility on the part of the beneficiaries is also increased. Due consideration have to be therefore given on the selection of source to avoid the need for treatment as far as possible.

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

- Use of least contaminated spring/stream source,

- Innovation in the design of the spring and stream intakes (including source protection) to minimize problems in their operation,
- Continue to strengthen both the institutional and community capability to operate and maintain the water scheme,
- Health and hygiene education and training activities targeted to women and mother groups.
- As a last resort, provide simple, cost effective and easy to operate and maintain treatment facilities.

A certain level of approximation is inevitable in the design of community water supply scheme. The assumptions about population growth rate for schemes planned for 15 to 20 years later for example, may not be accurate. The daily water demand fluctuates among different users. Variations according to level of education/ income and alternative water access for bathing, dish and clothes washing have not been well studied in Nepal.

The exact properties of pipes are often diverging from manufacturing specifications. Poor workmanship when butt-welding HDP pipes generally form beads inside the pipe and affects the friction factor. In some cases, lime deposits in pipeline also lead to reduced diameter and higher friction. A balance approach provides simplicity while maintaining flexibility. Therefore, this document is meant to be used as a guideline for the design of community based gravity flow schemes. Wherever necessary, the designer should use his judgment and creativity to propose a scheme that would function satisfactorily over the design period.

3. RVWRMP PREFERENCES REGARDING FLOW USAGE AND FREQUENCY OF DISTRIBUTION

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

Gravity scheme is the mode of supply which is the most appropriate in RVWRMP area due to its very low cost of operation.

In an open system, the safe source yield must meet the peak water demand of the service area. A storage tank is not required in an open system and all its pipes are distribution lines. In an open system, no flow closing devices are installed in the distribution system hence no faucet is installed on the standpost. Static pressure, therefore, never builds up in the system. These systems are very cheap to build, operate and maintain. Nevertheless, they do not make an optimum use of the water extracted and can lead to environmental hazard. When the source discharge is higher than the peak water demand for the population, RVWRMP will promote a Multiple Use System (MUS) which provides water for domestic use and irrigation.

Break Pressure Chambers (BPCs) are generally not required in an open system. In some cases however, the dynamic pressure may exceed the pressure limit of the pipe class and chambers may need to be provided to break the excess head. These chambers are called Interruption Chambers (IC). Distribution Chambers may also need to be provided to ensure proper distribution of flow in different branches.

A closed system is used when the safe yield of the source cannot directly supply the peak water demand. To balance the deficit and meet the peak demand, a storage tank is provided. As the water thus stored cannot be allowed to go to waste, faucets and valves have to be installed to control flow. A closed system, therefore, is subjected to the maximum static water pressure and should be

designed accordingly.

Break Pressure Chambers (BPCs), therefore, need to be provided in a closed system whenever the working pressure limits of pipes, pipe joints and fittings are exceeded. In the distribution system, overflow and wastage from the Break Pressure Chamber should be controlled which is achieved by installing a float valve. Provision of faucets at standpost also allows it to be closed and minimizes the problem of wastewater disposal in a closed system.

The closed system are the most prefer option of RVWRMP to optimize the use of water in all possible usage.

Nevertheless, open system option may be considered for situation requiring very low cost.

In a continuous system, water is available in the distribution lines all the time. The difference between a continuous and an intermittent system is more valid for a closed system. A closed system can be continuous. Water in a continuous system is available whenever the faucet is opened. Since water is continuously available, it is a more desirable, because service is available all the time. Since the distribution line is always under pressure, the possibility of contamination by negative suction in the pipeline in a continuous system does not exist. This situation is the one preferred by RVWMP.

Intermittent Supply Condition, in this system, water is supplied to the consumers only during some fixed hours of the day. Many schemes in Nepal are presently being operated intermittently even though they were originally designed to function continuously. The possible reasons: source dried, faucets in the standpost are not properly maintained leading to wastage. In many cases the non-performance of the float valves in Break Pressure Chambers also leads to excessive wastage. When schemes are operated on intermittent basis water is supplied for a short period within which time the design demand has to be met.

In a scheme with only public standposts with fixed tap flow, the pipe size of the distribution network will not be affected, even if the scheme is operated on the intermittent basis. But the storage volume will be increased when the scheme is operated on an intermittent basis. The likelihood of contamination in an intermittent system is higher. It is due to infiltration of polluted and dirty water from outside into the empty water pipes through leaks and leaking joints due to negative suction pressure. Therefore community water supply schemes should be designed and operated as continuous systems, wherever possible.

4. DESIGN CRITERIA

4.1 Population

The total population of a community to be served by the proposed water scheme needs to be accurately surveyed. First, the present population of the community targeted has to be established. Next, the forecasted population at the end of the design period needs to be estimated.

The population data should be taken on household basis by actual counting. Census records are also needed to determine the average growth rate per annum.

The main aim of population survey is to determine:

1. The population of residents in the residential houses/buildings
2. The population of day scholars and boarders in the academic institutions
3. The population of outdoor and indoor patients in hospitals and nursing homes
4. The population of birds and animals in the farms/houses
5. The population of visitors (floating population) in the hotels and restaurants and others, if any.

The population survey is the basis for determining the capacity of the pipe network.

With the present population and population growth rate, one can forecast the projected population to calculate the projected water demand and capacity of the pipe network.

4.2 Present Population

Population survey is one of the crucial activities in the design of a water scheme. The surveyor/designer must spend sufficient time to establish the present population of the community, in close co-operation with the members of the Water Users and Sanitation Committee in particular and the beneficiaries in general.

4.3 Annual Population Growth Rate

A water supply scheme should be designed to meet the community's future water requirements. The future population is estimated based on the past growth trend of the particular community. Population growth rate critically affects the design because of its impact on the projected population, water demand and finally it defines the cost of the infrastructure.

Population growth rates for different districts can be obtained from the results of the national census conducted in 1981, 1991 and 2001. These rates generally represent the average growth of the districts. They however, may not represent the growth rate of a particular community in the district. Population growth rates in the municipal areas, district head-quarters and market centers are generally higher. Also new urbanizing areas have higher growth rate, which may not be represented by the district rate. In the communities of the hills, the growth rates are low and even negative in some case.

Inter-census growth rate by VDC will be used systematically by RVWRMP but :

In case of rural communities, where the growth rate is less than 1% per year, a growth rate of 1% should be adopted. This will allow some growth without substantially affecting the cost of the scheme.

VDCs growth rates should also be used for estimating design population of schools.

Local observation like the emergence of road corridors should be considered to re-assess the validity of past growth rates.

4.4 DESIGN PERIOD

The design period refers to the duration for which a scheme will meet water demands of different water users. This time begins from the day a scheme is commissioned and operated by the users. The general practice in Nepal is to design water schemes for a period of 15 to 20 years.

The design period of a water supply scheme generally depends on :

- * Rate of population growth,
- * Present and future settlement pattern,
- * Economical life of the system components, and
- * Potential for development.

With a high population growth rate and a long design period, the cost of a scheme generally becomes high. As such there is less justification for the high investment by taking a longer design period. When the population growth rate is high, phased implementation may be considered or a shorter design period may be more appropriate.

In some cases, the storage tanks may be designed to meet the demand for a shorter period while the distribution pipes are sized to meet the full design water demand. Storage could be added later.

Logistic, re-mobilization of community and other administrative supports make impractical to consider phased implementation in small community water supply schemes.

Phasing infrastructures construction may be considered only for compelling justifications such as a very high population growth rate.

Table 1 : Design Period

Design Period Years	Rationale	Basis
15	For communities where the growth rate is high	Population Growth Rate >2 %
20	Where the communities are isolated and have low growth potential	Population Growth Rate <2 %

The period required for construction of the scheme should also be taken into consideration while computing the design population. Time needed for construction depends on the size of the scheme, logistics, planning and participation of the users. Community water supply schemes should be completed within a reasonably short period. Otherwise the participation of the community cannot be sustained satisfactorily. For design purposes, 1 year construction period after the detailed design should be adopted.

4.5 Population Forecast:

The design population will have to be estimated with due regard to all the factors governing the future growth and development of the project area in the industrial, commercial, educational, social and administrative spheres. Special factors causing sudden immigration or influx of population should also be foreseen to the extent possible.

Based on those factors there are numerous methods for population forecast, which are listed as follows:

1. Demographic method
2. Arithmetic increase method
3. Incremental increase method
4. Geometrical increase method
5. Decreasing rate of growth method
6. Graphical method

The following two methods are more applicable for population forecast in our conditions:

4.5.1 Geometric growth method:

As urban and suburban areas of Terai are rapidly growing towns and cities having vast scope of expansion, geometrical increase method is mostly applicable to forecast the design population in this case.

In this method percentage increase is assumed to be the rate of growth and average of the

percentage increase is used to find out future increment in the population. The population is forecasted by using the following formula:

$$P = P_0 * (1 + r)^n$$

Where, P_0 - the present population.

r - the mean geometric growth rate per annum.

n is the number of years.

4.6 Incremental increase method:

This method should be applied for population forecast in the areas where there are no vast expansion possibilities of the town but population forecasted (i.e. population projected) with geometric method maybe found lesser than the actual. The factors limiting the population growth should well evaluated before applying this calculation method.

$$P = P_0 + n * X + [n(n+1)/2] * Y$$

Where, P and P_0 are the projected and present Populations respectively

X and Y are the average increase and incremental increase in population per year

n is the number of years.

While forecasting the population in both cases the designer has to consider the growth rate by analyzing the census data for the service area instead and not the average district growth rate.

4.7 WATER DEMAND

4.7.1 General

The amount of water required for a rural community depends on factors like the economic level of the community, their health/hygiene awareness and other physical and social aspects. In case of a bazaar, the demand would be higher due to commercial activities and the transient population.

Piped water supplies for communities should be provided adequately for the following purposes:

1. Domestic needs:
2. Institutional needs
3. Public purposes: street washing, sewer flushing, public parks watering etc.
4. Industrial and commercial use
5. Fire fighting
6. Requirement for livestock and poultry
7. Unavoidable waste and losses

4.7.2 Domestic Demand

Water used by an individual for different purpose is referred to as the domestic demand and denoted as liter per capita per day (lpcd). It includes drinking, cooking, washing, bathing, toilets flushing, gardening...

In Nepal the generally adopted per capita domestic needs are presented here after :

Table 2 : Domestic water demand per capita

S.No.	Community Population	Adopted lpcd	Remarks
1.	< 20,000	45	Supply through Public taps
2.	<20,000	70 to 100	Supply through private taps
3.	>20,000 <100,000	100 to 150	Supply through private taps
4.	> 100,000	150 to 200	Supply through private taps

The design of gravity flow community water supply schemes in Nepal, in the past, has taken 45 l as per capita demand as per the recommendation of the World Health Organization (WHO). The provision of 45 lpcd is considered to include allowances for drinking and cooking, personal washing, wastage and leakage, and some portion of the domestic animals demand. Water consumption studies in the country are limited and are based on short duration though some study has shown the per capita consumption in rural area to vary between 20 to 45 liters while in the bazaar it varied between 50 to 70 liters .

In some communities, a source that could supply the recommended per capita water demand may not be located at an economical distance from the service area. The tendency in such circumstances is to seek source(s) away from the community so that the per capita water demand could be supplied. This approach may have grave implications on the cost of the scheme whose operation and maintenance also create difficulties. **In such case, closer water sources should be selected, even though per capita demand may have to be lowered.**

When yield is limited, demand as low as 230 liters per day for a family of 8 to 10 have been considered in the past. Decision on lower per capita demand should be based on the extent of water scarcity and reliability of the closer water source(s). These factors must be carefully evaluated by the designer/surveyor. If the source yield is not adequate, the system may supply 45 lpcd during all other seasons except in dry season. It should however, be kept in mind that the primary objectives of water supply improvement have to be fulfilled.

In such circumstances, other options of water supply such as improvement and protection & use of traditional spring sources as well as rain water harvesting should also be investigated as supplementary supply sources. Traditional spring sources must be protected even in bazaar areas.

4.7.3 Institutional Demand

Institutional demand refers to the water needed for offices, schools, and health posts, in the community. In some case, tourist resorts, local industries like brewery and dairy, may also have to be supplied water from the schemes. Past experience shows that the likelihood of such example are less. In case of such demand the final decision should be made by the Water User Committee. The Committee may allow service if these big users agree to support the community in both the construction, operation and maintenance of the water scheme.

Government institutions deriving service from the water scheme must also support the Water User Committee in operating and maintaining the schemes. In government offices, a standpost should be provided in the court yard. This would also allow the members of the community around to take service from the standpost.

In community water supply schemes priority should be given to supply water to schools and health posts. The following institutional water demand should be adopted:

Table 3 :Institutional Water Demand

Type of Institutions	Demand
School	10 l / student
Health post	1000 l per day if no sanitary facility
	3000 l per day if sanitation facility exist
Health Center	500 l / bed

4.7.4 Livestock Demand

Livestock is an important livelihood component in rural Nepal. It has utilities both as draft animals for tilling land, and as a source of income. In most villages, livestock is taken out for grazing which use the local springs and rivers. Livestock demand may be, therefore, included only if the source yield is more than enough to supply the recommended per capita water demand. Livestock demand however, should not exceed 20% of the design domestic water demand. The water demand for livestock should not be the guiding factor for selecting a source(s).

4.7.5 Wastage and Leakage

In case of community based gravity flow schemes, wastage and leakage are incorporated in the per capita demand and are not considered separately.

4.8 Fire demand

Water required for fire fighting is usually known as fire demand. It is usual to provide for fire fighting demand as a coincident draft on the distribution system along with the normal supply to the consumers as assumed. It is related as a function of population and may be computed from the following formulae:

$$Q = 100 * P^{0.50}$$

Where, Q is the quantity of water in kiloliters per day.

P is the population of the service area in thousands.

If it results more than 1 liter per capita per day, for small cities and towns 1 liter per capita per day can be adopted as fire fighting demand. Only one third of this volume should be added as fire demand storage while determining the capacity of the service reservoir.

4.8.1 Design Water Demand

The per capita water demand for different users when multiplied by the design population gives the design water demand in each category. When the different demands of each type are added up the total design water demand is obtained.

4.8.2 WATER CONSUMPTION PATTERN

Water consumption pattern refers to the variation in the amount of water consumed with respect to time. This pattern depends on geographic location, peoples habits etc. Water consumption varies at different times even in a day, morning, noon and evening. Detailed study of water consumption

pattern is yet to be undertaken in Nepal. Until more specific pattern is obtained, the following consumption pattern should be adopted :

Table 4: Water Consumption Pattern

Hours	% of Daily Demand
05.00 – 07.00	25
07.00 – 12.00	35
12.00 - 17.00	20
17,00 - 19.00	20
19.00 - 05.00	Negligible

4.8.3 TAP FLOW RATE AND PEAK FACTOR

Tap flow rate in a community water supply scheme should be fixed on the basis of the peak demand and convenience of water collection. Peak demand is influenced by the consumption pattern. Generally, one standpost is provided to serve a maximum of 100 users. For this population at a capita demand of 45 lpcd, the standpost should supply 4500 liter water in a day. This would require an average flow of about 0.05 l/s to be maintained in the faucet. The following reasons however, make this flow rate both inconvenient and impractical.

At this flow rate, a gagro (jar) having a Volume of 15 liter would be filled in about 5 minutes. If this flow rate is maintained, the users have to spend more time in the standpost, which becomes inconvenient. This flow rate is also inadequate to meet peak water demand in the morning.

Between 5 to 7 AM in the morning, for example, Table 1: Water Consumption Pattern shows that the tap has to supply 25% of the water demand. In this two hours period, for the same populations of 100, the standpost has therefore, supply 1125 liters, at a flow rate of 0.156 l/s. This rate is three times the average flow rate calculated earlier. ($0.156/0.05 > 3$).

The ratio between this peak flow and the average flow is termed as the Peak Factor.

$$\text{P.F.} = \text{Peak Flow} / \text{Average Flow.}$$

At the flow rate of 0.156 l/s, the gagro of 15 liter capacity will be filled in about one and half minutes. This filling time is more convenient and may be acceptable in the rural communities. Higher flow rate (> 0.156 l/s) can be maintained in the tap which will also fill the vessel faster. Higher flow rate may lead to wastage of water if the faucet is left open. Higher flow rate would also require large size distribution pipes which will mean higher project cost. If pipe sizes are higher the desired residual head may also not be achieved. (see section on residual head).

At each standpost, therefore, the design population and its total design water demand should be determined. This water demand may then be converted in terms of the average tap flow rate which when multiplied by the peak factor three yields the required tap flow rate. For an assumed population distribution, the calculation of the flow rate is shown in the following table.

Table 5 : Tap Flow Rate for Assumed Population Distribution

Standpost No.	Design Population (p)	Average Demand (q) lpd	Total Demand (p \times q=Qt)	Flow Rate Average l/s	Peak Flow Rate l/s

3	83	45	3735	0.043	0.129
4	97	45	4365	0.05	0.15
2	75	60	3375	0.031	0.117
1	50	45	2250	0.026	0.078

For practical consideration it is not desirable to design and construct systems with different flow rate in each tap. This causes difficulties in flow adjustment. The following criteria (Table 3 Suggested Tap Flow Rate) has been suggested based upon the design water demand to standardize the tap flow rate. As evident from the table when the population served is more or less than the desirable 100, the peak factor changes but remains within the range of three.

Table 6 Suggested Tap Flow Rate

Design Water Demand (l)	P.C. Rate (lpcd)	Tap Flow (l/s)	Peak Factor (P.F.)	Population	Type of User
4500 - 6000	60	0.20	3.8 - 2.88	75 - 100	Bazaar
3300 - 4500	60	0.15	3.92 - 2.88	55 - 75	Bazaar
3375 - 4500	45	0.15	3.84 - 2.8	75 - 100	Village

In the hills, it might not always be practicable to serve 100 users by one standpost because the houses are dispersed. In such case, the standpost may have to serve lesser users. When the number served is less, the tap flow required will also be less. In such cases, the faucet can supply lower flow rate. The lowest tap flow rate flow should be 0.1 l/s. This rate should be used when the design demand is less than 3300 l/day. Such situation is likely to be encountered along the transmission main when few houses may have to be supplied. In such case required average flow can be tapped from the transmission main. A small storage tank with float valve should be provided with a standpost.

4.8.4 Static Head

The static head in a pipeline refers to the difference in elevation between a point considered in the supply line and the open higher end of that pipeline where the water is exposed to atmospheric pressure. This, in most of the cases, can be a Storage Tank or a Break Pressure Chamber. Static head occurs in the pipeline when a pipe flowing full is closed and the flow velocity becomes zero.

Pipes manufactured from various materials come in different sizes and pressure classes according to the pressure they can withstand under normal working conditions. The choice of pipe for a particular situation is defined by availability, resistance to corrosion and mechanical damage, and pressure limit. The ease with which pipes can be transported and joined also influences its selection.

Locally manufactured High Density Polyethylene (HDP) pipes are mostly used in community water supply schemes in Nepal. In rocky terrains and when the static water pressure is likely to be very high, HDP pipes are not suitable. GI pipes and in special cases high pressure steel pipes may be adopted whenever static head is higher than 10 Kg / cm².

4.8.3.1 Transmission Main

The static pressure in the transmission main should be as follows :

- for HDP pipes pressure class 10 kg/cm² not exceeding 100 m
- for GI pipes pressure class conforming to BS 1387 medium grade not exceeding 160 m

The maximum pressure for G.I. pipes shall not exceed 16 kg/cm² since most valves and fittings are rated for this pressure. If the static pressure exceeds 16 kg/cm², the pipes should be welded together to minimize leakage and special type of fittings should be used.

In the transmission main, the maximum static pressure should not exceed the noted pressure of pipe used.

4.8.3.2 Distribution Line

In a distribution system, the flow changes continuously due to the opening and closing of faucets. These changes may create high-pressure waves due to water hammer. This may affect pipe joints, threads, and fitting and in extreme cases, even the pipeline may burst.

The effect of water hammer can be minimized by considering appropriate velocity of flow and by installing brass taps (slow closing faucets) and valves. However, the continuous change of pressure in a pipe system cannot be avoided. The greater the pressure variations are, the quicker are damages to the pipe material and associated fittings.

Faucets can be affected if velocity changes frequently. Faucets are the most frequently used component of water supply scheme, hence they should withstand frequent handling while remaining water tight under all working conditions. Self-closing faucets with almost instantaneous closure mechanisms such as the Jayson Taps should not be used in distribution mains where pressure is high. A Jayson tap should be only used when the static head at the standpost is not more than 20 m with a tap flow of 0.15 l/s.

For these reasons, the maximum pressure in the distribution main should not exceed a maximum static pressure of 60 m even where pipe material with a permissible working pressure of 10 kg/m² is used. For pipe sections aligned along areas and gullies that would not be inhabited in the future, the acceptable static head can increase up to 80 meters.

4.8.4 Residual Head

The dynamic head remaining at the end of a pipe section is referred to as residual head. The residual head at a standpost, BPC or storage tank is required to account for :

- Appurtenance head loss, which is caused by the design flow rate passing through a faucet, float valve etc.
- Pipe installation loss, which is caused when the design flow rate passes through the pipe within the standpost structure. .
- Safety head, to provide safety against survey inaccuracies.

For public tap stand posts, the following residual head has been recommended.

Table 7 : Recommended residual head

Structure	Residual Head (m)
-----------	-------------------

Standpost ideal	5-10
Standpost acceptable	up to 15
BPCs and Storage Tanks	10-15

If the residual head exceeds the specified values at the standpost, the excess head over the minimum required should be controlled by installation of a ferrule at the main line or an orifice near the standpost or a flow regulating key at the standpost (Used in Western Development Region).

If the residual head is high, excess head should be burned off by installing an orifice plate. The charts for hydraulic calculations is given in Annex G of DESIGN GUIDELINES FOR COMMUNITY BASED GRAVITY FLOW RURAL WATER SUPPLY SCHEMES VOLUME - II : DESIGN CRITERIA. Head loss through orifice is shown in Annex H.

4.8.5 Design of Orifice

There may be points in a system where the residual head at a discharge point is excessively high. This can particularly happen to tap stands. For such cases, it is possible to install a device (orifice) which creates high frictional losses in only a short length of pipeline. Design of such orifice can be done by this formula:

$$Q = CA\sqrt{2gh}$$

Where,

Q=flow

C= Coefficient of Orifice(generally-0.6)

A=cross-sectional area of orifice

g=gravitational acceleration

h=head loss through orifice

Knowing value of Q,C,g,and h it can be calculate the area of the required orifice and then diameter of the orifice.

Distribution network should be designed for the following minimum residual pressures (head) at ferrule points:

Single storey building	5 m
Two-storey building	10 m
Three-storey building	15 m

4.8.6 Water Hammer in Gravity Flow Water Systems - A Surge Pipe as a Remedy

When a tap stand faucet or globe valve is shut, the velocity head (flow) is converted into pressure head. The excess pressure due to water hammer is additive to the normal hydrostatic pressure in the pipe and depends on the elastic properties of the liquid and pipe and magnitude and rapidness of change in velocity. This increased pressure head is felt at the faucet or valve and then reflected back up the distribution main. This wave oscillates back and forth between the tap stand and the upper tank until the energy of the wave is dissipated by friction. This increased pressure head (greater than the static head) can cause damage to the pipeline and fittings.

Water hammer has not been thoroughly considered in rural water supply as its long-term effects are hard to quantify and the measurement is difficult. However, field tests¹ have shown that a typical

brass tap with 60 meter static pressure recorded 120 meters of water hammer under normal village use, indicating that steps should be taken to minimize this problem.

The degree of water hammer is a function of the rate at which flow is stopped at the downstream end of the pipeline, how the pipeline diameter decreases in the direction of flow, and also on the elastic properties of water and pipe material. Water hammer is a case-specific characteristic and only general guidelines can be recommended. Educating users on slow closure of faucets is recommended, but can not realistically be expected to solve the problem.

Two steps are recommended to minimize the hammer effect:

Avoid laying short lengths of small diameter pipe from a larger distribution main to the tap stands.

Install a surge tank to absorb the pressure wave created by sudden water flow stoppage at tap stands with static heads greater or equal to 30 meters.

DO NOT locate the surge tank closer to the tap stand than 5 meters: it will cause jet-like flow to occur for a few seconds until the surge pipe has depressurized.

In the field this surge pipe are able to completely eliminate water hammer at a tap stand with 60 meters of static head and a flow of 0.14 Lps. Optimal results were recorded when the surge pipe was placed approximately 5 meters away from the tap stand. Likewise, the surge pipe will be ineffective if it is located much further than 5 meters away. An optimum surge pipe was found to be a 1.5 meters length of 50mm □ 10 kgf/cm² HDP pipe.

The effects of water hammer are much more severe for Jayson faucets since near instantaneous closure occurs. For this reason, Jayson faucets should only be used when the tap stand is directly off the RT (minimum static head).

5. SUMMARY OF DESIGN CRITERIA

Table 8 : Domestic Water Consumption Figures

S.No.	Community Population	Minimum lpcd	Remarks
1.	< 20,000	45	Supply through Public taps
2.	<20,000	70 to 100	Supply through private taps
3.	20,000 to 100,000	100 to 150	Supply through private taps

Table 9 : Institutional Water Consumption Figures

-	School	10 l/d per student
-	Health Post	1000 l/d for out patients only and without improved sanitary condition e.g WC 3000 l/d for out patient only with improved sanitary condition

Table 10 : Water Demand Projections

-	Present Water Demand	at the time of survey
-	Base year Water Demand	when construction is completed and water scheme is commissioned.
-	Design Water Demand	After 15 or 20 years service life

5.1 Safe yield = 0.9 * measured source yield at the peak of the dry season

Table 11 : Water Consumption Pattern

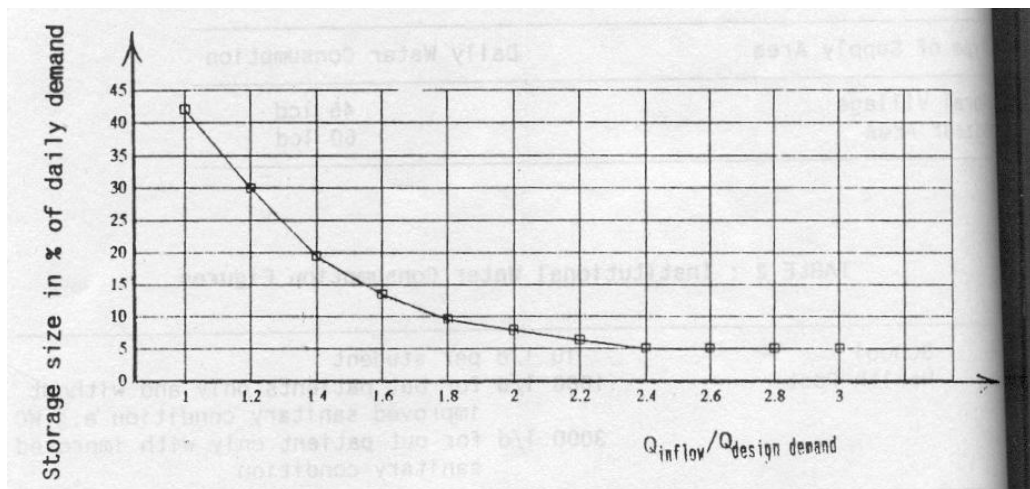
Time	% of daily demand
05 am to 07 am	25

07 am to 12 noon	35
13 to 17	20
17 to 19	20
19 to 05 am	Negligible

5.2 Peak Flow Factor for the above consumption pattern = 3

5.3 Storage Tank Capacity

The storage tank capacity should be estimated on the basis of following graph:



5.4 Flow velocity

a) Minimum Velocity

On stream intakes, if no sedimentation is provided, the minimum flow velocity shall be:

- in down hill stretches 0.8 m/s
- in up-hill stretches 1.0 m/s

If a sedimentation is provided, the minimum flow velocity can be reduced to:

- in down hill stretches 0.4 m/s
- in up-hill stretches 0.5 m/s

b) Maximum Velocity

- desirable 2.3 m/s
- maximum 3.0 m/s

Table 12 : Suggested Tap Flow Rates

Design Water Demand (l/d)	Peak Flow		Remarks
	Rate (l/s)	(l/hr)	
4500 - 6000	0.20	720	Bazaar
3300 - 4500	0.15	540	Bazaar
3375 - 4500	0.15	540	Village

When the design demand is less than 3,300 l/day, the tap flow is 0.1 l/s.(360 l/hr)

5.5 Static Head

a) Transmission Main

- For HDP pipes pressure class 10 kg/cm² not more than 100 m
- For GI pipes pressure class conforming to BS 1387 medium grade not more than 160 m
- For more than 160 m use welded joints for pipe & fittings

b) Distribution Lines

- Acceptable 60 m
- Exceptional cases 80 m
- With self-closing taps (e.g. Jayson Taps) 20 m

Table 13 : Residual Head

Structure	Residual Head	
- Standpost	Desirable	5 m
	Acceptable	up to 15 m
- BPCS and Storage Tanks		10 to 15 m

Table 14 : Maximum Distance of Standpost Location from Users

Walking Distance	Desirable	In Exceptional Cases
- horizontal	150 m	250 m
- vertical	50 m	80 m

5.6 Design population per standpost : 100 inhabitant

DESIGN GUIDELINES FOR

IRRIGATION

1. TECHNICAL CHOICES

During the WUMP, farmers' preference for irrigation technology will be recorded but the final technical choice will be kept open.

2. MICRO-IRRIGATION PROMOTION

Open canal irrigation is an age old tradition in Nepal which despite its success to provide minimal food security has many drawbacks such a very poor water efficiency and very hazardous impact on slope stability.

Micro-irrigation has gained popularity and is actively promoted by the newly established "Non-conventional irrigation" unit of the department of irrigation.

The very specificity of RVWRMP to combine water supply and irrigation improvement offer an excellent opportunity to use piped water for both purpose.

Several hybrid systems or multiple use water systems are presently promoted in Nepal by the ADB supported project " Economic and Social Inclusion of the Disadvantaged Poor through Livelihood Enhancement with Micro-Irrigation ".

These systems will be strongly supported by RVWRMP.

3. CONVENTIONAL OPEN CANAL IRRIGATION

The support to these systems are usually the responsibility of the Department of Irrigation recent changes in the Irrigation Policy suggest that DOI officers are responsible for all projects over 50 ha in the hills and 200 ha in the Terai and that responsibility for anything less than that devolves to the DDC, therefore becoming the responsibility of the DTO.

In the hills, these open canal irrigation are very often unstable and threatening the slope stability. Their improvement is costly and requires often major involvement of contractors. The use of concrete structures makes them very difficult to maintain and repair by their users.

It is therefore unlikely that RVWRMP will promote such technology unless the benefits prove to be commensurate to the disadvantages.

When a micro-hydro scheme is feasible, open canal with concrete lining and concrete structures may be envisaged.

4. IDENTIFICATION SURVEY AND DEVELOPMENT OF A SCHEME IMPLEMENTATION PLAN (SIP)

Based on the WUMP endorsed by VDC and DDC, an identification survey for a specific irrigation scheme will be initiated which will refine the characteristics of the scheme.

Meanwhile the Support Organisation will prepare with the Users Committees (equivalent to Water User Association) a Scheme Implementation Plan (equivalent to a Community Action Plan but more specific

about agriculture aspects). This plan will specify targets on irrigated area, cropping intensity, yield, and the details of UC's institutional development plan and should explore the potential benefit expected from the irrigation development.

The Support Organisation will also ensure that the registration of the Users Committees (Water User Association) with the District Water Resources Management Committee is complete and valid.

The District Management Committee will review the SIP and request correction and amendment as required.

5. APPROVAL OF THE SIP AND IDENTIFICATION SURVEY BY THE UC AND VDC.

After completion of SIP and the identification survey report, the report has to be formally approved by the UC, the VDC.

6. DETAILED SURVEY & DESIGN AND ECONOMICAL & FINANCIAL ANALYSIS

Once the SIP and identification survey report is approved, a detailed survey and design phase is initiated to prepare a complete bill of quantity detailing the contribution of the UC (WUA) and skilled manpower/contractors requirements.

A financial and economical analysis has to be prepared for irrigation system not integrated into the water supply systems and costing more than 1,000 EUR/ha for new schemes or 500 EUR/ha for rehabilitation of old schemes.

The UC (WUA) can start their contribution as soon as the detail design is finalised.

The design report should be systematically reviewed by the PSU staff who will request correction and amendment as required.

7. APPROVAL OF INVESTMENT COST BY DDC

Based on the detailed cost estimate and recommendation from the District Management Committee, the District Development Committee approves the irrigation development proposed.

8. DESIGN REFERENCES

The PDSP manual (UNDP NEP 85/103/World Bank -1990) used by the Department of Irrigation is the core reference for design of irrigation infrastructure.

This manual is completed updated with the following documents:

Guidelines for Irrigation Systems in the Hills and Valleys: Department of Irrigation – January 2006

Guidelines for designing and evaluating surface irrigation systems: FAO IRRIGATION AND DRAINAGE PAPER 45 – FAO 1989 - M-56 ISBN 92-5-102879-6

Guidelines for Planning Irrigation and Drainage Investment Projects: Technical Paper 11 – FAO 1996

Pressurized Irrigation Techniques – FAO – 1999

Design and Operation of Smallholder Irrigation in South Asia: WORLD BANK TECHNICAL PAPER NUMBER 256.

9. PRIORITY INTERVENTIONS FROM RVWRMP

9.1 Multiple Use System (MUS)

Pipe and structures serving both water supply and irrigation.

9.2 Canal lining and stabilisation

Lining with geo-textile, clay&cement, slates when appropriate

Stabilisation of slope and canal with gabion work and bio-engineering.

9.3 Removing cross-drainage bottleneck with appropriate technology

Use of pipe and light structures will be preferred as villagers have to construct and maintain the structures.

For more details on RVWRMP's irrigation concepts refer to the Project's "**Irrigation Implementation Guideline**".

DESIGN GUIDELINES FOR MICRO-HYDRO

RVWRMP will implement design standards of GON, Ministry of Environment, Science and technology (MEST), Alternative Energy Promotion Centre (AEPC) for technical design and financial feasibility analysis of Micro-Hydro schemes. RVWRMP will conduct survey/study, prepare detailed design report, business plan and financial analysis by mobilizing its own human resources or hiring consultants pre-qualified by AEPC. RVWRMP will acquire consensus of AEPC to carryout the detailed feasibility study with involvement of RVWRMP own human resources who has serious work experiences in design, implementation, socio-economic and management of Micro-Hydro schemes.

The following guidelines and manuals of GON/MEST/AEPC will be adopted for design of micro-hydro schemes:

1. GON/MEST/AEPC: Reference Micro-hydropower standard
2. GON/MEST/AEPC: Guidelines for Detailed Feasibility Studies of Micro-Hydro Projects
3. GON/MEST/AEPC: Subsidy for Renewable Energy and Renewable Energy Delivery Mechanism
4. GON/MEST/AEPC: Guidelines for Power Output Verification from Micro-Hydro Plants

The following guidelines and manuals will be referred for preparation of the detailed technical design:

1. Adam Harvey, Intermediate technology Publications: Micro-Hydro Design Manual
2. Intermediate Development Group (ITDG): Civil Works Guidelines for Micro-Hydropower in Nepal
3. ITDG: Guidelines for Micro-Hydro Electrical Installations
4. AEPC/IREF; Flow Verification Guidelines
5. AEPC: Guidelines for Preliminary Feasibility Studies of Micro-Hydro Projects

Other reference books are,

1. International Centre for Integrated Mountain Development (ICIMOD): Manual for Survey and Layout Design of Private Micro-Hydro Plants
2. Jeremy Thake, ITDG: The Pelton Turbine Manual; Design, Manufacture, and Installation for Small-Scale Hydropower
3. AEPC: Micro-Hydro Operator Training; Course Directory
4. AEPC: Micro-Hydro Operator Training; Training Reference Book
5. ITDG: Management Guidelines for Isolated Micro-Hydro Plants in Nepal
6. AEPC: Micro-Hydro Year Book of Nepal
7. REDP: Environment Assessment Guidelines
8. REDP: Environment Management Guidelines

DESIGN GUIDELINES FOR MUS

Introduction

For rural and peri-urban households water is required for various needs which can be broadly categorized as domestic —drinking, cooking, cleaning, and sanitation—and productive —irrigation for gardens and field crops, livestock raising, brick making, food processing and other enterprises. These productive activities make a major contribution to rural communities in income generation and food security.

It has been long recognized that locally available water is used simultaneously for both domestic and productive purposes. MUS by design (MUS-D) are water systems designed whereby a single water system fulfills both domestic and productive water needs. As such, it takes into account the water demands for each of those components. Because MUS includes productive use the community is more likely to invest in the installation and maintenance required for the sustainability of their water system.

Rural Village Water Resource Management Project (RVWRMP) is a joint project of government of Nepal and Government of Finland. Accordance to the visions encompassed in the APP and 10th five year development plan of Nepal focus has been given to the non-conventional irrigation schemes. MUS is also a non conventional irrigation scheme and has been observed very effective for the poor, vulnerable and marginalized people. Seeing the effectiveness of such MUS schemes, RVWRMP has going to scale up the MUS concept by implementing the MUS schemes on the different nine districts (Darchula, Baitadi, Doti, Dadeldhura, Bajhang, Achham, Bajura, Humla and Dailekha) of Far-Western and Mid-Western regions in close coordination with IDE in Doti, Dadeldhura, Dailekha and Humla.

Objectives

The goal of MUS is to explore ways to provide required water for domestic and productive uses of small-scale water supplies by design for the improvement of poor people's livelihoods through more productive use.

There can be a number of MUS designs depending on the type of water source, its location in relation to the community, water quality and desired/available technologies. Examples include:

- Spring water distributed by a gravity system
- Treatment and supply of stream/river water
- Lifting and distribution of groundwater/lake water
- Rain water collection and distribution

By definition, MUS might be the scheme which may cover different types of needs of the rural community by providing safe drinking water, irrigation, rural electricity from Pico-hydro and micro-hydro powder, fisheries, poultry farming and other domestic enterprises like brick making,

paper making etc. But all these types of integrations has not been seen on previous MUS schemes and now RVWRMP has planning for the integration of drinking water, irrigation and pico-hydropower or micro-hydropower as far as possible. For the design guidelines of pico-hydro and micro-hydro power, it will be included on design guidelines of micro-hydro power. Other design guideline of MUS is as below and almost same as that of gravity drinking water supply systems except micro-irrigation technologies and its demand considerations. So, its design guidelines are almost same except for some technical considerations and structures.

Design Guidelines

1. Population Calculation

Once the present population is calculated, the design period and population growth rate are known, the benefited population at the end of the design period can be calculated by the following mathematical formula.

$$\begin{aligned} \text{Present Population} &= P \\ \text{Base Year Population} &= PB = P (1+r)^n \quad \text{where, } n=2 \\ \text{Design Population} &= Pn = P (1+r)^n \quad \text{where, } n=22 \end{aligned}$$

Where,

- Pn = projected population at the end of the project period
- PB = Base year population
- P = present population
- r = annual population growth rate in % and
- n = number of years
- $(1+r)^n$ = growth factor

(Growth rate and growth rate factor is considered as per district basis but it should be considered if community basis data is available)

District/ G.R/G.F	Darchula	Baitadi	Dadel- dhura	Doti	Bajhang	Humla	Bajura	Achham	Dailekha	Kailali
Growth rate	1.84	1.59	1.91	2.15	1.84	1.6	1.68	1.57	1.83	3.92
Growth factor	1.5	1.41	1.52	1.43	1.49	1.42	1.44	1.41	1.49	2.28

2. Water Demand Calculation

Per capita water consumption/demand calculation will be based on:

- i) 45 l/person/day, for domestic uses on rural area.
- ii) 800 l/day/HH, for productive uses on rural area.

In MUS schemes, institutional water demand is considered same as that of drinking water supply systems and livestock demand also included on top of population demand (45 l/cap/day) if the source yield is exceed enough to supply the recommended per capita water demand. Livestock demand however, should not exceed 20 % of the design domestic water demand. The water demand for the livestock should not be the guiding factor for selecting a source.

The water consumption pattern depends on various factors but for domestic uses referred same as that of drinking water supply as below:

Hours:		% of daily demand:	
5:00 AM	7:00 AM	2	25.0%
7:00 AM	12:00 AM	5	35.0%
12:00 AM	5:00 PM	5	20.0%
5:00 PM	7:00 PM	2	20.0%
7:00 PM	5:00 AM	10	0.0%

The productive water consumption is considered depending on the farmer's irrigation practice on high value crops on their fields that means twice a day (in morning time and evening time).So, consumption pattern is;

Hours:		% of daily demand	
5:00 AM	8:00 AM	3	50.0%
8:00 AM	12:00 AM	4	0.0%
12:00 AM	4:00 PM	4	0.0%
4:00 PM	7:00 PM	3	50.0%
7:00 PM	5:00 AM	10	0.0%

3. MUS Types:

Depending on the amount of water available in the source (scarce, moderate, and abundant), three types of MUS can be constructed:

TYPE A: Continuous Flow System

TYPE B: Seasonally Controlled System

TYPE C: Year-round Controlled System

TYPE A: Continuous Flow System

This type of MUS is built if the safe discharge at the water source is more than 1.5 times the projected water demand. Water is supplied throughout the day from the tap-stands without regulating the flow in the main tank. However, this type of system is not recommended if the household number exceeds 40 and/or the pipe network is more than 4 kilometers long.

TYPE B: Seasonally Controlled System

If the flow of the water source is not adequate to meet the design demand throughout the year, this seasonal design must be adopted to ensure domestic water supply in the dry season. There are two separate water tanks – one for domestic and one for productive uses. Water from the source is first supplied to the domestic water tank. Once it is filled, the surplus water will be directed to the productive water tank beside it. Such a design allows first priority for domestic water use. There will be two separate distribution pipelines – one leading to tap stands and the other to irrigation off-takes. As far as practicable, both the domestic and productive pipelines will be laid along a common trench. Tap stands are located in between houses to serve domestic demand. On the other hand, off-takes are constructed approximately at the center of the irrigation field of few landowners (on average 3-6 households).

Water distribution is controlled from the outlets of the two main tanks, depending on the water availability during different seasons of the year. Although, this type of design is relatively more costly due to the two tanks and distribution systems, the design removes the potential conflict between domestic and productive uses by prioritizing domestic use. This is the most common type of system built in Nepal to date.

TYPE C: Year- round Controlled System

If the water source is just enough to meet the design demand, Type C is recommended. This system is similar to the continuous flow system in terms of the single main tank and pipe network, however in addition, each household has a storage tank at the house. Based on a community-developed schedule, house tanks are filled on a turn-by-turn basis and the household members choose how much water to use for each purpose.

Recommendation

The source yield has been varied seasonally in our most of the cases and MUS design mostly depends on the source availability. However MUS always considers domestic water as a first priority and intends to supply the domestic water as on the system of continuous systems of drinking water supply so seasonally control system is recommended as far as possible.

Therefore MUS schemes should be designed and operated as continuous system, whenever possible.

4. MUS Schemes Components

The major structures of the MUS are the intake, storage tanks, and water outlets (Multiple use Tap stand and off take). Depending on the alignment, some minor structures such as a break pressure tank, washout, air valve, or gully crossing might also be required. Every structure is constructed according to strict quality control mechanisms supervised by the team of community organization's technicians and the District Management Committee (DMC) representatives.

Intake

The structure made to capture water from the source is called the intake. It is recommended to select spring water sources as often as possible because their water quality is often better than surface water sources. As a result, water treatment is not generally required, which reduces the investment and recurrent costs. Spring intakes are normally a box-like structure with a single or double chamber. The intake should be constructed in such a way that it is easily accessible for regular maintenance, protects the source from surface runoff contamination, deters animals from approaching it, and protects from landslides and erosion. All intakes are provided with proper washouts and air valves. In the hills of Nepal, the spring intake is usually built with stone masonry and an RCC slab cover.

Storage Tanks

Storage tanks are necessary to balance the supply and demand of water. While the supply of the source is uniform throughout the day, consumption has peaks during the morning and the evening hours. Thus, if the yield of the source does not meet the demand as per the consumption pattern, storage tanks are required.

For seasonally regulated systems both the Modified Thai Jar (MTJ) and Ferro-cement lined tank (FCL) are used for water storage. However, for continuous flow and year round controlled systems only the MTJ model is used. In such cases, more than one jar may be needed to meet the required storage volume. To make a single tank other type of RVT can be constructed to economize the system. The necessary tank size is determined during the design phase and is dependent on the supply and demand of water at different times of the day. After calculating the volume of storage, the nearest larger standard size is chosen.

The tank site should be both technically and socially feasible. It should be built on stable ground not prone to landslides and flooding and there should be easy drainage of any overflow. Often, communities are proud of their tanks, so the tank location must be fixed in close consultation with the beneficiary households. It is recommended to built the tank as close to the village as possible to ensure better care in operation and maintenance. Suitable fencing has to be provided around the tanks for their protection.

Water Outlets

Two types of water outlets, tap-stands and offtakes, are constructed for domestic and irrigation use respectively. Every outlet is provided with two taps for better service. In each outlet a flow regulator balances and adjusts the flow rate. One domestic tap-stand is designed to serve 4 – 6 households. Likewise, one offtake provides irrigation to a 500-1000 m² area depending on the crop season and type of micro irrigation used. Tap-stands are built in locations to maximize equity in distance for beneficiary households. Offtakes are located approximately in the center of several households' crop fields. The number of offtakes and tap-stands depend on the concentration of the houses and field to be irrigated. Usually each tap-stand and offtake will have a service coverage between 3-6 houses and 4-7 crop fields respectively. The UC in consultation with the CO survey team decide the location of the outlets. The following basic criteria have to be met while choosing outlet locations:

Maximize equity in distance to households/farms.

Stable ground

Good accessibility

Easy drainage of waste water

Not prone to damage by flood or landslide

Land for the structure and access walkway is available free of cost. (The landowner must provide their land contribution in writing during the feasibility study.)

Both types of outlets are constructed using a special mould

PIPELINE

Same as that of drinking water supply systems except two line systems on distribution networks.

Transmission Line

Same as that of drinking water supply systems.

Distribution Pipeline

The main difference with the drinking water supply and MUS system is due to the distribution network of pipelines also. In MUS system, two pipe lines are provided to supply the water for domestic uses and productive uses separately. Domestic pipe line starts from domestic use reservoir tank to the houses of the users and productive pipe line starts from productive use reservoir tank to the field of farmers. Distribution pipe sizes are determined by the tap flow rate when the water is supplied through the stand posts and off-takes; it should supply water at adequate residual head on outlets so that the micro sprinkler (low head sprinkler) should run effectively as well. Sometimes Break Pressure Tank (BPT) and service tanks are needed as per the location of settlements.

Micro-irrigation Technologies (MIT)

MIT are the very important in the water distribution system and which provides the efficient use of water and also a means of income generation. So, Productive uses are designed depending upon its characteristics so drip irrigation/micro-sprinkler irrigation etc should be linked with the outlets of productive uses distribution systems.

Flow Velocity

Minimum flow velocity should not be lesser than the 0.3 m/s and maximum flow velocity should with in the 3.0 m/s

Residual Head

Residual head should be more than 7 m for tap stand post and off takes and 10 to 15 m. for BPCs and Storage Tanks

STRUCTURES AND SYSTEM APPURTANCES

Break Pressure Chamber
Interruption Chamber
Gully crossing
Suspended crossing
Air valve
Wash Out
Sectional control Valve
Valve Chamber and
Fencing

Same as that of drinking water supply systems

Note:

Refer **Design Guidelines for Planning, Designing and implementing gravity fed piped Multiple Use Water Systems-** 2006 Prepared by IDE/Nepal, Katmandu.

DESIGN GUIDELINES FOR ENVIRONMENTAL SANITATION

Environmental sanitation in RVWRMP will include sanitation and hygiene improvement activities at household, community and school levels. The household level sanitation activities mainly focus on latrine construction, solid waste management and personal hygiene behaviors. Design of latrine will consider appropriateness with the culture of the community, climate and availability of local materials; however the design must ensure safe management of excreta and secured uses of faeces and urine.

Improved Sulav Latrine (ISL) will be the common type of latrine at household level in the project. Improvement in Sulav Latrine was made from experiences of RWSSSP (Lumbini area) which supported for over 40,000 households for their latrine construction. The design of ISL should adopt the standard decomposition period of two years for safe handling of faeces to use as manure in agricultural fields. The ISL should have water seal pan and simple fittings/mechanisms for altering operation of the pits. Superstructure of the latrine could be low-cost build using local materials and technology. The project will focus on promoting the technology up to pan level including septic pit/container to ensure the safe management and use of faeces and urine.

RVWRMP will also study and improve indigenous technologies of communities formulating them to be more hygienic and suitable to their practice, culture, climates and water availability. For example: improvement of traditional dry latrines for mountain communities as well as water scarce areas. The project will also pilot for the appropriateness of ECOSAN latrines to vegetable farming entrepreneurs.

School latrines will be designed separately for girls and boys. Each latrine will have urinal section and W/C cabins. Number of urinals and cabins will depend upon the population of students. Sulav systems will be adopted for septic pits; or attached to Bio-gas plants if feasible in the climate and possible to make coordination with agencies supporting biogas promotion.

The environmental sanitation includes use of tap stands' tail-water for irrigation or safe disposal to improve hygienic environment around the tap stands. It also includes management of surface run-off in the village, if necessary for improving environmental condition of the settlement.

Possibilities of appropriate technologies and systems for on-site solid waste management, for utilization of waste or safe disposal or recycling to improve environment conditions of households and settlements of rural areas will be studied and tested as pilot schemes in various communities and regions of the project area.

DESIGN GUIDELINES FOR SOIL CONSERVATION & WATERSHED MANAGEMENT

Design Guidelines for Soil Conservation & Watershed Management will be developed based on experience from the Project's working areas and on practices and guidelines used by Department of Soil Conservation and Watershed management (DSCWM), DISCOs and other stakeholders.

Refer to Working Strategy of Soil Conservation and Watershed Management 2061 (Bhutatat ra jaladhar samrchan bibahag ko karyabidhi 2061).

*For more details on the RVWRMP's approach on Soil Conservation and Watershed Management refer to **Paper 38** of this manual and the Project's **Soil Conservation and Watershed Management Guideline** for details of possible activities.*

Step 11a - Preparation of CAP and approval by UC/Users, Commitment and approval from VDC

GUIDELINES FOR COMMUNITY ACTION PLAN (CAP)

1. Introduction

The Community Action Plan (CAP) is a process, in which the UC and users make a detailed plan for action, with the help of the SO. The CAP is prepared mainly for the Implementation Phase. Preparation of CAP starts immediately after the users have approved the tentative scheme layout, and ends after the agreement for the Implementation Phase. The UC should submit the CAP to the DDC. The monitoring team will also participate in the CAP preparation meeting.

2. Purpose

The purpose of the Community Action Plan is to:

1. Ensure that the construction work will be completed within the planned time.
2. Help the UC in community mobilisation activities.
3. Make the users aware of their role and responsibilities in different stages of the scheme, e.g. transportation of the materials to site, collection of local materials, digging of pipeline, management of the store and material procurement.
4. Divide the tasks among the members, so that women/ men and all ethnic groups will have important tasks but neither group will be overburdened.
5. Make implementation calendar of the scheme.

3. Process

The process should be as much participatory as possible.

- Make a draft CAP available to users to ensure that CAP content and implications are clear to all. (See annex)
- Call a mass meeting. The meeting should be organized cluster wise if the scheme is big. Give both written and oral information to all women/men and all ethnic groups about the meeting. There should be one male and one female representative invited from each household. All ethnic groups/castes living in the community as well as all clusters should be well represented. Make sure that the time and venue of the meeting are suitable for all. At least 2/3 of the households should be represented in the mass meeting. If there are fewer representatives or if women are in a minority or if some ethnic group/caste is not represented, postpone the meeting until the representation is adequate and equal.
- Explain the objectives of the meeting. Ensure the participation of all male and female representatives and of all the ethnic group/caste representatives.
- Discuss and finalise plans for activities one by one. Give adequate time for discussion, presentation and decision-making.
- Encourage both men and women and all ethnic groups/castes for discussion and decision making.
- All the decisions should be registered by the UC and get signatures of all the participants.

The UC should prepare a list of all the participants showing the gender and all ethnic group/caste and profession. The secretary has to record everybody who addressed the meeting (gender and ethnic group/caste).

4. When it is prepared?

Basically it is prepared during preparatory phase and implementation phase. One day CAP preparation training will be given to UC members during the preparatory phase. Then UC will prepare draft CAP focusing on some of the activities such as UC registration, detail technical survey, fund collection etc. The scheme related training namely UC orientation on project, gender and social inclusion, CAP, hygiene sanitation and education, financial management, pre and post construction seminar etc are also dealt during the CAP preparation. Accordingly, next CAP is prepared during the implementation phase by mentioning of construction activities of scheme such as purchasing of non local material and collection of local materials.

With the assistance of SO staff, the UC prepares the draft CAP clearly mentioning the what, when, where, who and how of the activities planned for the implementation phase. The UC has to present draft CAP to the mass meeting. The VDC contribution should also discuss during the meeting and finalize it. Focusing on technical aspect the UC has to clarify about the detail cost estimate of the scheme. The SO can facilitate to UC to present the CAP to the meeting. The meeting will discuss about the capacity of implementation of scheme including cash and kind contribution and handling and managing of the scheme. The CAP can also be revised if needed.

After discussion and clarification of the queries by the meeting, the CAP will be finalized on consensus basis and utilized by UC.

Example of

CAP FOR A WATER RESOURCES MANAGEMENT SCHEME

Community Action Plan is prepared for the activities to be undertaken in the Implementation Phase. Basically, CAP contains the training and workshops (table 1) and the direct construction related activities (table 2).

Table 1. Training and Workshops

Sn.	What? Activities to be done	Total Parti.		Ethnicity	Total Days	When?		Where? (Place)	How? How to perform?	Who? Responsible Person/SO	Supported by Person/SO
		M	F			Starting Date	Completion Date				
1	Pre-construction seminar of UC										
2	Scheme level technical trainings (LLB,VMW, RWHM,BSM)										
3	During-construction seminar of UC										
4	Review meeting of FCHV/MG										
5	Scheme level social trainings (GSI, HSE, Book keeping and other										
6	Post-construction seminar of UC										

Table No. 2: Construction related activities

Sn.	What? Activities to be done	Human resource		Total Days	When?		Where? (Place)	How? How to perform?	Who? Responsible Person/SO	Supported by Person/SO
		S. Labour	Labour		Starting Date	Completion Date				

1	Procurement of construction materials									
2	Transportation of construction materials: * Cement									
	* Pipes									
	* Fittings/Tools etc.									
3	Collection of local materials: * Stone									
	* Boulders									
	* Sand									
	* Others									
4	Trench digging									
5	Laying of pipe									
6	Filling the trench/pipeline									

Sn.	What? Activities to be done	Human resource		Total	When?		Where? (Place)	How? How to perform?	Who? (Responsible Person/SO)	Supported by Person/SO
		Skilled Labor	Labor	Days	Starting Date	Completion Date				

7	Construction works of WSS Scheme:									
	* Construction of road									
	* Cleanliness of construction site									
	* Collection chamber									
	* IC/BPT									
	* Distribution chamber									
	* Reservoir tank									
	* Taps									
8	Fencing in the source									
9	Household latrine construction									
10	Institutional latrine construction									
11	Others									

Remark:

- Don't forget the signature of UC members

GUIDELINES FOR USERS' MASS MEETING FOR FINAL APPROVAL

1. Introduction

A one-day meeting (public hearing) participated by the user households is held when the final layout, design, cost estimate and bill of quantities are ready. This is done in the end of CAP preparation process. The main objective of the meeting is to finalize and approve the proposed scheme by the users. Review of the layout, cost estimates of the scheme, etc. is done during the meeting. If users agree, the scheme proposal will be forwarded to DDC for final approval. If users disagree, the scheme will be redefined if possible, in case otherwise the scheme will not be redesigned.

Public hearing is a way of notifying people about their development initiatives getting done at their premises. This is organized through mass meeting with participation from almost all households of the scheme area. In RVWRMP Public hearing is treated as one of the major tools of transparency and conducted two times during the scheme implementation activities

General objectives of Public Hearing

Main objective of Public hearing in RVWRMP is to

- notice community people and concerned stakeholders on their scheme activities
- acknowledge people on financial matters (income/expenditure)
- assure and demonstrate (with bills etc.) to community people that the scheme is getting done in a transparent way

2. Objectives

1. Users review and discuss the design, cost estimates and bill of quantities and CAP presented by SO.
2. Users and UC approve the CAP, design and estimate.

3. Process

- Call a mass meeting or, in case of a big scheme, organize cluster wise meetings.
- Provide both written and oral information about the meeting to men and women well in advance.
- Invitations to the mass meetings should be given to one male and one female representative from each household, all ethnic/caste groups, UC members, VDC chairperson and vice-chairperson as well as to other key persons of community. All ethnic groups/castes living in the community as well as all clusters should be well represented.
- Make sure that the time and venue of the meeting are suitable for all.
- At least 2/3 of the households and UC members should be present in the meeting. At least 50 % of the participants should be women. If women are in minority or some ethnic groups/castes are not well represented, postpone the meeting until the representation is adequate.
- Present design, cost estimates and bill of quantities of the scheme for review and discussion.
- Make sure that both men and women understand the design, bill of quantities, and the amount of money to be spent for different purposes.
- Let the UC present the CAP prepared. Initiate and encourage discussion. Make clear about the volume of works that the people have to do and amount of cash that they have to contribute.
- Get formal approval by users on CAP.

- Fix project information board at public place of the scheme area (the board has to be already filled up by the SO highlighting key scheme features)
- One of the UC members spells on the project features as mentioned in the design estimate and in the board.
- All the concerned members of the scheme area should understand the key features of their own scheme.
- UC keeps records of this meeting getting signatures of the participants
- Encourage both men and women and all ethnic groups/castes to discuss and ask for clarifications.
- Record all the important issues raised and discussed. Also make record of the members that participated actively in the meeting and those who did not (gender and ethnic group/caste, profession of the speaker).
- The UC should prepare a list of all the participants showing the gender and ethnic group/caste, profession.
- Get the signatures of all the participants present in the meeting.

Step 11b – Final Approval by DDC

FINAL APPROVAL OF THE SCHEME FOR IMPLEMENTATION BY DDC

1. Introduction

After the completion of all the activities of the Preparatory Phase by SO and the users have approved the designed scheme, the scheme has to be approved by the DDC before the Implementation Phase can begin. The DDC will appraise the scheme based on established criteria, makes sure that the scheme is eligible for implementation before approval.

2. Selection Criteria

The proposed scheme proposal has to fulfill the following criteria:

1. The User Committee is registered under the Water Resource Act and has opened its bank account.
2. The per capita cost of the scheme is within the following limit excluding delivery cost: Optional analysis will be conducted if the cost exceeds the ceiling given below.
 - Gravity flow system NPR 7,000
 - Rain Water Harvesting System NPR 9,000
 - Gravity and non conventional irrigation system or other kind of MUS NPR 10,000
 - Micro Hydro system as per AEPC
 - Conventional irrigation system NPR 7,000

3. Contribution of Users and VDC in Drinking Water Supply, Irrigation and Micro Hydro Scheme (Individual and Multiuse system) is mentioned in the table below:

Technology	VDC (Cash)	Users			
		Cash		Kind	
		Investment	O&M	Description	Contribution
Piped Water Supply Scheme	NPR 100 per capita	NPR 500/ tap	NPR 500/ tap	Material Collection and Transportation Trench digging/Burying Structure Construction	Non local material from road head to site | 1 wd ¹ /HH Local material collection and transportation | 1 wd/HH Total Length of Distribution System Total Unskilled Labour for Tap Stand Construction
Rainwater Harvesting DWS (6.5 m3)	NPR 500/HH	NPR 100/HH		Material Collection and Transportation RWH Jar Construction	Non local material from road head to site | 1 wd/HH Local material collection and transportation | 1 wd/HH Total Unskilled Labour for Jar construction
Conventional Irrigation System	NPR 150/Ropani	NPR 100 /Ropani	NPR 25/ Ropani	Material Collection and Transportation Main/Branch/Distribution System	Non local material from road head to site | 1 wd/HH Local material collection and transportation | 1 wd/HH All earthworks (Excavation and filling works)
Non-conventional Irrigation System	2% of non local material cost	NPR 150 /HH	NPR 50/HH	Material Collection and Transportation Main/Branch/Distribution System	Non local material from road head to site | 1 wd/HH Local material collection and transportation | 1 wd/HH All earthworks (Excavation and filling works)
Micro Hydro	NPR 100/Capita	NPR 500 kW		Material Collection and Transportation Canal/pipeline/transmission/distribution system	Non local material from road head to site | 1 wd/HH Local material collection and transportation | 1 wd/HH All earthworks (Excavation and filling works)
Piped DWS + Non conventional Irrigation System	NPR 150/capita	NPR 750 /tap	NPR 750 /tap	Material Collection and Transportation Main/Branch/Distribution System	Non local material from road head to site 1 wd/HH Local material collection and transportation 1 wd/HH All earthworks (Excavation and filling works)

¹ Working day.
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Micro Hydro + Irrigation system	NPR 100/capita	NPR 500/kW & NPR 50 / ropani	NPR 1000/kW & NPR25/ropani	Material Collection and Transportation Main/Branch/Distribution System	Non local material from road head to site Local material collection and transportation All earthworks (Excavation and filling works)	1 wd/HH 1 wd/HH
Micro Hydro + Irrigation + DWS	NPR 150/capita	NPR 500/kW + NPR 50 per ropani + NPR 500 per tap	NPR 1000/kW + 25/ropani + 500/tap	Material Collection and Transportation Main/Branch/Distribution System Construction of Structure	Non local material from road head to site Local material collection and transportation All earthworks (Excavation and filling works) Unskilled Labour for Tap Stand construction	1 wd/HH 1 wd/HH

A scheme proposal that fulfills the above criteria will be approved by the DDC and the agreement will be signed between DDC, SO, VDC and UC for the Implementation Phase. Agreement for the Implementation Phase is given in Paper no. 31.

Step 12 – Implementation Phase Agreement

**Government of Nepal
Ministry of Local Development
Office of the District Development Committee**

.....

**Rural Village Water Resources Management Project
(Nepal-Finland Cooperation)**

**Implementation Phase Agreement Paper
(Sample format)**

Fiscal Year

1. Name of the Scheme:

2. Location

VDC:....., Ward. no:.....

Tole/Cluster:.....

3. Number of HHs:.....Number of beneficiaries.....

4. Name of support organization

- **Social**
- **Technical**

5. Duration of the scheme:

OFFICE OF THE DISTRICT DEVELOPMENT COMMITTEE
 **DISTRICT**

IMPLEMENTATION PHASE AGREEMENT

Name of the scheme:

CONTRACTING PARTIES

This contract is made for the implementation of the above mentioned scheme between:
 District Development Committee, hereinafter called DDC,
 Village Development Committee, hereinafter called VDC,
 Water User Committee, hereinafter called UC,
 Support Organization, hereinafter called SO.

2. SCOPE OF CONTRACT

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

scheme/s.

The scope of the activities and work are specified in the attached "Implementation Phase Proposal", prepared by SO, and the Community Action Plan (annex of SO's proposal), prepared by UC, and approved by DDC. All activities and work shall be carried out in accordance with the "Step-by-Step Manual" and implementation guideline.

3. CONTRACT PERIOD

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

The DDC may allow the SO and the UC to extend the duration of this contract upon a written request from them. However, the DDC will not cover any additional cost thereof.

4. ROLE AND RESPONSIBILITIES OF UC

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

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

- Manage all the construction activities in a timely manner as specified in the Community Action Plan, which comprise procurement as per specification and transportation of none

local material, collection and transportation of local material, arrangement or road head or site stores, store keeping for construction materials and tools, maintaining books and accounts of all income and expenditure.

- Procure construction materials, pipes, fittings and tools from VAT registered suppliers/manufacturers/firms not exceeding the rate fixed by the DMC. UC is responsible to verify the quality of materials with the support of SO before delivery from the suppliers/manufacturers. Also maintain quality of the structures and other activities.
- Conduct regular meetings to follow-up and record the status of work and any possible problems. These site meetings shall be minuted in a site ledger book, and signed by all the participants.
- Conduct mass meetings for public hearing and public auditing and updates project briefing board to notify users and concerned bodies the real income and expenditures of the scheme in a transparent manner. During this phase, public hearing has to be conducted upon procurement of construction materials. UC is also responsible to conduct public auditing upon completion of the activities of the scheme. Detail in regards to income and expenditures, quality/quantity of materials and other required things have to be discussed and recorded in the public auditing.
- participate in the meeting/seminars/trainings and mobilize community people in scheme activities
- Support and participate in monitoring activities
- Supervise the activities of the SO staff and keep their attendance record.
- Coordinate with DDC, VDC, WRMC and SO as required.
- Cooperate with the DDC by providing any necessary documents, bills, receipts and vouchers for the monitoring and auditing purpose.
- ensure regular collection and maintenance of O & M fund.

5. ROLE AND RESPONSIBILITIES OF SO:

The SO is responsible to:

- conduct scheme level trainings/workshops/seminars, mass meetings as per CAP
- assist UC on procurement of materials, its storage and transportation and ensure the quality of materials and workmanship
- help UC on store management and proper book keeping including public hearing and auditing
- keep proper record of meetings and decisions made during the implementation
- assist UC in all technical matters of the scheme
- prepare measurement book
- participate in monitoring activities
- assist UC on reconciliation of the accounts/payments
- assist in social mobilization and livelihoods activities
- submit to DDC monthly progress reports of the activities and completion of work, as well as the expenditure statements of SO and UC, as per the requirements of DDC. The report shall include also all the problems encountered and how they were solved.
- appoint competent full time field staff as well as part time staff.

The full time staff shall be:

Type of staff	Name	Sex	Duration
1.			

2.
3.

The part time staff shall be:

Type of staff	Name	Sex	Duration
1.
2.
3.

- maintain the time sheets of the full time and part time staff showing their involvement in the scheme activities on daily basis. The UC shall certify the time sheets concerning the time spent in the field.
- report immediately to the DDC about any problems that can not be solved at the site between UC, VDC and SO. The SO shall similarly report immediately about any significant matters that may influence on completion of work within the agreed time or cost, or may cause changes to scheme design.
- coordinate with DDC, VDC, WRMC and UC regularly.

6. ROLE AND RESPONSIBILITIES OF DDC

The DDC is responsible to:

- release installment from DWRDF to UC's and SO's account timely
- provide technical backups to UC and SO through DMC.
- monitor the performance of the SO and the UC as well as the quality of material, workmanship and structures.
- take necessary action for the activities not conducted properly by SO and UC
- consider to extend the duration of this contract upon a written request form the SO. However, the DDC will not cover any additional cost of the extended period.
- provide necessary support and assistance to UC and SOs for successful completion of the scheme.
- verify the SO's staffs whether they are deputed as per proposal or not. In the latter case, DDC has right to reject appointment of the staffs deputed.

7. ROLE AND RESPONSIBILITIES OF DTO

The DTO 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 UCs and SOs
- ensure completion of the scheme and report to the DDC/DMC.

8. ROLE AND RESPONSIBILITY OF VDC

The VDC is responsible to:

- match the VDC fund to UC account as per agreement.

- monitor and evaluate implementation activities and performance of SOs and UCs and recommend to DDC for corrective measure
- recommend to DDC for final payments of UC and SO
- share the experiences of UCs of a completed scheme to educate other UCs
- supports to communities to enhance livelihoods, to improve water supply and sanitation facilities and generate fund.
- provide overall assistance to UC in mobilizing the local resources and getting necessary permits or approvals from the local authorities needed for smooth implementation of the scheme.
- allocate some fund every year for operation and maintenance of the scheme implemented

9. ROLE AND RESPONSIBILITY OF WRMC

The WRMC is responsible to:

- participate in monitoring the implementation phase activities
- coordinate with DDC, VDC and UCs.
- mobilize local resources and support to UC implementation of the scheme
- support UC in income generating activities

10. SCHEME COST AND TOTAL COST ESTIMATE

As per design report and as specified in the **Implementation Phase Proposal** the total estimated cost of the scheme is Rs. The scheme cost includes "Technical" and "Software" costs in cash and kind.

The total estimated amount consists of the following:

- SO cost for its services: Rs (in words rupees only)

- Expenditure for the construction work:

S.N.	Description	Cash	Kind
1	Cost of Construction Materials :		
	.....	Rs.	Rs.....
	.....	Rs.....	Rs.....
2	Other construction costs:		
	.....	Rs.....	Rs.....
	.....	Rs.....	Rs.....
3	Tools	Rs.....	Rs.....
4	Transportation	Rs.....	Rs.....
5	Store rent	Rs.....	Rs.....
6	Sanitation programme:		
	• HH latrine	Rs.....	Rs.....
	• Institutional latrine	Rs.....	Rs.....
7	UC management cost	Rs.....	Rs.....

	Sub-Total:	Rs.....	Rs.....
8	Contingency	Rs.....	Rs.....
9	Training cost	Rs.....	Rs.....
10	Monitoring cost	Rs.....	Rs.....
	Grand Total	Rs.....	Rs.....

The Grand Total of Cash and Kind is Rs

- Expenditure from DWRDF in cash: Rs

Monitoring and Auditing Costs are not included in the cost; however, they will be paid from the DWRDF and do not exceed 3 % of the scheme cost.

The DDC may approve an additional estimate for scheme materials in case it can be justified, e.g. due to unexpected rise in market price, changed natural conditions or by a natural calamity.

Any additional cost estimate due to mistake in survey, design or calculation, will be solely SO's responsibility. The SO is not released from its responsibility just because the design and estimate are approved by the DDC.

11. CONTRIBUTION OF DIFFERENT PARTIES

The contribution of different parties is as follows:

UC (Community):

- ♦ cash for O & M fund Rs.
- ♦ cash for capital cost Rs.
- ♦ in kind Rs.

Total: Rs.....

DDC from DWRDF:

TO UC :

- ♦ for scheme implementation Rs.
- ♦ for management cost Rs.....
- ♦ Others Rs.....

TO SO:

- ♦ for service cost Rs.
- ♦ for scheme related training Rs.....

VDC:

- ♦ cash Rs.

Others

Rs.....

The Grand Total of the contributions of stakeholders is..... Rs.

12. PAYMENT SCHEDULE TO UC

The DDC shall release fund from DWRDF to the account of UC on installment basis as specified below:

First Installment:

Rs. (in words rupees only),

equivalent to up to 50% of the cost estimate amount (excluding kind), shall be released to the account of UC by account payee cheque at the time of signing the contract and on submission of proof of a bank deposit of the contribution of concerned VDC and users.

Second Installment:

Rs. (in words rupees only),

equivalent to up to 30% of the cost estimate amount (excluding kind), shall be released upon submission of proof of expenditure of the first installment or a satisfactory part of it.

Last Installment:

Rs. (in words rupees only)

up to 20% will be released only after:

- evaluation report of the cost as per the work done
- completion of all the activities as per CAP
- submission of public auditing report
- submission of recommendation of VDC and SO
- approval of DDC after final monitoring visit

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

13. PAYMENT SCHEDULE TO SUPPORT ORGANIZATION

The DDC shall release fund from the DWRDF to the account by account payee cheque of the SO on installment basis, in total Rs. (in words rupees only), as specified in the Implementation Phase Proposal as follows:

First Installment:

Rs. (in words rupees only)

(33% of the total amount to be paid to SO) shall be paid at the time of signing this contract.

Second Installment:

Rs. (in words rupees only)

(33% of the total amount to be paid to SO) shall be released at the same time as the payment of the second installment to the UC.

Third/Final Installment:

Rs. (in words rupees only)
(34% of the total amount to be paid to SO) shall be released after releasing the last installment to UC.

All payments shall be made within two weeks of the receipt of written request of UC in case the necessary requirements are fulfilled.

14. PAYMENTS FOR MONITORING

The DDC will pay travel cost and night allowance from the DWRDF to staff participating in monitoring of the scheme. Expenses other than for monitoring purpose shall not be borne by the DWRDF.

The amount spent on monitoring visits of a scheme shall not exceed 1% of the scheme cost.

15. TAXES

The SO will be solely responsible for any taxes it may have to pay to GoN in association with this contract.

16. AUDITING

Book keeping of all financial transactions of UC will be audited by users itself organizing public/social auditing mass gathering. Procurement of construction materials, stock of materials, payment of skilled/unskilled labors, transportation cost, bank deposits, kind contribution of users will be the main subjects for discussion. UC in assistance of SO is responsible to organize the event. Representation of each HH is expected in the meeting however 75% of the total HH of the scheme area may finalize this auditing. UC in assistance of SO will update project information board including total scheme cost after completion of public auditing.

17. MONITORING AND SUPERVISION

The DDC will arrange monitoring visits to the scheme as per the Project Implementation Guideline. 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 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 and UC 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 and UC.

The DDC monitoring team shall produce a monitoring report at the site, and verify it by signatures. Any disagreements between the monitoring team, SO and UC 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.

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

18. TERMINATION OF CONTRACT

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

- The contract can not be fulfilled satisfactorily due to poor performance of SO
 - Information provided by SO is found intentionally inaccurate or misleading.*
 - The scheme can not be implemented within the cost estimate or due to any other reason resulting to considerable delay of work or increase of cost.
 - There is mismanagement of funds or materials.
 - There is no effective contribution of community resulting in delay of work, loss of material or increase of cost.
 - The UC or SO fail to maintain site records, books and accounts in a proper manner.
 - The SO fails to submit progress reports and financial statements in time.*
- * Only replacement of SO necessary.

If the contract is terminated by DDC for a reason beyond the control of the SO or UC, all the expenditure till the date of termination shall be paid to the SO and UC. In addition, reasonable cost of demobilization shall be compensated.

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

19. REDUCTION OF PAYMENT

The DDC has the right to reduce the payments in case of particular activities have not been undertaken by SO 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.

20. AMENDMENTS OR DISPUTES

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

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

21. 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 UC 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 DWRDF. Such surplus fund can be adjusted while making the final payment to the UC.

20. SIGNATURES

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

On behalf of the UC:

Signature:

Name:

Position:

Date:

On behalf of the VDC:

Signature:

Name:

Position:

Date:

Witnessed by:.....(DTO)

Name:

Position:

Date:

On behalf of the SO:

Signature:

Name:

Position:

Date:

On behalf of the DDC:

Signature:

Name:

Position:

Date:

Witnessed by:(RVWRMP)

Name:

Position:

Date:

Annexes:

A) Implementation Phase Proposal, dated

b) Community Action Plan, dated

c) Design Report of the scheme, dated

Step 13 – Implementation Phase Activities

GUIDELINES FOR PRE-CONSTRUCTION SEMINAR TO UC

Introduction

Once the agreement for the Implementation Phase is signed between the UC, DDC, VDC and SO, the UC will start the construction activities. The Community Action Plan (CAP) will be the basis for these activities. Briefing the UC on basic/critical components and the underlined responsibilities during the Implementation Phase is important to further encourage the UC to initiate activities. This guideline enables UC to review their CAP and mobilize communities for implementation activities in a planned way. Included in this guideline is also a brief guideline on public hearings.

Duration: 3 days (immediately after the agreement for Implementation Phase)

Participants: UC members, VDC representative, WRMC representative from same scheme

Resource Person: SO staffs (Team Leader, Field Coordinator, Health Promoter)

Organizer: SO

Objectives:

The main objective of the pre-construction seminar is to:

- prepare the UC to execute CAP and manage scheme construction activities efficiently.
- remind the UC members of their roles and responsibilities during the implementation phase.
- review roles and responsibilities of other concerned organizations.
- discuss the CAP to initiate action accordingly
- discuss about Operation and Maintenance of the scheme (initiate O&M plan)
- inform UC members on key terms and conditions of the agreement
- review the procurement plan, rules and procedures.
- discuss on community mobilization, public hearing
- make aware on producing minutes of the decisions made

Expected Outcome

- UC will be able to implement the scheme activities as per CAP
- UC will review and revise the CAP if seemed necessary and follow it in scheme implementation
- UC will be aware on Operation and maintenance of the scheme
- UC will understand roles and responsibility of COs, CMs

Required materials for the seminar

Agreement paper, Design estimate, CAP, Step by Step chart, Posters, O and M guideline (summary), Social mobilization guideline (summary)

Pre-construction Seminar Program

Day	Contents	Time	Methods/Tools
1	Session 1 1. Introduction	1.5 hrs	Group introduction, step by step

	<ul style="list-style-type: none"> • Participants' introduction • Objectives and content of seminar • Brief review of previous training (preparatory phase) • Expected outcomes of participants <p>Session 2</p> <ul style="list-style-type: none"> • Role and responsibilities of UC • Roles and responsibility of concerned stakeholders • Information on key terms and conditions of implementation phase agreement <p>Session 3</p> <ul style="list-style-type: none"> • Review of CAP <ul style="list-style-type: none"> • Main activities • Duration/time • Discussion on responsibilities • Supervision 	<p>2.5 hrs</p> <p>1.5 hrs</p>	<p>chart</p> <p>Agreement papers, discussions</p> <p>CAP document, discussion by UC</p>
2	<p>Session 1</p> <ul style="list-style-type: none"> • Recap of the 1st day • Discussion on O & M of the scheme • Discussion on fund collection for investment <p>Session 2</p> <ul style="list-style-type: none"> • Management of construction materials • Procurement plans, rules, procedures of non local materials • Collection of local materials • availability of skilled/unskilled human resources locally • Discussion on quality of materials and structures <p>Session 3</p> <ul style="list-style-type: none"> • Allocation of responsibilities within UC members for materials collection/ transportation • Storage of materials in transit 	<p>1.5 hrs</p> <p>2.5 hrs</p> <p>1.5 hrs</p>	<p>Operation and maintenance manual (summary)</p> <p>Procurement guidelines, discussion</p> <p>Discussion</p>
3	<p>Session 1</p> <ul style="list-style-type: none"> • Recap of previous days • Discussion on producing minutes/reports of the decisions 	<p>1.5 hrs</p>	<p>Implementation guideline</p> <p>Agreement papers</p> <p>Discussions</p>

GUIDELINES FOR

MATERIAL PROCUREMENT

1. Introduction

Water User's Committees (UC) are established as the main managerial bodies for the schemes. After implementation phase agreement with DDC, funds for implementation of schemes will be provided to UC according to the provisions of the project guideline. The UC is responsible for managing the fund i.e. purchase of construction materials, transportation and payment of labor. Although, different parties, namely UC, SO, DDC/DMC, DTO are involved in the material procurement process, the UC shall have the main responsibility for material procurement. The UC shall prepare a procurement plan. SO and DDC will provide assistance to UC throughout the procurement process.

PSU and DoLIDAR will examine and recommend manufacturers for the purchases of materials and equipment. Price lists are collected from potential manufacturers/suppliers. DMC will fix the maximum price ceiling/rate for the procurement of necessary construction materials and equipment.

The UC should purchase only those construction materials and equipment which meet the detailed technical specification established by RVWRMP and quality certified by DTO. However, under special circumstances and if decided by DMC, UC may purchase construction materials and equipment from any supplier/manufacturer only if i) the price is within the maximum rate/ceiling fixed by DDC, ii) the quality of materials and equipment meets the detailed technical specification established by RVWRMP and quality certified by DTO, and iii) material cost at site is minimum (compared to other possible options as per prevailing rules and regulations) including transportation cost up to the road head.

2. When to purchase materials

During the implementation phase, the UC shall prepare a plan of action for procurement of materials and equipment based on the total requirements of materials and equipment for the whole scheme. This will be done with the help of the SO. There should be a mutual understanding between the UC and the SO regarding the requirements of materials for a particular period of time and accordingly the procurement plan has to be prepared. For example, if both UC and SO decide to start the scheme activities from the intake, they have to agree about which materials are needed as well as when to buy and transport them to the construction sites of the scheme. Special care has to be taken for procurement of materials like cement, steel bars etc. as their quality deteriorates with time if remained unused for few months.

3. General procurement process

To facilitate UC for the procurement of construction material and equipment following steps shall be followed for procurement process, in general:

- DMC will prepare a list of all items that are likely to be used either as a construction material or equipment in the beginning of each fiscal year.
- Categorize the items in the major heading of HDPE Pipe, GI Pipe and Fittings, Cement, Steel etc. separately for the bid invitation i.e. a supplier/manufacturer may decide to supply materials under one or multiple headings.
- PSU and DoLIDAR will examine and recommend manufacturers for the purchases of materials and equipment. Price lists are collected from potential manufacturers/suppliers.
- The DMC shall fix/set the maximum rates for procurement of the construction materials based on market survey.
- All concerned UCs shall be notified about the potential manufacturer and supplier and the maximum rate/ceiling for procurement of each of the item.
- UC shall prepare a procurement plan in coordination with SO and will communicate it to the DMC for the release of the first instalment.
- DMC/DTO shall provide a detailed technical specification of construction material and equipment to UC and SO.
- UC with assistance of SO, shall contact potential manufacturer/supplier for assessment of availability of construction material in required quantity, assessment of quality and possible negotiation in the price within the maximum ceiling fixed by DMC.
- On the basis of least cost option (without compromising the quality), UC shall select supplier/manufacturer.
- SO, in coordination with DTO, will prepare a contract agreement (standard pro-forma) for the procurement of construction materials exceeding NPR 5,00,000 from the selected manufacturer/supplier in required quality and quantity and within the maximum rate/ceiling fixed by DMC.

The following requirements of GoN Procurement Act BS 2063 are to be followed for the material procurement:

- Up to NPR 35,00,000 procurement, User Committee may procure directly from market without inviting quotations
- For any procurement above NPR 35,00,000 tender shall be invited.

The monitoring team of the DDC will check and verify that the materials bought are in accordance with the approved technical specification, quantity and the cost ceiling.

It is important for the UC to keep all the bills properly, since the DDC will appoint an auditor to audit their financial books.

UC are required to purchase the materials from a firm registered at VAT office unless otherwise waived according to financial regulations of GoN.

4. Roles and responsibilities

The roles and responsibilities of the different parties in the material procurement process are as follows:

UC

- The UC is entirely responsible for purchasing construction materials as well as making other financial decisions in the Implementation Phase.
- Form a procurement committee or nominate representatives among the UC.
- Prepare a list of the required materials, procurement plan and approve it in a UC meeting. Also get approval of DMC about procurement plan.
- Purchase materials according to the standard norms and technical specifications provided by the RVWRMP and within the ceiling fixed by DDC..
- Decide the mode of payment to the suppliers, by cheque or by draft.
- Make agreement with supplier for the supply of required materials.
- Transport all the construction materials from the road head to the construction site of schemes with due care and safety.
- Store the construction materials and tools in a proper place.
- Keep proper store records and financial records.
- Show bills related to purchase and transportation of materials to users.

Users

- Check the bills and receipts of the purchased materials.
- Transport materials from the road head to the construction site.

SO

- Clarify the terms and terminology used in the "scheme file", bills of quantities, technical specifications, quotations etc.
- Provide technical and administrative support to the UC during the procurement process including preparation of agreement between UC and Supplier. So are required to witness the agreement.
- Assist and guide the UC to purchase construction materials of the specified quantity and quality.
- Assist the UC in keeping proper store records.

DDC/DMC/DTO

- The DMC will set the maximum rates for procurement of the construction materials through a process of market survey.
- The DDC through DMC is responsible to monitor the progress and ensure the quality of the schemes. The DDC is authorized to check and control the quality and quantity of the materials purchased by the UC.
- The DDC has to appoint an auditor for auditing of the bookkeeping of UC, if felt necessary.

- DTO will approve the quality of materials and equipment for procurement according to the technical specification of RVWRMP and shall guide SO and UC for ensuring quality of the purchased materials.
- DTO will assist DMC, SO and UC in the procurement process.

5. Transportation

The transportation of the materials from the market to the road head should be arranged by the suppliers. The UC is responsible for arranging the transportation of the materials from the road head to the construction site. The appropriate costs of transportation have to be paid by the UC according to the project guidelines.

6. Record keeping system

The UC is responsible for keeping records systematically on the materials purchased for the scheme. This should be done with the forms, formats and ledgers according to the Guidelines and Formats prepared by the RVWRMP. The recording about the construction materials should be done as per the Sample Ledgers and Guidelines for Bookkeeping to User Committee given in Paper 23 and Paper 24 of this Manual. SO accountant should visit the UC's office regularly to train and support the UC in book keeping.

SECOND PUBLIC HEARING

Introduction

Public hearing is a way of notifying people about their development initiatives getting done at their premises. This is organized through mass meeting with participation from almost all households of the scheme area. In RVWRMP Public hearing is treated as one of the major tools of transparency and conducted two times during the scheme implementation activities

Objective of Public Hearing

Main objective of Public hearing in RVWRMP is to

- notice community people and concerned stakeholders on their scheme activities
- acknowledge people on financial matters (income/expenditure)
- assure and demonstrate (with bills etc.) to community people that the scheme is getting done in a transparent way

When and how to conduct public hearing

First public hearing

After the completion of design estimate and CAP for a scheme, a mass meeting is held for review, discussion and approval of the plans. The appropriate time for this meeting is at the end of CAP preparation at the scheme area. During this meeting UC is responsible to conduct public hearing. Details about this Public Hearing are given in Paper 47 of this Manual.

Second public hearing

This event is organized after procurement of construction materials. This hearing is the most important event as all income and expenditures till the date are discussed. UC in assistance of SO and CM will organize this event following the procedures mentioned below:

- invite users of the scheme area (compulsory representation from each household)
- explain on receipt of income showing ledgers maintained (contribution from DWRDF, VDC and Users)
- explain expenditures heading by heading of the procured items and logistic expenses. during the discussion of the expenditure, the following contents should be covered:
 - what construction materials are procured ?
 - how much pipe, tools and fittings are procured ?
 - what is the unit and total price of the aforesaid materials ?
 - who were suppliers/manufacturers of the materials ?

- how much spent on transportation and storage ?
 - what were the means of transportation ?
 - what is the condition of transported materials ?
 - how and where are the materials stored ?
- show receipt vouchers of the expenditures incurred during material transportation including the receipt of the supplier.
 - discuss on problems faced if any
 - request all users, participants to take part in the discussion, clap their hands and accept the discussed matters. In the case of any mistake found, all should try for solution.
 - keep records of the discussions in the minute register getting signatures of all participants.
 - update project board if found any change.

Public hearing can be done in the presence of 75% HH. UC in assistance of SO should report the events to DMC immediately.

GUIDELINES FOR

TRANSPORTATION AND STORE MANAGEMENT

1. Introduction:

Mismanagement of inventory of construction materials in transit and or at site may hamper the scheme implementation activities as it may cause high risk of materials to be damaged or lost knowingly or unknowingly. Proper management for recording all received and released materials is therefore needed in transit or at site. This guideline aims to support UC in keeping all records of materials and their conditions properly.

2. Objective:

- Support UC to manage materials at site properly
- Help UC in record keeping

3. Procedures for store management

- UC makes procurement plan of different materials in such a way that only urgently needed materials require to be procured
- UC nominates responsible persons for taking care in procurement and transportations/storage of materials separately or jointly by its CAP meeting
- UC decides locations for storage of materials by UC/CAP meeting before procurement starts.
- Persons nominated for procurement should verify each item of materials to be loaded one by one before getting loaded
- Persons nominated ensure that materials like cement, tools, and fittings are packed properly and store rooms at road head and other locations are well managed, special attention to store cement, tools and fittings.
- While unloading, items need to be verified one by one again before storage in the store room at road head by persons nominated.
- Persons dealing with store management should maintain ledger at each locations to ensure receipt and release of materials accurately. Ledger sample is mentioned below:
- Unloaded materials at store locations need to be recorded as incoming stock and the same will be recorded as outgoing stock while handing over to the porter getting its signature.
- UC should manage store rooms at scheme village or at scheme site as main store for all materials and must maintain store ledgers as provided by the project properly.
- UC is responsible to any damage or loss of materials if caused by its mismanagement.

Sample of waybill (Chalan) form for material transportation
 Materials delivery fromto

S. n	Name of Porter	Goods (delivered)	Pc/weight	Signature of porter	Received goods (Pc/kg)

Received above goods in
condition
 Recipient's signature.....
 Recipient's name.....
 Date:

Samples of ledgers for expandable and non expandable ledgers are given below. These ledgers should be maintained by the UC at the main store site of the scheme properly.

Stock Ledger

(Expendable Materials)

Name of the scheme:.....

Type of Material:..... Unit :

S.N.	Date	Quality of materials	Purchased Quantity	Unit	Expended Quantity	Balance	Signature

Stock Ledger

(Non-Expendable Materials)

Name of the scheme:.....

Name of Material:..... Unit :

S.N.	Date	Quality of materials	Purchased Quantity	Unit	Expended Quantity	Balance	Signature

GUIDELINES FOR LOCAL MATERIAL COLLECTION

Local materials should be provided by community free of cost. Labour required for collection and transportation will be as per the RVWRMP guidelines. The local materials include stones, aggregates, sand, woods, bamboo, slates, water, etc.

Stone:

Stones should be hard, tough, clean and regular on faces. Stones, for masonry works, should be derived from a source that is normally and satisfactorily used for the masonry purpose. Stones directly from the riverbed with round shapes are not allowed to be used. The faces of all stones showing externally should be rough hammer dressed to a convex surface.

Aggregates:

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

Coarse aggregate should as far as possible be angular or rounded in shape. Aggregate with high percentage of flaky or elongated particles should be rejected. The amount of fine particles occurring in a free state or as a loose adherent should not exceed 1% when determined by the laboratory sedimentation test. After twenty-four hours in water, a previously dried sample should not gain more than 10% in weight.

Bricks:

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

Timber:

Whenever applicable, the timber for carpentry and joinery should be the Sal Wood of the best quality obtained from an approved saw mill. In remote hill area where such procurement is not feasible, and especially in case of the community contribution, the best locally available timber should be used.

The timber should be reasonably straight grained. All timber for the works is to be purchased or provided at the work-site immediately after the project started and should be stacked in open as long as possible before use.

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

Where the timbers need to be extended into a wall, they should be thoroughly "brush treated" with a wood preservative, and as much clear air space maintained around the timber where it adjoins the wall as possible.

Sand:

Fine aggregate, whenever feasible should be natural sand from river or mines. The setting test for natural sand should be made and after being allowed to settle for three hours the

layers of silt deposit on the coarse material should not exceed 8% and the layer of mica deposit should not exceed 2%.

The sand containing more than the allowable percentage of silt shall be washed so as to bring the silt content within the limit.

Water:

As far as possible, only fresh and clean water free from all deleterious matter and chemically inert should be used for mixing mortar or concrete.

Refer Public Works Directives (PWD), Government of Nepal, 2002; and Design guidelines for community based gravity flow rural water supply schemes, Revised 2004, Vol-X, Section-III: General Specification for Construction Works

GUIDELINES FOR

CONSTRUCTION ORGANISATION

1. OBJECTIVE

This guideline provides a list of advice and checklists to help the planning and day to day organization of a work site operated by the User Committee with the guidance of the Support Organization.

The organization of the construction work is crucial and has to take into account that for many people this construction work will be a very first experience.

2. ORGANISATION OF THE GUIDELINES

- Checklist of reports, maps, steps to be available before construction
- Checklist regarding purchase of non-local material
- Checklist regarding collection of local material
- Checklist for storage of material
- General scheduling
- Manpower organization
- Measurements and recording of voluntary contributions
- Preparation of construction progress review meeting
- Checklist for workers safety
- Reference for material specification

3. CHECKLIST OF REPORTS, MAPS, STEPS BEFORE CONSTRUCTION

Construction cannot start without:

- A fully registered, aware, accepted and oriented User Committee (UC)
- Community Action Plan
- A design report with well accepted specification especially regarding the number/location of tap stand, outlets, position and size of reservoirs, intake....
- A set of layout maps complete in all respects with several extra copies for mapping construction progress
- A set of design drawings with all dimensions
- A fully approved and understood bill of quantity and cost estimates
- A full breakdown of voluntary contributions and paid work
- A well accepted Support Organisation
- A clear description of quality standards for procurement of local and non-local material

4. CHECKLIST REGARDING PURCHASE OF NON-LOCAL MATERIAL

Purchase cannot start without:

- A fully approved and understood bill of quantity and cost estimates
- A clear list of tools (based on design software)
- A clear description of quality standards
- Agreement about price ceiling
- Identified suppliers
- Negotiation about price
- A consensus amongst the UC about price
- A well organized transportation schedule
- A location for off loading
- A location for storage (intermediary and final)
- A group of porter
- **Rain protection for the bags of cement**
- **A clear schedule for the purchase**

5. CHECKLIST REGARDING COLLECTION OF LOCAL MATERIAL

- A fully approved and understood bill of quantity
- Well identified location and quality standard (especially for sand)
- Location for storage
- Group of porter
- **A clear schedule for the procurement at the different locations**

6. CHECKLIST FOR STORAGE OF MATERIAL

6.1 Material requiring protection from rain and secured (padlocked) storage

- **CEMENT BAGS:** preferably stored on pallets or any platform isolating from water leakage.
- Thermo crayons
- Tools
- All fittings and small items

6.2 HDP pipe handling

Attention has to be paid to avoid perforation, extreme bending, smashing under heavy load...

6.3 Avoiding contamination with mud

Stored sand and aggregate should be protected from being mixed with mud during rain.

7. GENERAL SCHEDULING

- Identification of tasks clearly understood by everybody such as construction of intake, excavation between point a and point b, construction of reservoir A,....
- Define a daily schedule for each major task
- Allocate manpower and material for each of these tasks
- Define clearly one focal/co-ordination person for each site/task
- Start the day as early as possible
- Start every day with a short briefing for site/group leaders

8. MANPOWER ORGANIZATION

- Balance the skilled and unskilled manpower.
- Make sure that enough time is spent explaining what a good work is, even for the most simple ones.
- Define clearly the tasks
- Insure that the contribution log-sheets are filled up every day for every body contributing work (paid and unpaid)
- Rotate the tasks to insure that many people learn the different tasks (even men should carry stones, sand and mortar and women should use spade and shovel and prepare the mortar).

9. MAPPING, MEASUREMENTS AND RECORDING OF WORK CONTRIBUTIONS

Based on the bill of quantities the measurement book (GoN format) should be updated regularly in parallel with contribution log-sheet.

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

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

10. CHECKLIST FOR WORKERS SAFETY

- **Workers should be encouraged to wear shoes or boots while working**
- Children should be prevented to use sharp tools for site clearance
- Safety precaution should be constantly considered but particularly while working on :
 - Steep slope
 - Rock cutting and moving
 - Site clearance
 - Deep excavation
 - Tree felling

11. REFERENCE FOR QUALITY AND STANDARDS

Fikkal Water Supply and Sanitation Sector Project
Volume IV: Technical Specification

VOLUME X : GENERAL SPECIFICATIONS FOR SUPPLY OF PIPES & FITTINGS
AND
CONSTRUCTION WORKS

Section - I : Specification for High Density Polyethylene Pipes & Fittings

Section - II : Specification for Galvanized Mild Steel (GMS) Pipes & Fittings and Valves

Section - III : General Specification for Construction Works

12. MANUFACTURER AND PROCUREMENT ADVICES

PSU engineers will issue regularly advices regarding acceptable manufacturers for pipes, fitting, cements.

Log sheets to be used during construction are attached as Annexes to this Paper.

WORK/KIND CONTRIBUTION LOG SHEET ANNEX 1

LoG SHEET N0 :.....(Preprinted)

User Committee Name :.....

User Committee REF NUM.....

Date:.....Location :

WORK/KIND DESCRIPTION

.....

Description of the hh contribution

Contribution 1 : Unit used for quantity.....

Contribution 2 : Unit used for quantity.....

Contribution 3 : Unit used for quantity

Contribution 4 : Unit used for quantity

Male contributions

Ser	HH ID	Quantities				Remarks
		Cont. 1	Cont. 2	Cont. 3	Cont. 4	

Female contributions

Ser	HH ID	Quantities				Remarks
		Cont. 1	Cont. 2	Cont. 3	Cont. 4	

Children contributions

Ser	HH ID	Quantities				Remarks
		Cont.	Cont.	Cont.	Cont.	

		1	2	3	4	

Whole household contributions

Ser	HH ID	Quantities				Remarks
		Cont. 1	Cont. 2	Cont. 3	Cont. 4	

Beneficiary log sheet

ANNEX 2

LOG SHEET NO :.....(PREPRINTED)

SCHEME NAME :
.....

SCHEME REFERENCE NO :

Date :

BENEFICIARIES

HH ID	Service operational	made	Date of entry in operation	Service reference	point

13. SERVICE CODING :**13.1 New scheme :****13.1.1 Fully dedicated to water supply**

Public Tap Stand (PUTSN),
Private Tap Stand (PVTSN),
Public Fountain (PUFN)
Rain Water Harvesting Individual Household
Multi Household rain Water Harvesting (MHHRWHN)

13.1.2 Multipurpose

Individual household dual purpose tap stand : (IDPTPN)
Multiple households dual purpose tap stand : (MHHDPTPN)

13.1.3 Irrigation

Individual household micro-irrigation kit without ground reservoir : (IMIKN)
Multiple households micro-irrigation kit with ground reservoir : (MHHMIKN)
Cemented outlet from open canal : (CON)
Outlet from earth canal : (EON)
Outlet from piped irrigation network : (PION)

13.2 Electrical connection

Individual household connection for lighting purpose only : (IECLN)
Individual household connection for industrial purpose : (IECIN)

13.3 Toilet

Provision of individual household toilet, pour flushing : (TPF)
Provision of individual household toilet , ECOSAN model (TECO)
Provision of individual household dry toilet (TD)

13.4 Rehabilitated scheme :**13.4.1 Fully dedicated to water supply**

Public Tap Stand (PUTSR),
Private Tap Stand (PVTSNR),
Public Fountain (PUFNR)

13.4.2 Multipurpose

Individual household dual purpose tap stand : (IDPTPR)
Multiple households dual purpose tap stand : (MHHDPTPR)

13.4.3 Irrigation

Individual household micro-irrigation kit without ground reservoir : (IMIKR)
Multiple households micro-irrigation kit with ground reservoir : (MHHMIKR)
Cemented outlet from open canal : (COR)
Outlet from earth canal : (EOR)
Outlet from piped irrigation network : (PIOR)

GUIDELINES FOR CONSTRUCTION REVIEW SEMINAR

1. Introduction

The Construction Review Seminar is aimed at strengthening the capability of UC in scheme related responsibilities. The SO will organize the seminar when the implementation activities are in halfway. The UC should be informed to bring all the necessary documents e.g. accounts, store records, UC meeting minutes, CAP papers, design estimates, etc. in the seminar.

2. Objectives

The main objectives of this seminar are to:

- help the UC in management of the CAP.
- identify and resolve the scheme related possible problems (technical, management, social, sanitation etc.) in order to ensure the stipulated construction quality

3. Details of the Seminar

Duration:	2 days
Participants:	
1st day:	All members of the UC (including sub-committees, if so formed), VDC, WRMC and VMWs, MG.
2nd day:	One man and one woman from each household, UC, VMW, FCHV, MG.

Methods

The seminar should use participatory methods. The SO should stimulate and encourage both men and women and all ethnic group/caste representatives to be active and to express their views.

- Group discussions
- Presentation of the scheme progress report by the UC.
- Filling the Construction Review Seminar Questionnaire by SO
- Mass meeting with users on the 2nd day.
- Presentation of financial statement on scheme by the UC.

Materials needed

- Construction Review Seminar Questionnaire
- Design and estimate of the scheme
- CAP chart of the scheme
- Final layout, Community Map (to check and add information, if so required)
- Poster papers, markers, etc.
- Posters and charts of HSE for exhibition

Expected outcomes

- All disputes or problems related to schemes (e.g., source dispute) settled, if not or steps initiated for assistance from concerned authorities in this regard
- Improvements measures worked out (if needed) in order to ensure quality in construction
- Users aware of the progress of the scheme.
- Users aware of the financial situation
- Previous CAP revised, if necessary.

Contents:

Day	Contents	Tentative Time	Important activities
1st	<p>I. Introduction and objectives of the seminar.</p> <p>II. Identification of problems and solutions:</p> <ul style="list-style-type: none"> * Help the UC to fill the questionnaire (one form per UC) * The UC presents the progress according to CAP. Possible problems of the scheme e.g. social, management, store, procurement, sanitation etc. (Ask men and women separately about possible problems and solutions. Make sure that in the end you have the opinions of both in your records). <p>III. Discussion of recommendations and suggestions of the UC:</p> <ul style="list-style-type: none"> * Discuss and revise the CAP if necessary. Focus on sanitation and maintenance aspects in relation to the continuity of the program. * Check all the records i.e.; store book, account book, meeting minute book, etc. * Give feedback on bookkeeping and records of the UC. <p>IV. Conclusion of the day</p>	<p>15 min.</p> <p>3.5 hr.</p> <p>1.5 hr.</p> <p>15 min.</p>	<ul style="list-style-type: none"> • Explain why and how the questionnaire should be filled. • Let the UC members discuss first. • One resource person will check all the records and give feedback.
2nd	<p>I. Introduction and objectives of the day.</p> <p>II. Presentation and recommendations:</p> <ul style="list-style-type: none"> * Present the status and problems of the scheme according to the questionnaire and the CAP * Discuss and collect all users' ideas on problems and solutions. Ask men and women separately about possible problems and solutions. Make sure that in the end you have the opinions of both in your records. * Answer the queries together with UC * Get final recommendations, suggestions and future plan regarding the scheme implementation from the mass meeting. <p>III. Conclusion and closing of the meeting.</p>	<p>15 min.</p> <p>3 hr.</p> <p>15 min.</p>	<ul style="list-style-type: none"> • Write down all the decisions in the poster papers and present them to all. • Help the UC to take minutes. • Especially women should be encouraged to take part in discussion and decision making.

Note: The SO should record all the important issues discussed and decisions made in the seminar and include them while making report to DDC. Make sure that the opinions given by women and men are noted separately.

CONSTRUCTION REVIEW SEMINAR QUESTIONNAIRE**A. General:**

1. Scheme name: _____ 2. District: _____
3. VDC: _____ 4. Ward number: _____
5. Total number of households: _____ 6. Scheme started (date): _____
7. Registration number of the UC: _____
8. Changes in the UC and reason for them:

Sn	Name	Designation	Elected person in the beginning (Name)	Reason for the change
1.				
2.				
3.				
4.				

B. Procurement and store:

1. Where are the materials stored? (road head and others):

2. Have there been any problems in managing the store? Yes [] No []
 If yes, specify: _____
 Problem (record separately the problems indicated by men/women) and mention the solutions to overcome the problem-s:

3. Have there been any problems in procurement? Yes [] No []
 If yes, specify:
 Problems (record separately problems expressed by men/women):
 Solution worked out:

4. Have there been any problem in purchasing the MIT kits? Yes [] No []

If yes, specify:

Problems (record separately problems expressed by men/women):

Solution worked out:

C. Construction work

Structures: (as per design)	Number of completed structures:	Number of incomplete structures:	Tentative date of completion:	Remarks:
Intake				
Collection chamber				
Reservoir				
Jar				
FCL				
Distribution chamber				
Interruption chamber				
Transmission pipeline				
Distribution pipeline				
Sedimentation tank				
Washout				
Air valve				
Stream crossing				
Break pressure tank				
Sectional valve chamber				
Taps				
Multiple Use Taps				
Offtakes				
Platforms				
Storage tank m3				
Storage tank m3				
Storage tank m3				

D. Community contribution and participation:

Work	Working days		Total number of days
	Male	Female	
Local materials collection (sand, boulder, etc.)			
Construction materials transportation to site			
Construction work (digging pipeline/sludging etc.)			
Total			

E. Financial statement:

* Capital contribution : _____ Rs.

* O&M : _____ Rs.

* Total Interest to date : _____ Rs.

Total : _____ Rs.

* Bank account number of UC account: _____ Current [] Saving []

* Bank account number of O&M account: _____ Current [] Saving []

* Name and address of the bank: _____

- Signatories and designation: 1 _____
2 _____

* Outflow of money so far?: _____

* Procurement expenditure: _____

* Skilled labour payment

* Other expenses

* How was the rest amount spent? (In case of discrepancy between outflow amount and expenses):

F. Sanitation and environment:

* Number of local latrine builders: Selected: male: _____ female: _____

Trained: male: _____ female: _____

* Number of permanent household latrine: To be constructed: _____ Completed: _____

* Number of temporary type of latrines: Constructed: _____ In use: _____

* Future plan of household latrines: _____

* Number of latrine in schools: Planned: _____ Completed: _____

* Number of latrine in the health posts: Planned: _____ Completed: _____

* Have there been any problems with the drainage of wastewater of taps? Yes [] No []
 If yes, reasons: _____

Skilled human resources:

- * Number of trained/to be trained VMWs: male: _____ female: _____
- * Number of trained VMWs working in the scheme: male: _____ female: _____
- * Payment to VMWs: (in cash or kind, rate): _____
- * Number of skilled mistries working in the scheme: male: _____ female: _____
- * Number of unskilled mistries working in the scheme: male: _____ female: _____
- * Rates: Skilled labour: _____ Rs/day Unskilled: _____ Rs/day
- * Number of technicians working in the scheme: male: _____ female: _____

H. Number of meetings organised by the UC and the main agenda discussed:

Date of Meeting	Main Agenda	Decision Made
Date of Meeting	Attendance in Meetings by Sex and ethnic group/caste	Name of the Members absent by Sex and Ethnic group/caste

I. Any suggestions to the SO or Project?

J. Remarks: (Any problems related to scheme not been mentioned earlier. Record the problems indicated by men/women, separately): _____

K. Signature of UC members:

Name: _____

Signature: _____

TRAINING FOR VILLAGE MAINTENANCE WORKERS (VMW)

Introduction:

At least one VMW will be trained in each small and medium size WS, irrigation and combination of both and micro-hydro scheme (multiple use scheme or MUS). The number of VMW may be exceeded depending upon the population size and scheme size for optimum facilitation of O&M activities of these schemes. UC/Users are responsible to manage the remuneration for his/her services. UC & Users should make a long-term plan for VMW's renovation during CAP preparation for O&M & should present in post construction seminar.

Based on following criteria, UC will select the person for training from scheme area.

- He/She should be regular inhabitant of the scheme area.
- Age of above 16 years.
- Good health
- Minimum 5 years of schooling
- Highly motivated to work as a Village Maintenance Worker (VMW).
- Having no intention to leave the village for outside work
- Preference to women and Dalit candidates

Training venue will be in one of the scheme ready for construction during implementation phase. All local materials and non local materials to be procured, transported and stored in the scheme area. During this training, all the planned structure of the scheme will be constructed and completed. So, scheme size should be small and manageable. Since this training is skill oriented, participants should get adequate time for practice. After training, VMWs will be equipped with a set of tools per scheme for the use of regular repair and maintenance work of the constructed scheme. Depending upon availability of training resource persons, district local Support Organization, consultant or local freelancer will be responsible to operate and manage VMW training will financial support from DDC/DMC.

Duration: 32 days (including 2 days weekend)

Participants: Local persons of the scheme area; preferably working as a mistri.

Resource Person:	2	Overseer	: Full time; one will be training coordinator
	2	WSST	: Full time
	1	Software	: Part time (Health person)

Organizer: District Management Committee/DDC

Objectives:

- To develop skilled person resources for O&M activities in water supply , irrigation and multiple use scheme (MUS).
- To assist VDC/UC by providing local trained person at village level for O&M so that VDC/UC can manage scheme properly.

Expected outcome: After this training;

- A trained VMW will be in each water supply, irrigation and multiple use scheme (MUS) for O&M.
- Scheme will be maintained and operated properly by UC & VMW.
- Trained VMW will be mobilized in O&M activities by providing certain amount of remuneration by UC/Users.

Source of Fund: District Water Resource Development Fund

Required materials:

- Construction materials, Tools and Pans etc
- IEC materials:
- Designs/estimate report of scheme
- Handouts in Nepali.
- Items for cooking, lodging, food etc.
- Tool kits for distribution to each scheme
- Certificates

Day	Contents	Time	Teaching/Learning Activities
1 st	<p>Session I Opening Session</p> <ul style="list-style-type: none"> • Warm up • Self introduction • Expectation of participant • Objectives of training. • Expected outcome of training <p>Session II</p> <ul style="list-style-type: none"> • Warm up • Training rules, management, responsibilities of participants & resource person during training • Importance of VMW role & responsibilities • Concept of Water Resource Management and Multiple Use of Water • Brief introduction of RWSSSP • Group division: For pit latrine and waste pit construction for the use of participants during training. <p>Session III Pre test Assignment to participants for daily revision</p> <p>Session IV Latrine & Waste Pit construction</p>	<p>1.30 hrs.</p> <p>1.30 hrs.</p> <p>1 hr.</p> <p>3 hrs.</p>	<p>Self or game</p> <p>Meta Card</p> <p>Explanation</p> <p>Explanation</p> <p>Written</p> <p>Practical: Participants will construct the latrine waste pit for their use during training and other way will learn about the structure.</p>
2 nd		30 min.	

	<p>Session I Revision</p> <p>Session II Warm up Community participation in Water Resource Management Programme - what & why?</p> <ul style="list-style-type: none"> - Definition - Contribution <ul style="list-style-type: none"> - Cash - Kind - Women's participation in UC and other decision making meetings - How to involve all ethnicity, clusters and underprivileged community of scheme areas. - Local resources mobilization <ul style="list-style-type: none"> - Institution - Materials - Money - Trained/Skilled persons etc. <p>Session III</p> <ul style="list-style-type: none"> - Warm up - Step-by-Step activities in RVWRMP as a participatory tool. - Role of VMW to make desirable participation in WS, irrigation and combination of both and micro-hydro scheme (multiple use scheme or MUS)scheme. <p>Session IV Warm up About UC:</p> <ul style="list-style-type: none"> - UC information - Importance of UC - Process of formation - Composition of men & women 	<p>3 hrs.</p> <p>1 hr.</p> <p>1.30 hrs.</p>	<p>By participants</p> <p>Explanation & Discussion</p> <p>Show Step-by-Step flow chart</p> <p>Show the documents of registered UC's agreement papers etc.</p>
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3 rd	<p>(50%)</p> <ul style="list-style-type: none"> - Process of registration - Role of UC in water supply or irrigation and combination of both and micro-hydro scheme (multiple use scheme or MUS) & O&M fund raising <p>Session I Revision</p> <p>Session II</p> <ul style="list-style-type: none"> - Warm up - Hygiene, Sanitations & Education - What is health? - What is Sanitation? - Relation between health, water & sanitation. - Knowledge, Attitude & Practice (KAP) in rural communities related to water, Sanitation, health & hygiene. <p>Session III</p> <ul style="list-style-type: none"> • Warm up • Common health problems. <ul style="list-style-type: none"> - Water borne - Water washed - Water related - List of diseases <p>Session IV</p> <ul style="list-style-type: none"> • Causative factors of health problems. <ul style="list-style-type: none"> - Participant's view - Conclusion. <p>Session V Warm up Fecal oral contamination</p> <ul style="list-style-type: none"> - Water (Fluid) - Food 	<p>30 min.</p> <p>1 hr.</p> <p>1 hr.</p> <p>1 hr.</p> <p>1 hr.</p> <p>1 hr.</p> <p>1.30 hrs.</p>	<p>By discussion with participants</p> <p>Divide participants in 2 group: 1- Unhealthy Practices 2- Healthy Practices</p> <p>Brainstorming or group work</p> <p>Discussion</p> <p>Explain by using of Flash card</p> <p>Fecal oral contamination</p>
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	<ul style="list-style-type: none"> - Finger - Flies - Animals <p>Session VI</p> <ul style="list-style-type: none"> • Preventive measures • Awareness creating activities e.g. training, mass campaigns etc. <ul style="list-style-type: none"> - Use of latrine - House hold - Institution - Use of waste pit. - Use of soakage pit - Proper drainage of waste waters - Personal hygiene: Hand washing, bathing & washing regularly in clean water, use of clean food etc. - Develop healthy habits. 		Explain by using flash cards "what is sanitation - source to mouth"
4 th	<p>Session I Revision</p> <p>Session II</p> <ul style="list-style-type: none"> • Warm up • Introduction of Civil works. <p>Session III Measurement & their Units</p> <p>Session IV Area & volume of different figures.</p> <p>Session V</p> <ul style="list-style-type: none"> • Warm up • Scale & measuring tap <p>Session VI Pacing & tape distance (length)</p>	<p>30 min</p> <p>1.30 hrs</p> <p>1 hrs</p> <p>1 hr</p> <p>1 hr</p>	<p>By participants</p> <p>Explanation</p> <p>Explanation & Demonstration</p> <p>Explanation & Demonstration</p> <p>Experiment & Demonstration</p> <p>Experiment & Demonstration</p>
5 th	<p>Session I Revision</p>	30 min.	By participants

	<p>Session II Land slides Revision / Erosion, Land preservation, Gully, drainage, plantation, turbing grabion work.</p> <p>Session III Warm up Construction work.</p> <ul style="list-style-type: none"> • Earth work / excavation, refilling • Stone work, soiling • Stone masonry • Refilling <p>Session IV Warm up Local Construction materials</p> <ul style="list-style-type: none"> • Stone • Sand • Aggregate • Water • Wood etc. <p>Session V Construction materials.</p> <ul style="list-style-type: none"> • Cement • Bricks • Rebar • Other <p>Session V Warm up Brick Work</p> <ul style="list-style-type: none"> – PCC – RCC – Curing – Fencing 	<p>1 hr.</p> <p>1.30 hrs.</p> <p>1 hr.</p> <p>1 hr.</p> <p>1 hr.</p>	<p>Explanation & discussion</p> <p>Explanation & discussion</p> <p>Explanation & discussion</p>
6 th	<p>Session I Revision</p> <p>Session II Warm up</p>	<p>30 min</p> <p>1.30 hr.</p>	<p>By participants</p> <p>Explanation & Discussion</p> <p>Explain again during practice</p>

	<p>Ferro cement works; plaster, punning, pointing, painting & form works</p> <p>Session III Hydrological Cycle</p> <p>Session IV Water flow phenomenon & source measurement</p> <p>Session V</p> <ul style="list-style-type: none"> - Warm up - Water supply system 	<p>1 hr.</p> <p>1 hr.</p> <p>2 hrs.</p>	<p>Explanation & Discussion</p> <p>Explanation & discussion</p> <p>Explain by showing drawing</p>
7 th	<p>Session I Revision</p> <p>Session II Warm up water supply or irrigation and combination of both and micro-hydro scheme (multiple use scheme or MUS) components</p> <ul style="list-style-type: none"> - Intake - CC - IC - DC - WOV - SV - AV - BPT - ST - Reserved - Tanks - Taps <p>Session III Introduction of construction and plumbing tools</p>	<p>30 min.</p> <p>1.30 hrs.</p> <p>1 hrs.</p>	<p>By participants</p> <p>Explanation & demonstration</p> <p>Explanation & Demonstration</p>

	<p>Session IV</p> <ul style="list-style-type: none"> • Warm up • Introduction of GI & Brass Fitting • HDPE Fittings • Pipe (sizes, series & uses) <p>Session VI</p> <p>Warm up</p> <p>GI pipes & fittings</p> <ul style="list-style-type: none"> – Sizes – Class – Uses – Cuttings 	<p>1 hrs.</p> <p>1 hrs.</p> <p>1 hrs.</p>	<p>Practical & demonstration</p> <p>Practical & demonstration</p> <p>Practical</p>
8 th	<p>Session I</p> <p>Revision</p> <p>Session II</p> <p>Warm up</p> <p>Importance of Latrine</p> <ul style="list-style-type: none"> – Sulav – VIP – Simple Pit <p>Types of Latrine</p> <p>Session III</p> <p>Store Keeping</p> <ul style="list-style-type: none"> – Requisition & site register (with daily in and out records) – Labour attendance <p>Session IV</p> <p>Final evaluation of theory class</p> <p>Preparation for field work</p>	<p>30 min</p> <p>2 hrs</p> <p>1 hr</p> <p>2.30 hrs</p>	<p>By participants</p> <p>Demonstration - Relate practical work of first day; Show poster, flash cards</p> <p>Experiment & Demonstration</p>

9 th - 27 th	Practical work in scheme: Each day 1hr. will be theory class according to need.	6 hrs.	<ul style="list-style-type: none"> - Participants will work in scheme - Manage holiday on 2 Saturdays
32 nd	<p>Session I Revision</p> <p>Session II</p> <ul style="list-style-type: none"> - Evaluation of participants - Feedback collection <p>Session III Closing Ceremony</p> <ul style="list-style-type: none"> - Certificate distribution - Tool kit distribution - Closing remarks 	<p>2 hr.</p> <p>2 hrs.</p> <p>2 hrs.</p>	<p>Revise important issues</p> <p>Give evaluation of theory & practical performance give feedback to each participant separately</p> <p>Written</p>

LOCAL LATRINE BUILDER'S TRAINING (RESIDENTIAL)

Introduction:

To assist UC community in Latrine construction and other sanitation related, activities, local person(s) will be trained as Local Latrine Builder (LLB) in each scheme/ VDC. WRMC/UC will coordinate with VDC and select the person for training. It is on the job training to be organized in scheme areas. WRMC, VDC, and UC will show their commitment to mobilize the trained persons in scheme area or in the VDC as paid skilled labor. The concept of this training is to enhance the capacity of local people for income opportunity skilled person. After training each participants will receive certificate, a set of tools and some IEC materials. The concerned VDC/UC / WRMC will select the persons based on following criteria:

- Person should be local (from scheme area/VDC)
- Person interested to work as mistri (LLB)
- Matured (less likely to migrate in other areas).
- Priority to the person who is working as mistri in the village.
- Priority should be given to JAGDAMBA.
- Women's should be encouraged and should be given priority.
-

Duration: 14 days (including 1 day weekend)

Participants: Selected person of the scheme areas maximum 25

Resource persons:

Overseer	- 1
Technician	- 3
Social	- 1 (Part time)

Organizer: DMC

Objectives: The immediate objectives of training are to;

- Develop skilled person power to construct latrine in the scheme area/VDC.
- Assist UC to construct latrine with desired quality.

Expected outcome: After this training;

- Participants will be capable to construct latrine like sulav, single pit and Eco-san
- Skilled person power, in latrine construction will be developed at scheme & VDC level.
- Model latrines (10-15) with temporary & permanent superstructure) will be constructed in the scheme during training.
- Trained person will be mobilized in scheme areas as paid labor/Mistri in future.

Source of Fund: DWRDF

Required materials:

1. poster and charts specifically;
 - Why latrine is important?
 - Faecal oral contamination (Disa Mukhama kasari pugchha).
 - Water borne diseases.
 - What are differences between Sulav & Eco-san latrine.
 - Contribution pattern in environmental Sanitation.
 - Other Pamphlets, poster, charts, handouts etc.
 - Cassettes of sanitation, latrine design (if applicable)
2. Cloth bag.
3. Certificates
4. Estimate, designs and lay out of households.
5. Books, tools, IEC materials to be distributed to all participants (see list for detail)
6. All construction materials (local & non local) as per estimate, must be in scheme site before starting training.
7. Construction manual in Nepali (?)

List of Tools to be provided to each trained LLBs. These tools will be used by the participants during the training as well.

1. Stone Cutting hammer -1
2. Building Trowel-1
3. Pointing Trowel-1
4. Finishing Trowel -1
5. Measuring tape- 1 (3 m steel)
6. Hex Frame with blade -1 set
7. Spirit level -1
8. Plumb bob -1
9. Try square -1
10. Transparent pipe for water level -5 m.

Note:

- **10-15** numbers of household latrines are reasonable to be completed during training. All latrines should be completed with superstructure (permanent or temporary type) so that trainee will get complete know how of complete structure.
- Every day revision is important of previous sessions. Make sessions interactive and ask questions for clarity. Facilitator should check the trainee's ability of learning and provide inputs as needed.
- It is residential training so is the flexibility in time management.
- Invite key persons from, WDO, health post/center, DDC, DTO, VDC, UC, and schools, local CBOs etc. in closing and also as resource person (if available). This is one opportunity to aware people about importance of trained person and program of RVWRMP.

CONTENTS :

Day	Content	Time	Learning Activities
1	<p>Session I Opening session</p> <ul style="list-style-type: none"> ▪ Self introduction. ▪ Expectation of participants. ▪ Objectives of training. ▪ Expected outcome of training. ▪ Importance of LLB in water supply & sanitation program. <p>BREAK</p> <p>Session II Pre test. Warm up Rules and regulation during training period. Role and responsibilities of facilitators, participants, helper, UC and households.</p> <p>Session III Warm up Introduction of RVWRMP</p> <ul style="list-style-type: none"> ▪ Brief of working modality, approach, fund flow, contribution pattern, subsidy, GIS etc. ▪ Importance of Environmental sanitation ▪ Roles & responsibilities of WRMC, CO, CM, UC, VDC & how to maintain close coordination among these. <p>Session V practical Construction of pit latrine and waste pit to be used during training.</p>	<p>1 hr</p> <p>15 min</p> <p>2 hrs</p> <p>2 hrs</p> <p>3 hrs</p>	<p>self</p> <p>written-meta card</p> <p>Explanation</p> <p>Explanation</p> <p>Explanation</p> <p>written</p> <p>Discussion and conclusion</p> <p>Explanation through flex poster</p> <p>Practical in group</p>

2nd day	<p>Session I Review of previous day</p> <p>Session II Brain storming (participant's view)</p> <ul style="list-style-type: none"> ▪ What are common health problems related to water, sanitation, environment, personal hygiene and unhealthy human behaviors? ▪ How these can be prevented at village level? ▪ Discussion and conclusions <p>Session II Warm up Fecal Oral Contamination & health problems</p> <ul style="list-style-type: none"> ▪ Contamination of water how? ▪ Fecal /water borne diseases; cholera, Diarrhea, dysentery, poliomyelitis hepatitis' A', typhoid, worms infestation. ▪ Water washed diseases; scabies, eye infection, ring worm, ▪ Water related; malaria, encephalitis, fialarisis, dengue fever. <p>Session III Latrine</p> <ul style="list-style-type: none"> ▪ Importance of latrine ▪ Types of latrines in uses ; their design and tentative costs ▪ Limitations of different designs; strengths and weaknesses. 	<p>1 hr</p> <p>2 hr</p> <p>3 hrs</p> <p>2 hrs</p>	<p>participants Q & A</p> <p>Discussion and conclusion</p> <p>Explanation ; relate issues with session II</p> <p>Explanation through pictorial flex poster & chart</p>
3rd day	<p>Session I Revision</p> <p>Session II Warm-up Concept of Engineering, drawing, plan, section and elevation Measurement of; units and scale.</p> <p>Session II warm up Latrine</p> <ul style="list-style-type: none"> ▪ Sulav ; its construction procedure ▪ eco-san ; its construction procedure ▪ Detail drawing, of sulav & eco-san 	<p>30 min</p> <p>1 hr</p> <p>2 hrs</p>	<p>participants Q & A</p> <p>explanation</p> <p>discussion through flex poster,</p>

	<ul style="list-style-type: none"> ▪ material and labor required for latrine ▪ introduction of civil work and technical terms <p>Session III Group division for practical work</p>	4.5 hrs	Practical
4th day	<p>Session I Revision</p> <p>Session II Warm up Construction and workmanship</p> <ul style="list-style-type: none"> ▪ quality of local and non-local materials ▪ introduction of construction tools <p>Session III Dry wall construction and leaching (theory) Lay out and stone machinery</p> <p>Session IV Practical Lay out of latrine</p>	30 min 1 hr 1hr 5.5 hrs	participants Q & A explanation demonstration explanation Practical
5th day	<p>Session I Revision</p> <p>Session II community participation & GSI;</p> <ul style="list-style-type: none"> ▪ Importance of community participation and GSI ▪ Hindering factors of GSI & practical solution <p>Session III practical</p> <ul style="list-style-type: none"> ▪ Setting pan, PCC, plaster & punning. ▪ Dry wall construction in leaching pit ▪ Dry wall construction in leaching pit 	30 min 2 hrs 5.5 hrs	participants Q & A explanation and discussion Practical
6th day	<p>Session I Revision & discussion in GSI</p> <p>Session II Practical</p> <ul style="list-style-type: none"> ▪ stone machinery work with super structure latrine house. 	1 hr 7 hrs	participants Q & A Practical
7th day	<p>Session I Mid term evaluation</p> <p>Session II Practical</p>	1 hr 7 hrs	written Practical
8th-13th days	<p>Session I revision (Daily) based on mid term evaluation and field experience</p> <p>Session II Practical</p>	1hr	discussion & explanation

14 th day	Session I post test & feedback collection CLOSING SESSION <ul style="list-style-type: none"> ▪ distribution of certificate and tools to participants ▪ closing remarks by participants ▪ Closing remarks by key persons and facilitators. 	2 hrs -	written written CLOSING
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LOCAL LATRINE BUILDERS (MISTRI) TRAINING
PRE-Test questionnaire
 (पूर्व परिक्षा)

प्रशिक्षकले ध्यान दिनु पर्ने कुरा : प्रश्न लेखन नजान्ने सहभागीको हकमा, एक जना श्रोत व्यक्तिले सहभागीसग सोधेर जे जस्तो जवाफ आउछ सो लेख्नु पर्दछ । परिक्षा पछि तुरन्तै वा सोही दिनमा नतिजा निकाली लेखेर टांसी दिनु पर्दछ र आवश्यकता अनुसार प्राप्त जानकारीहरूलाई छलफलमा ल्याएमा राम्रो हुन्छ ।

Time: 30 minut

Date:

समय: ३० मिनट

मिति:

NAME:

नाम:

VDC: Ward No.

गा.वि.स. वडा नं.

Q. No. 1 what is your purpose to come in this training?

तालिममा आउनुको तपाईंको उद्देश्य के छ ?

Q. No. 2 what do you means by W/S and sanitation scheme?

खानेपानी र सरसफाई योजना भन्नाले तपाईं के बुझ्नु हुन्छ ?

Q. No. 3 Do you have any idea about "MISTRI" work? If yes, what type? And if no, would you able to continue this work after completion of this training?

के तपाईंलाई मिस्ट्री काममा अनुभव छ ? छैन भने यो के तालिम पश्चात् तपाईंले यो काम निरन्तर गर्न सक्नुहुन्छ ?

Q. No. 4 Who is the owner of the scheme? And why?

योजनाको मालिक को हो र किन ?

Q. No. 5 what do you understands by "Toilet/Latrine"? Is it useful for our life? Why?

चर्पी भन्नाले तपाईंले के बुझ्नु हुन्छ ? के यो हाम्रो जीवनको लागि फाइदाजनक छ?

Q. No. 6 How many method to build a wall?

कुन कुन तरीकाबाट पखाल (वाल) बनाउन सकिन्छ ?

Q. No. 7 How does fecal oral contamination take place in human beings? Write the routs.

मानिसको मुखमा दिसा कसरी जान सक्छ ? त्यसका कुनै ४ वटा माध्यमहरू लेख्नुहोस् ।

Q. No. 8 What are the local materials, which should be, use during latrine construction?

चर्पी निर्माणमा प्रयोग गर्न सकिने स्थानीय सामग्रीहरू के के हुन् ?

Q. No. 9 Convert the 4 inches into centimeters.

४ इञ्चलाई से.मि. मा परिणत गर्नुहोस् ।

Q. No. 10 Using a toilet or safe drinking water, which one is important for our healthy life and why?

स्वस्थ्य जीवनको लागि सुरक्षित पानी वा चर्पीमा कुन चाहिं बढी महत्वपूर्ण छ र किन ? लेख्नुहोस् ।

LOCAL LATRINE BUILDER (MISTRI) TRAINING

Post-Test questionnaire (तालिम पश्चात् मूल्याङ्कन)

प्रशिक्षकले ध्यान दिनु पर्ने कुरा : प्रश्न लेख्न नजान्ने सहभागीको हकमा, एक जना श्रोत व्यक्तिले सहभागीसग सोधेर जे जस्तो जवाफ आउछ सो लेख्नू पर्दछ । परिक्षा पछि तूरुन्तै वा सोही दिनमा नतिजा निकाली लेखेर टांसी दिनु पर्दछ र आवश्यकता अनुसार प्राप्त जानकारीहरूलाई छलफलमा ल्याएमा राम्रो हन्छ ।

Time: 60 minute

समय: ६० मिनट

Date:

मिति:

NAME:

नाम:

VDC:

Ward No.

गा.वि.स.

वडा नं.

Q. No.1

What is Sanitation?

सरसफाई भनेको के हो ?

Q. No. 2 Write the name of water borne diseases.
पानीबाट हुन सक्ने रोगहरूको नाम लेख्नुहोस् ।

Q. No. 3 What do you understand by following common terms used in civil work?

निम्नलिखित सामाग्री वा कार्य भन्नाले के बुझ्नु हुन्छ ?

Mortar

(मोरटार)

PCC (1:2:4)

(पि.सी.सी.)

Punning

(पनि)

Plinth level

(प्लीन्थ लेवल)

Q. No. 4 What do you mean by Sulav Latrine? Write the construction process in brief.

सुलभ चर्पी भन्नाले तपाईं के बुझ्नुहुन्छ ? निर्माणको प्रक्रिया बंदागत रूपमा लेख्नुहोस् ।

Q. No. 5 Write the function of following components of latrine:

चर्पीमा निम्न लिखित भागहरूको काम लेख्नुहोस् ।

Pan

(प्यान)

Pit

(पिट)

Flooring

(फ्लोरिङ)

RCC slab

Q. No. 6 Write the name of tools using in latrine construction.

चर्पी निर्माणमा प्रयोग हुने औजारहरू लेख्नुहोस् ।

Q. No. 7 What are the healthy practices you will start in your life after this training?

यो तालिम पश्चात् तपाईंले तपाईंको जीवनमा कुन कुन स्वस्थ व्यवहारहरू शुरु

गर्नुहुन्छ ? लेख्नुहोस् ।

Q. No. 8 What will you do immediately after this training in the scheme area?

यो तालिम पश्चात् तुरुन्तै तपाईंले योजना स्थलमा के गर्नुहुन्छ ?

PROPOSAL FOR TRAINING & SEMINARS
(Sample for reference)

Program:

Date:

Duration:

Venue:

Participants:

Objectives:

Expected Outcome:

Resource Persons:	Full Time	Part Time
-------------------	-----------	-----------

1		
---	--	--

2		
---	--	--

3		
---	--	--

4		
---	--	--

Particulars		Rate (NER)	Total (NER)	Remarks
B. Tea & Snacks	Participants			
	Resource Persons			
	Sub Total 'B'			

Total Budget:

Details of Budget:

Particulars		Rate (NER)	Total (NER)	Remarks
A. Allowance/Fee	Participants			
	Resource Persons			
	Sub Total 'A'			

Particulars		Rate (NER)	Total (NER)	Remarks
C. Transportation	Participants			
	Resource Persons			
	Sub Total 'C'			

Particulars		Rate (NER)	Total (NER)	Remarks
D. Others	Video Show			
	Helper			
	Hall Rent			
	Photo Reel			
	Sub Total 'D'			

Particulars		Quantity	Unit	Rate (NER)	Total (NER)	Remarks
E. Materials	Consumable					
	Non-consumable					

support materials to participants e.g tools to LLBs , VMW						
	Sub Total 'E'					

.1 Grand Total of (A+B+C+D+E) = NER.

Any other support required for the training (if any)

.....

 Prepared by:

.....
 Recommended by

Approved by

Key Points to be remembered for all types of training/ seminars

1. Make decision in DMC & get approval of proposal from concerned authority, prior 2 weeks of training.
2. Be clear about source of funding and include in annual work plan. The trainings which are to be organized from DWRDF must be included in scheme cost and in annual work plan as well. Those trainings which are to be organized from PSU fund, proposal should be forwarded before 2 weeks to PSU for approval and funding.
3. Consult and plan with VDC and UC for residential /village level trainings in advance
4. During training display the conclusion of discussion, group work and important notes so that participants can revise during leisure time.
5. Refer Step-by-Step flow chart (provided in flex poster) in each training/ seminar.
6. Refer rate sheet for allowance, fee for resource person, tea-snacks, stationeries etc. (refer HRD guideline-RVWRMP).
7. Involve local resource person as far as possible I e.g. In charge of sub health post, health center, as a resource person in village level HSE training and other for other relevant trainings. It is an opportunity to mobilize local human resource and aware about RVWRMP. Further it will develop local level co-operation and coordination as well.
8. Prepare all the handouts and required visual aids before hand.
9. Be punctual and convince participants to come in time.
10. In residential training, try to arrange mass campaign like video show, exhibition (if possible).
11. Take Pre-test and Post - test which provide feedback to facilitator about the level of knowledge and understanding of participants.
12. Review the outcome of previous training and give inputs according to the need of the participants, since every training is supported and linked with one-another.
13. Collect certificates from PSU and get signature of concerned authority before closing day.
14. Remember our target group is Adult. Adult learns better ;
 - a. When they are *respected & valued* of their knowledge and experiences. They are expert in their culture and community so facilitator's role is to *help* them to use their experiences to solve the problem.
 - b. If messages or skill are *relevant* to their lives are useful to solve problems.
 - c. If they feel respected and self directed learner.
15. Avoid lecture method. Participatory training approach has flexibility to select tools and techniques. It is up to facilitator. IEC materials facilitate the learning process and create environment for two-way communication. Facilitator must have the sets of IEC materials (at least) provided by the program. Make session active through visual aids, games, experience sharing, case story etc. Participants also can help in this regard. Use visual aids as much as possible. Because people remember;
 - a. 20 % of what they hear
 - b. 40 % of what they hear & see.
 - c. 80 % of what they discover themselves

RAIN WATER HARVESTING MASON (MISTRI) TRAINING

The rainwater harvesting technologies should be disseminated to communities for balanced use of water resources for sustainable improvement of environmental conditions of the area. Rainwater harvesting can be one of the effective components of watershed management. The rainwater can be used for drinking purpose or micro-conventional irrigation as well.

A 14-days residential training will be organized at scheme site to:

- prepare skilled human resources for the construction of rainwater systems.
- support the UC/WRMC/VDC to continue the rainwater systems by their own

Construction materials should be collected at site before starting training. Training should be planned with the consultation of UC, Users and VDC. All the required arrangement for residential training like lodging, fooding, classroom, practical sessions, etc. should be assured in advance.

UC will select their local participants from their users. Dalit and women get priority.

Refer RVWRMP training manual for details.

WATER RESOURCE TECHNICIAN TRAINING

Considering requirement of water resources technician cadres in far- and mid-western regions, several trainings are planned to be organized to enhance practical skills of the local technicians for construction of water resource and MUS schemes. Participants for the training will be selected from project VDCs and Support Organisations. Separate guidelines will be prepared for the selection process.

Around 40-days technician training will be organised in a MUS scheme site. The training content will include the following:

- Ferro-cement and Soil Cement tank
- RCC
- Plumb Concrete
- HDP pipes & fittings
- Multiple Uses taps and Off take structures
- MIT (Micro-Irrigational Technologies)
- Pond lining technologies (eg. plastic lining, soil cement lining etc.)
- Masonry
- GI pipes & fitting
- Measurement units & drawings
- Selection of raw/local/commercial material
- Gabion work
- Carpentry & roofing
- Calcium mitigation
- Basic pumps
- General water quality assessment

These skills should be sufficient to cover the following applications:

- Gravity Water Supply
- Micro-irrigation
- Probable Canal lining / simple cross-drainage structures / gabion
- Rainwater Harvesting
- Multiple Uses Systems
- Micro irrigation Technologies (MIT)

Additional training for specific locations may be provided for:

- Hand & electrical pumps
- Civil work related to hydro-power plants

Refer RVWRMP Training Manual for details.

O&M TRAINING TO UC

Introduction:

Two days training will be organized for UC by SO during implementation phase of scheme cycle. First day, participants will get to know about Step-by-step process, RVWRMP and monitoring of O&M and during the second day UC will review their own previously prepared O&M plan and update it for its effective implementation.

Duration: 2 days

Participants: All members of UC

Organizer: SO

Resource Person: Field coordinator, Community mobilizer/Health motivator etc.

Objectives: Objectives of the training are to;

- aware all the UC members about Operation & Maintenance of the ongoing scheme
- aware UC members about role & responsibilities of UC & other stakeholders in O&M of the scheme
- review and reflect issues and experience of UC to implement O & M activities
- review and update O&M action plan prepared during CAP preparation phase

Expected outcome: After this training;

- UC members will understand the Step-by-Step activities & take part accordingly
- review O&M action plan prepared during CAP preparation phase is updated for effective implementation.

Source of Fund: DWRDF

Required Materials:

CAP- O&M plan prepared during preparation phase of scheme cycle, Step-by-Step poster, brief introduction paper of RWSSSP, UC manual including O&M functions, Flash cards, Relevant posters and charts, materials and stationeries.

Days	Content	Time	Teaching/Learning Activities
1 ST	<p>Session I Opening Session</p> <ul style="list-style-type: none"> • Introduction of participants • Expectation of participants • Objective of the training • Expected outcome of the training: <p>Session II Introduction of RVWRMP Implementation Phase Main features of RVWRMP (Short)</p> <ul style="list-style-type: none"> • Warm up • Funding mechanism • Contribution: Cash & Kind (DWRDF, DDC, VDC, Users) • Types of repair and maintenance activities <p>Session III Step-by-Step:</p> <ul style="list-style-type: none"> • Activities & Steps • Role & Responsibility of UC, DDC, VDC & SO in O&M 	<p>1 hrs</p> <p>2 hrs</p> <p>2 hrs</p>	<p>Through Game or Self</p> <p>List the expectations, which are expressed by participants and relate with objectives. If participants are literate can write in cards and just summarize them.</p> <p>Ask question what they know already then continue discussion (Avoid lecturing without discussion)</p> <p>Explain showing Step-by-Step big cloth poster</p> <p>Explain importance of each steps & role of UC in that step</p>

	<p>Session IV</p> <ul style="list-style-type: none"> • Importance of monitoring • Role of UC and Users in monitoring and evaluation of O&M 	1 hr	Presentation and discussion
2 nd	<p>Session I Review of Previous day</p> <p>Session II</p> <ul style="list-style-type: none"> • review and reflect issues and experience of UC to implement O & M activities <p>Session III</p> <ul style="list-style-type: none"> • review and reflect issues and experience of UC to implement O & M activities continued(especially the performance and factors affecting performance of tap stand group, VMW, HH and WC members) <p>Session IV</p> <ul style="list-style-type: none"> • Warm up • review and update O&M action plan prepared during CAP preparation phase • Gender Tree <p>Session V Finalization of updated O&M plan for implementation</p>	<p>30 min</p> <p>1.30 hrs.</p> <p>1 hr</p> <p>1.30 hrs.</p> <p>1 hr</p>	<p>From participants: Discuss</p> <p>Brain storming and discussion Experience sharing Explanation Story telling</p> <p>Presentation of previous O&M plan in flip-chart and discussion</p> <p>Discussion, feedback and writing</p>

	Session VI Closing Session - Closing with feedback collection	30 mint	
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GUIDELINES FOR O&M OF SCHEMES FOR UC

1. Introduction

Both the UC and users need guidance and training in operation and maintenance (O&M). The SO should help UC to build their capacity in managing the finances, store, and O&M fund efficiently. SO will guide UC to about possible ways and menace to generate O&M fund and similarly support in technical guidance in case of major repairs from outside.

The UC will select Village Maintenance Worker (VMW) for water supply, irrigation and combination of both and micro-hydro scheme (multiple use scheme or MUS) to perform the future O&M function. The DDC will facilitate the on-the-job training to VMW and WUC. Dalit and women must be selected to participate in the training of VMW. UC will provide priority to Dalit and women while hiring for these posts.

2. Definition of terms

Rehabilitation: Re-construction of a broken (not running) water supply, irrigation, micro-hydro and multiple use scheme (MUS). It is similar to implementation of a new system.

Operation: The day-to-day activities to keep the water supply, irrigation, micro-hydro and multiple use scheme (MUS) functioning properly. WS, irrigation and combination of both and micro-hydro scheme (multiple use scheme or MUS)

Maintenance: Activities planned to keep the each component of system in condition.
Activities conducted to prevent or minimize breakdowns.

Repair: Activities done after a breakdown has occurred.

3. Levels of O&M

The concept of operation and maintenance (O&M) is further divided into three levels:

- a) Preventive maintenance
- b) Minor repairs
- c) Major repairs

a) Preventive maintenance

Preventive maintenance against damages includes regular cleaning of intake, reservoirs, washouts, BPC/DC/CC/IC, strengthening of river crossings, preventing erosion etc in gravity system and oiling of moveable parts, filling soil around the platform in case of water supply, irrigation, micro-hydro and multiple use scheme (MUS).

b) Minor repairs

Minor repairs are required to keep the taps-stand and other easily repairable structure in running condition. These repairs include change of bucket washers, replacement of flapper valves, replacement of bolts and even change of pump head in the ground water and repairs of damaged structures, replacements of pipe, fittings, washers etc. in case gravity supply system. This work requires some tools and other materials. The Pump Caretaker and VMW should be able to do these minor repairs. The UC should take the responsibility to arrange funds or materials for this purpose.

c) Major repairs

Repairs that the UC or VMW are not capable to do are considered as major repairs. These repairs include reconstruction of part of the system, addition of new sources, calcium removal, breakage of reservoirs in gravity scheme and blocking of screen or sand filled in filter in ground water system. The UC should be able to find outside resources and technical assistance if major repairs are needed.

4. Collection Of Cash For Investment And Generating O&M Fund: (Please refer Paper-41 of this Step-by-Step Manual)

5. O&M Plan of UC

The O&M plan should be initiated during CAP preparation for O&M activities during preparation phase of the scheme cycle and finalised at the end of implementation phase, post-construction seminar organized immediately after completion of scheme. All the user households of a scheme should be invited in the post-construction seminar. The seminar should also be participated by Village Maintenance Worker, Pump Caretaker, Community Health Volunteer (CHV), Mother Groups and other key persons of communities.

The O&M fund together with a monthly water fee is assumed to cover preventive maintenance and minor repair works. In case of major repairs, UC should be able to tap other resources for example VDC Self Reliant Fund, funds from HMG/DWSS maintenance budget or DDC fund.

6. O&M related responsibilities of the UC**During implementation phase:**

- Collect O&M funds and ensure their proper management.
- Operate bank accounts for both scheme construction and O&M.

After implementation of the scheme:

- Ensure payment to VMW for the works they do in the scheme.
- Ensure water tariff collection from users on regular basis.
- Operate the bank account for O&M in transparent manner

- Maintain proper book keeping and accounts on expenses made and materials (purchase of spare parts).
- Manage preventive maintenance and small repairs.
- Make plans to find outside resources in case of major repairs.
- Organize regular UC meetings and inform the users about the decisions made.
- Organize mass meeting of users to inform them about the fund situation and get prior approval to make decision to meet the possible emergency.

7. Management of materials and tools

The UC should take care of proper management of materials: procurement, transportation, storage release and use. The management of tools and materials should start when materials are procured during the implementation phase.

The UC should manage the tools and materials according to the following guidelines:

- Manage the materials required for the repair and maintenance.
- The SO is responsible to prepare a standard list of spare parts required for operation and maintenance.
 - Maintenance Tools box should be provided to the VMW as per the standard list prepared by RVWRMP and also the re-usable tools procured during construction of scheme. The basic set of maintenance tools and cost will be included in the design documents.
 - Manage a proper place to store the construction materials and tools.
 - The UC will maintain a proper record of the construction tools in a simple register. The SO is responsible to provide skills required to keep records and accounts right from the commencement of implementation phase.
 - Construction tools and maintenance tools procured and used during the construction will be the property of the UC exclusively. The UC may use such tools and equipment also for other community development activities.

8. General and special meetings

The UC should discuss O&M related matters in its regular meetings. A meeting participated by all the user households should be organized by UC on annually in order to provide detailed information about the status of the O&M Fund and agree on the change in O&M policies, if so required. If urgent decisions are needed the UC should call a special meeting.

In the annual mass meeting:

- UC will present the status of tools and materials in the store.
- Review the payment for the services of VMW
- Review and revise the water tariff

- Review the performance of the UC, VMW and FCHVs.
- Discuss other O&M related matters.

9. Village Maintenance Worker

The role of VMW is very important to keep a water supply, irrigation, micro-hydro and scheme in a running condition. Motivation of VMW is one of the major factors affecting the sustainability of the water supply scheme. The level of motivation of the VMW determines the quality of his or her services, which in the end benefit all users. One important way to increase VMW motivation is to compensate reasonably for the works they do in the schemes. Therefore, it should be the responsibility of UC and users to keep them motivated. Payment to VMW during construction will be according to the skilled labour rate (when the VMW will be involved full time). The VMW should always be monitored and supported by the UC.

PREPARATION TRAINING ON PUBLIC AUDITING

The UC will be oriented prepared for Public Auditing during the Financial Management and Book Keeping Training in the preparatory phase.

Also in implementation phase a specific training will be organised to further prepare the UC and VDC officials to the public auditing which should conclude the implementation (construction) phase.

This training can be combined with Construction Review Seminar or other appropriate training during the implementation phase. The training concentrates on orienting the UC and VDC about the meaning and objectives of the Public Auditing and training the participants on proper use and filling of Public Auditing Formats (see Paper 69 of this Manual).

GUIDELINES FOR TRAINING AND CAPACITY BUILDING ON INCOME GENERATION AND LIVELIHOODS

Introduction

Rural Village Water Resources Management Project (RVWRMP) is aimed at enriching quality of life, environmental conditions and increased opportunities to improve rural livelihoods in the Mid- and Far-Western regions through rational, equitable and sustainable use of water at the village level. To improve rural livelihoods, the project will start Income Generation and Sustainable Livelihoods (IGSL) activities in its working area on demand driven basis. These activities will depend on the potential and needs of micro entrepreneurs and their market and hence demand of low income families from JAGADAMBA group will be the priority for the activities by strengthening skills, technology and services of the target group.

Key principle of the programme in income generation and livelihood sector is to utilize and promote local resources that were previously underutilized in a traditional way or not utilized at all. Therefore skill enhancement of the community people is prerequisite activity to utilize these resources in a sustainable manner. This guideline is prepared to manage skill enhancement activities and training in income generation and livelihoods sector in the project VDCs.

Objectives

Main objectives of this guideline are to:

- support community people's efforts to improve the quality of life
- support community people to improve animal health and husbandry
- enhance entrepreneurship skills on agriculture and forest based enterprises
- capacitate community people to promote small scale business and manage independently

Selection of participants/trainees:

Participants will be selected from CO members. The priority will be given to JAGADAMBA group and enterprising CO members. At least one (not more than two) person from each scheme will be selected for a specific training proposed. It's not mandatory to all schemes to participate if the environment of any scheme does not qualify according to the requirements of this guideline.

WRMC is the main responsible body for the selection of potential entrepreneurs. Following criteria should be met while selecting the participants:

- Priority will be given to the CO members from JAGADAMBA group(poorest – Poor-moderate)
- Participant should be from CO members having good character, creativeness, commitment, credibility and credit worthiness.
- Participants should have resources for the proposed business in the scheme area or be able to manage the resources.

Organization of the training event

Training will be organized on need basis as collected from the project VDCs. Once the resource analysis of the scheme/VDC is completed, demands together with resource analysis report will be collected through CM. Further collected baseline data and WUMP reports will also be the basis for selecting the proposed event. Based on the analysis of information and reports, suitable training will be organized grouping the participants of the same demand into one place at VDC or district level. In the case of piloting/demonstration scheme, training will be organized as deemed necessary.

Training/Skill development programme

Bearing in mind the normally available local resources of the project VDCs, skill development plan is designed as per the following categories:

1. Animal Health and Husbandry Improvement training:

- Animal nutrition
- Cattle and buffalo raising
- Rainbow trout fish farming
- Fodder production and goat raising
- Milk production and processing
- Poultry farming
- Village livestock development worker

2. Agriculture Development training

- Fruit and vegetable nursery establishment
- Bee keeping training
- Cereal crop production
- Citrus cultivation and processing
- Vegetable production
- Ginger cultivation
- Coriander farming
- Kitchen garden
- Off season vegetable production
- Vegetable seed production

3. Forestry based training

- NTFP management
- Ketuki processing
- Rittha processing
- Aallo processing

- Bambo propagation and management
- Improved cook stove
- Natural resource based entrepreneurship development
- Soil conservation and watershed management
- Protection and promotion of natural resources

4. Other trainings

Entrepreneurship Development Training

Besides the above subjects, skill development trainings may be given on other sectors as found appropriate and feasible

5. Exposure visits

Exposure visits for interested entrepreneurs will be organized from one scheme area to the other or one district to the other district for observation of the enterprises if required. This system is expected to be very fruitful tool to enhance the capacity of the entrepreneurs.

Coordination and management

Respective public institutions stationed in the project districts are expected to coordinate and support in delivering services needed by the poor people to set up or expand their interest. District based officers of these organizations will be invited in the DMC meeting as DMC members and will decide to support in the field of expertise. Therefore all these aforesaid trainings/activities will be under the coordinated guidance of the DDC at district level. Coordination at center, regional or other than district level will be done by PSU.

In the public sector, the PSU will coordinate with Department of Cottage and small Industries (DCSI) and Cottage and Small Industries Department Board (CSIDB) for skill development training linking their regular activities in the project district while national and district level financial institutions will be invited for wholesale lending to the programme VDCs. Other public institutions will be coordinated as needed.

The project is very flexible to join hands with likeminded institutions working in the project district and the VDCs. The project will seek such institutions as deemed necessary.

DMC/PSU will be organizer of these trainings.

Resource persons

Resource persons are expected from the respective public institutions as these institutions are available at area, district or regional level. In the absence of sector specialist within these institutions, out door expert consultants will be hired for the training.

Duration of the training

Duration of the training is expected to be three days to one week at the village or district level. Few trainings may require more time than expected.

Contents of the training

- appropriate topic from the training programs mentioned above
- management of the enterprises
- marketing of the product and its linkages development

Environment required for the training

Trainings will be conducted on practical basis. Therefore training venue will be the one where required materials will be available easily. Support from likeminded institutions is anticipated for the training.

Expected outcomes

Training scheme is designed for one to two people from each scheme area in general. Therefore the trained persons are expected to be more capable to run their own business/enterprise and enrich the capacity of the other CO members resulting them to be able to utilize their own resources effectively and thereby improve their livelihoods.

For more information on the Roles and Responsibilities of different stakeholders in initiation of income generation and livelihoods activities refer to Project's *IGA and Livelihoods Guideline*.

GUIDELINES FOR ESTABLISHMENT OF REVOLVING LOAN FUND

Introduction

RVWRMP aims to launch micro credit and income generation activities to improve rural livelihoods in its project VDCs. Establishment of a fund is a prerequisite for such activities. This fund will support to generate micro enterprising activities and meet urgent requirement of the poorest of the poor people among CO members. The fund comprises seed money from RVWRMP, loan from financial institutions and other incomes. Fund from CO members, WRMC and Operation and Maintenance fund of the scheme can also be revolved in this account on interest basis. Accumulation of such fund will act as revolving loan fund.

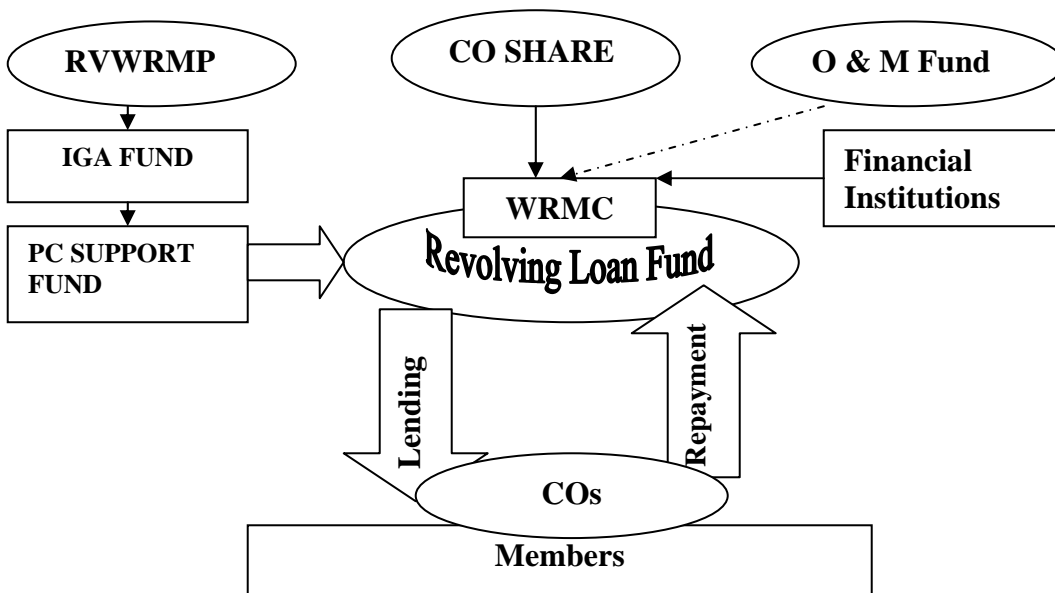
Objectives

Grounds behind establishment of revolving loan fund are to:

- support in meeting urgent financial requirement of the poorest of the poor, women and deprived CO members
- support in initiating micro enterprising development activities of CO members
- support in supplementing shortfall capital in COs
- Support to purchase MIT (Micro-Irrigation Technologies)
- Support in other income generation and livelihood activities

Establishment of Revolving Loan Fund

Revolving loan fund will be established with financial support from different institutions. Establishment of the fund will be initiated with the seed money of RVWRMP. There is fund of COs and UC (O & M fund) in the village which can be used in terms of revolving fund based on the mutual understanding among the COs, UCs and WRMC. Besides this, WRMC can explore for wholesale credit with financial institutions. WRMC itself will manage the fund in close assistance of COs/ CO members. Revolving loan fund can be seen in the diagram below:



Management of Revolving Loan Fund

Management of fund is a crucial part rather than collecting money. Everything has to be taken into consideration very carefully while mobilizing the fund. To manage the revolving loan fund, following sub committee under WRMC will be formed at the village level:

- One male and one female from WRMC -2
- Dalit and Janajati -1
- Community Mobilizer -1
- VDC secretary (optional invited member) -1

Chairperson will be selected among above five members on consensus basis. CM will act as secretary of the revolving loan fund. Executive members of the fund will be having following criteria:

- honest
- ideal character
- trustworthy
- politically neutral
- having feeling of 'we' instead of 'I'.
- CO member having good track record

Revolving Fund Management Committee (RFMC) will be selected during regular WRMC meeting based on the above criteria (with certain modifications in the criteria and addition of specific criteria as per the locations/situation).

Mobilization of Revolving Fund

The fund has been managed to support in improving livelihood conditions of rural communities through the enhancement of income opportunities. This fund will provide the credit capital supplement to the poorest of poor members and deprived CO members, those have not easy access to institutional credit. Therefore following policy has been formulated to mobilize fund at WRMC level:

1. The loan ceiling for a CO will be equal to the amount arrived at by multiplying the number of households with appropriate amount decided later (e.g. about Rs 1500). For example, a CO has 20 participating households; the upper loan ceiling of the CO will be Rs 30000. In case of member households, the upper ceiling should not higher than Rs 10000 depending upon the nature of enterprise.
2. An interest rate should not be more than 10-12% to COs and interest rate for CO members should not be higher than 16-18%. Interest Income margin 4-6% will remain in CO to meet the management cost and 10-12% interest rate will go to WRMC to meet the management cost. But for the poorest of poor, COs and WRMC will provide some rebate in the interest (the amount of rebate will be decided by COs).
3. The fund will be made available directly to COs through WRMC. All the activities related with lending and collection will be carried out by CO.
4. The member borrowing credit will pay the principal and interest on the basis of monthly installments within a period not exceeding 24 months based on the nature of the enterprise undertaken by the member.

5. WRMC/UC/CO may disburse this fund in kind to ultra poor and they repay back in kind too.
6. All CO members will bear the responsibility for full utilization of this fund and timely repayment of principal as well as the interest. CO members should focus their investment in enterprises development activities. In case there is a failure in recovery of principal and interest of the fund, all members will pay the amount to WRMC on equality basis
7. Community Managed livestock Insurance System will be introduced in WRMC. COs will make aware their members about livestock insurance and encourage the members who borrow for livestock to get their animals insured.

Procedures for lending revolving fund

1. CO should investigate/appraise/study the demand of the members, get it approved from a meeting witnessing the presence of all CO members.
2. CO will submit the loan request application to WRMC meeting.
3. CM and WRMC members should analyze the request made by the members and their willingness to utilize and repay in time. The demand should be discussed in WRMC meeting and based on the policy and approved criteria; WRMC meeting will approve the request.
4. CO is responsible to support CO member in utilization of loan fund and its repayment. Installments for repayment of loan will depend on the nature of investment or enterprises or work but not more than 12 installments/months.

Priority of COs for lending

The priority will be given accordingly:-

1. COs having most of the members are the poorest of poor.
2. COs having most of the members are dalit and deprived.
3. Female CO.
4. COs having a lot of income generation opportunities but failed to support for credit through its own internal saving.

Note: Ceiling of seed money to be provided from RVWRMP will be determined later based on the availability of the resources.

For details, refer to Micro Credit Guideline.

Step 14 – Post-Construction Seminar and Public Auditing

GUIDELINES FOR POST-CONSTRUCTION SEMINAR

1. Introduction

The Post-construction Seminar will be organised for the UC and users after completion of the scheme. It will be a two-day event. The first day will relate to all the activities described in the CAP, and scheme design. Evaluation of the completion of the works and compliance of responsibilities by the SO and other stakeholders by UC and users is done. The SO will provide recommendations to UC for ensuring sustainability of the scheme. Plan for raising water tariff and remuneration for the services of VMW is made. UC together with users may also plan a symbolic inauguration ceremony. The second day of the seminar will focus on orienting the VDC members and UC office holders to be able to tap in the support and assistance for the scheme and other development activities in the community from outside sources.

2. Objectives

The main objectives of this seminar are to:

- Plan water tariff collection from the users and other fund raising measures for future O&M of the scheme.
- Plan for payment of the services to VMW.
- Plan household latrine construction and sanitation promotion activities.
- Make management plan of the left over materials, tools, etc.
- Prepare plan for mobilization of UC fund for high earning activities

3. Details of the Seminar

Duration: 2 days

Participants:

1st day: Users (at least 50 % of participants should be women), all members of the UC, representatives of VDC, VMWs, LLBs, FCHVs and key persons of community. Representation of all ethnic groups of the communities.

2nd day: UC and VDC members.

Methods:

The seminar should be participatory. The SO should stimulate and encourage both men and women and all ethnic groups/castes to be active and to express their views.

- Discussion
- Presentation of the status of the scheme, store, materials, tools and future plans of the UC in this regard
- Filling the questionnaire
- Orientation to VDC and UC members on the methods and techniques of tapping the resources and mobilising the UC fund for high income earning activities. .

Materials needed:

- Post-Construction Seminar Questionnaire
- Design and estimate of the scheme
- CAP chart of the scheme
- Final layout, Community Map (to check and add information)
- Poster papers, markers, etc.
- Posters, charts of HSE for exhibition

Expected outcomes:

- Users will become aware of their future role in O&M and sanitation activities
- The UC and users will share the idea and commitment of regular fund raising for O&M, and revolving fund for household latrine promotion activities.
-

Contents:

Day	Contents	Tentative Time	Important activities
1 st	<p>I. Introduction of the objectives of the workshop.</p> <p>II. Identification of problems and solutions:</p> <ul style="list-style-type: none"> * Help the UC to fill the questionnaire. <p>III. Information, recommendations and approval.</p> <ul style="list-style-type: none"> * The UC presents the status of the scheme * Discuss of problems/solutions and answer the queries together with the UC. * Present the recommendations made and get final approval from the users for the future plan, role of UC/users, VDC etc. * O/M, VMW, technician, rising and proper use of funds, where to get help in case of major damage of scheme etc. * VDC's role in the WSS (why and how?) * Continuation of sanitation activities (why and how?) <ul style="list-style-type: none"> * Household latrine * Mobilizing the O&M Fund * Drainage * Waste pit * Campaign in schools, VDC, MG <p>IV. Future planning and recommendations.</p> <ul style="list-style-type: none"> * Discuss possible problems and solutions of the scheme, e.g., technical, management, sanitation etc. Ask men and women separately about possible problems and solutions. Make sure that in the end you have the opinions of both in your records. * Prepare/finalise O&M plan for the scheme. * Present the M&E report of scheme. • Inform about the completion of responsibilities of the SO and the project <p>Conclusion of the day.</p>	<p>15 min</p> <p>1 hr</p> <p>1.5 hr</p> <p>1 hr</p> <p>15 min</p>	<p>* Explain why and how the questionnaire should be filled.</p> <ul style="list-style-type: none"> • Stimulate and encourage men, women and all ethnic groups/castes to express their views.
2 nd	<p>I Introduction of the key persons.</p> <p>II Explanation of the objectives of the meeting.</p>	<p>15 min</p> <p>15 min</p>	

	III. Orientation on techniques and methods of tapping the resources from the outside sources for the development of community IV Conclusion and closing of the workshop	2.5 hr	
--	--	--------	--

Note: SO should record all the points and decisions made in the workshop and include them in the reporting to DDC. Make sure that you record separately the opinions given by women and men.

**POST-CONSTRUCTION SEMINAR
QUESTIONNAIRE**

A. General:

Scheme name: _____

District: _____ VDC: _____

Ward no: _____ Total number of taps: _____

Total number of off takes: _____

Total number of households: _____ Total number of users: _____

Total number of MIT users: _____

Scheme started on: _____ Scheme completed on: _____

Changes in the UC and reasons for them:

Sn.	Name	Designation (e.g. UC member or secretary)	Name of first elected person	Reason for Change
1.				
2.				
3.				
4.				
5.				

B. O&M:

* Total amount of the O&M fund in the beginning? :Rs. _____ Now: Rs _____

* How is the tariff raising done? monthly [] annually [] other ways [] in cash []% in kind []%

* Are there any problems in raising money for O&M? Yes [] No []

If yes, specify the problems and found solutions:

Problems:

Solutions:

* How many VMWs are working in the scheme? male: _____ female: _____

* How is the compensation for VMW arranged (money and/or kind)?

* How many times did the UC organize a meeting to inform the users about the financial and other O&M matters?

* How will the community deal with major damages of the scheme in the future?

* How much money is used from the UC fund to O&M activities?

Purpose:	Amount:	Purpose:	Amount:
_____	_____	_____	_____

Total: _____ Rs

C. Management of surplus materials and tools:

- * What is the plan to manage and use surplus materials and tools in the future?

D. Environment and Sanitation:

- * Have there been any problems with drainage of wastewater of a tap? Yes [] No []

If yes, reason: _____

Are there any plans to improve the situation? If yes what are they? : _____

- * Plantation around source (in gravity): completed [] not completed []

If not completed, reason: _____

- * Fencing of structures: completed [] not completed []

If not completed, reason: _____

- * Total number of LLBs working in the communities: male: _____ female: _____

E. Status of latrine construction

	Target in CAP:	Constructed:	Remarks:
Households			
Schools			
Health Posts			

GUIDELINES FOR PUBLIC AUDITING

Introduction

Public auditing is an appraisal of the investment and activities related to the development work. It ensures actual investment, income, quality and quantity of the work, procedures of the activities carried out and thereby corrective measures among concerned stakeholders. In RVWRMP, Public auditing is treated as one of the most important events of the scheme cycle which is conducted after completion of all the activities of the scheme by UC. This is conducted during post construction seminar organizing mass meeting of the users and other concerned stakeholders as well.

Objective of Public Auditing

Main objective of public auditing in RVWRMP is to

- notice community people and concerned stakeholders on their scheme activities
- acknowledge people on financial matters (income/expenditure)
- promote ownership of the scheme
- assure and demonstrate (with bills etc.) to community people that the scheme is getting done in a transparent way

When and how to conduct public auditing

Public Auditing is conducted at the end of the implementation of the scheme. Representation from each household is a must in this event. Representation from WRMC, VDC, and existing political parties are invited in the meeting. UC and SO in consultation with DMC are jointly responsible to organize this meeting following the processes mentioned below:

- Call mass meeting at the scheme area and ensure full participation of the users and the concerned stakeholders. Information should be delivered to all before seven days of the event. It should comprise date, time and venue of the public auditing.
- Present scheme completion activities and report (sample of formats to be presented are prepared below).
- Explain on total income and expenditures of the scheme showing the ledger of income and expenditures maintained. Explanation should cover each transaction of income and expenditures related to bank and cash with bills. Interested readers may look at the book keeping. Discussion will be focused on the following topic:
 - Was UC formed as accepted by all users?
 - Was the scheme completed as per CAP?
 - Were all users well informed about the project?
 - What construction materials are procured?

- How much pipe, tools and fittings are procured?
 - What is the unit and total price of the aforesaid materials?
 - Who were suppliers/manufacturers of the materials?
 - How much spent on transportation and storage?
 - What were the means of transportation?
 - Did final monitoring team agree on completion of the scheme?
 - If any material/s damaged, lost during implementation?
 - What are the materials left with UC?
 - Whether SO/DTO has measured quantity, quality of works, verified UC book keeping and prepared measurement book?
- Discuss with users about performance of SO
 - ask users for their queries
 - Get acceptance and endorsement of the discussions by the users and the stakeholders.
 - keep all records in the minutes getting signatures of all participants and send public auditing report to DDC, VDC, DMC with o/c with UC
 - Update project board immediately after public auditing
 - Ensure plan for the future in regards to regular O & M of the scheme and other activities.

Sample of formats for Public Auditing

Income

Sources of income (mention cash or materials received from where)	Cash or materials	Remarks

Expenditure

Expenditure detail	Rate	Quantity	Total
1. Materials (which materials are procured)			
2. Wages (how much paid on which work)			
3. Kind (how much)			

4. Management cost (Transportation and others)			

Stock

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

Sundry Creditors (payable amount)

Description	Cash/Quantity

Goal and achievement

Description of work	Goal	Actual progress

TECHNICAL TESTING

At submission of draft completion report by the user committee with support of SO, technical team will visit the site for technical testing of the scheme. The expert technical team will evaluate quality of construction, operation performance of components (including testing and measurements), specifications & deviations, appropriateness, facility improvements, operation & maintenance systems, environmental impacts and sustainability.

Refer monitoring guidelines for detailed checklists and formats.

Step 15 – Agreement between DDC/VDC/UC/SO for Post Construction Activities

**Government of Nepal
Ministry of Local Development
Office of the District Development Committee**

.....

**Rural Village Water Resources Management Project
(Nepal-Finland Cooperation)**

**Post Construction Phase Agreement Paper
(Sample format)**

Fiscal Year

1. Name of the Scheme:

2. Location

VDC:....., Ward. no:.....

Tole/Cluster:.....

3. Number of HHs:.....Number of beneficiary.....

4. Name of support organization

- **Social**
- **Technical**

5. Duration of the scheme:

**OFFICE OF THE DISTRICT DEVELOPMENT COMMITTEE
..... DISTRICT**

POST CONSTRUCTION PHASE AGREEMENT

Name of the scheme:
.....
.....

CONTRACTING PARTIES

This contract is made for the Post Construction of the above mentioned scheme between:

- District Development Committee, hereinafter called DDC,
- Village Development Committee, hereinafter called VDC,
- Water User Committee, hereinafter called UC,
- Support Organization, hereinafter called SO.

2. SCOPE OF CONTRACT

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

The scope of the activities and work are specified in the attached "Post Construction Phase Proposal", prepared by SO, and the Community Action Plan, reviewed by UC, and approved by DDC. Following activities will be carried out during the phase

- Review of CAP
- Management and O&M of schemes by UC
- Follow-up of O&M activities
- Scaling up Income Generating and livelihoods activities
- Strengthening Saving & Credit Systems
- Environmental Sanitation Activities
- Training/Capacity Building
- Support Visits and Studies

3. CONTRACT PERIOD

The Post Construction activities will start immediately after the construction activities of the implementation phase are completed. This phase will continue upto six months, from.....
to

Post construction is a continuous process to be taken care by the UC and the VDC. Therefore contract period mentioned above is not applied in the case of UC and the VDC.

4. ROLE AND RESPONSIBILITIES OF UC

The community has the ownership and full responsibility of the scheme even after completion of the implementation phase activities. To sustain the scheme, UC will revise/review CAP and conduct the activities:

- Ensure regular collection of Operation and Maintenance fund of the scheme
- Continue regular Operation and Maintenance and follow up of the scheme activities as required.
- Continue services of Village Maintenance Worker providing incentive in time.
- Mobilize O & M fund within scheme area for income generation and livelihoods activities.
- Support CO members in scaling up income generation and livelihood activities.
- Support in strengthening saving and credit activities in the scheme area
- Continue of environmental sanitation and conservation activities in the scheme area
- Participate in the meeting/seminars/trainings and mobilize community people in scheme activities
- Support in monitoring and studies activities
- Supervise the activities of the SO staff and keep their attendance record.
- Coordinate with DDC, VDC, WRMC and SO as required.
- Cooperate with the DDC by providing any necessary documents if needed.
- maintain inventory of the leftover tools, fittings and construction materials.

5. ROLE AND RESPONSIBILITIES OF SO:

The SO is responsible to:

- conduct scheme level trainings/workshops/seminars, mass meetings as per revised CAP.
- keep proper record of meetings and decisions made during the Post Construction phase.
- assist UC in operation and maintenance of scheme including mobilization of the O&M fund for income generation and livelihoods activities.
- establish system for collecting regular service fee.
- participate in monitoring activities.
- assist in income generation and livelihoods activities.
- support in environmental sanitation and conservation activities.
- submit to DDC monthly progress reports of the activities and completion of work, as well as the expenditure statements of SO, as per the requirements of DDC. The report shall include also all the problems encountered and how they were solved.
- assist UC in maintaining inventory of the leftover materials.
- appoint competent full time field staff as well as part time staff.

The full time staff shall be:

Type of staff	Name	Sex	Duration
1.
2.
3.

The part time staff shall be:

Type of staff	Name	Sex	Duration
1.

2.
 3.
- maintain the time sheets of the full time and part time staff showing their involvement in the scheme activities on daily basis. The UC shall certify the time sheets concerning the time spent in the field.
 - report immediately to the DDC about any problems that can not be solved at the site between UC, VDC and SO. The SO shall similarly report immediately about any significant matters that may influence on completion of work within the agreed time or cost, or may cause changes to scheme design.
 - coordinate with DDC, VDC, WRMC and UC regularly.

6. ROLE AND RESPONSIBILITIES OF DDC

The DDC is responsible to:

- release installment from DWRDF to SO's account timely
- monitor and follow up of the post construction activities done by the SO and UC
- Coordinate with different stake holders within district for income generation and livelihoods related activities

7. ROLE AND RESPONSIBILITIES OF DTO

The DTO is responsible to

- recommend DDC for payments to SOs.
- assist in providing technical back up if needed.
- ensure completion of the post construction activities and report to the DDC/DMC.

8. ROLE AND RESPONSIBILITY OF VDC

The VDC is responsible to:

- monitor and evaluate Post Construction activities and performance of SOs and UCs.
- supports to communities to enhance livelihoods, to improve water supply and sanitation facilities and generate fund.
- provide overall assistance to UC in mobilizing the local resources and getting necessary permits or approvals from the local authorities needed for smooth operation of the Post Construction of the scheme.
- coordinate with stakeholders working in the VDC for the assistance required
- allocate some fund every year for operation and maintenance of the scheme implemented

9. ROLE AND RESPONSIBILITY OF WRMC

The WRMC is responsible to:

- participate in monitoring the Post Construction phase activities
- coordinate with DDC, VDC and UCs.
- mobilize local resources and support to UC Post Construction of the scheme
- support UC in income generating activities

10. PAYMENT TO SOs FROM DWRDF

- ◆ for service cost Rs.
- ◆ for Post construction related related training Rs.....

Total Payment Rs.

11. PAYMENT SCHEDULE TO SUPPORT ORGANIZATION

The DDC shall release fund from the DWRDF to the account by account payee cheque of the SO on installment basis, in total Rs. (in words rupees only), as specified in the Post Construction Phase Proposal as follows:

First Installment:

Rs. (in words rupees only)
 (33% of the total amount to be paid to SO) shall be paid at the time of signing this contract.

Second/Final Installment:

Rs. (in words rupees only)
 (67% of the total amount to be paid to SO) shall be released after completion of the mandate mentioned in the agreement.

All payments shall be made within two weeks of the receipt of written request of SO.

12. PAYMENTS FOR MONITORING

The DDC will pay travel cost and night allowance from the DWRDF to staff participating in monitoring of the scheme. Expenses other than for monitoring purpose shall not be borne by the DWRDF.

The amount spent on monitoring visits of a scheme shall not exceed 3% of the scheme cost.

13. TAXES

The SO will be solely responsible for any taxes it may have to pay to GoN in association with this contract.

14. MONITORING AND SUPERVISION

The DDC will arrange monitoring visits to the scheme as per the Implementation Guideline. 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 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 and UC 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 and UC.

15. TERMINATION OF CONTRACT

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

- The contract can not be fulfilled satisfactorily due to poor performance of SO
- Information provided by SO is found intentionally inaccurate or misleading.
- The SO fails to submit progress reports and financial statements in time.

16. REDUCTION OF PAYMENT

The DDC has the right to reduce the payments in case of particular activities have not been undertaken by SO as specified.

17. AMENDMENTS OR DISPUTES

The contract parties can change this contract only in writing and approved and signed by all parties. In case of any dispute all parties shall make all efforts to resolve it. If this is not possible the dispute will be solved under the prevailing legal system of GoN.

18. SIGNATURES

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

On behalf of the UC:

On behalf of the SO:

Signature:

Signature:

Name:

Name:

Position:

Position:

Date:

Date:

On behalf of the VDC:

On behalf of the DDC:

Signature:

Signature:

Name:

Name:

Position:

Position:

Date:

Date:

Witnessed by:.....(DTO)

Witnessed by:(RVWRMP)

Name:

Name:

Position:

Position:

Date:

Date:

Annexes:

A) Post Construction Phase Proposal, dated

b) Revised Community Action Plan, dated

Step 16 – Post Construction Activities

GUIDELINES FOR REVIEW OF COMMUNITY ACTION PLAN (CAP)

1. Introduction

The Community Action Plan (CAP) prepared for implementation of the scheme needs to be reviewed upon completion of the scheme. UC, in assistance of SO is responsible to review of the CAP together with users to guide post construction activities of the scheme. Operation and maintenance of the scheme and other activities required will be based on this detailed work plan. Review of CAP has to be submitted to the DDC for information.

2. Purpose

The purpose of the review of Community Action Plan is to:

1. Ensure that the operation and maintenance activities will be done regularly.
2. Help the UC in community mobilisation activities for post construction activities.
3. Make the users aware of their role and responsibilities on operation and maintenance if the scheme.
4. Collect regular operation and maintenance fund

3. Process

The process should be as much participatory as possible.

- Organize mass meeting on cluster wise basis if the scheme is big giving at least 7 days notification. There should be one male and one female representative invited from each household. All ethnic groups/castes living in the community as well as all clusters should be well represented. Make sure that the time and venue of the meeting are suitable for all. At least 2/3 of the households should be represented in the mass meeting. If there are fewer representatives or if women are in a minority or if some ethnic group/caste is not represented, postpone the meeting until the representation is adequate and equal.
- Evaluate the activities carried out during CAP and based on that CAP, Explain the objectives of reviewing CAP. Ensure the participation of all male and female representatives and of all the ethnic group/caste representatives.
- Discuss and finalise plans for activities one by one. Give adequate time for discussion, presentation and decision-making.
- Encourage both men and women and all ethnic groups/castes for discussion and decision making.
- All the decisions should be registered by the UC and get signatures of all the participants.

The UC should prepare a list of all the participants showing the gender and all ethnic group/caste and profession. The secretary has to record everybody who addressed the meeting (gender and ethnic group/caste).

4. When is the CAP reviewed?

CAP is reviewed immediately after implementation phase is completed. With the assistance of SO staff, the UC prepares the draft review of CAP clearly mentioning what, when, where, who and how of the activities planned for the post construction phase. The UC has to present draft review CAP to the mass meeting. The VDC contribution should also discuss during the meeting and finalize it. The SO can facilitate to UC to present the review of CAP to the meeting. The meeting will also discuss on detail action plan for increasing operation and maintenance fund.

After discussion and clarification of the queries by the meeting, the review of CAP will be finalized on consensus basis and utilized by UC.

Example of

REVIEW OF CAP FOR A WATER RESOURCES MANAGEMENT SCHEME

Review of CAP is done for the activities to be undertaken in the post construction Phase. Basically, review of CAP comprises various activities to be carried out during post construction phase.

Table 1. Training and Workshops

Sn.	What? Activities to be done	Total Parti.		Ethnicity	Total Days	When?		Where? (Place)	How? How to perform?	Who? Responsible Person/SO	Supported by Person/SO
		M	F			Starting Date	Completion Date				
1	Post-construction seminar of UC										
2											
3	Continuation of O and M fund collection										
4	Coordination among support agencies										
5											
6											

Table No. 2: Construction related activities

Sn.	What? Activities to be done	Human resource		Total Days	When?		Where? (Place)	How? How to perform?	Who? Responsible Person/SO	Supported by Person/SO
		S. Labour	Labour		Starting Date	Completion Date				
1	Storage of remaining construction materials (tools and fittings etc)									
2	Follow up of O and M of the scheme: Regular follow up/check									
	Regular maintenance									
	Continuation of VMW									
3	Collection of local materials:									
	* Stone									
	* Boulders									
	* Sand									
	* Others									
4										
5										
6										

Sn.	What? Activities to be done	Human resource		Total Days	When?		Where? (Place)	How? How to perform?	Who? (Responsible Person/SO)	Supported by Person/SO
		Skilled Labor	Labor		Starting Date	Completion Date				

7										

Remark:

- Don't forget the signature of UC members

POST-CONSTRUCTION TRAINING AND CAPACITY BUILDING

RVWRMP continues different training and capacity building activities in the scheme area also after the completion of scheme implementation activities. This is to strengthen the local community and institutions for smooth Operation & Maintenance of the schemes, as well as to facilitate further livelihoods improvement in the Project areas.

The training and capacity building in the Post-Construction phase includes:

Operation and Maintenance training

Depending upon the existing capacity of UC and scheme size, one to two workshops during the first six months after construction should be organised to evaluate the problems and progress related to O&M. The role and duties of the Users Committees, VMW, tap-stand group/s and the Community Mobilizers will be reviewed during such seminar. This training shall deal with setting of water tariff; tariff collection system; payment to VMW; regular supervision of structures; service level and quality of service of the scheme and active utilization of O&M fund etc.

Other Trainings in Pos-Construction Phase

Other trainings in Post-Construction Phase can include scheme management training to upgrade capacity of UC, income generating, livelihoods, basic literacy training, further training of VMWs and participatory M&E etc.

FOLLOW-UP OF OPERATION & MAINTENANCE (O&M) ACTIVITIES

1. Introduction

After implementation of schemes UC and users need support for smooth operation and maintenance of the water supply and irrigation schemes. They need specific guidance, support and encouragement in reviewing updating and implementing previously developed O&M plan. One workshop of two days duration will be organized to follow-up of operation & maintenance (O&M) activities for the UC and representatives of users after completion of the scheme. The assign SO will responsible for organizing this workshop and support UC to upgrade their management capacity during post implementation phase of the scheme cycle.

2. Objectives

The main objectives of follow up are to encourage users and UC in operationalizing O&M activities at community level to ensure sustainability of the scheme.

Following topic will be discussed with UC and representatives of users during two days workshop:

- Review and reflect issues and experience of UC to implement O & M activities including O&M fund collection from the users and other fund raising measures and explore way out to generate fund.
- Explore work performance of VMW and status of her/his remuneration payment
- Explore status of the performance of UC and UC members in O&M functions like water tariff collection, supervision of structures, service level (especially duration of water supply and adequacy of discharge from all taps stands) and others....
- Primary linkages with WUMC, VDC and other village level service agencies like school, health-post, agriculture, forest and cooperative societies and others...
- Status of household latrine construction and sanitation promotion activities.
- Discuss status of the left over materials, tools, etc and prepare management plan for its optimum use and safe storage.
- Discuss and develop future O&M plan and explore possibility of linking O&M fund with Income generation activities at community level.
- review and update O&M action plan prepared during preparation phase

3. Details of the Workshop

Duration: 2 days

Participants:

Users (at least 50 % of participants should be women), all members of the UC, representatives of VDC and CO/s, School Teacher/s, VMW/s, LLB/s, FCHVs and other key persons of community.

Methods:

The workshop should be participatory. The SO should stimulate and encourage both men and women and all ethnic groups/castes to be active and to express their views.

- Discussion
- Presentation of the status of the scheme, store, materials, tools and future plans of the UC in this regard
- Orientation to VDC and UC members on the methods and techniques of tapping the resources and mobilising the UC fund for high income earning activities. .

Materials needed:

- Previously agreed O& M action plan
- Community Map (to check and add information)
- Poster papers, markers, etc.
- Community Map showing HH covered with latrines.

Expected outcomes:

- Users will become aware of their future role in O&M and sanitation activities
- The UC and users will share the idea and commitment of regular fund raising for O&M, and revolving fund for household latrine promotion activities.
- Develop action plan for expanding linkages with all possible stakeholders

Contents:

Day	Contents	Tentative Time	Important activities
1 st	I. Introduction of the objectives of the workshop.	15 min	presentation
	II. Information sharing, discussion.		
	* The UC presents the status of the scheme on sanitation, VMW, O&M fund collection, left over tools and materials, linkages	1 hrs	presentation by one of the UC member and supported by others
	* UC experience to implement O&M activities	30 min	Stimulate and encourage men, women and all ethnic groups/castes to express their views.
	* Discuss of problems and possible solution about O&M Fund Collection	30 min	
	* Discuss of problems and possible solution about performance of VMW	30 min	

Continues next page.....

1 st	<p>II. Information sharing, discussion -continue.....</p> <ul style="list-style-type: none"> * Discuss of problems and possible solution about toilet construction * Discuss of problems and possible solution existing structure and service level * Discuss of problems and possible solution about UC performance (regular meeting, mass meeting, supervision of VMW performance, scheme structure and service level and others... * Discuss of problems and possible solution about drainage, waste disposal, school latrine and others.... * Summery and conclusion of day one 	<p>30 min</p> <p>30 min</p> <p>15 min</p> <p>30 min</p> <p>30 min</p>	<p>Stimulate and encourage both men, women and all ethnic groups/castes to express their views</p> <p>continue.....</p>
2 nd	<p>III. Orientation on techniques and methods of generating internal resources and tapping the resources from the outside sources for O&M function.</p> <p>IV. Future planning and recommendations and approval (Prepare action plan solutions and answer the queries together with the UC- who will do what by when in coordination with whome? with monitoring indicators)</p> <p>Group one: Repair and maintenance work, O& M fund collection, linkages</p> <p>Group two Sanitation (HH toilet construction, school toilet, drainage, waste disposal, VMW,</p> <p>Presentation and discussion and finalization in plenary session</p> <p>V. Conclusion of the day.</p>	<p>1 hrs</p> <p>3 hrs</p> <p>1 Hr</p> <p>30 min</p>	<p>SO presentation and discussion</p> <p>Group work in two groups</p> <p>Presentation, Discussion and making necessary correction of the plan</p>

Note: SO should record all the points and decisions made in the workshop and include them in the reporting to DDC. Make sure that you record separately the opinions given by women and men.

GUIDELINES FOR POST-CONSTRUCTION SUPPORT TO UC

1. Introduction

After successful planning and implementation of construction works of a water supply, irrigation or MUS scheme, users and users committee face various challenges to operationalize other functional activities helpful for overall sustainability of the scheme. These activities could be classified into expansion of the toilet construction in each and every household; regularly collecting O&M fund from users; environment sanitation activities; promotion of smokeless Chulos (stoves) and linkage with various stakeholders such as WUMC, VDC, DDC, health-post, schools, District Agriculture/Soil Conservation/Drinking Water and Sanitation offices and others. They still need specific guidance, support and encouragement for overall management of the constructed schemes to ensure long term sustainability of the scheme. The Post-construction Support activities will be organised for the UC after completion of the scheme. The assign SO by DDC/DMC will help and support UC to upgrade their management capacity during post implementation phase of the scheme cycle.

2. Objectives

The main objectives of post construction support are to upgrade capacity of UC and users for successful operationalisation and ensure long term sustainability of the constructed system.

The main thrust of these activities for ensuring sustainability of the scheme is to:

- implement water tariff collection plan from the users and other fund raising measures for future O&M of the scheme.
- ensure regular payment of the services to VMW.
- continue household latrine construction and sanitation promotion activities.
- implement management plan of the left over materials, tools, etc.
- prepare plan for mobilization of UC fund for income generation activities
- develop linkages with stakeholders like WUMC , VDC, DDC, District Agriculture/ Soil conservation/ Cooperative/ Water Supply and other related organizations.
- present the RVWRMP matching O&M fund policy and the UC evaluation process and criteria used to measure O&M capacity of the UCs. (Details in Paper 77.)

3. Post construction support seminar

One post construction support seminar will be organized to discuss about above objectives with following detail.

Details of the Seminar

Duration: 2 days

Participants:

- 1st day: Users (at least 50 % of participants should be women), all members of the UC, representatives of VDC, VMWs, LLBs, FCHVs and key persons of community.
- 2nd day: UC and VDC members.

Methods:

The seminar should be participatory. The SO should stimulate and encourage both men and women and all ethnic groups/castes to be active and to express their views.

- Discussion
- Presentation of the status of the scheme, store, materials, tools and future plans of the UC in this regard
- Filling the questionnaire
- Orientation to VDC and UC members on the methods and techniques of tapping the resources and mobilising the UC fund for high income earning activities.

Materials needed:

- Post-construction Questionnaire
- Design and estimate of the scheme
- CAP chart of the scheme
- Final layout, Community Map (to check and add information)
- Poster papers, markers, etc.
- Posters, charts of HSE for exhibition

Expected outcomes:

- Users will become aware of their future role in O&M and sanitation activities
- The UC and users will share the idea and commitment of regular fund raising for O&M, and revolving fund for household latrine promotion activities.

Contents:

Day	Contents	Tentative Time	Important activities
1 st	I. Introduction of the objectives of the workshop.	30 min	
	II. Identification of problems and solutions:		
	* Help the UC to fill the questionnaire.	30 min	* Explain why and how the questionnaire should be filled.
	III. Information, recommendations and approval.		
	* The UC presents the status of the scheme		
	* Discuss of problems/solutions in relation to O&M action plan, payment to VMW, expansion of HH latrine construction program, status of total fund available at UC account and answer the queries together with the UC.	1.5 hr	• Stimulate and encourage men and women from all ethnic groups/castes to express their views.
	* O/M, VMW, technician, raising and proper use of funds, where to get help in case of major damage of scheme etc.	30 min	
* Continuation of sanitation activities (why and how?)	30 min		
* Household latrine			
* Mobilizing the O&M Fund			
* Drainage			
* Waste pit			
* Campaign in schools, VDC, MG			
IV. Future planning and recommendations.			
* Discuss possible problems and solutions of the scheme, e.g., technical, management, sanitation etc. Ask men and women separately about possible problems and solutions. Make sure that in the end you have the opinions of both in your records.	1.5 hr	Discussion and preparing action	
* Present the recommendations made and get final approval from the users for the future plan, including use of O&M fund for generating income, role of UC/users, VDC etc.			
Conclusion of the day.	15 min		
2 nd	I Introduction of the key persons.	15 min	By individual participants
	II Explanation of the objectives of the meeting.	15 min	Presentation by poster
	III. Discuss status of O&M fund and explore area for ensuring regular collection from maximum numbers of HH from all cluster.	1 hr.	Discussion

	IV. Orientation on techniques and methods of tapping the resources from the outside sources specially by promoting linkages with WUMC , VDC, DDC, District Agriculture/ Soil conservation/ Cooperative/ Water Supply and other related organization for the development of community.	2.5 hr	Discussion and recording of conclusion
	V. Possibility of using O&M fund for income generating activities	1 hr	Prepare action plan for future action
	VI Conclusion		
	VII. Closing of the workshop		

Note: SO should record all the points and decisions made in the workshop and include them in the reporting to DDC. Make sure that you record separately the opinions given by women and men.

UC O&M EVALUATION PROCESS AND CRITERIA

To ensure sustainability the Operation and Maintenance of the build schemes is the responsibility of the users and the UC. The O&M performance and the condition of the scheme related institutions and structures will be evaluated during the post-construction phase. To provide incentive for good O&M the project may provide O&M matching fund up to the amount collected by the UC based on their performance. The best performing UC will also receive recognition and some incentives. The evaluation also provides possibility to analyse the strengths, weaknesses and needs for further training in different UCs.

See Paper 40 of this manual for details on O&M fund collection and matching fund modality.

The assessment of indicators will be done during Post construction phase by monitoring team before granting O & M support fund from the Project.

UC Evaluation Criteria

The following are the standard indicators for long-term sustainability of schemes which will be useful to assess the increasing sense and level of responsibility of UC regarding construction quality and service delivery. For the purpose of simplicity, indicators are divided into a) Institutional, b) Social, c) Financial and d) Technical aspect of scheme. The broad aspects are further divided into its sub-divisions. Some score allocated to each sub divisions for evaluation purpose which is presented in the following table.

Areas of UC evaluation

SN	Aspect		Sub Division	Score
1	Institutional	A	UC status	15
		B	VMW status	12
		C	Coordination and Linkage	8
			Total	35
2	Social / Environment	A	Community Participation	6
		B	Hygiene and Sanitation	6
		C	Environment	8
			Total	20
3	Financial	A	Regular O&M fund collection	7.5
		B	O&M Fund	7.5
			Total	15
4	Technical	A	Source Yield	12

		B	Condition and Functioning of Structure	10
		C	Functioning of Taps	8
			Total	30
			GRAND TOTAL of (1+2+3+4)	100

UC Performance Indicators (breakdown)

S.N.	Aspects / Dimensions / Indicators			Scores
1	Aspects – Institutional			Total scores-35
A	UC Status:	Yes	No	15
	<i>I.A.1.</i> Renewal of WSUG / WSUC Registration			2
	<i>I.A.2.</i> WSUC election and general assembly held (UC charter followed)			3
	<i>1.A.3.</i> Maintained good records / book keeping (availability of trained / skilled Treasurer)			3
	<i>I.A.4.</i> UC active and Functional by implementing UC decisions			3
	<i>I.A.5.</i> Completeness of O&M tools-kit and some spare parts as provided by the RVWRMP			2
	<i>I.A.6.</i> UC representative of gender, caste and ethnic composition (social inclusiveness)			2
B	VMW Status:	Yes	No	12
	<i>I.B.1.</i> VMW recruited and active			3
	<i>I.B.2.</i> Skilled and trained			3
	<i>I.B.3.</i> Remunerated on regular basis			3
	<i>I.B.4.</i> Any replaced VMW are trained personnel			3
C	Coordination and Linkages	Yes	No	8
	<i>I.C.1.</i> Functional linkages with other in-village or external sources / agencies			2
	<i>I.C.2.</i> Coordination and linkages established with district authorities and other agencies			2
	<i>I.C.3.</i> Capable in tapping resources, training and other supports for O&M of the scheme (involvement of VDC / DDC and other agencies during post project implementation)			2
	<i>I.C.4.</i> Status of updated display board about scheme			2
2	Aspects : Social/Environment			Total scores-35
A.	Community Participation:	Yes	No	8
	<i>2.A.1.</i> Involvement of community in decision making process in scheme implementation / operation (O&M)			3
	<i>2.A.2.</i> High level of satisfaction of the users / community cohesiveness			2
	<i>2.A.3.</i> No pending source dispute			3
B	Hygiene and Sanitation:	Yes	No	10
	<i>2.B.1.</i> Reduction in diarrhea diseases			2
	<i>2.B.2.</i> Improvement in hand washing practices before meal and after defecation			4

	2.B.3. Latrine coverage and usage			4
C	Environment:	Yes	No	12
	2.C.1 Minimum or no environmental problem			2
	2.C.2 Good drainage system and cleanliness around structures			2
	2.C.3. No exposed transmission or distribution pipes			4
	2.C.4. No existence of water logged pits or unmanaged/health risked pits			3
3	Aspects : Financial			Total scores-35
	A. Regular O&M Collection:	Yes	No	0
	3.A.1 Formation of capital for O&M Fund on regular basis (from all HHs as decided by WSUC)			6
	3.A.2. Proportion of bottom ceiling available in the bank			4
	B. O&M Fund:	Yes	No	10
	3.B.1. Active bank account with existence of increasing and properly use of O&M fund			5
	3.B.2. Productive use of fund for O&M purpose			5
4	Aspects : Technical			Total scores-35
	A. Source Yield:	Yes	No	2
	4.A.1. Source not depleting (according to planning level yield)			2
	B. Condition and Functioning of Structures:	Yes	No	8
	4.B.1. All structures functioning well (no problem in regular water supply)			2
	4.B.2. Regular repair maintenance activities			3
	4.B.3. No leakages or damage in structures (e.g. Intake, CC, RVT, Valve Chamber, BPT/IC, Pipelines etc.)			3
	C. Functioning of Taps (as per service standard ??):	Yes	No	10
	4.C.1. All taps are operating			4
	4.C.2. Adequate discharge in all taps (@ 45 lpcd)			2
	4.C.3. Taps and other fittings replaced are of standard quality			4

Note:

1) **Minimum score :** UC to score at least 50 marks to be eligible for O & M support fund as a token of appreciation of UC towards sustainability of the scheme.

2) Evaluation Scale/Parameter:

<u>Sr. No.</u>	<u>Scale / Rating</u>	<u>Total Score</u>	<u>Remarks</u>
1.	Excellent	> 75%	Sustainable
2.	Good	50 - < 74%	Fairly Sustainable
3.	Poor	< 49%	Not Sustainable

3) Provision for Highest scoring UC:

- a. **At district Level:** Project supported UC scoring highest within each project district will be publicly recognized at each district headquarter (possibly on the occasion of World Water Day – 22 April) in collaboration with district chapter of FEDWASAN.

- b. **At project Level:** Project supported UC scoring highest among all nine working district recognized and awarded special certificate with 15 days cross fertilization visit to successful cases in Nepal by the Project.

Relevant Acts, Rules & Regulations

- Water Resources Act, 1992 (2049 BS)
- Water Resources Regulation 1993 (2050 BS)
- Environmental Protection Act, 1996 (2053 BS)
- Environmental Protection Regulation, 1997 (2054 BS)
- Drinking Water Regulation, 1998 (2055 BS)
- Local Self Governance Act, 1999 (2056 BS)
- Local Self Governance Rules and Regulations, 1999 (2056 BS)
- Tenth Development Plan, 2002-2007 (2059-2063 BS)
- Water Resources Strategy, 2002 (2059 BS)
- Rural Water Supply and Sanitation National Policy, 2004 (2060 BS)
- Rural Water Supply and Sanitation National Strategy, 2004 (2060 BS)
- Local Infrastructure Development Policy, 2004 (2060 BS)
- Water Plan, 2005 (2062 BS)
- Procurement Act, 2007 (2063 BS)

STRENGTHENING INCOME GENERATION, LIVELIHOODS

Introduction

Rural Village Water Resources Management Project (RVWRMP) aims to enrich quality of life, environmental conditions and increased opportunities to improve rural livelihoods in the Mid and Far West regions through rational, equitable and sustainable use of water at the village level. Social mobilization, awareness and skill enhancement are the prerequisites for the aforesaid objective. Bearing in mind the facts, the project will start Income Generation and Sustainable Livelihoods (IGSL) activities in its working area on demand driven basis during post construction period. These activities will depend on the potential and needs of micro entrepreneurs and their market comprising their local resources (skills, entrepreneurship, resources, marketing etc.). Even after the project is phased out, communities are expected to continue these essential activities.

Objectives

Main objective of this guideline is to strengthen community people for post construction activities related to income generation and livelihoods. Other objectives are as per the following:

- Promote financial assets strengthening saving and credit system within the community
- Enhance skills of the community people in utilization of local resources to manage their demands in a sustainable way.
- Promote entrepreneurship skills and start micro enterprises development activities
- Develop linkages among respective agencies as required

Steps ahead for Income Generation and Livelihoods Activities

Income Generation and livelihood activities will be started in the pockets where there is already availability of water for micro irrigation or RVWRMP has supported in this sector. Implementation steps will be as follows:

Input Level activities:

- DMC/DDC organizes coordination meeting in the district
- CO identifies sub-sectors with the help of Agriculture Technicians
- CO selects active and potential farmers based on their interest, GESI policy of the project and inclusion approach of DAG
- All selected farmers are given basic training on how to raise nurseries and manage them
- Farmers group select two Leader farmers (one male and one female) in each group
- Leader farmers get more technical trainings/exposures

- Establishment or strengthening agro vets at the local level

Production Level activities:

- Leader farmers provide additional market led production trainings to the entrepreneurs
- Strengthening collection centers
- Establishment or strengthening agro vets, dealer, sub-dealers
- Mobilization of CO funds and or revolving fund as agreed between the CO and entrepreneurs for MIT supplies and seeds
- Strengthening marketing planning committees

Marketing Level Activities:

- Strengthening Marketing Planning Committees
- Coordination among farmers and traders
- Establishment of price information system
- Marketing of the products

Areas of intervention:

Animal Health and Husbandry Improvement
Agriculture Development
NTFPs

Above sectors are expected to be undertaken by the entrepreneurs and managed by expected cooperatives.

USE, REVIEW AND UPDATING OF WUMP

VDC/WRMC will continue mobilizing Water Use Master Plan (WUMP) for getting supports from government and non-government agencies to implement its prioritized activities. It also reviews the status of water resources facilities and management every year receiving information from its community level institutions such as Community Organization (CO) and User Committee (UC). Based on the information, VDC/WRMC will update the WUMP each year with support of DDC/DIDC.

Mid-term term review and evaluation of WUMP will be done in three years by VDC/WRMC. WUMP for the next five years will be prepared by updating all the information collecting from CO level. DIDC will support VDC/WRMC to prepare WUMP for the next five year.

POST CONSTRUCTION IMPACT AND EFFECT INVESTIGATION

1. OBJECTIVE

The post-construction period should give time to investigate the immediate effects/impacts of the program and take stock of the perception of achievement/failure of the program. Of particular relevance will be:

- The actual satisfaction regarding the size, location and service provided by the infrastructure developed
- The perception regarding the sustainability of the completed infrastructure
- The perception regarding the un-completed/unfulfilled requirements related to water management
- The perception regarding the distribution of responsibility
- The perception regarding the accountability
- The perception regarding the equity and social responsibility of the mechanisms/institutions initiated by RVWRMP
- The perception regarding the health benefits

2. METHODOLOGY

A balance of household interviews based on semi-structured questionnaire and focus groups will complement mass gathering organized by the WRMC.

Physical status of individual structure will be recorded individually (as built report).

The investigation can often be combined with visit for the O&M capacity evaluation of the UC. (See Paper 77 for details.)

3. TIMEFRAME

3.1 Post-construction phase

Several cycles of scheme implementation are envisaged in one particular VDC. This should allow an investigation of the schemes during a long post-construction period.

One impact/effect investigation should be conducted following construction (during the next 6 months) and one more should be conducted just before demobilizing from the VDCs (end of SO and CM contract).

4. RESPONSABILITIES

4.1 Methodology

PSU staff (O&M, GSI, M&E, MIS) will provide a protocol involving questionnaire, focus group check list and infrastructure descriptors

4.2 Field investigation

Community Mobiliser and SO staff assisted by the WRA.

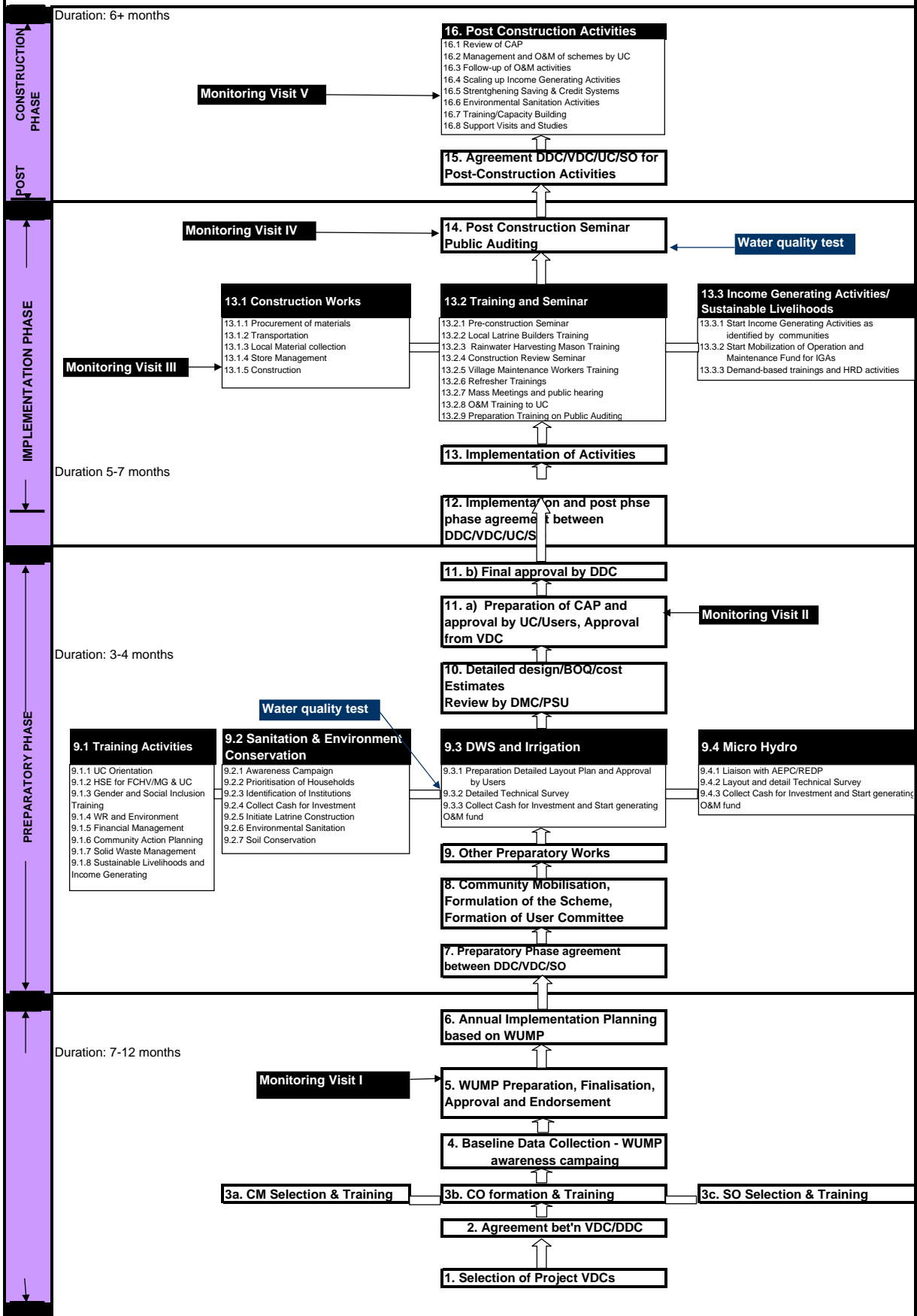
4.3 Data compilation

This part may have to be outsourced.

4.4 Report preparation

PSU staff (O&M, GSI, M&E, MIS).

Rural Village Water Resources Management Project - Nepal
STEP-BY-STEP FLOW CHART (not applicable to arsenic mitigation program)



Note :-

- 1.Social Mobilization is integral Part of the Project and will be continue from Planning Phase to Post Construction Phase at VDC level.
- 2.Supervision is integral part of project, Process monitoring is a continuous process in each and every step.