

Water use master plan

Nepal: जलउपयोग गुर्योजना

A water use master plan supports the development of integrated water resources at the local level; all stakeholders, including disadvantaged groups, take part in the plan.

A water use master plan (WUMP) is a holistic, participatory, and inclusive planning process that takes an integrated approach to the management of water resources and uses at the village level. The WUMP specifies the total water budget for its planning unit, the village development committee (VDC), and explores potential uses for it. It empowers marginalized groups to claim their rights to an equitable share of water within and between communities. The WUMP also helps local bodies with annual and periodic planning and project prioritization.

The WUMP is a 17-step process that includes social mobilization, the formation of inclusive management committees, capacity building for everyone involved in the process, and, as a final step, social assessment using various participatory rural appraisal (PRA) tools. Simultaneously, the technical part of the process evaluates the capacity of all water resources and their potential uses. In a workshop facilitated by NGO staff, the community discusses suggestions formulated by the two participatory assessments, prioritizes possible projects, and formulates plans. The VDC representatives decide which plans can be implemented using their own resources and which need external support. The WUMP then organizes a workshop to present these plans to various organizations in order to get their commitment and support. The prioritized projects are implemented according to the WUMP. The plan also contains a series of long-term activities and during the course of its implementation, there is sufficient latitude to allow the community to rectify its original plans in order to put into practise lessons learned during earlier phases and to continue to review and modify the plan as needed.

Left: A community gathers for social and resource mapping; a facilitator talks them through the mapping exercise. (WARM-P)

Right: Household rainwater harvesting tanks in Dailekh. (WARM-P)



WOCAT database reference: QA NEP 36

Location: 15 districts in the Western, Mid-Western, and Far-Western Development Regions of Nepal

Approach area: >3,000 km²

Land use: Not specified

Type of approach: Project/programme based

Focus: Water conservation, water sources, catchment area

Related technology: Not described

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Comment: This is a broad and integrated approach; WUMP advocates water conservation; water harvesting, and technologies that promote the efficient use of water

The technology was documented using the WOCAT (www.wocat.org) tool.

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Problems, objectives and constraints

Problems

- Issues on access to water are often contentious, communities often quarrel over water rights
- A lack of coordinated planning at the local level
- A growing demand for water both for domestic and agricultural use
- Water sources are diminishing and the changing climate will further aggravate this

Aims/objectives

- Establish inclusive water planning and water resource management at the community level
- Ensure the optimal use of water resources; see that water is equitably and efficiently distributed
- Promote conservation of water and natural resources linked to water; implement water projects based on the plan agreed by the entire community

Constraints addressed

Major	Constraint	Treatment
Institutional	There is no elected body in the VDC and no one takes permanent ownership of the WUMP.	Create an advisory body consisting of representatives from all political parties.
Social	Communities are reluctant to share water resources and hide the sources of water during planning	Earn everyone's trust through meetings, dialogue, and social mapping that includes all stakeholders including disadvantaged groups.
Social/Awareness	Low awareness of the need for conservation and of the need to use water efficiently	Intensive awareness raising and capacity building programmes
Minor	Constraint	Treatment
Financial	When the WUMP is implemented by the VDC using its own funds it usually takes a long time.	Collaborate and network with resource organizations such as INGOs and donor funded programmes for funding.
Technical	When the administrative boundaries of a VDC do not coincide with its physical watershed boundaries, it can be difficult to make technical decisions.	Cluster VDCs into groups in the same sub/watershed.

Participation and decision making

Stakeholders/target groups



VDCs, district development committees (DDCs), resource organizations



Local service providers, NGOs, consultants



Local communities



Approach costs met by:

VDC	25%
Project (WARM-P)	75%
TOTAL	100%

Annual budget: The Water Resources Management Programme (WARM-P) of HELVETAS Swiss Intercooperation has an annual budget of USD 5,000 per plan which includes funds for the preparation of the WUMP. It also supports the implementation of selected water supply and sanitation schemes for which it has an additional budget; allocation of funds depends on the requirements of the WUMP and may differ from one VDC to another.

Remarks

- All costs and amounts are rough estimates by the technicians and authors. Exchange rate USD 1 = NPR 71 in July 2011.

Decisions on choice of the technology: Technologies are selected on the basis of suitability and availability of water sources by local communities with the support of technicians and the VDC.

Decisions on method of implementing the technology: Since the VDC endorses the WUMP, it decides on implementation.

Approach designed by: The Water Resources Management Programme (WARM-P) of HELVETAS Swiss Intercooperation

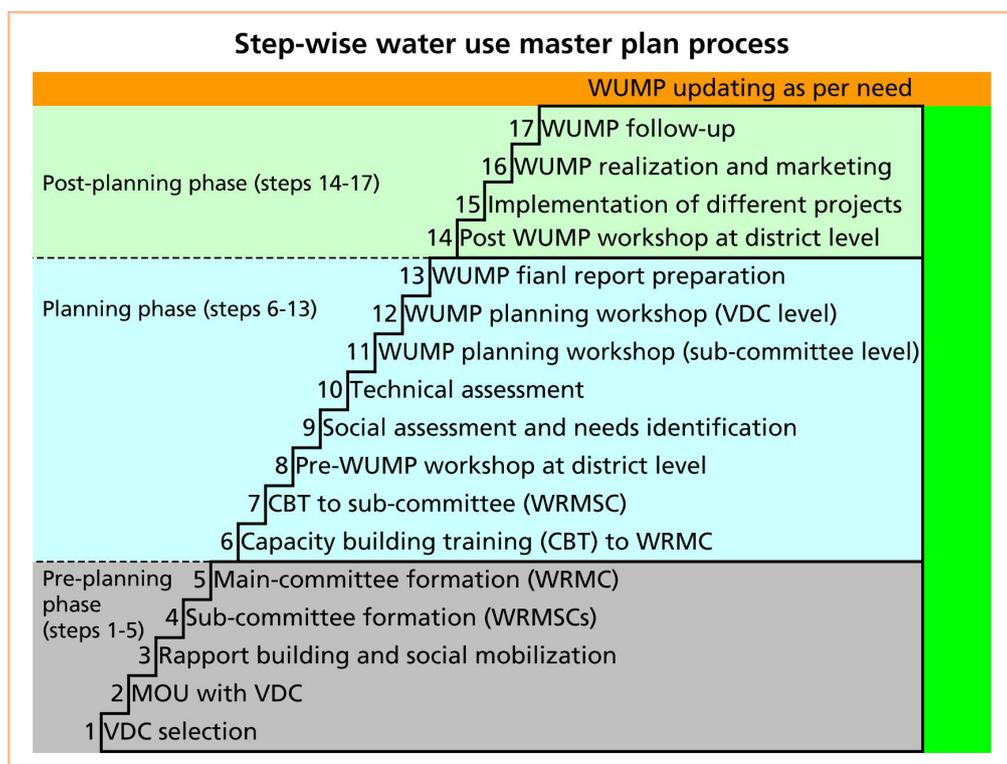
Implementing bodies: The VDCs in partnership with WARM-P/HELVETAS Swiss Intercooperation and local service providers

Land user involvement

Phase	Involvement	Activities
Initiation/motivation	Interactive participation by the community and the members of the VDC	Community meetings, decision taken by the VDC on how to prepare the WUMP
Planning	Interactive participation by the community, the water resource management committee and sub-committees (WRMC and WRMSCs), and the VDC	Social and resource mapping, social assessments, technical assessments and planning
Implementation	Self-mobilization of the community and the users' committee with the support of the VDC	Implementation of the water projects, source protection/conservation
Monitoring/evaluation	Interactive participation of the users' committee, project staff, and the VDC	Review of the plan, community monitoring during the construction phase, follow-up monitoring during routine operation

Differences in participation of men and women: Equal participation of men and women is encouraged during the social assessment and needs identification phase. During the planning and implementation phases, the participation of women in decision making is ensured through a provision that there be a representation of at least 33% women in the water resource management committees, sub-committees, and users' committees.

Involvement of disadvantaged groups: Disadvantaged groups (Dalit and Janajati among others) are requested to participate in numbers proportional to the percentage they represent in the community in all activities and committees.



Organogram

The step-wise WUMP process
VDC = Village development committee
MOU = Memorandum of understanding
WRMC = Water resource management committee
WRMSC = Water resource management sub-committee
WUMP = Water use master plan (AK Thaku)

Technical support

Training and awareness raising:

- Social mobilization and awareness raising orientations, training
- Capacity building and training to WRMC and local service providers

Advisory service: provided by local service providers

External material support/subsidies

- The community is not paid to participate in meetings or other social or technical assessments
- No external material is needed

Contribution per area (state/private sector): 25–50% is contributed by the VDC and 50-75% is contributed by the project

Labour: No support for labour

Inputs: No inputs are required for the preparation of the WUMP. When the water schemes are implemented, external materials are generally supplied.

Credit: No provided

Support to local institutions: Support is provided to the VDC for the preparation of the WUMP

Monitoring and evaluation

Monitored aspects	Methods and indicators
Biophysical	Follow-up monitoring to check if the water sources are protected, and if the area is conserved by planting
Technical	Follow-up monitoring to check water sources and number of water projects implemented
Socio-cultural	Public hearings and audits to ensure transparency and community participation (especially of disadvantaged groups)
Area treated	Follow-up monitoring of implementation (as shown in the diagram above)
No. of land users involved	Public review, final commissioning: community contribution and participation (as shown in the diagram above)
Management of approach	WUMP follow-up: implementation of WUMP (as shown in the diagram above)
Other (implementation of WUMP)	WUMP follow-up: implementation of WUMP (as shown in the diagram above)

Impacts of the approach

- All members of the community, even those with water resources on their own land, are willing to share water resources after participating in the WUMP.
- Disadvantaged groups participate on an equal footing in management committees and have equal access to water resources.
- The community realizes the need to protect water resources and begins to conserve water.

Improved sustainable land management: Water, forests, and land are all interlinked. Proper management of water resources, source protection, and conservation are all part of sustainable land management.

Adoption by other land users/projects: This approach has been replicated by the Rural Water Resources Management Project of FINNIDA, the LIVE/EU project, and Nepal Water for Health (NEWAH), a national-level NGO in Nepal. Nepal's Ministry of Local Development, Department of Local Infrastructure and Roads, has expressed an interest in developing WUMPs for all the VDCs in Nepal.

Improved livelihoods/human wellbeing: Having access to sustainable water resources improves livelihoods.

Improved situation of disadvantaged groups: Disadvantaged groups participate and share benefits on equal terms.

Poverty alleviation: Access to water improves hygiene and contributes to better health and to poverty alleviation.

Training, advisory service, and research: Capacity building, training, and orientation are an integral part of the WUMP.

Land/water use rights: Ensuring equitable use of water resources is a key feature of the WUMP approach.

Long-term impact of subsidies: No subsidies are involved.

Concluding statements

WUMP is a practical tool for the integrated management of water resources at the local level. It is a process-oriented approach. WUMP helps to provide access to drinking water and water for irrigation and also provides for a sustainable supply of water by making provisions for the conservation of water resources and the catchment area. Capacity building and awareness raising in the community are a prerequisite for the successful deployment of a WUMP. The concept is well-recognized and replicated by other agencies, but ultimately, successful implementation depends on the capacity of the VDC and the extent to which it takes ownership.

Main motivation of land users: Equitable and sustainable access to water resources to meet domestic and agricultural needs

Sustainability of activities:

In order to ensure sustainability the following issues need to be addressed:

- Social: Coordinated planning in consultation with the local people; capacity building at all levels so that management committees, local service providers, local government, and the community as a whole can participate better, voice their concerns, and be part of the solution.
- Economic: The VDCs take a lead role, the beneficiaries need to be willing to share the costs and need to want to participate in activities such as quality control, and routine operation and maintenance schemes.
- Environment: Conservation of water sources, integrated water resources planning, and the efficient use of water

Strengths and →how to sustain/improve

Communities appreciate the WUMP approach → The Ministry of Local Development has expressed an interest in preparing national guidelines for this process in order to scale it up to all the VDCs in Nepal

VDCs own the process both by participating and by contributing to the funding. → Need to simplify the process and make it more cost effective so that it is easier to replicate.

An integrated approach to the use of water resources may help in climate change adaptation. → Strengthen awareness activities and continue to promote water conservation

The WUMP process is inclusive and is managed by the whole community. → Continue to strengthen the capacity of disadvantaged groups so that they can participate more actively.

Weaknesses and →how to overcome

Not all VDCs actively participate in the WUMP → When VDCs contribute funds for the WUMP, they are usually more actively involved.

Communities can have high expectations for WUMP but their VDCs may have limited resources. → The VDCs need to communicate clearly with their community so that they can prepare a realistic plan together.

Conflicts can arise over the allocation of water resources → The VDC and the management committee must work with the community to see that any contentious issues are resolved equitably

At times it can be difficult to get everyone to agree to a given WUMP. → The VDC authorities can improve their negotiating skills in order to make their demands heard with donors and district development committees.

Key reference(s): HELVETAS (2007) *Water use master plan preparation guideline*. Lalitpur, Nepal: WARM-P/HELVETAS; Rural Village Water Resource Management Project (2011) *Proceedings of water use master plan national level experience sharing workshop*. Lalitpur, Nepal:

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