

# CPWF POLICY BRIEF

## People, livelihoods and Multiple-Use Water Services (MUS)

The CPWF's MUS team includes researchers and implementers from the domestic and productive water sub-sectors. Partners are the International Water Management Institute, the International Water and Sanitation Centre, International Development Enterprises, and 18 national and regional farmer networks, NGOs, government agencies, and universities in eight countries in five river basins: the Andes System (Bolivia and Colombia), Indus-Ganges (India and Nepal), Limpopo (South Africa and Zimbabwe), Mekong (Thailand), and Nile basins (Ethiopia). Winrock International led an economic analysis of CP-MUS cases and other case studies. CPWF MUS piloted the MUS approach in 25 study areas.

### A RESEARCH OUTCOME THAT YOU CAN USE

As a starting point in the planning and design of a new water infrastructure, or the rehabilitation of an existing one, the Multiple-Use Water Services (MUS) approach works with an understanding that:

- People have multiple water needs at places of work and residence, and
- Drawing water from multiple sources increases resilience to changes in conditions.

MUS meets cross-community water needs for both domestic and productive purposes. Proven benefits of the MUS approach to water management include improved health and food production, reduced domestic load (less fetching water) on women, and increased income generation.

### PLANNING FOR THE PEOPLE

MUS overcomes the problem of the fragmentation in water sub-sectors: these conventionally provide for only one end-use, or end-user group, who then determines how that water is managed.

These single-use perspectives ignore the principle of the same water user needing water for multiple purposes, often at the same site. This is especially the case in informal rural and peri-urban settings where people's livelihoods depend upon diversified agricultural practices.

Poorer communities often develop and manage water for multiple uses from multiple sources through necessity. Their multiple water needs are also reflected in the fact that domestic or irrigation systems planned for one single use are also used for non-planned purposes. Unplanned usage may damage infrastructure or deregulate allocation schedules.

At an opposite scale, planners of large water resources and infrastructure at basin, national and transboundary levels do consider societies' multiple water needs. MUS can help by filling any gaps in the water management of government line agencies, local government, NGOs and organized water users for poverty alleviation and economic development.

### WORKING TOGETHER FOR CROSS-SCALE CHANGE

In all countries, strategic MUS 'learning alliances' have been forged between water users and governmental and non-governmental service providers, private water service providers, researchers, policy-makers and financing agencies. Learning alliances help to upscale homestead- and community-scale MUS models to intermediate,

national and global levels. In this way, MUS contributes to establishing a sustainable and enabling environment that, ultimately, provides rural and peri-urban households in low- and middle-income countries with the water services they need.

### WHY MUS WORKS AT THE HOMESTEAD-LEVEL

For the land-poor, women, elderly and the sick, the homestead is often the only site available for farming and small-scale enterprise.

In the face of rising food prices and volatile economies, the homestead is readily accessible for increased food production, which cuts expenditures and generates income. Benefit / cost ratios of homestead-scale MUS are high. Net annual household income increased USD100-500, or, expressed per volume of water, USD 0.7–2 per m<sup>3</sup>.

Homestead-scale MUS, providing between 50 and 100 litres per capita per day (lpcd) or more, is the most effective way of using water for achieving all Millennium Development Goals. The increased availability of labor and the recycling of water and nutrients particularly enhances the productivity of water, which then contributes to the alleviation of poverty.

Costs of infrastructure investment could generally be repaid within six to 36 months. These findings underpin the policy recommendation to aim at providing 50-100 lpcd, or, an intermediate- and high-level MUS.

Service level	Volume(lpcd)	Water needs met
High MUS	100-200	All domestic needs; garden, trees, livestock and enterprise
Intermediate MUS	50-100	All domestic needs; garden, trees, livestock or small enterprise
Basic MUS	20-50	Consumption OK; hygiene low; basic livestock, fruit trees
Basic Domestic	< 20	Consumption just OK, hygiene too low; no productive uses



## WHY MUS WORKS AT THE COMMUNITY-SCALE

Opportunities for integrated planning and design of new communal systems, or rehabilitation of old systems, are possible through community-scale MUS, as it builds easily upon communities' existing infrastructure, water arrangements and priority water demands. Sites of community end-uses include fields and direct access to surface water bodies.

Community-scale MUS enhances transparency in the allocation of water and public resources. Transparency is a critical condition for system sustainability. Single-use productive sub-sectors, like irrigation, livestock, fisheries and watershed management, can evolve into community-scale MUS by considering multiple water uses at homesteads and people's priorities.

## UPSCALING VIA INSTITUTIONAL INNOVATIONS

For water users and private service providers, the logic of multiple uses from multiple sources is obvious, and many have already created bottom-up initiatives for developing homestead-scale MUS. The CPWF MUS project demonstrated that at intermediate, national and global levels, learning alliances contributed to the creation of the sustainable environment necessary for the widespread upscaling of homestead-scale and community-scale MUS.

NGOs can be innovators of technologies that allow for homestead-scale MUS and of new community-scale integrated water supplies for multiple uses. When the domestic sub-sector aims at full coverage, including the poor and focused on homesteads, it also brings in engineering skills and health expertise. However, strict centralized design norms and water quality standards allowed for domestic uses only.

Nevertheless, upscaling is already possible simply by recognizing the reality of *de facto* multiple uses of many domestic systems. This holds particularly true for the early use of systems designed for future expansion. The productive sub-sectors bring in engineering expertise for larger-scale water storage and conveyance to fields. Experts can also advise on how to enhance the productivity of water end-uses. However, few currently recognize the homestead as the often preferred site for domestic and various productive uses.

Local government has emerged as potentially the most important government arm in supporting people in articulating their water demands, allocating public resources, coordinating infrastructure development for multiple uses and calling upon expertise as needed.

## MUS: A PROVEN APPROACH

These described upscaling activities and outputs have led to the awareness and acceptance of the MUS concept in the eight countries. Moreover, in South Africa, MUS is currently embraced in national policy and modalities for pilot implementation at scale are being discussed. Nepal has promulgated national guidelines for local government which promote MUS.

Policy dialogue at global level in collaboration with the MUS Group, which is hosted by IRC, led to the uptake of the MUS concept and studies or pilot implementation by the Bill and Melinda Gates Foundation, the Comprehensive Assessment of Water Management in Agriculture, the International Committee on Irrigation and Drainage, Food and Agriculture Organization, Global Water Partnership, IFAD, Water Supply and Sanitation Collaborative Council, Winrock International, World Bank Water Supply Program, and the Topic Sessions at the two most recent World Water Forums.

## FOR MORE INFORMATION

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