

Multiple Water Use Systems (MUS): iDE's Approach to Design, Development, and Impact



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iDE MUS Journey

- iDE Nepal is pioneer in applying MUS approach by design in Nepal
- MUS by design was first designed and tested in 2001
- Promotion of MUS thru SIMI project in 2003
- Government and IWMI have reviewed and recommended the MUS approach
- MUS included in guidelines for local development block grants in 2008
- Developed 280 MUS serving over 60,000 people in 30 districts, majority of funds coming from Government
- Designed and demonstrated Solar and Hydram lift MUS and planning for scale-up working with Renewable World
- Growing understanding of MUS benefits and rural water supply systems should be designed for multiple uses.

iDE MUS By Design Approach

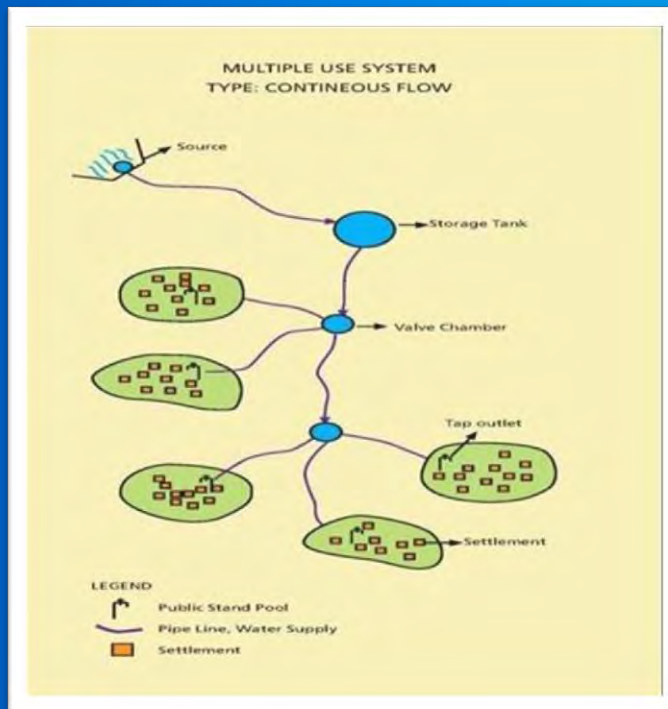


- Spring water source
- Domestic and productive uses by design
- Service level as per the local need and priorities, normally 45 L/day for domestic use and 250 to 600 L/day for irrigation
- Per HH cost is \$115, average 40 households per MUS
- Enable adoption of micro-irrigation technologies that save water

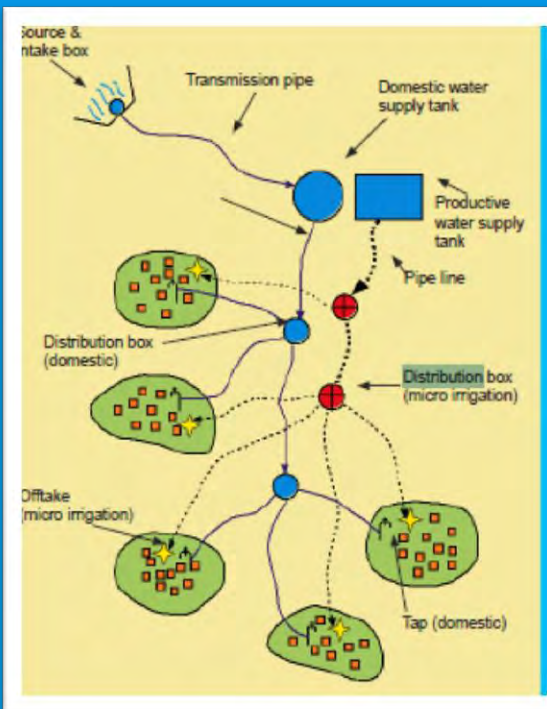
MUS by design is an approach to meeting both domestic and agricultural needs in a planned way, based on community priorities.

Gravity-fed MUS Systems

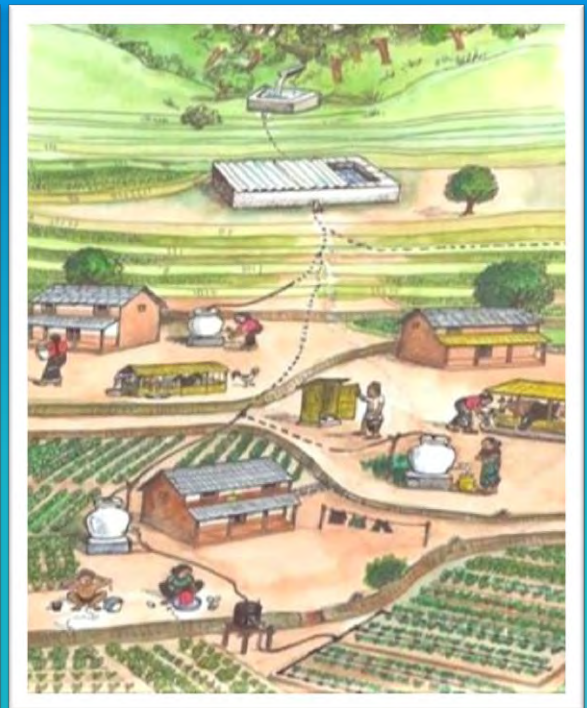
MUS are designed to match different landscape constraints, water sources, water demand, and users' preferences.



Continuous flow system

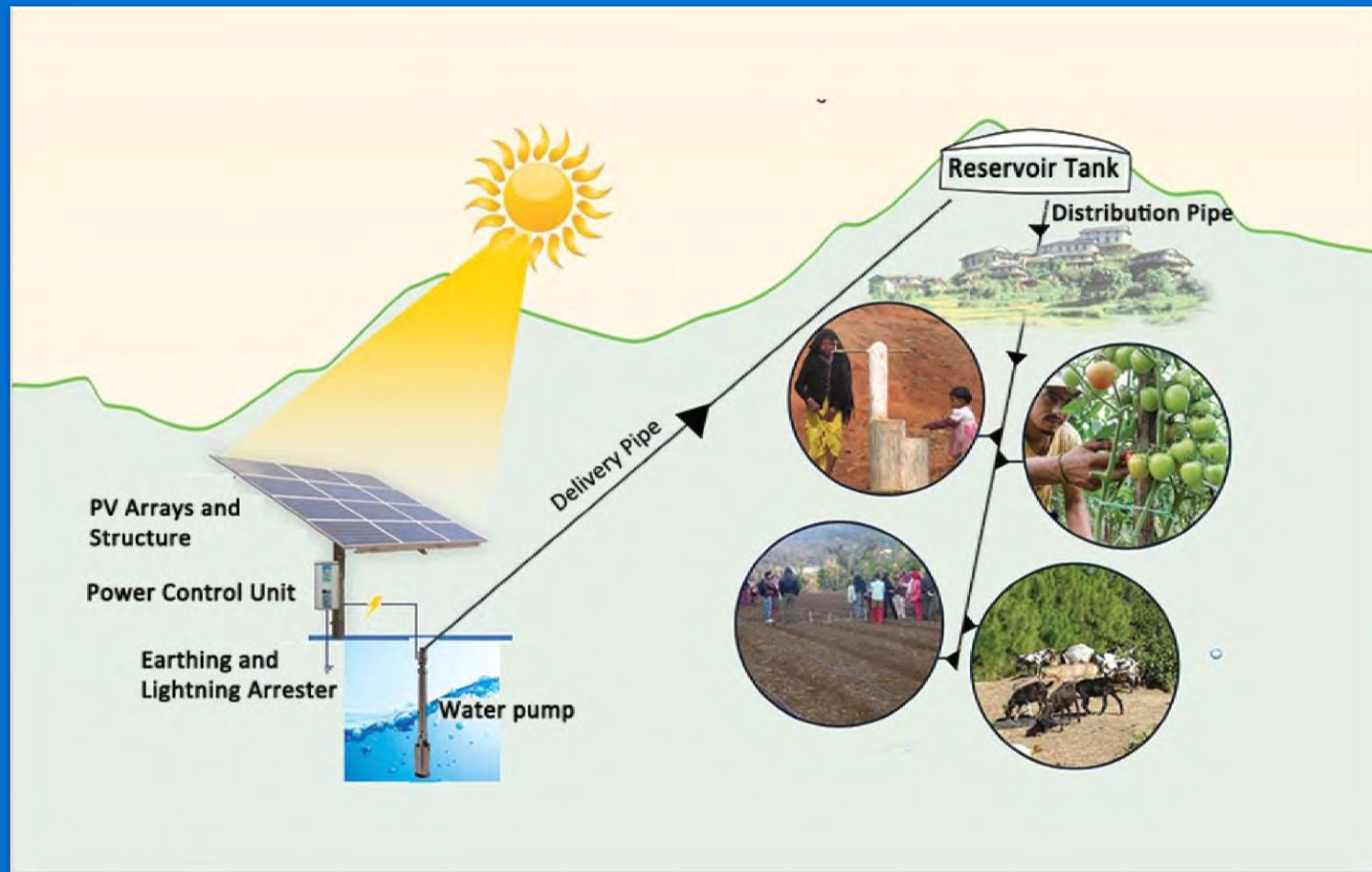


Seasonally Controlled System



Year-round control system

Lift MUS Systems



Solar, On-Grid Lift and Hydrum MUS designed for different water scenarios/ contexts

MUS utilizes existing proven technologies

MUS systems are simple to install and maintain.
Communities are trained, to ensure that they can undertake minor maintenance procedures themselves.



Key Observations on MUS

MUS helps the health and wellbeing of rural farmers through clean drinking water, improved livelihoods, and substantially reduced workload for women for water collection

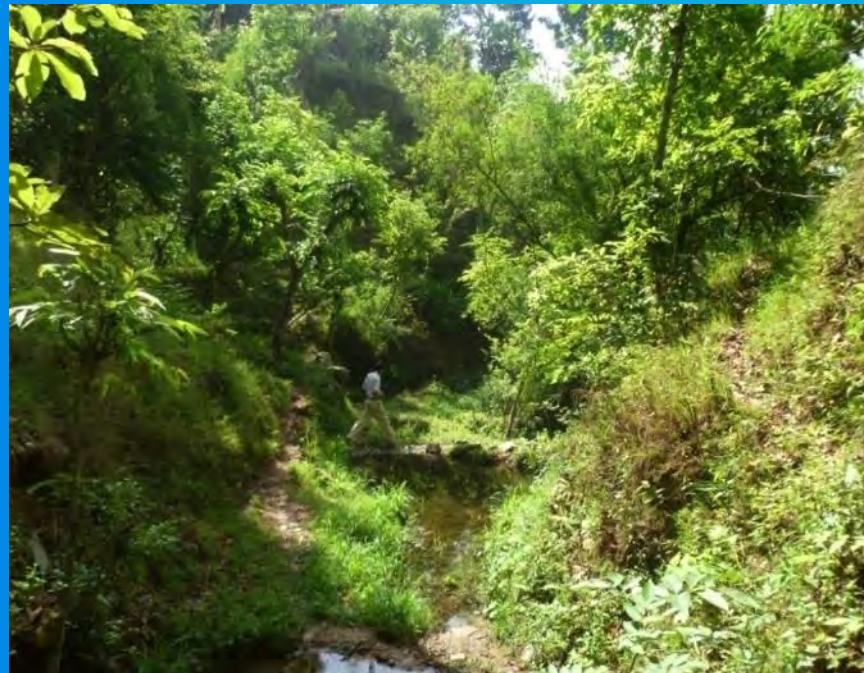


Investment is justified by vegetable crops.
Annual agriculture increased income about
\$250+/HH (only from irrigation)



A recent IWMI study shows a cost-benefit ratio of 1:11.

The increased returns provide incentives for communities to pay for repair and maintenance, protect water source watersheds, and greatly promote the management of MUS.



By-design MUS model is effective for improved water planning, increased water security and efficiency, and reduced conflicts in managing multiple water demands.



Water point sources are declining/drying up.
Therefore, we need better models for planning and
management of small-point water sources.
Development of recharge ponds has been effective
at improving marginal water flow at the source.



Holistic model is key to achieving full returns



An integrated
approach:
technology, social
mobilization,
agricultural market
development



Conclusion:

Development of 280 MUS has proven to be a practical and sustainable model for extending access to water services and multiple benefits to rural communities. Therefore, technology transfer and wider replication is recommended.

Thank You!



Photos by Bimala Rai Colavito