Towards More Resilient Basic Services–
iDE's Experience with Testing the Tool on MUS

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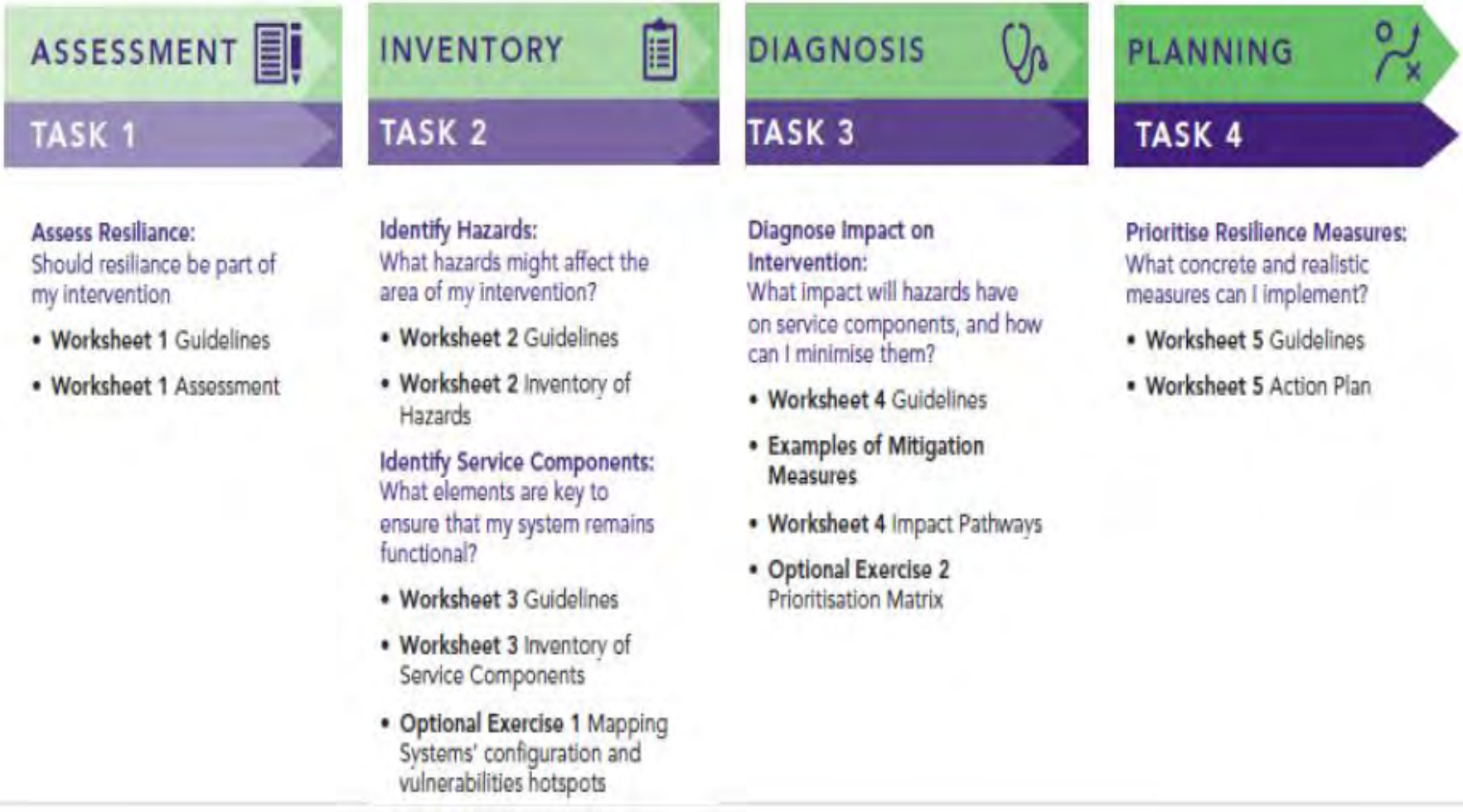
About the Tool

Tool.PDF

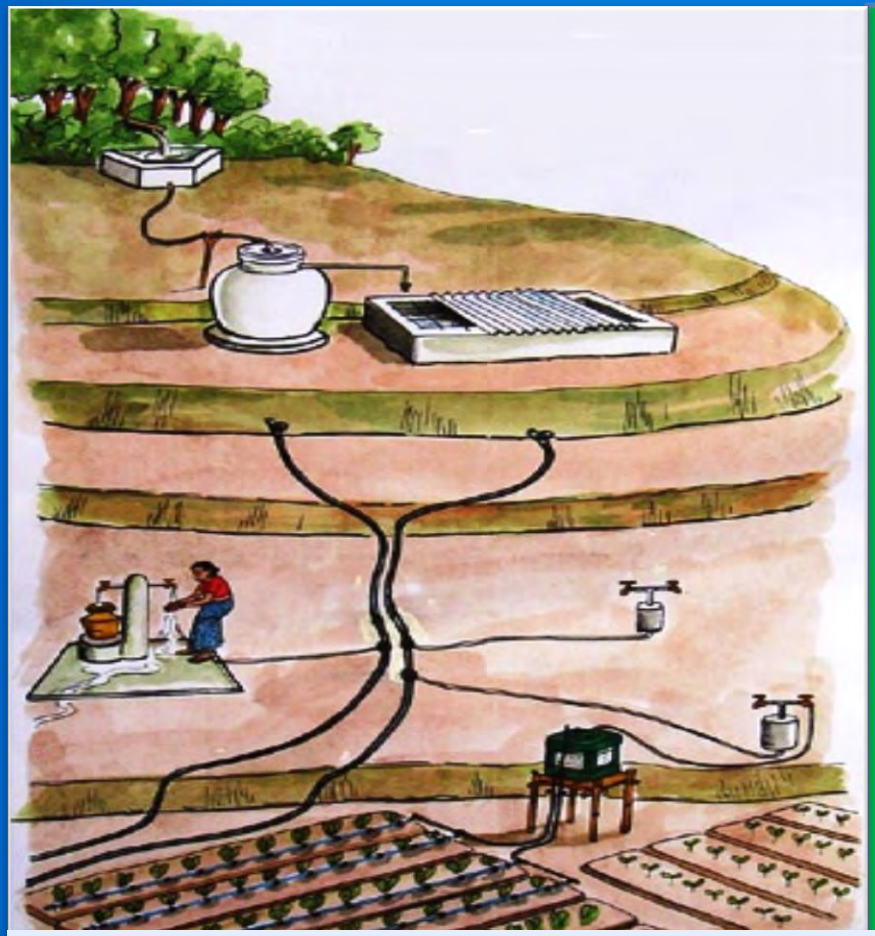
Help **Plan, Develop and Deliver** health, education, water and sanitation **hardware**

Resilient System!



Test report.xlsx

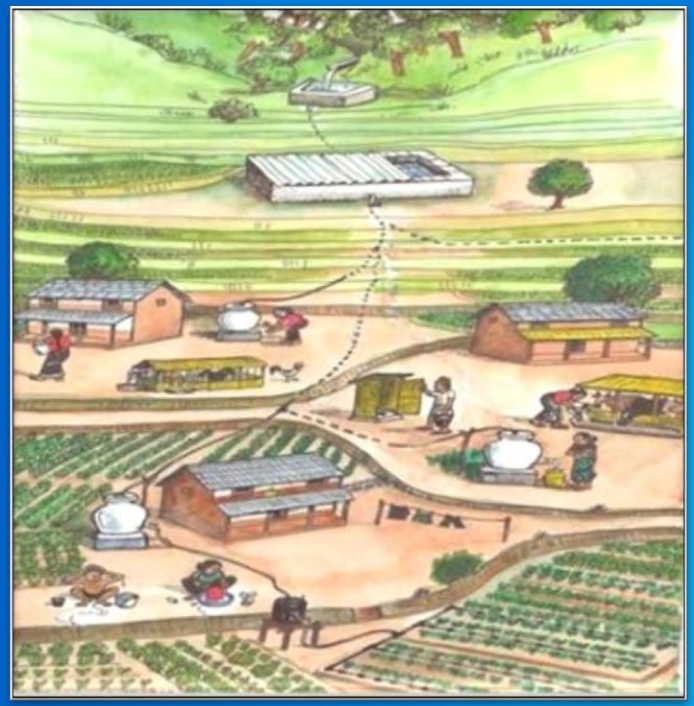
Multiple-use Water Systems (MUS)



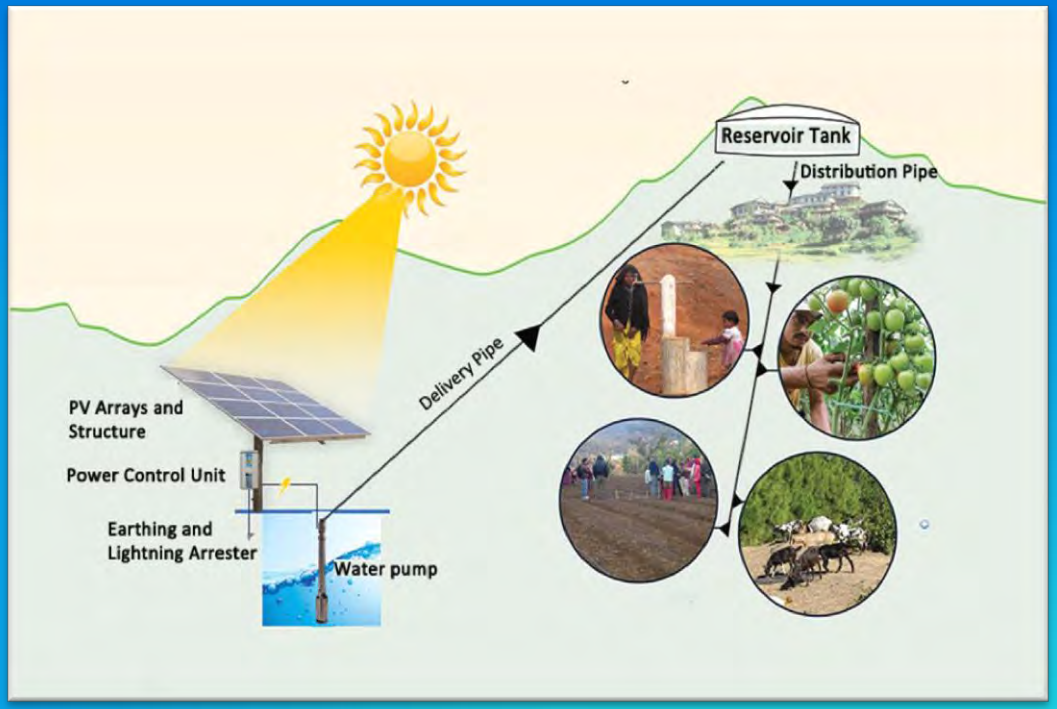
- Water source: spring
- Domestic and productive tanks
- Per HH cost is $ 115
- Average 40 households per MUS
- Enable rural households to increase income from a more reliable piped irrigation
- Enable adoption of micro irrigation technologies that save water and increase incomes.
- Uses existing proven technologies

MUS are piped systems that provide sufficient water to rural communities for domestic use and irrigation using micro irrigation technology. 280 MUS have been installed serving over 65,000 people in Nepal.

Different MUS Models



Gravity fed MUS



Solar/On Grid Lift MUS

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

Deciding on the use of tool for MUS

- iDE and partners are developing over 400 MUS while recognizing climate adaptation benefits;
- MUS represents a practical model for providing water services to poor rural communities;
- There is growing interest in MUS by governmental and other stakeholders. Now is a critical time to scale MUS
- MUS uses low-cost construction methods and local labor allowing for rapid recovery following disasters such as floods, earthquakes and landslides.
- iDE / BRACED and partners believe that the tool will help make MUS more resilient. BRACED recognizes that resiliency and sustainability go hand-in-hand;
- Our experience applying the tool to MUS has given us the opportunity to apply the tool to related other projects.

Tool tested in different locations of Nepal

- **Kaski, Lumle** : Existing Gravity MUS
- **Kaski, Bhalam** : Gravity MUS (new project)
- **Kavre, Anakot** : Existing Solar MUS
- **iDE Office, Kathamndu**

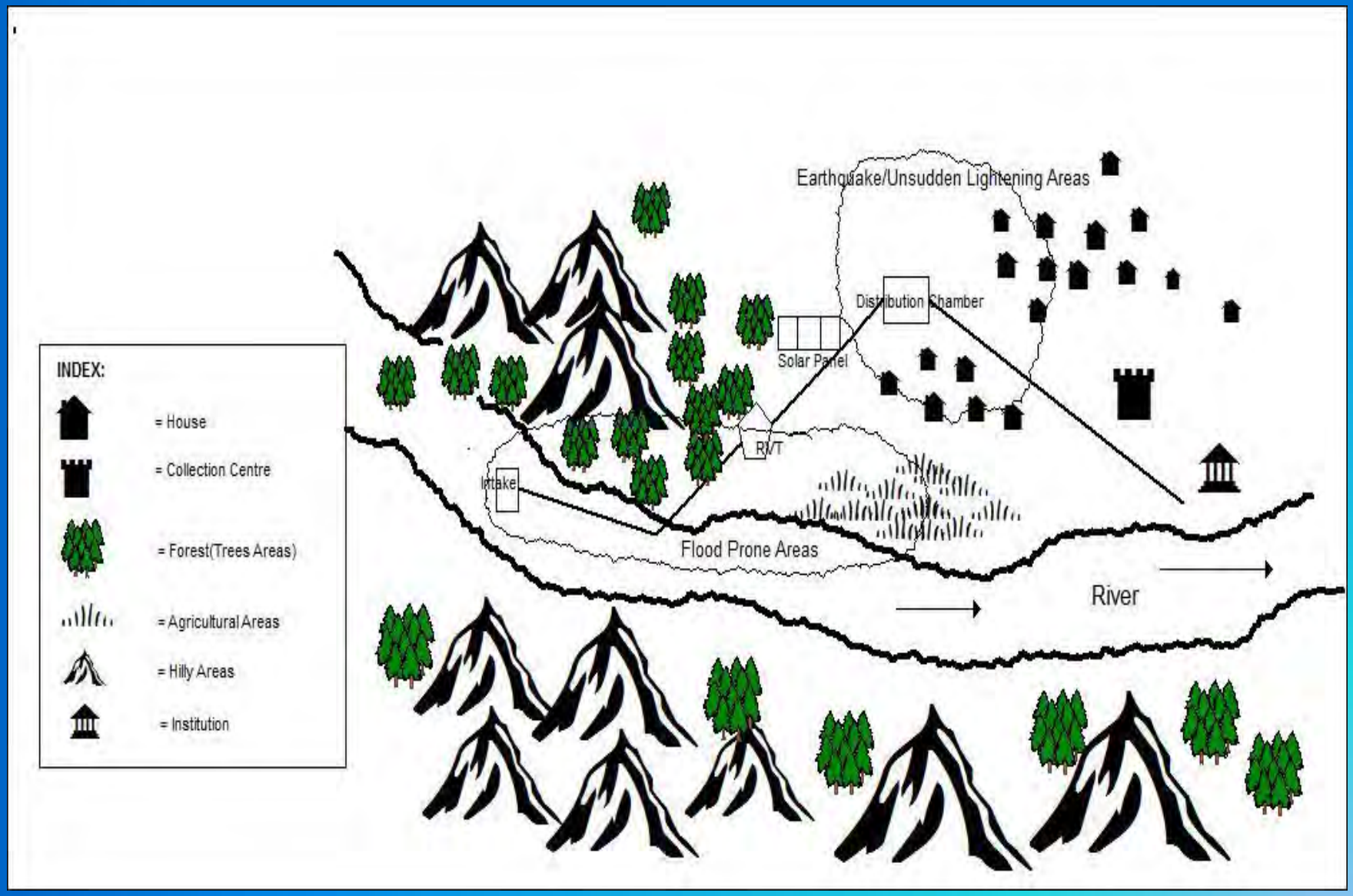
Tested with:

- Multiple-use water system (MUS) user groups
- Village climate change coordination committee (VC4) members,
- Marketing and planning committee (MPC) members
- iDE / BRACED staff in Kathmandu

Our experience using the tool to test an existing MUS project site in Kavre, Nepal

Test report.xlsx

Hazard Mapping in Tanke



MUS Service Components and Possible Impacts

Water Source/Intake

Pipelines

MUS taps

Storage/Reservoir Tanks

Solar Panel and Accessories

Productive use of MUS/ MIT

The tool helped us detect a few unrecognized risk factors!

Flooding

Earthquake

Landslide

Lightning

Drought

How will the tool be used in BRACED and other projects?

- BRACED will initially utilize the tool during the feasibility and design of MUS
- The tool will also be used outside of BRACED to improve the resilience of existing MUS that are impacted or highly likely to be impacted
- iDE is in process of upgrading the MUS field implementation guidelines, integrating the tool
- Provide trainings to our local partners to use the tool

Key Messages

- The tool is relevant in interventions that are normally designed without considering the natural hazards/ disasters that threaten local infrastructure such as rural water supply;
- A short orientation and exposure to the test document will enable inexperienced people to use the tool;
- The tool uniquely combines all the disaster risks and solutions together in a participatory manner with minimum resources and expertise;
- Need to test and verify the tool for trainings and software projects .


Thank you