Planning and Implementation of MUS in Nepal- iDE Experience

Poor are often the people hurt the most by water scarcity because poverty and access to water are closely linked: Gregersen *et.al* (2007)

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Rome, Italy

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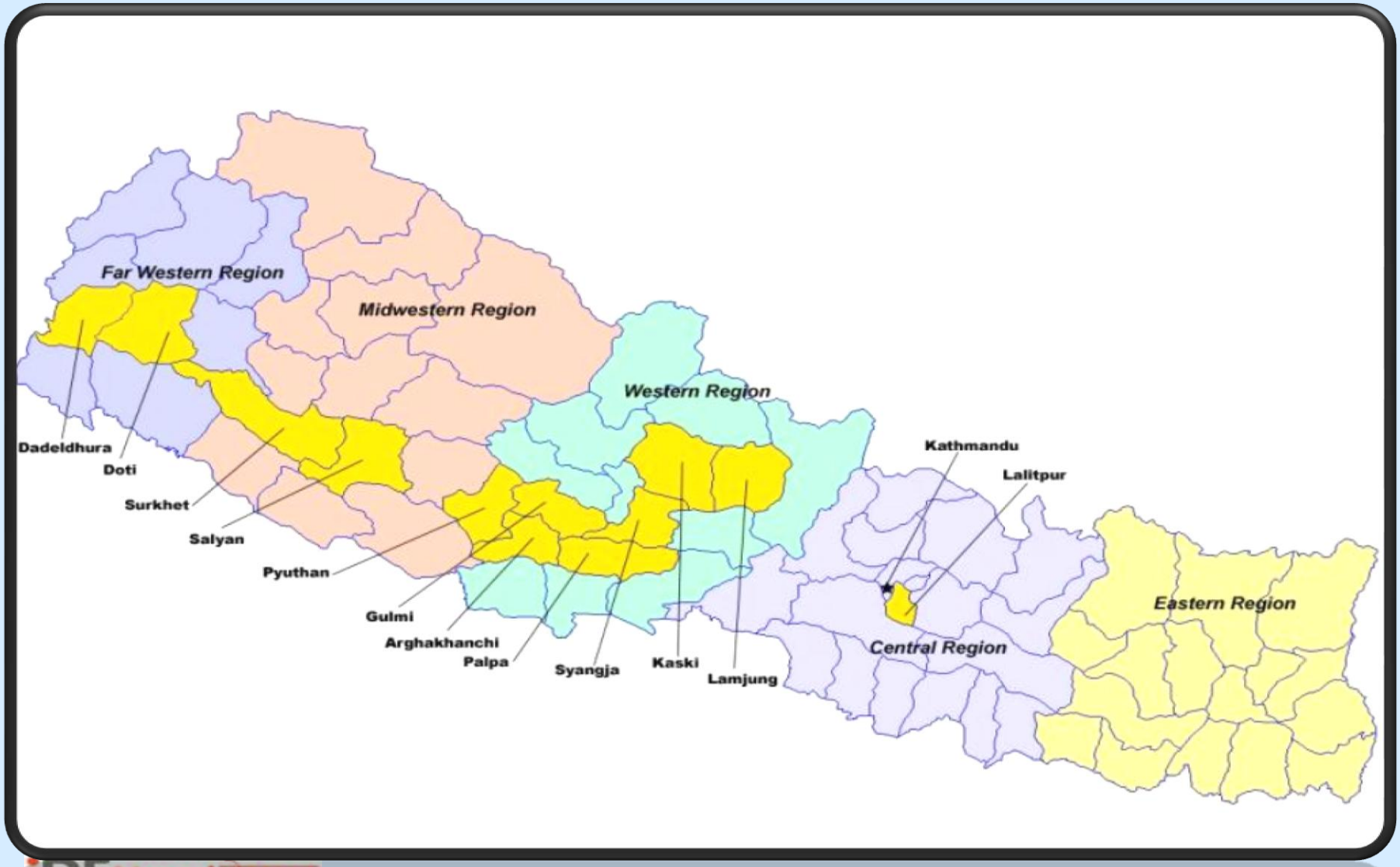
Talk of This Session

- iDE MUS in Nepal
- Technology Combination in MUS
- Thinking before Planning MUS
- Planning Criteria for MUS
- MUS Implementation Guideline
- Usefulness of MIG
- Reserch Outcomes

About iDE MUS

- iDE Nepal is Pioneer in applying MUS approach by design in Nepal
- MUS by design was first conceptualized and field tested by iDE Nepal in Palpa district in 2001 (funded by CPWF**)**
- Linking small-scale water resources development to home yard high-value crops and drinking water
- MUS materializes the idea of "HVC per drop of water for increasing productivity and income"
- Strong partnership with DOA, DOI and VDC. Learning alliance approach proved to be effective to attract other partners in MUS.
- A total of 156 MUS are in operation serving 4418 households (20 under construction)
- Average cost per Scheme : Rs. 2,13,170 (€ 2013) and Cash :Non cash Ratio: 62:38
- Package of interventions - social mobilization, agricultural trainings and technologies.

iDE MUS Sites



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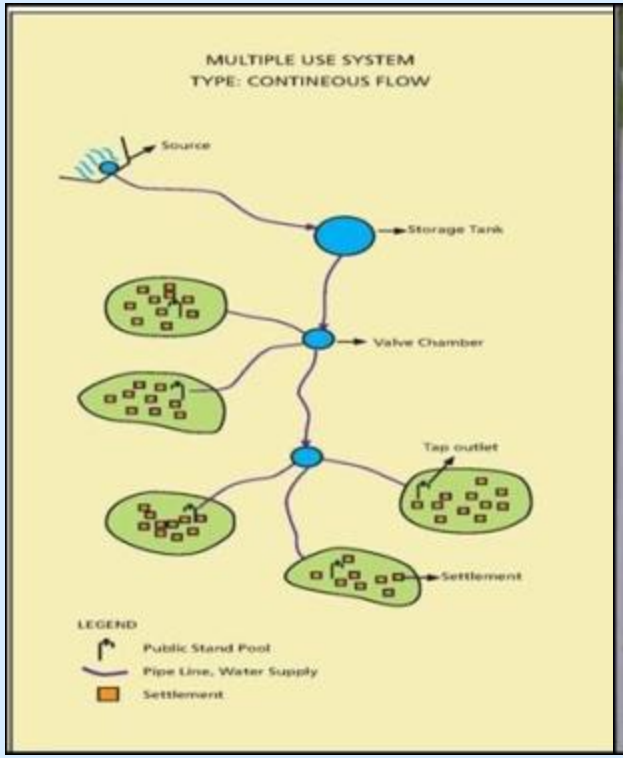
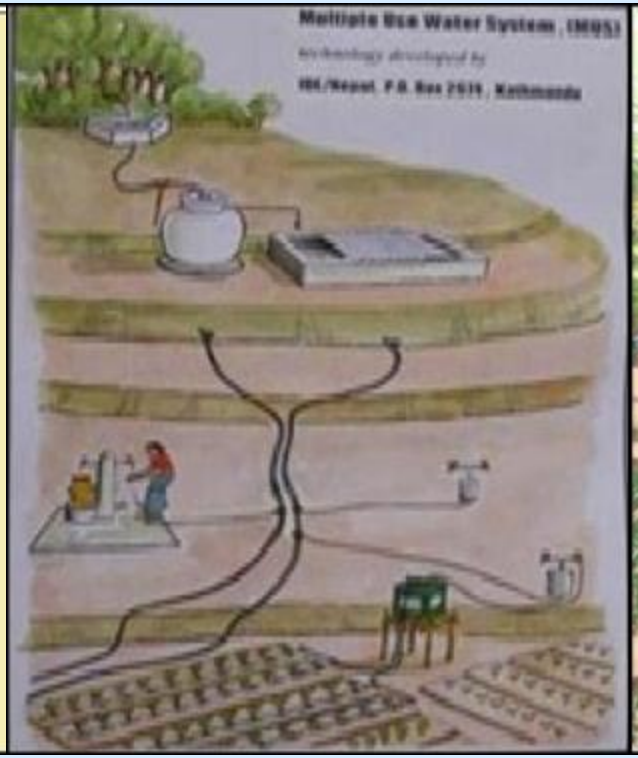
Technology Combination

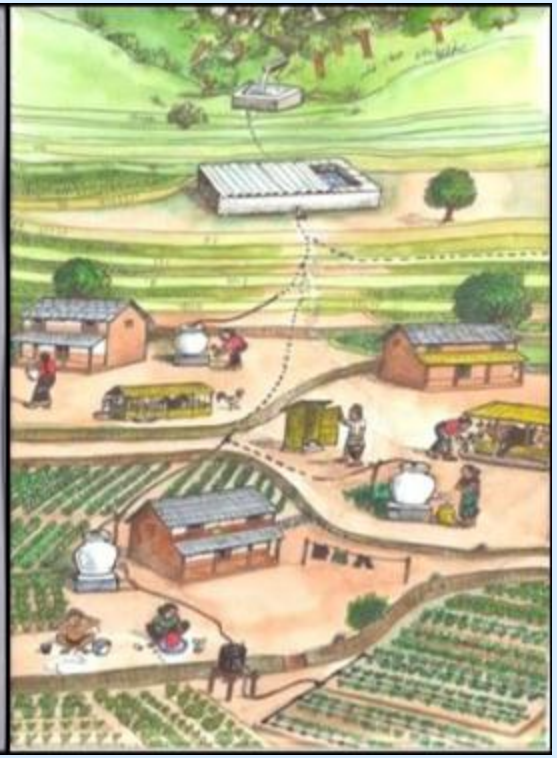
Water source- Pipeline- Storage tank- Tap stands- MIT –HVC



Continuous Flow System



Seasonally Controlled System



Year-Round Controlled System

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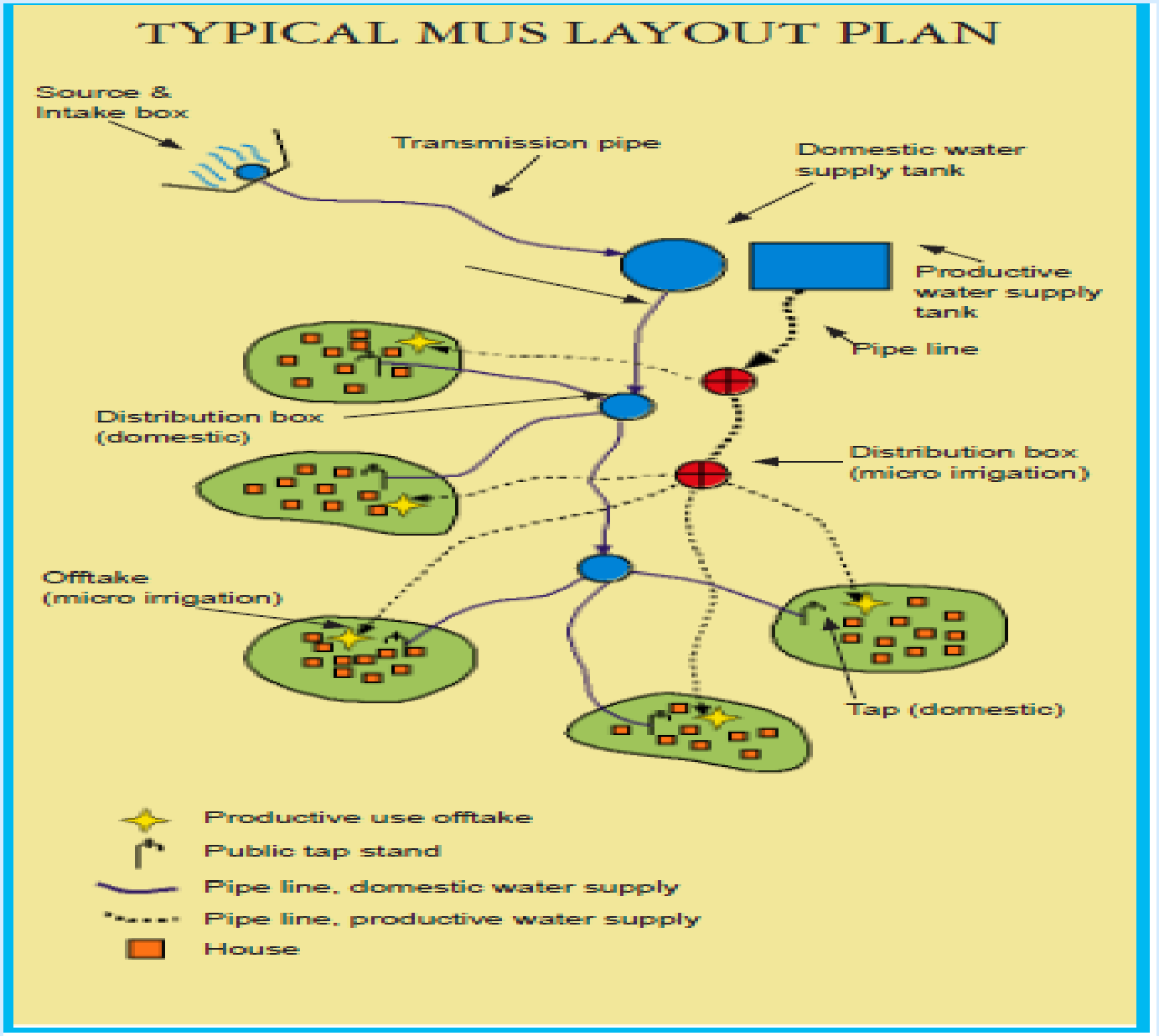

Meet the water requirements for domestic need, while applying the 'excess' water for irrigation with the use of MIT






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Thinking before planning MUS

- Areas where conventional irrigation, general development concept are less effective to irrigate these areas and uplift the targeted population
- Potential of small scale water resources development
- Delivering water resources to smallholder farmers for reliable and efficient irrigation and domestic use .
- Right technology for right farmer and use of water efficient and cost effective technologies
- Application of water resources act (drinking water and domestic uses followed by irrigation and other uses)
- Willingness of stakeholders to invest in the system
- Potential of combining technology with HVC

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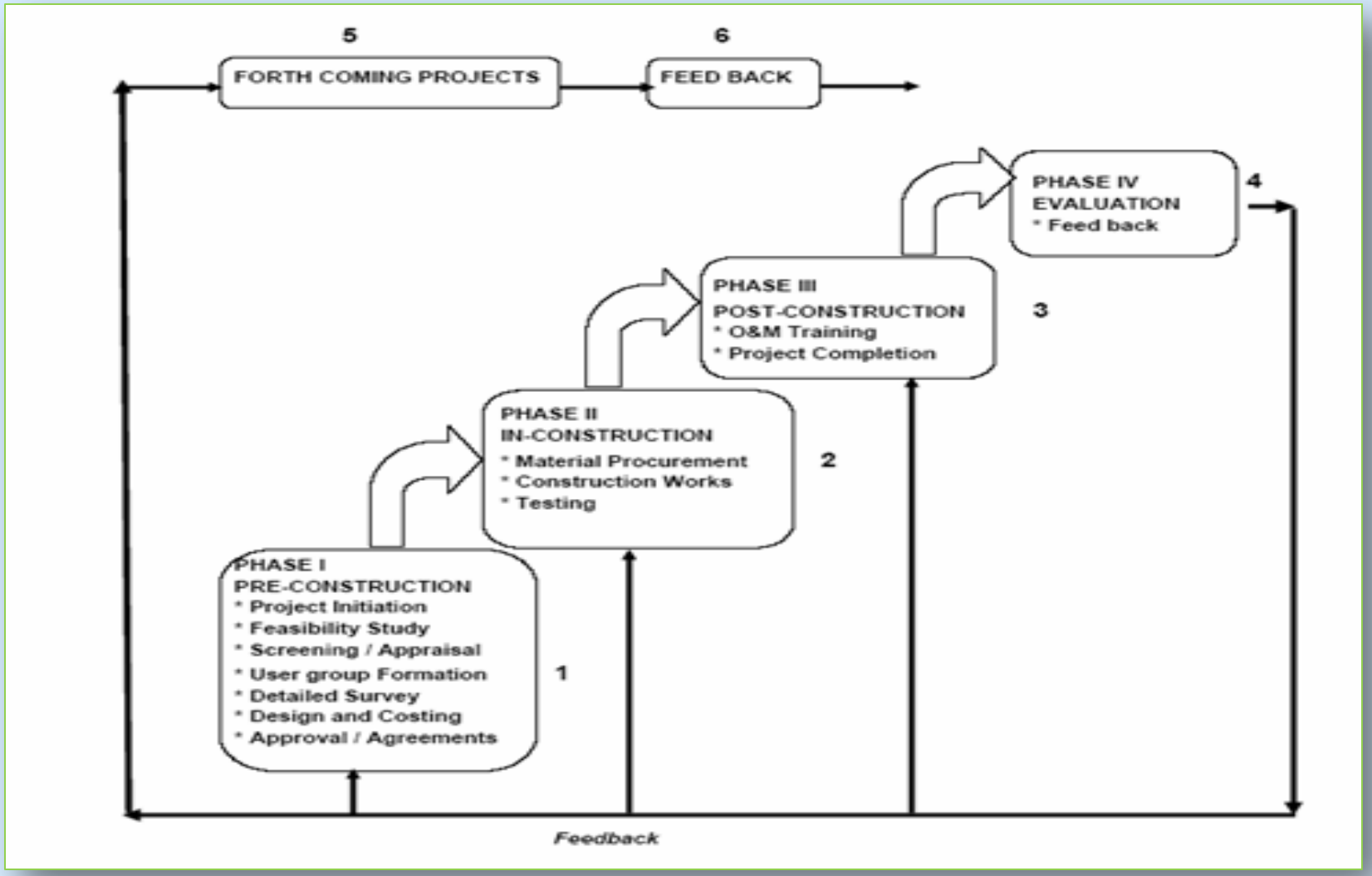
Basic Planning Criteria for MUS

- **Hardship in water collection :** At least more than ½ hour for the round trip during two months of the year.
- **Commitment for HVC production**
- **Ownership of the water source**
- **Location:** Rural or peri-urban. At least 2 km from the local town.
- **Water Source:** Preference will be given to the spring source.
- **Water discharge:** Enough to meet at least (500-600 ltr + 45 ltr) litres of water per household per day for the projected population of 10 years
- **Water Quality** : To be drinkable
- **Willingness to Community contribution:** Commitment to provide voluntary labour for non-cash components of the construction.
- **Level of poverty and food insufficiency**
- **Access to input and output market potential**
- **Inclusion of disadvantaged population**

Phases of MUS Planning and Implementation

MUS . Process.pdf



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IDE MUS Guidelines

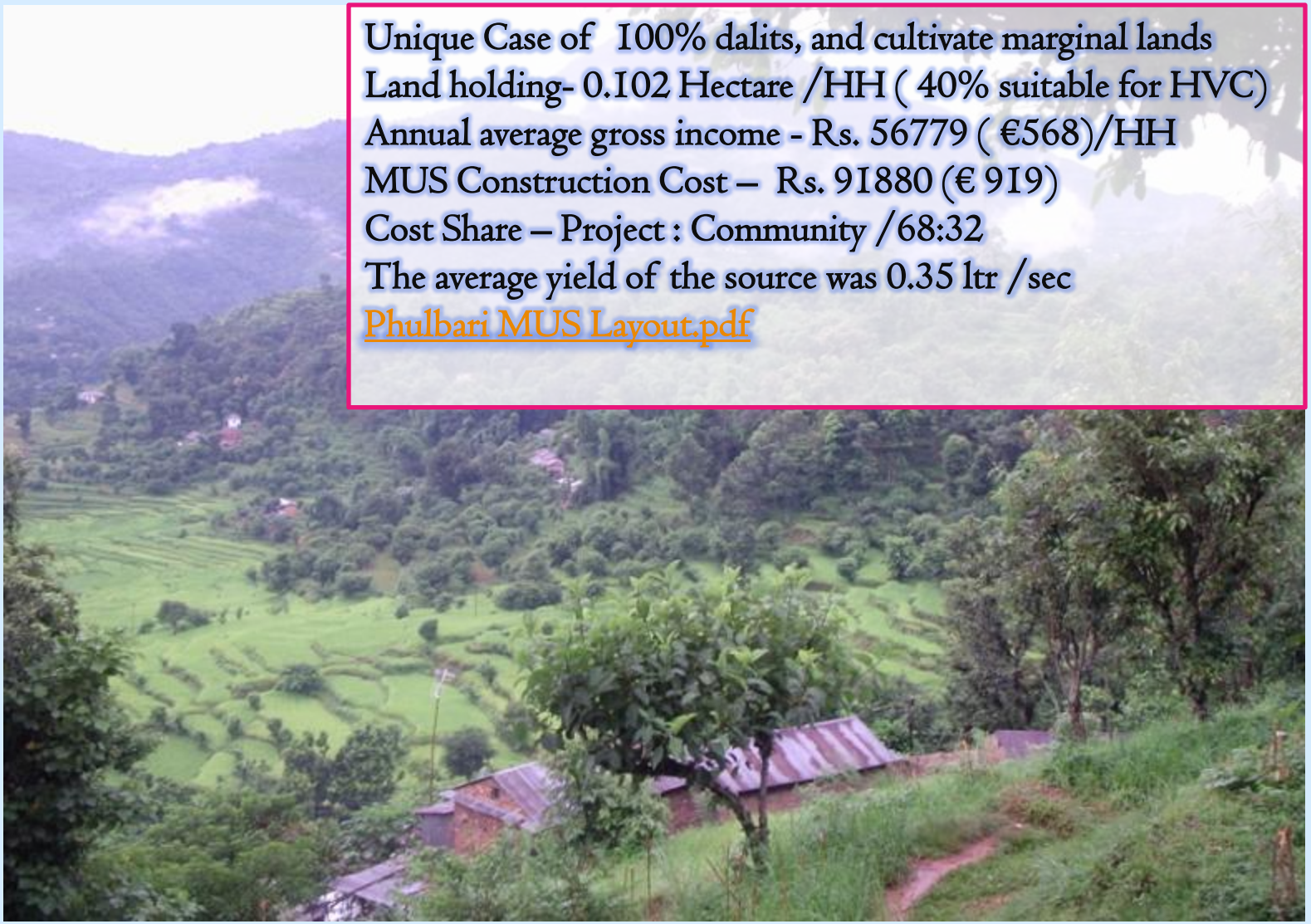
Issues under debate	Guideline- 2001	Guideline-2007	Present Need
Time frame designed	Approx. 60-90 days	Approx. 90-120 days	More than 1 Year
Provision of scheme screening (scoring system)	Not included	Included, but time frame not sufficient to implement	Practical implementation
Inclusion of women in UC	Not addressed	Addressed	Demand to change
Area of focus /WUG formation process	Technical /rules and regulations as stipulated by IDE	Socio-technical/Few ideas of community addressed	Let community to decide
Methodology used to prepare PIG	Technical staffs and central project team	Wide consultations and field studies	

Usefulness of MIG

- Experience gained so far has already proved MIG effective. However, practical application is must.
- MIG should include the provision of intensive training and adequate mobilization phase. Emphasis on social mobilization is critical to develop local understanding and institutions before the actual implementation of MUS.
- MUS (by design) for other multiple uses such as agri-processing , fish farming, micro-hydro etc. should be addressed. The existing MIG addresses only for DW and MIT irrigation.
- District and regional MUS workshop reports show that the present problems being faced by the MUS are the result of failure to use it practically.

Research Outcomes – Impact of MUS

Unique Case of 100% dalits, and cultivate marginal lands
Land holding- 0.102 Hectare /HH (40% suitable for HVC)
Annual average gross income - Rs. 56779 (€568)/HH
MUS Construction Cost – Rs. 91880 (€ 919)
Cost Share – Project : Community /68:32
The average yield of the source was 0.35 ltr /sec
Phulbari MUS Layout.pdf



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Phulbari Village- Case Study Area

	Pre-Project	Post- Project
Income	No income at all from vegetable	An average income increased by 17%
Cropping type	Crops requiring no irrigation or rain fed irritation would be sufficient. Traditional crops	Year round irrigation and practice of off-seasonal vegetable. Crop diversification
Consumption	Very limited production even not sufficient for consumption	Marketing and 12-20% consumption. No body has to buy vegetables
Availability of safe drinking water	Had to fetch water from river and far sources, and it was not often safe	Safe water available close to home

- Increased production and income with limited resources (land, water and financial resources)
- The total cost of MUS was recovered in a year MUS was installed. Cost- Benefit of MUS.pdf

MUS IMPACT

- Changed in intra-household roles
- Improved social cohesion
- Women in the mainstream of decision making
- Awareness through increased knowledge
- Leadership development
- Improved sanitation practices
- Improved social image
- Use of improved seeds, group crop planning, market knowledge and group marketing
- Increased in fresh vegetable consumption and food security
- Time saving

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Challenges

- Week functioning of WUGs
- Dependent on donors if the system breakdowns
- Maintaining and mobilizing the cash costs needed for the R& M systems need to be reinforced
- Need involving women in the O& M of system
- Increasing drying up of the spring water sources (in the hills)

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Presenting you the real scene of Machapuchre Mountain and Fewa Lake from iDE focused MUS region, Mid-hills of Nepal

Thank You!