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RVWRMP II
Nepal-Finland Cooperation

# Water Use Master Plan; an effective planning tool to maximize the water productivity through Multiple Water Use Scheme


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# WARM-P and RVWRMP Introduction

- WARM-P: A project of HELVETAS Swiss Intercooperation implemented under the umbrella of DWSS/ MoWS
- Implemented in 4 districts

*For more info: https://nepal.helvetas.org/en/programmes___projects/warm.cfm*

- RVWRM:P: A Bilateral project jointly funded by Government of Nepal and Finland; and implementing under DoLIDAR/ MoFALD Implemented in 10 districts

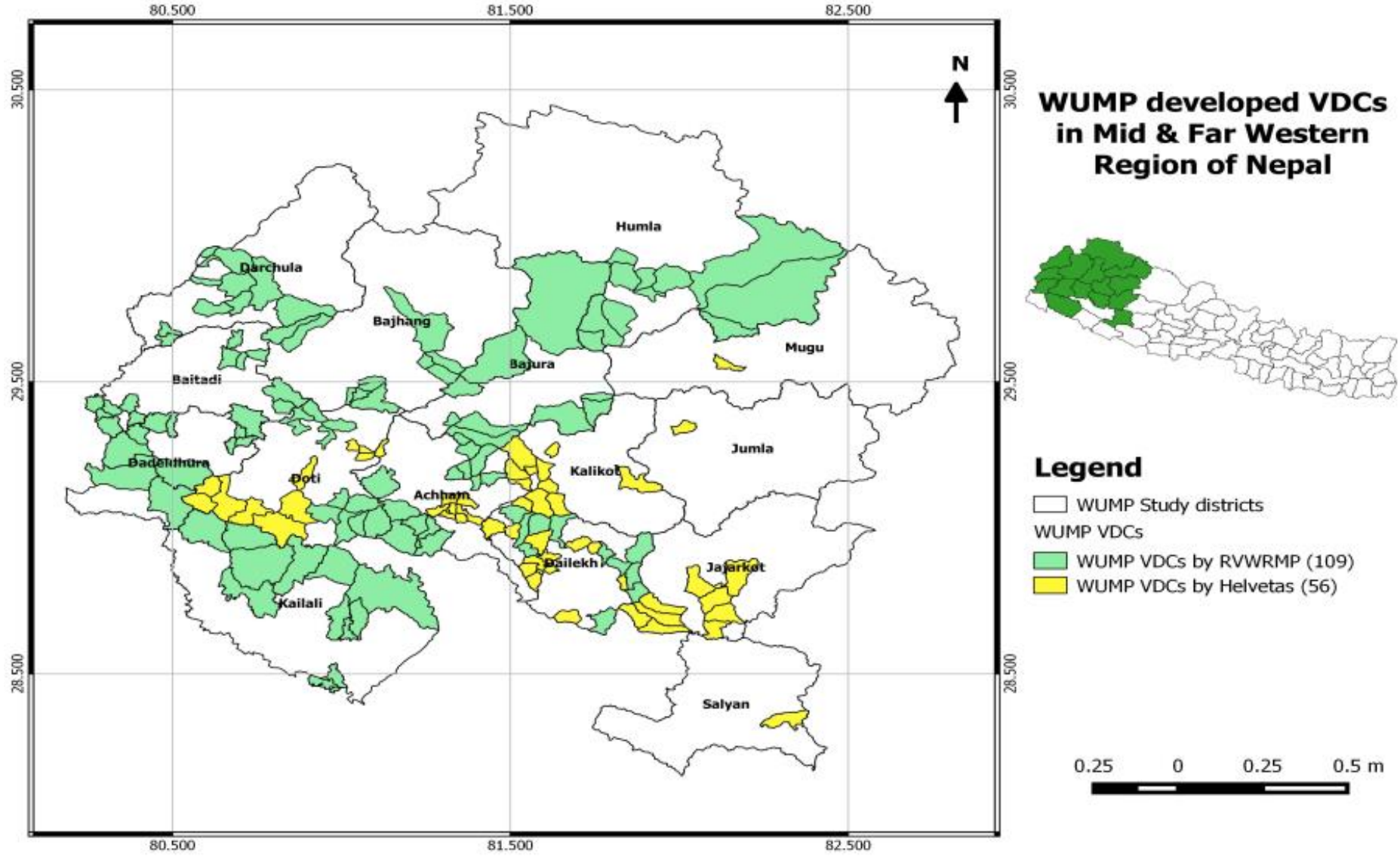
*For more info: http://www.rvwrmp.org.np/*

**Project component and working approach**

# Context

- Disputes over uses of water sources due to mounting competition for different uses
- Availability of excess water at some sources
- Lack of effective and efficient use of existing water sources
- Lack of participation of poor and disadvantaged group in planning and implementation
- Poor functionality, increasing water demand and negative impact of climate change effect

# WUMP VDCs in Mid/Far Western Region



# WUMP and its objectives

- WUMP is an approach to holistic, participatory and inclusive planning based on IWRM

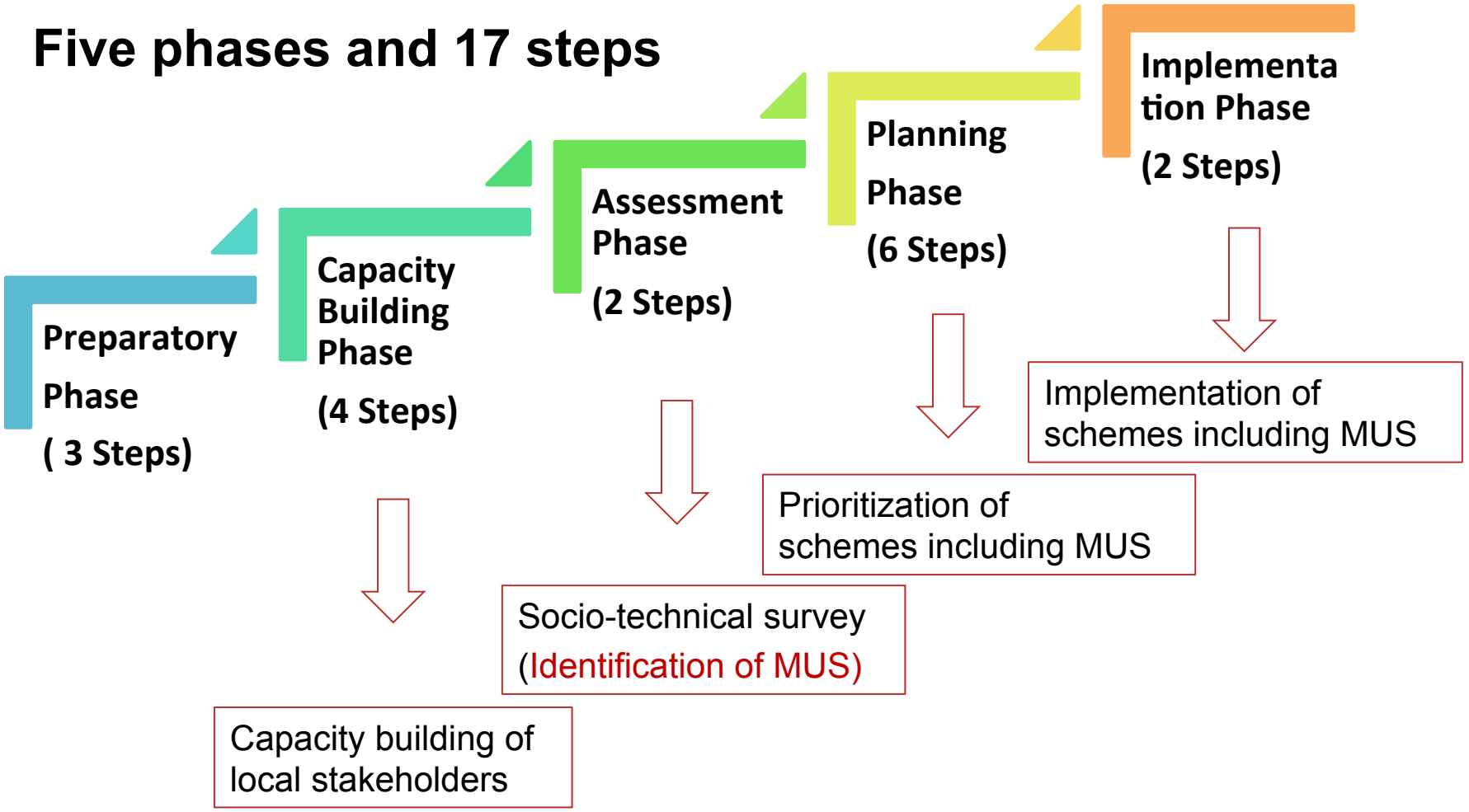
- Overall objective is to facilitate equitable, efficient and sustainable use of water


**Specific objectives are:**

- assessment of water resources availability, existing uses, requirements and potential uses
- participatory prioritization and planning of water resources development **with particular focus on MUS and source conservation,**
- strengthened local institutional capacity & participation of women and disadvantaged in planning and implementation

# WUMP methodology

- **Five phases and 17 steps**




WUMP prepared: 165 VDCs of Mid & Far-West. (Dec 2015.)

# WUMP methodology

# Decision support system for identification of MUS

Multiple use Systems

70 l/c/d

Water supply system with private connection

60 l/c/d

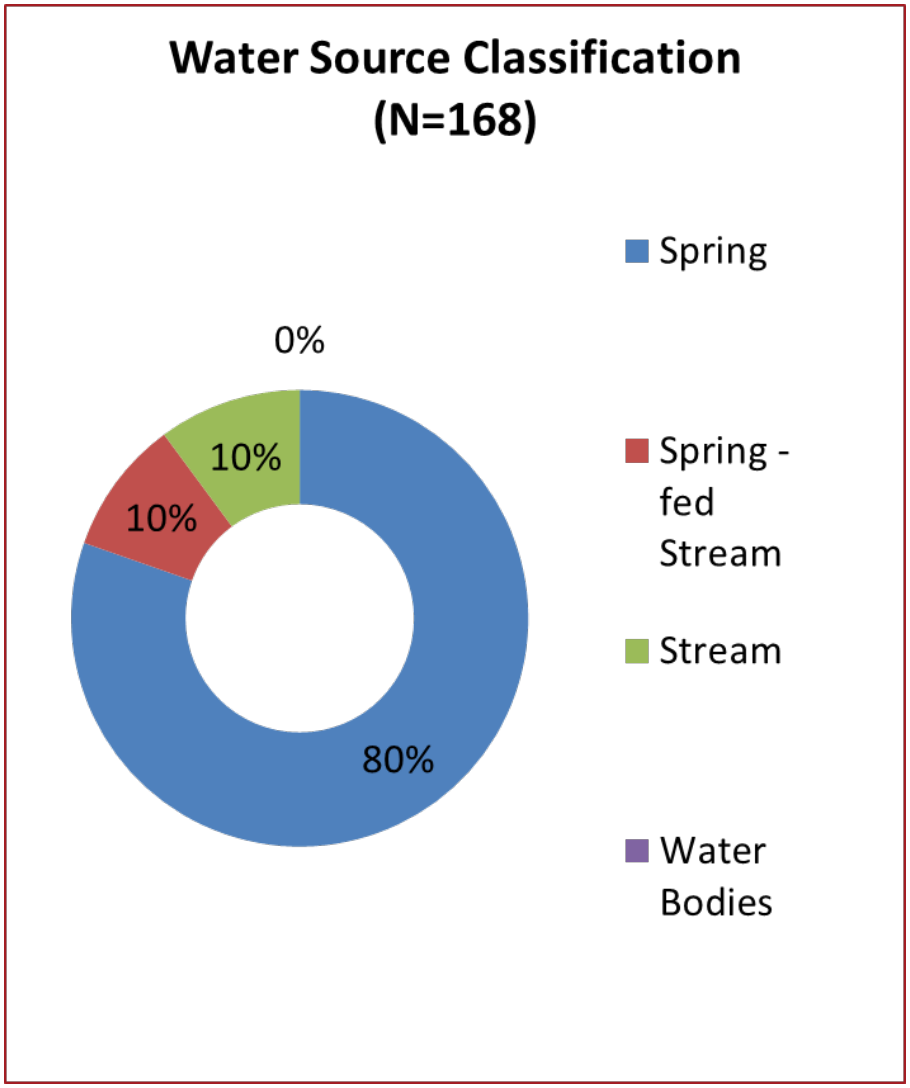
Water supply system with public connection

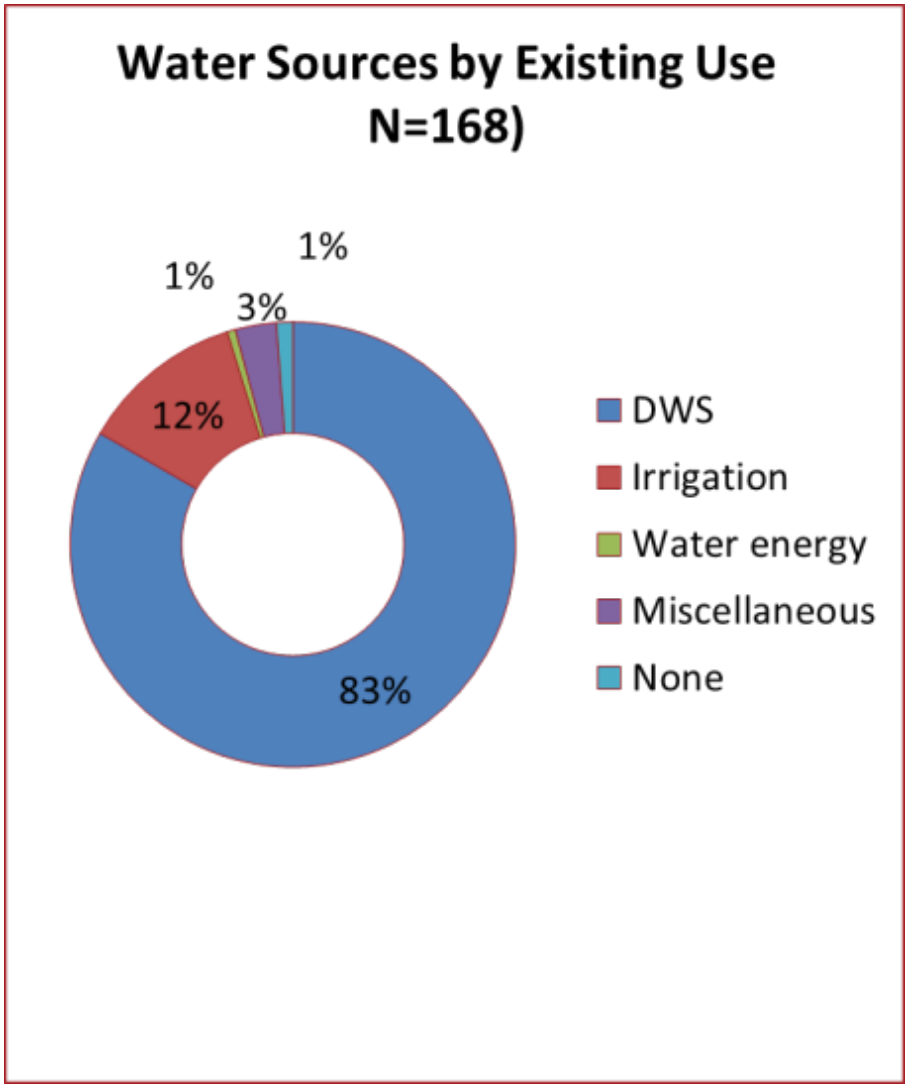
45 l/c/d

Rain water harvesting and source improvement with recharge measure

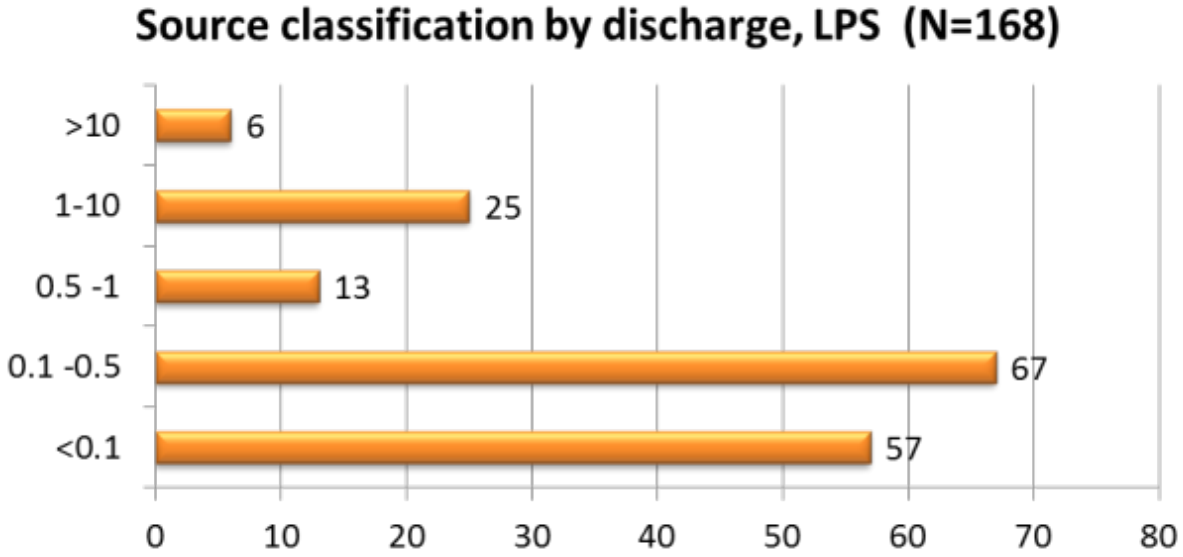
<25 l/c/d

# Type of water source and existing uses: Case of Dhime VDC, Jajarkot



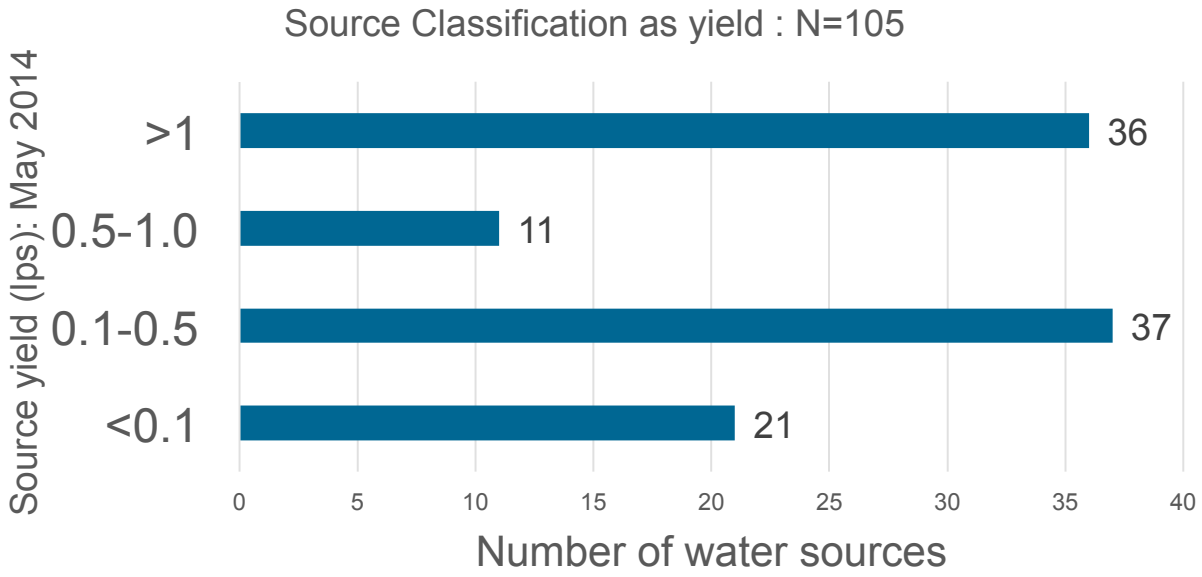
# Discharge capacity and potentially for MUS: Dhime VDC, Jajarkot




**About 25 % of the source can be potential for MUS scheme**

| Potential Multiple Uses Schemes | | |
|---|---|---|
| **Description** | **No of schemes** | **Type of MUS** |
| Potential MUS Scheme under drinking water schemes | 33 | Drinking water + Irrigation |
| Potential MUS Scheme under Irrigation schemes | 10 | Irrigation + Water energy |
| **Total** | **43** | |

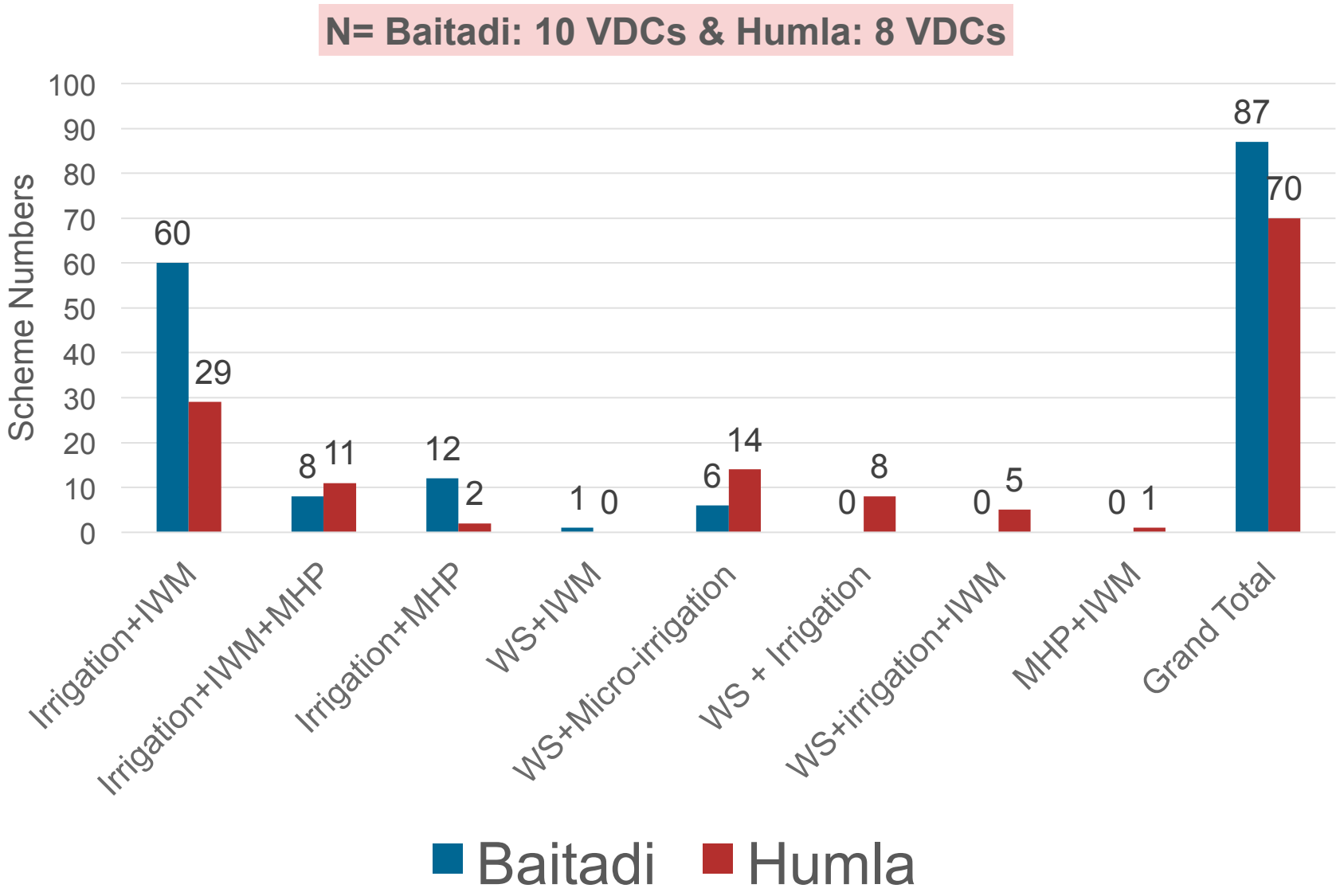
# Water Source analysis & Potential Use: Case of Shivaling VDC Baitadi




**About 30 % of the source can be potential for MUS scheme**

| **Potential Multiple Uses Schemes** | | |
|---|---|---|
| **Description** | **No of schemes** | **Type of MUS** |
| Potential MUS Scheme under drinking water schemes | 16 | Drinking water + Micro-Irrigation |
| Potential MUS Scheme under Irrigation schemes | 16 | Irrigation + Water energy |
| **Total** | **32** | |

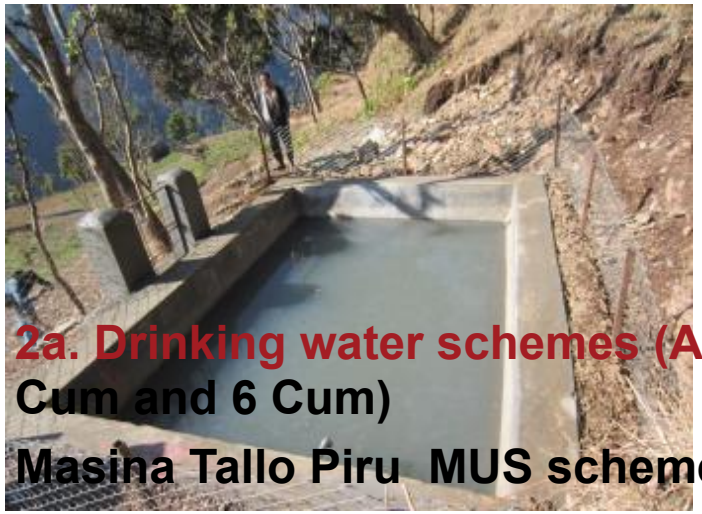
# MuS Schemes Identified in WUMP



# Type of MUS technology: Nepa VDC Dailekh

**1. Drinking water schemes (Overdesigned pipe and with additional outlets )**

**Koisidhara Private connection scheme, Nepa**



**2a. Drinking water schemes (Additional storage facilities): Soil cement pond 10 Cum and 6 Cum)**

**Masina Tallo Piru MUS scheme, Nepa**

# Type of MUS technology: Nepa VDC Dailekh

2b. **Water scheme (Additional storage facilities**:

(30 cum plastic pond and off take

(Dangikhola-pipalchautara Irrigation Scheme, Nepa)

**3. Rain water harvesting system**

(6.5 Cum jar +3 Cum soil cement pond)

Bhandarigaun RWH, Nepa

# Type of MUS technology: Shirsha VDC Dadeldhura

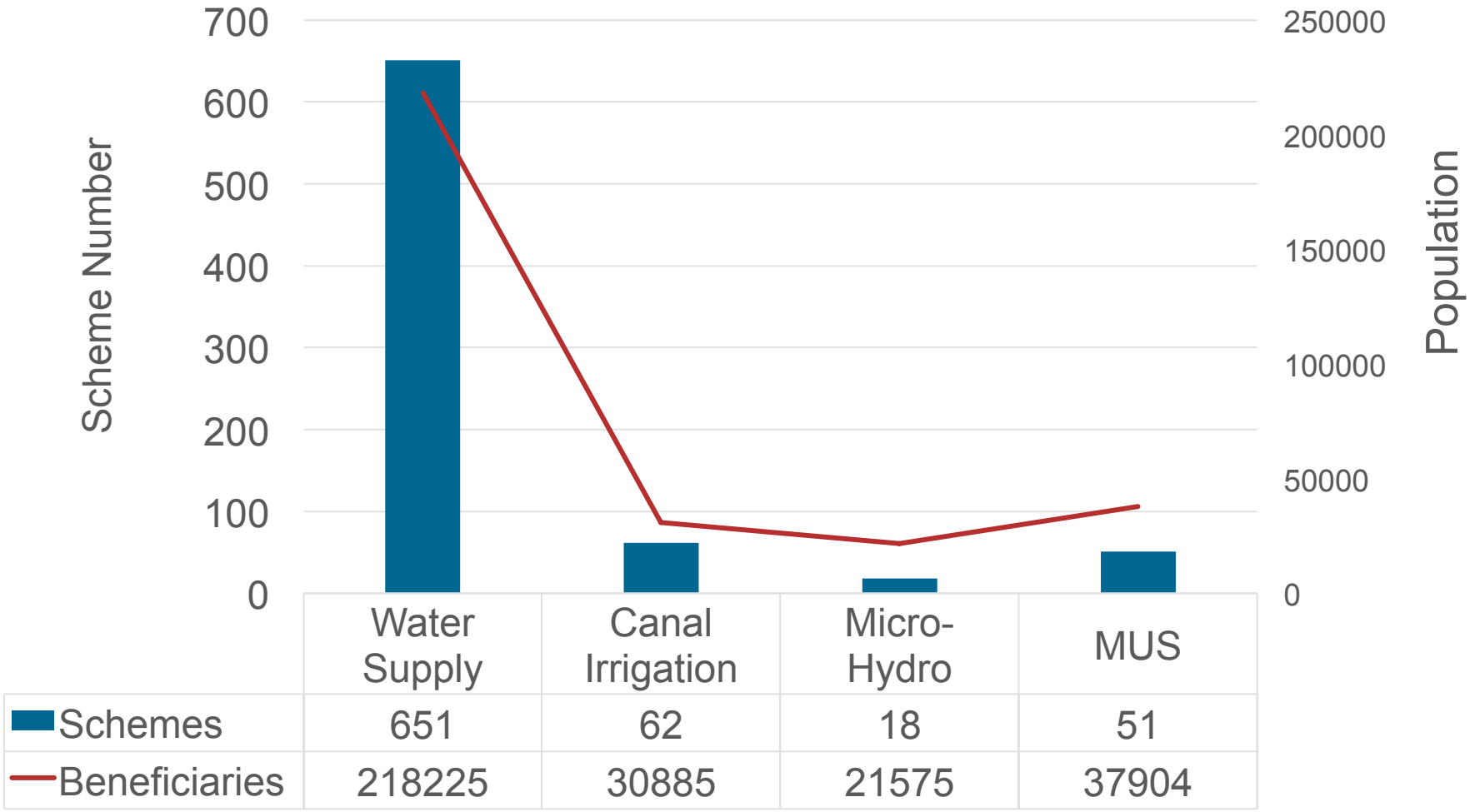


**4. Drinking water schemes (with pico hydro and irrigation )**

**Ashurani MUS scheme, Shirsha**



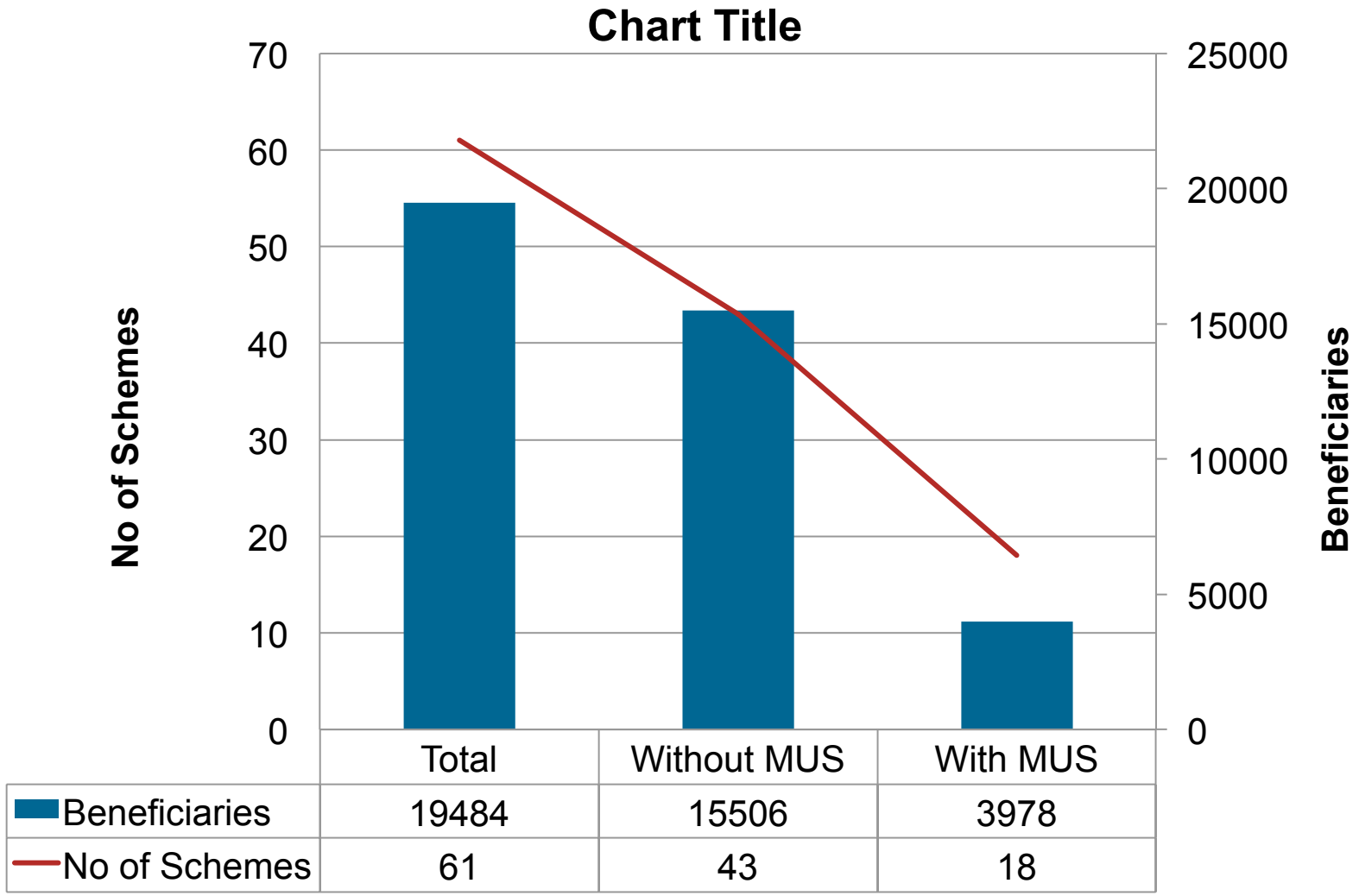
# Implemented MUS Schemes: RVWRMP (2007-2015)




| | Water Supply | Canal Irrigation | Micro-Hydro | MUS |
|---|---|---|---|---|
| Schemes | 651 | 62 | 18 | 51 |
| Beneficiaries | 218225 | 30885 | 21575 | 37904 |

In addition 164,000 population of 32,774 HHs (79% HHs) are benefitted from home garden.

# Implemented MUS schemes: WARM-P (Phase V:July 2013-Dec 2015)




| | Total | Without MUS | With MUS |
|---|---|---|---|
| Beneficiaries | 19484 | 15506 | 3978 |
| No of Schemes | 61 | 43 | 18 |

# Implemented MUS schemes

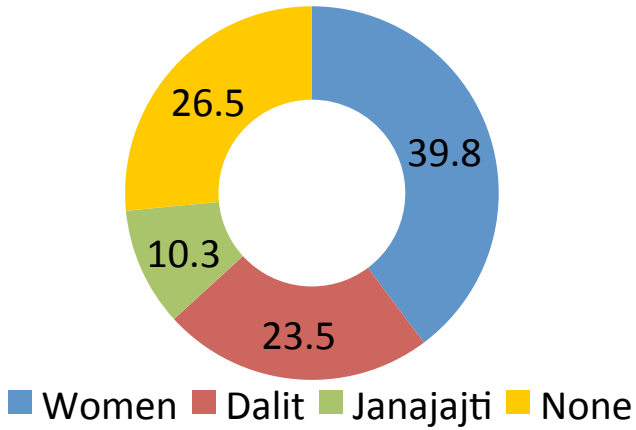
# Inclusion and participation in WUMP

| Composition of WUMP committees (N=26 VDCs) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Composition in committees | | | Participation in the key position of the committees | | | Composition of the VDC | | |
| Women | Dalit | Janajati | Women | Dalit | Janajati | Women | Dalit | Janajati |
| 37.9 | 18.3 | 4.3 | 39.8 | 23.5 | 10.3 | 52.6 | 21.9 | 4.4 |

Though not proportionate to the demographic landscape, the WUMP development committees are largely inclusive in terms of gender and social inclusion.

*WUMP VfM study, 2015*

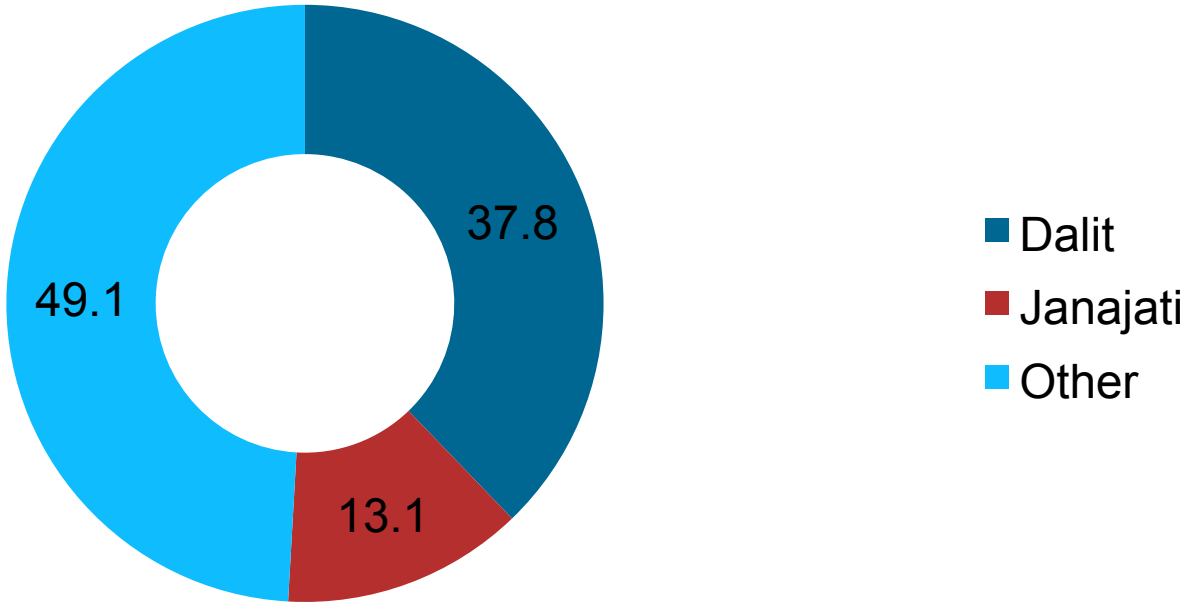
**Representation in key Position**



# Inclusion: beneficiaries of MUS

- MUS beneficiaries are more than proportionate population of Dalit and Janajati in the working VDCs
- Women beneficiaries are about 50%

**% of MUS beneficiaries (18 MUS schemes)**



# Discussion and conclusion

- WUMP is not only an effective approach for the identification and implementation of MUS but also improve water governance
- Inventory all water sources and their source measurement give better picture for MUS planning
- Decision support system with available discharge criteria is easy and supportive for identification of MUS
- MUS technologies introduced in the drinking water or irrigation schemes are found effective and efficient for the use of available water
- WUMP committees are largely inclusive in terms of gender and inclusion and excluded social group population in MUS benefices are more than proportionate population

# Discussion and conclusion

- On average more than 25 % of the water sources have excess water to develop as a MUS scheme
- WUMP is replicable approach (replicated by other agencies in the country and outside the country)
- SEIU/MoWS has been preparing a national guideline on application of WUMP in up coming WASH sector development plan

# Recommendation

- As WUMP is  a promising approach for planning and management of water resources (with emphasis on MUS), scaling up of such approach is necessary
- There are many plans at local level (LAPA, WASH plan, VDDP etc), harmonization of these plan is worthwhile
- So far WUMP considers one time source measurement during dry period, discharge measurement of some primary sources at certain interval should be done for further analysis of MUS potentiality
- There is not dedicated ministry or department for MUS, advocacy of MUS planning and implementation together with drinking water or irrigation or energy is recommended

# Acknowledgement


- Guideline on application of Water Use Master Plan 2015 (Draft), SEIU/MoWS
- Value for Money Assessment of Water Use Master Plan 2015
- Project Documents 2013 and Annual Reports, Water Resources Management Programme (WARM-P)/HELVETAS Swiss Intercooperation
- Project Documents 2011 and Annual Reports, Rural Village Water Resources Management Project
- Water Use Master Plan  report of various VDCs


Thanks !