WUMP: a participatory planning tool to manage development and risks related to water

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Thun, 10 Nov, 2015

Country Context: Water

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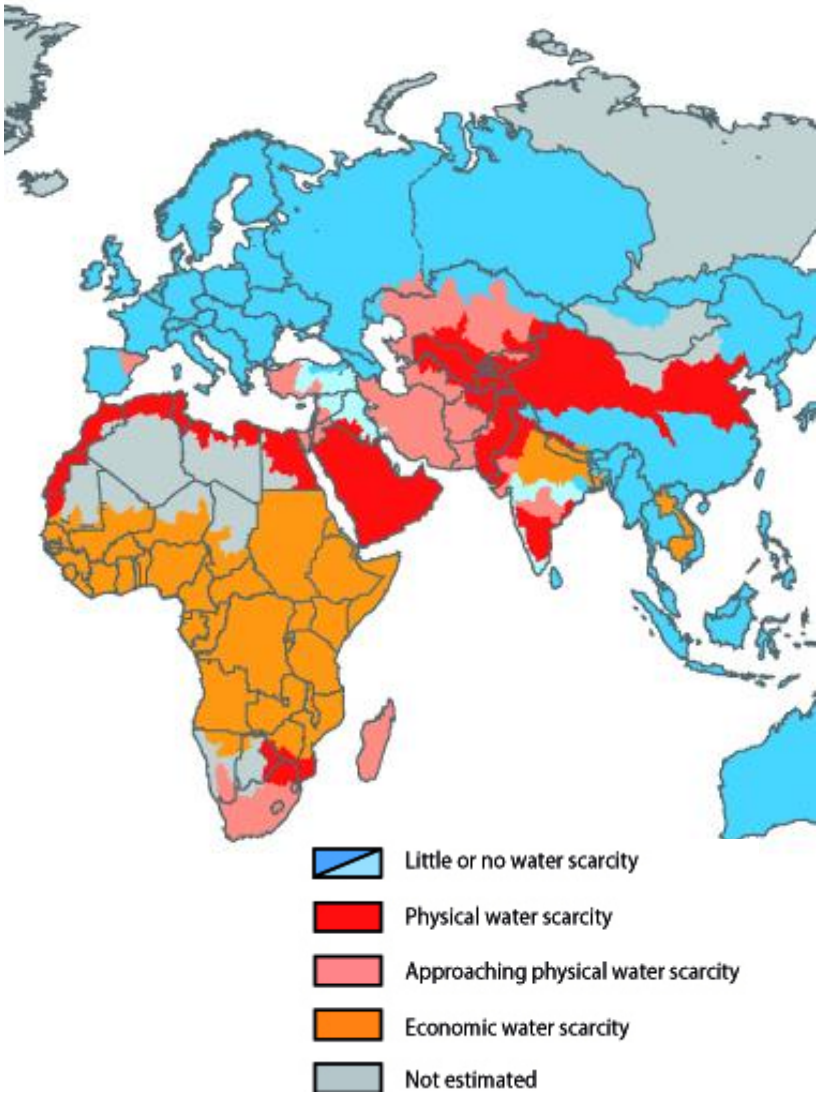
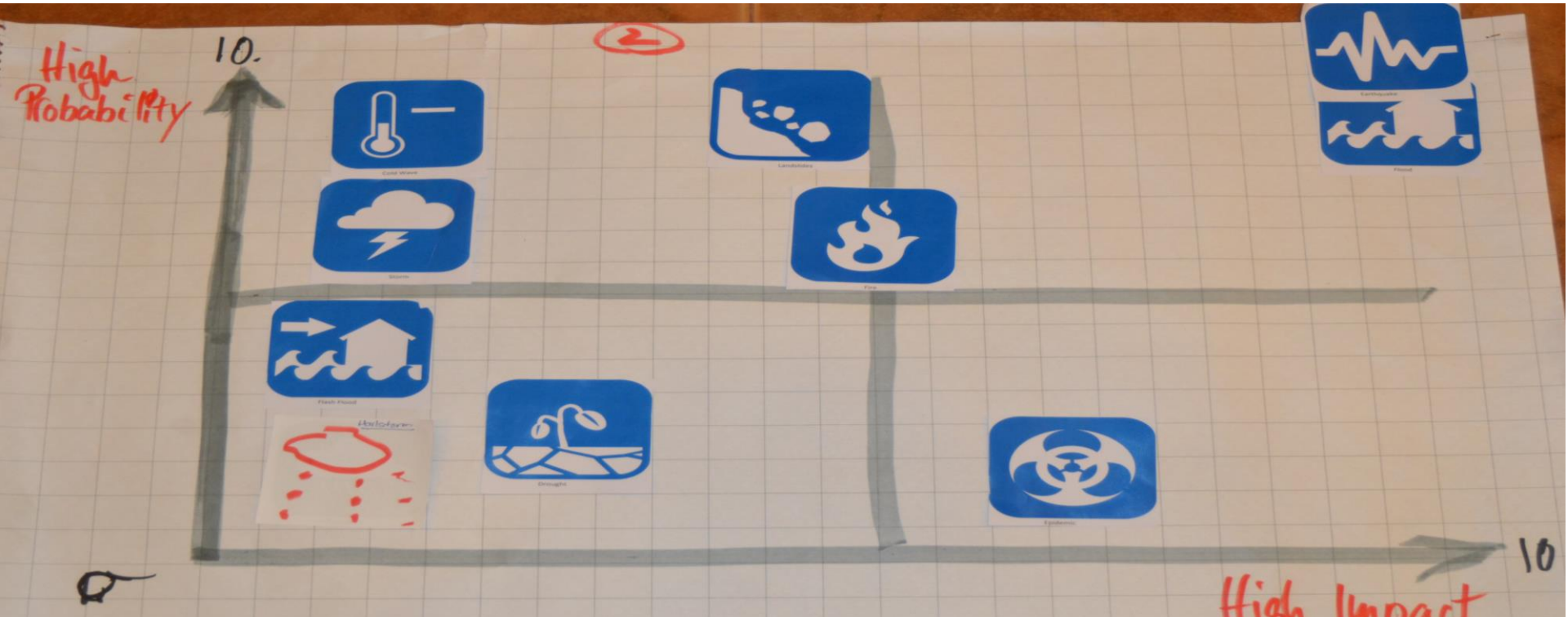
- Abundance and scarcity
- 2nd richest in water resources
- Country with economic water scarcity (IWMI)
- National water supply coverage 83.5% and sanitation coverage 70.2%, respectively. However, fully function schemes are only 25% (DWSS)
- Only about 32% of irrigable land has round the year irrigation facility (DoI)
- Daily average power cut in dry season is about 11 hrs (NEA)



Country Context: Disaster

- **Floods and Landslides – 31st**
- **Earthquake – 11th (Kathmandu No. 1)**
- **Climate Change – 4th**



Climate change vulnerabilities

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GLOF VULNERABILITY MAP OF NEPAL

LANDSLIDE VULNERABILITY MAP OF NEPAL - Hill and Mountain Ecological Zone

DROUGHT VULNERABILITY MAP OF NEPAL

FLOOD VULNERABILITY MAP OF NEPAL - Terai Ecological Zone

The local context

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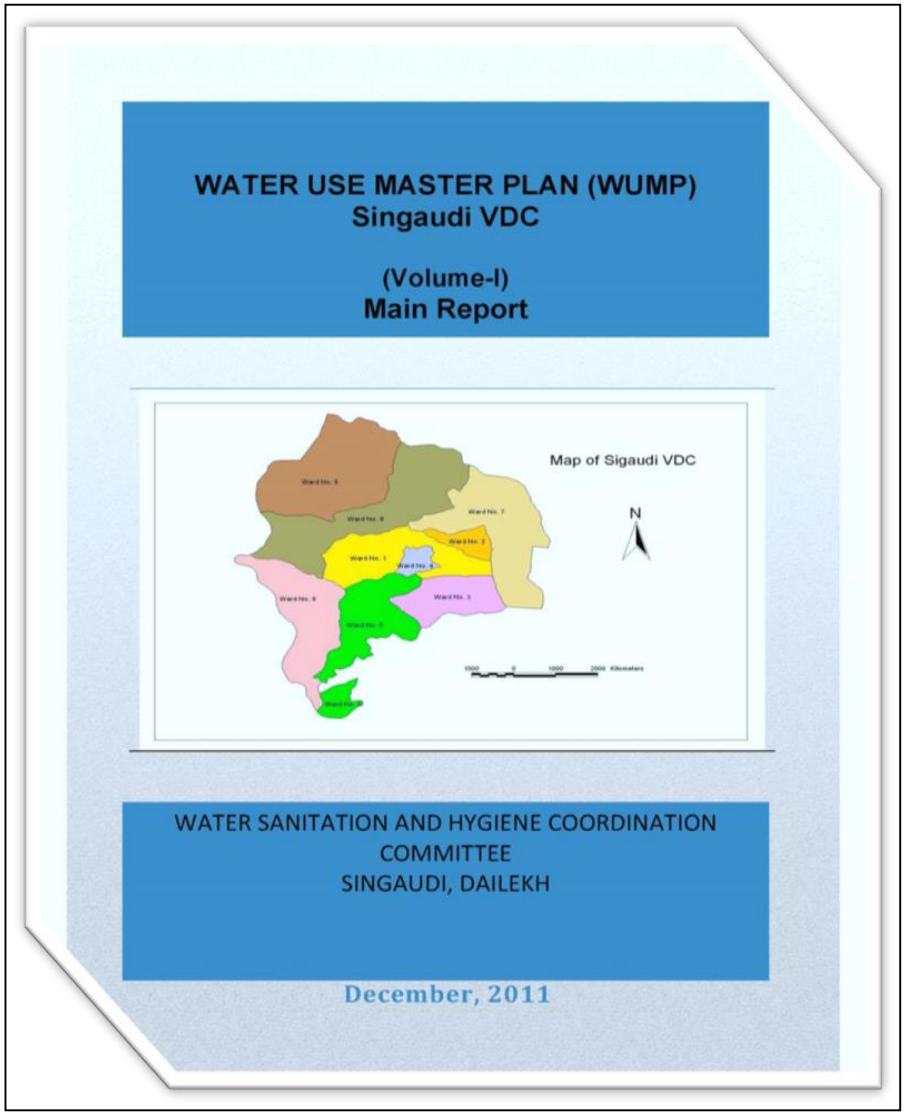
- Depleting water sources
- Source disputes due to mounting competition for the uses of water source
- Lack of coordinated and proper planning,
- Lack of participation of disadvantaged people in planning and management,
- Very poor functionality and sustainability of the water schemes.
- Lack of awareness on hygiene, sanitation, CCA, DRR and ecological conservation

What?

- WUMP is an Integrated Water Resources Management (IWRM) approach at local level
- Development cum conservation approach for rational and sustainable use of water resources



Why WUMP ?

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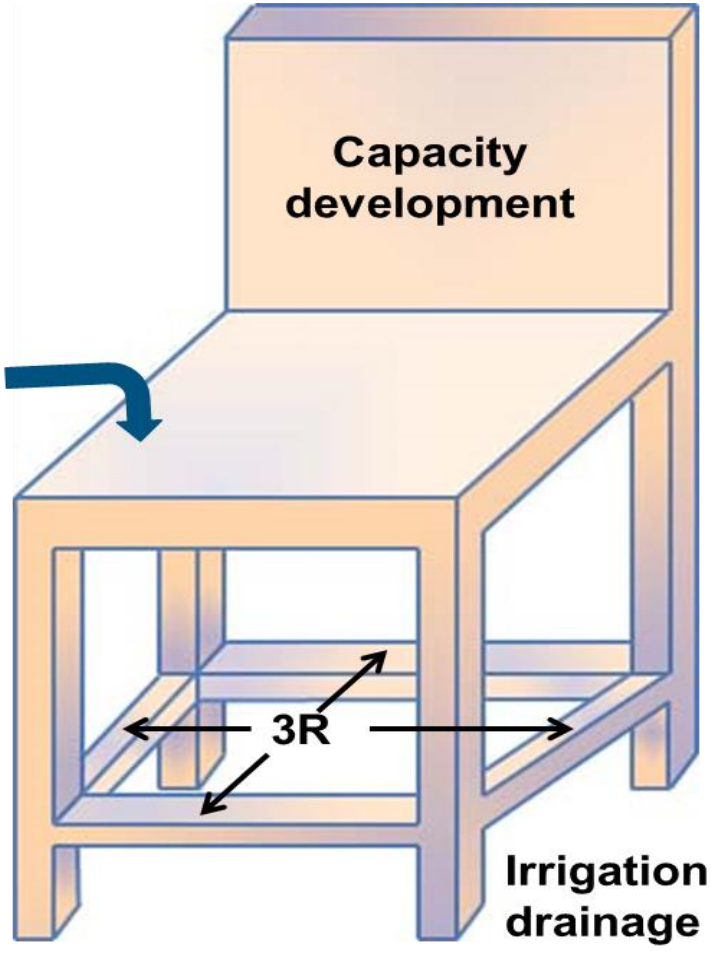
- is a process through which local government and communities in<u>teract, exchange knowledge, acquire and obtain ownership over the water management</u> plan
- planning and management of water resources that specify availability and requirement of water within a VDC and assess potential uses also considering CCA and DRR
- a process that emphasizes the inclusion and responsibility of all stakeholders in planning, negotiation and decision making
- helps evaluating competitive demands and manage any potential source dispute/ conflict.

Objective …

Facilitate equitable, efficient and sustainable use of water for well being and improved livelihoods.

- **assessment of water resources availability and requirements**
- **participatory prioritization and planning (social equity)**
- **coordinated water resources development by different stakeholders - communities, government, non government organizations (economic efficiency)**
- **promotion of conservation of water resources and environmental sanitation (ecological sustainability)**
- **strengthened local institutional capacity**

The WARM chair…



Hydropower
IWM
MuS

Water Energy

WASH

Gravity
Lift systems
Rain Water harvest
MuS

Conservation technologies

Environment and ecology

Irrigation and drainage

Gravity
Pond
Lift system
Sprinkle, Drip

WUMP Process: phases and steps

Implementation Phase

17 WUMP update

16 Marketing and implementation

Planning Phase

15 Dissemination at district level and endorsement by DDC

14 Approval of WUMP by VDC council

13 Final WUMP report preparation

12 VDC level planning workshop

11 Preparation of preliminary WUMP report

10 Ward level planning workshop

Assessment Phase

9 Technical assessment

8 Socio-economic assessment and needs identification

Capacity Building Phase

7 Capacity building for VDC and V-WASH-CC members

6 Activation of V-WASH-CC

5 Ward level orientation and activation of ward citizen forum

4 Preliminary WUMP orientation at VDC level

Preparatory Phase

3 Selection and training of service providers

2 Establishment of memorandum of understanding

1 VDC Decision to prepare WUMP

Preparatory Phase

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नेपाल सरकार
स्थानीय विकास मन्त्रालय
नेपा गाउँ विकास समितिको कार्यालय

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बीच

जलउपयोग गुरुयोजना (Water Use Master Plan)
तयारीका लागि

सम्झौता- पत्र

हस्ताक्षर :

गा. वि.स.को तर्फबाट	ज.व्य.का. हेल्भेटास तर्फबाट	सेवाप्रदायक संस्था को
तर्फबाट	तर्फबाट	तर्फबाट
दस्तखत :		
नाम : तुल्सी प्रसाद उपाध्याय	मदन राज भट्ट	टिकाराम आचार्य
पद : गा.वि.स. सचिव	टीम लिडर	कार्यकारी निर्देशक
मिति : ०६७/१२/२४	०६७/१२/२४	०६७/१२/२४

कार्यालयको छाप

Capacity Building Phase

- **Training to main committees**
- **WUMP facilitators training**
- **Community awareness**
- **Major focus on IWRM, WUMP, PRA, gender and inclusion, water rights, legal issues, CCA, DRR, adaptation measures linking to 3R etc..**

Assessment Phase

- Social / resource mapping
- Socio economic data collection
- Need identification
- Participatory 3R potential mapping including assessment of water related disaster risks

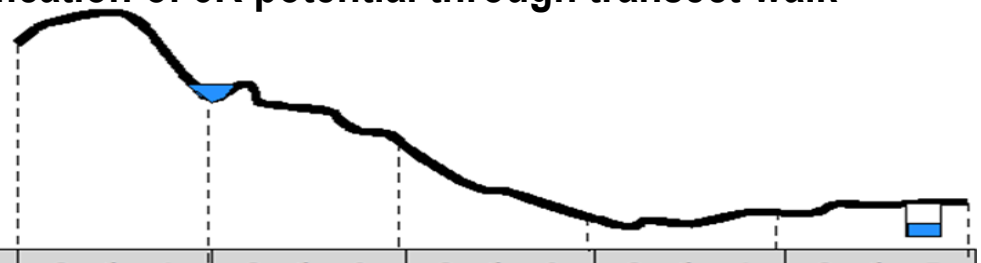
SC / Ward No.	Clusters	Households	Population		
			Female	Male	Total
1	4	84	217	210	427
2	5	52	172	164	336
3	4	62	189	200	389
4	5	51	141	174	315
5	5	53	165	172	337
6	5	70	201	183	384
7	4	70	191	189	380
8	10	90	262	255	517
9	6	79	215	228	443
Total	48	611	1753	1775	3528
%			49.7	50.3	

Ethnic Composition

SC / Ward No.	Clusters	Households			
		Dalit	Janajati	Others	Total
9	48	184	172	255	611

Assessment Phase

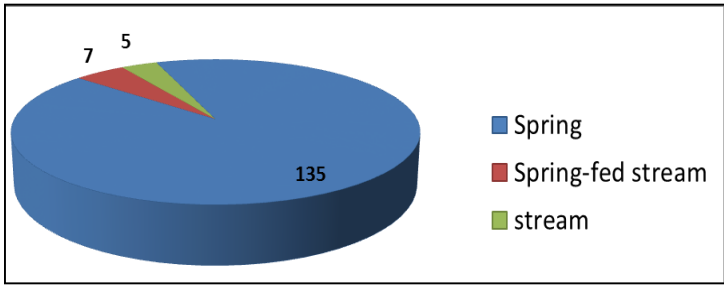
- **Technical assessment of existing water facilities and the sources (mapping) also incorporating the climate change effects**
- **Verification of 3R potential through transect walk**



	Section 1	Section 2	Section 3	Section 4	Section 5
LAND-USE	Grazing, few trees	Grazing-shrubs	Agriculture	Agriculture	Agriculture
CROPS	-	-	Khat-Maize	Sorghum-	Sorghum
SLOPE	> 50%	>20%	>20%	<10%	<10%
Concentrated runoff	Gullies, road	Gullies, road	Seasonal stream	Seasonal stream, road	Seasonal stream
Soil moisture	Green for few months	Green for few months	Green for 4 months	Green for 6 months	Green for 6 months
Already existing 3R measures	Stone faced soil bunds	WH pond	none	none	soil bunds
Existing water sources	None	one pond	none	water from dry riverbed	hand dug well
Challenges	Bush encroaching	low grass production, erosion	no water	Crop failure	drying up well
OTHERS	Big herd of cows	Abandoned quarry	Many tukuls	waterlogged after rain	most productive

Since 2003, drought in winter is the major hazard.

(Source : CRiSTAL exercise- Module-2)



Melamchi Water shed	Mean Annual temperature (° C)	Mean Annual Precipitation (MM)
1960-2000 base line	10.8	1503
2050 projection range	+1.8 to 2.6	+58 to 122

Planning Phase

- Disseminate social and technical assessment findings and verify with local people
- Setting the yard stick for prioritization
- Prioritize the schemes for different sectors (Negotiation, discussion)

Implementation

Disaster resilience and climate proofing in design and implementation

- **Selection of stable sites**
- **Use of reliable sources**
- **Use of suitable technology**
- **Water source restoration**
- **Combining bio and structural measures**
- **Retention, Recharge and Reuse (3R) measures**
- **Water Safety Plan**
- **Blue schools**

Implementation...

Implementation

Blue School Approach

Capacity Building to Teachers/ Development of local curricula

Support on Hardware(less) and software Activities(more)

↓

Effective Teaching/Practical Education in School

Practices/Demonstration/facility improvement/Extra Curricular Activities

↓

Students/Teachers knowledge/Skill enhanced

↓

Transfer from School to Home

↓

Adaptation and water resource management practice at community level

WUMP and DRR/CCA related to water

- not only manages use of water but also the DRR and CCA as a cross cutting issue for all four uses of water
- aware community in DRR and CCA
- builds capacity of local agencies in DRR and CCA
- facilitates community to identify and plan community based DRR and CCA
- promotes community based interventions e.g. pond irrigation, MuS, water safety plan, 3R interventions- source improvements, plantation, gully plugging, rain water harvesting, Water safety plan etc
- “side-effect”: reduced vulnerability to disaster risks and CC effects

Learnings…

- Water can be a good entry point for including CCA, DRR and conservation interventions
- Local knowledge is extremely important in participatory and effective planning
- Localization of WUMP to match local capacity is good approach for wider upscaling
- A flexible approach and can be adapted in different context
- Can be a good source of information during huge disasters e.g April earthquake

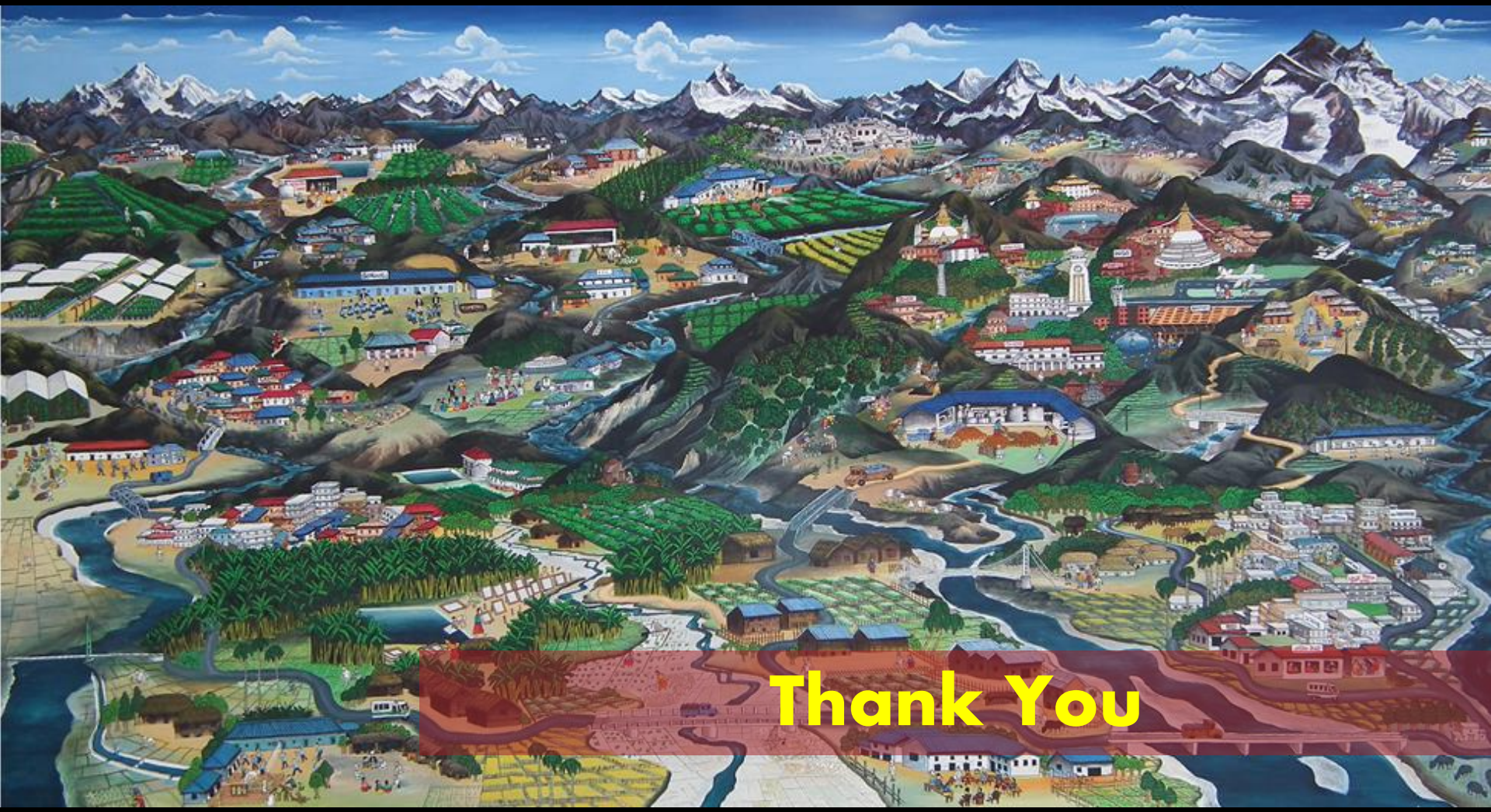
Challenges & Opportunities…

Opportunities

- Well appreciated approach by the stakeholders
- National guideline for WUMP by the Government
- Growing interest of Donors

Challenges

- Low budget at VDC
- Local capacity (participation process, WUMP marketing..)
- Overlapping roles and varied interests of different agencies
- It may raise expectations of communities
- Community priorities the intervention that benefits immediately


Thank You