

Integrating local knowledge in Adaptation Planning

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Background

Community perceptions

- Change – weather events; variations
- Impact – on livelihood activities (food, income)
- Coping responses – what do they do, institutional dependency

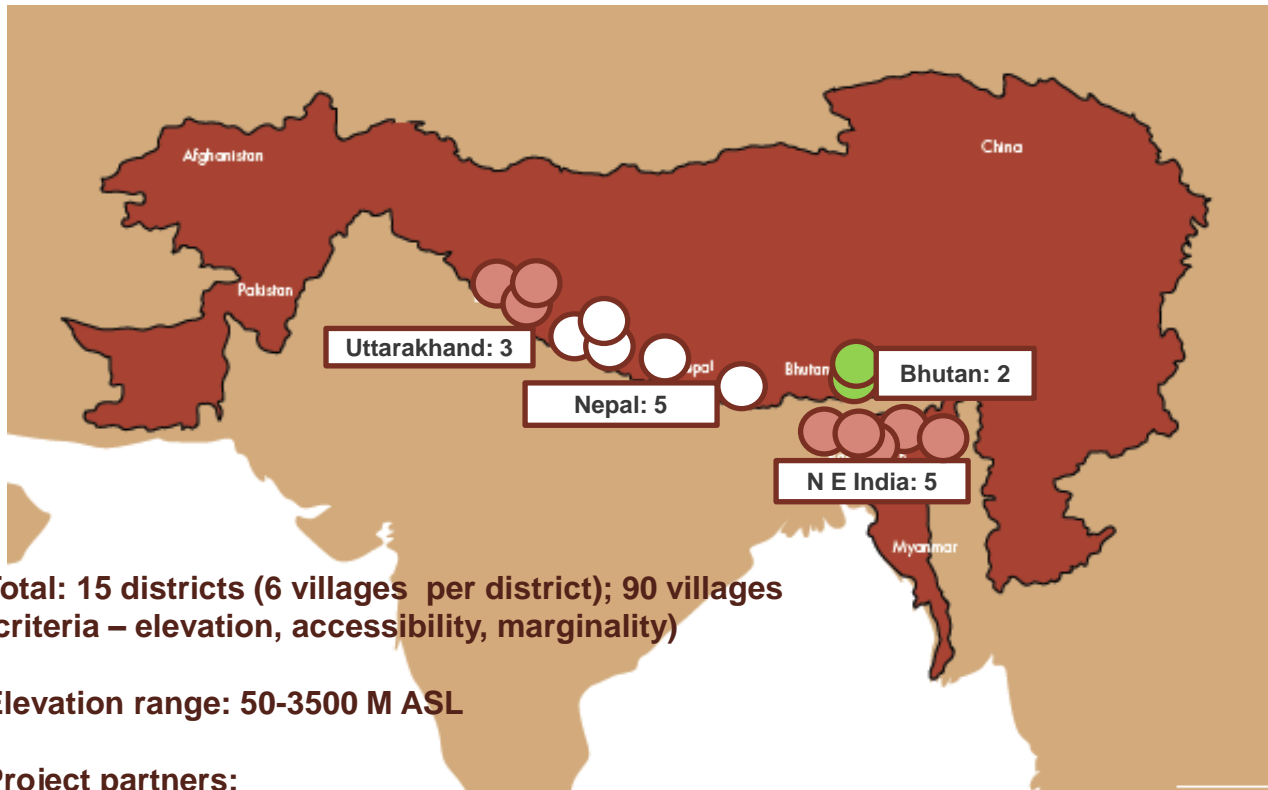
Identifying vulnerable groups

- Link to HH Wealth Ranking
- Which households have a better capacity to cope? Which don't ?
- Which categories have easier access to institutional support ? Which don't ?

Identifying coping/adapting mechanisms

- Which coping / adaptation mechanisms work?
- Identifying Institutional 'safety nets'

Research Sites AdaptHimal



Total: 15 districts (6 villages per district); 90 villages
(criteria – elevation, accessibility, marginality)

Elevation range: 50-3500 M ASL

Project partners:

Bhutan: AMEPP

India: Aajeevika, MRDS & NERCORMP

Nepal: WUPAP & LFLP

Survey districts



Bhutan

Pemagatshel

Trashigang



India

Uttarakhand

Almora

Bageshwar

Tehri

NE India

W Garo Hills

E Garo Hills

Ri Bhoi

Karbi Anglong

Ukhrul



Nepal

(West)

Humla

Bajhang

Dailekh

(Central & East)

Tanahu

Terathum

1. Participatory Rural Appraisal (PRA) Toolkit
 - to understand past events
2. Documentation of community observations
3. Adaptation Learning Highway (ALH)
 - outscaling and upscaling

PRA Tool I – Seasonal Dependency

(Support systems, Resource diversity & availability)

Production systems	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March
When												
Agriculture		What						Rice	Rice	Rice	Rice	
Where	Potato	Potato									Potato	Potato
		Veg	Veg	Veg				Veg	Veg	Veg		
Animal Husbandry												
	Milk	Milk	Milk	Milk	Milk	Milk	Milk	Milk	Milk	Milk	Milk	Milk
	Meat	Meat	Meat								Meat	Meat
	Wool	Wool									Wool	Wool
Forest												
	NTFP	NTFP				NTFP	NTFP			NTFP	NTFP	NTFP

PRA Tool II – Seasonal Calendar

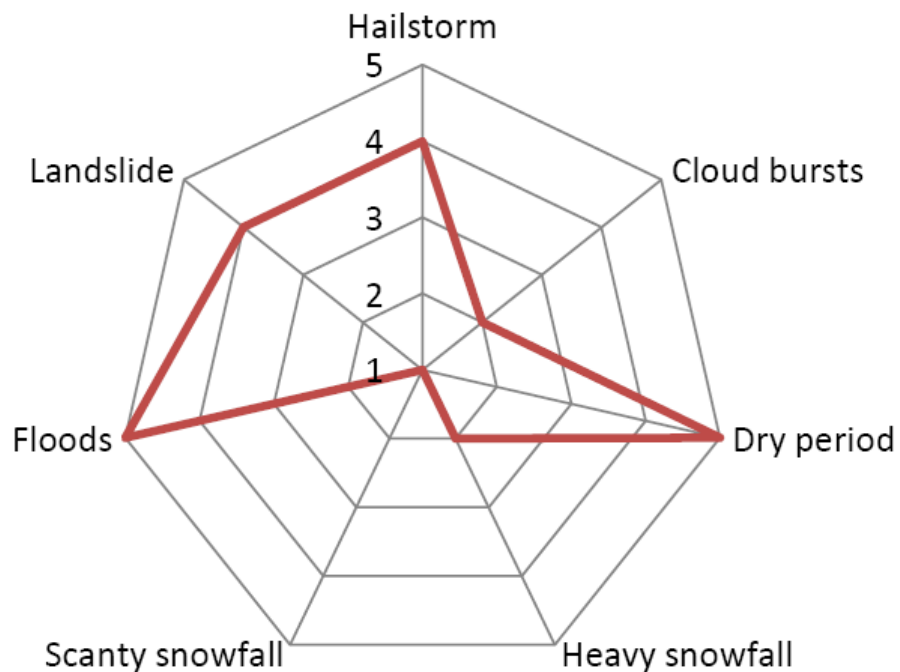
(Seasonal activities)

Production systems	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	March
Agriculture												
Rice			S	T	W	W	H	H				
Potatoes						LD	S	W	W	H	H	
Animal Husbandry												
Milk		FC						FC	FC	FC	FC	FC
Meat												
Wool												
Forest												
NTFP	C		C		C/S	C/S	C/S	s	s	C/S		

PRA Tool III - Weather perceptions (Seasonality, duration, change)

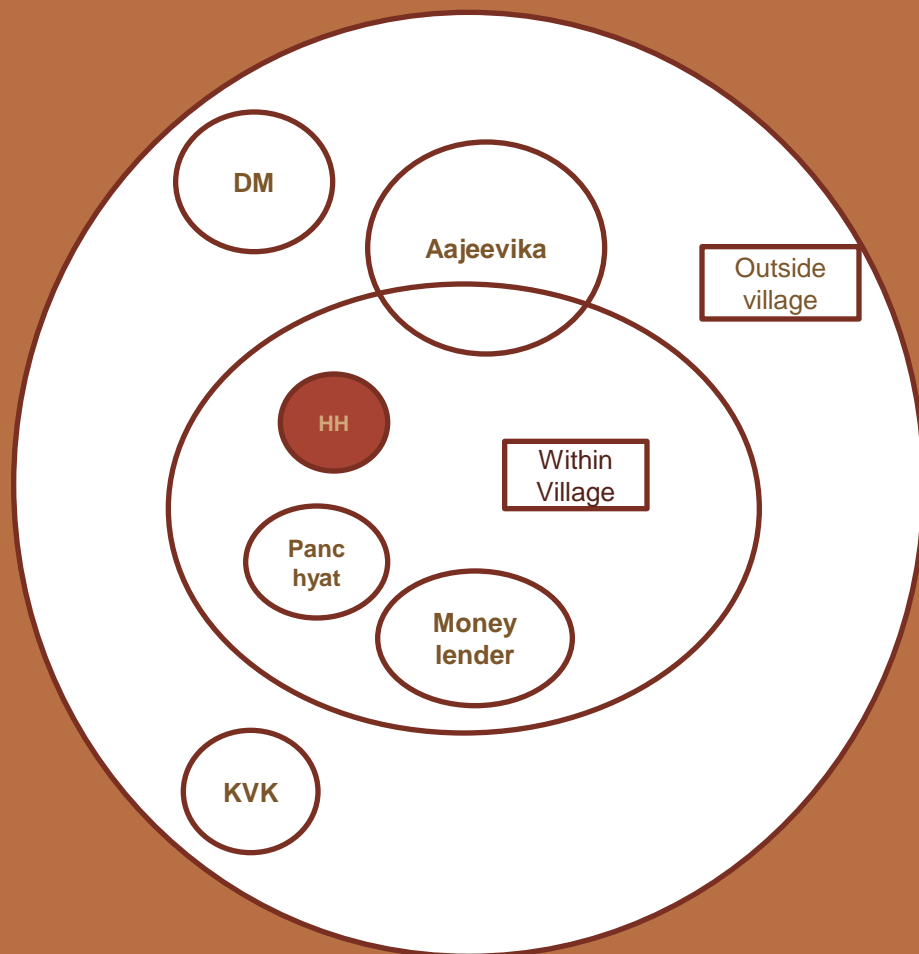


PRA Tool IV – Hazard Ranking (Weather & weather induced)



1 = 'has negligible impact', 5 = 'has strong impact'

PRA Tool V – Institutional Mapping (Institutional dependency)



Which institutions do households turn to during their time of need?

Impacts observed by local communities

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Impacts			NE India				
			WGH	EGH	Ri-Bhoi	Karbi	Ukhrul
Income	Resources impacted	Crops	**	**	***	***	
		Vegetable	***	***	***	***	
		Medicinal plants	*		**	*	
		Fruit	**	*	***	***	
		Livestock	***		*		**
		Forest	**	**	*		
		Infrastructure		**	**		
	Activity impacted	Sowing	*	**	***	***	
		Weeding	*	**	***	**	
		Harvesting	***	**	***	***	*
	Implication	Reduced income	**	*	*		*
		Decreased yield	***	**	***	***	**
		Quality	***	*	**		
		Changed timing	*				
		Impact on labor					

Notation: * < 33%, ** 33-66%, *** > 66% of villages

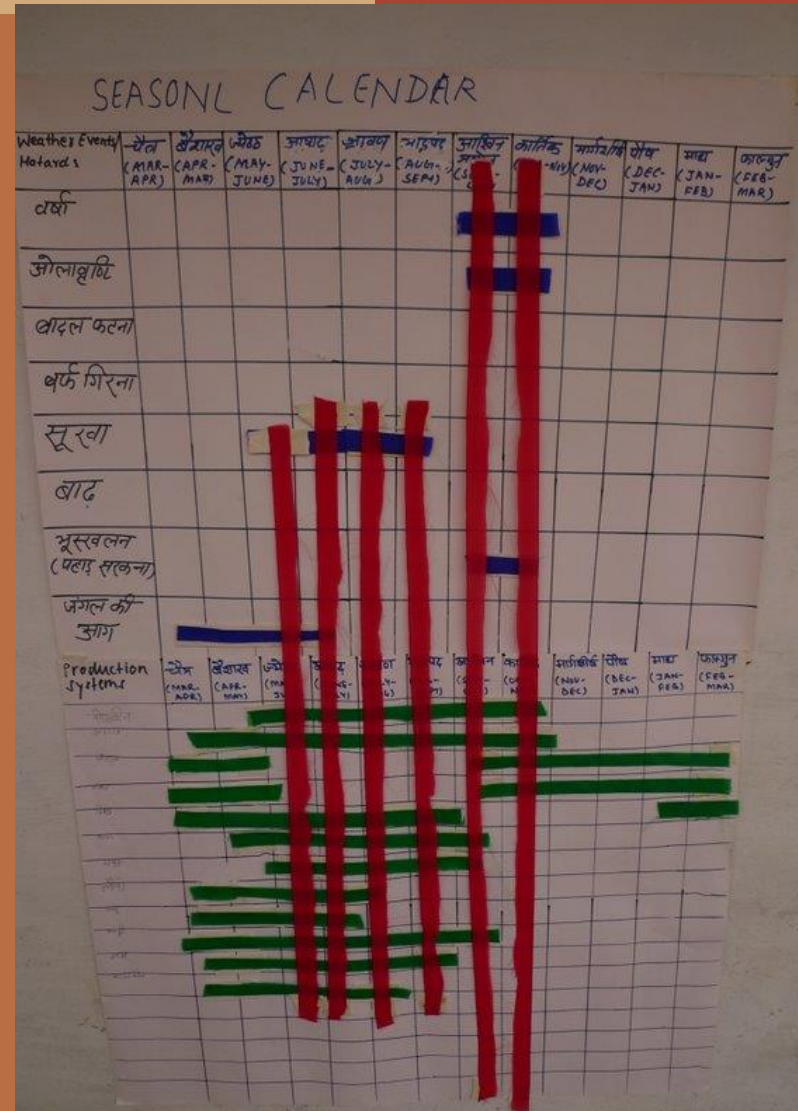
Coping and Adaptation strategies

Responses			% of villages in locations			
			Uttarakhand	Nepal	Bhutan	NE India
Coping	Sowing	repetition		13	8	11
	Time shift	early		13		11
		delayed	39	57	8	39
	Practices	farming practice	28	40	17	84
		drying practice		7	42	6
		pest/wildlife risk mgnt	17	60	8	89

Responses			% of villages in locations				
			Uttarakhand	Nepal	Bhutan	NE India	
Adaptive	Maturation (Duration)	Early (short)	6	3			
		Late (long)	6				
	Varietal replacement	new	28	3	17	11	
		resistant		3	50	23	
	crop replacement	food crop	22	27		22	
		cash crop	39	10		6	
	Shifts	system	Livestock			8	
		resource	forest resources		3		6
			Agriculture diversification	17	13	17	6
			occupation	17			

Data analysis & interpretation

- Qualitative data analysis
- Triangulation of data (combination of different methods and different sources of information)
- Comparison of **primary and secondary data** (e.g. people's perception of change and climatic data)
- Gender and social analysis
- Attribution: Do not attribute every change to climate change!
- Combination with **policy analysis**



Seasonal Calendar: Weather changes and activities

Weather/Event	मार्च (MAR-APR)	अप्रैल (APR-MAY)	मई (MAY-JUNE)	जून (JUNE-JULY)	जुलै (JULY-AUG)	सितंबर (SEP-OCT)
वर्षा						
ओलावृष्टि						
वादल कटना						
बर्फ गिरना						
सूखा						
बाढ़						
भूस्खलन (पहाड़ सरकना)						
जंगल की आग						
Production systems						

Weather Changes (months)

Snowfall

Onset: 1 delayed
 Completion: 1 ea
 Duration: (-) 2-3

Rainfall

Onset: 1-2 delayed
 Completion: 3 ea
 Duration: (-) 3-4

Dry periods

Onset: (+) 2-3
 Completion: 1-2 p
 Duration: (+) 3

New periods: 2-

Hazard Ranki

1. Dry spells (
2. Storms (3.0

Climate-induc

1. Pests (3.0)
- (Landslides)

Hazard ranking scale of 1-5; 5= impact;

Institutional Dependency:

- Mothers groups
- Project groups
- Village Women Development Committee
- Community Forest User Groups
- Moneylender, Shopkeeper
- Traditional ayurvedic practitioner
- Agro-vet centers
- Local Govt. (DADO, DDC, DFO)
- I/NGOs, Donor agencies

Adaptation Learning Highway

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C2C Knowledge Exchange Forum (C2C KEF)

- Knowledge exchange
- Peer verification (acceptance)
- Peer assessment
- Gap identification and need assessment (support services required)

Community-Scientists Interface Forum (CSIF)

- Knowledge exchange
- Participatory assessment
- Identification of promising adaptive mechanisms
- Designing participatory validation and monitoring framework
- Result sharing, dissemination and upscaling framework

State/Regional Consultative Workshop for formulating adaptive strategies

- Share findings, concerns and learning from C2C KEF, CSIF and FIP
- Policy action recommendations
- Formulation of policy support for upscaling effective adaptive strategies

Forum for exchange and interaction with local decision and policy makers (FIP)

- Knowledge sharing
- Share issues, concerns and gaps in support system
- Identify means to make support system more responsive
- Identify existing programmes and institutional mechanisms that can respond to community concerns
- Identify policy concerns

Conclusion

1. Enhanced awareness and adaptive capacities
2. Informed decision making at different levels (local to national)
3. Adaptive strategies based on local needs
4. Responsive governance mechanism
5. Minimizing communication gaps (science-policy-practice)

Thank you

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