Developing knowledge for integrating Adaptation and Mitigation : Pilot REDD+ in Community Managed Forest in Nepal

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Twin strategies of UNFCCC

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- The UNFCCC has identified two strategies : mitigation and adaptation.

- Mitigation is human intervention to reduce or enhance sinks of GHG emission
- Adaptation refers to "adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities" (IPCC, 2007).

A typical adaptation framework: Need for knowledge & capacity

(Source: ***Adaptation Framework and Strategy*** **project; website www.china-climate-adapt.org)**

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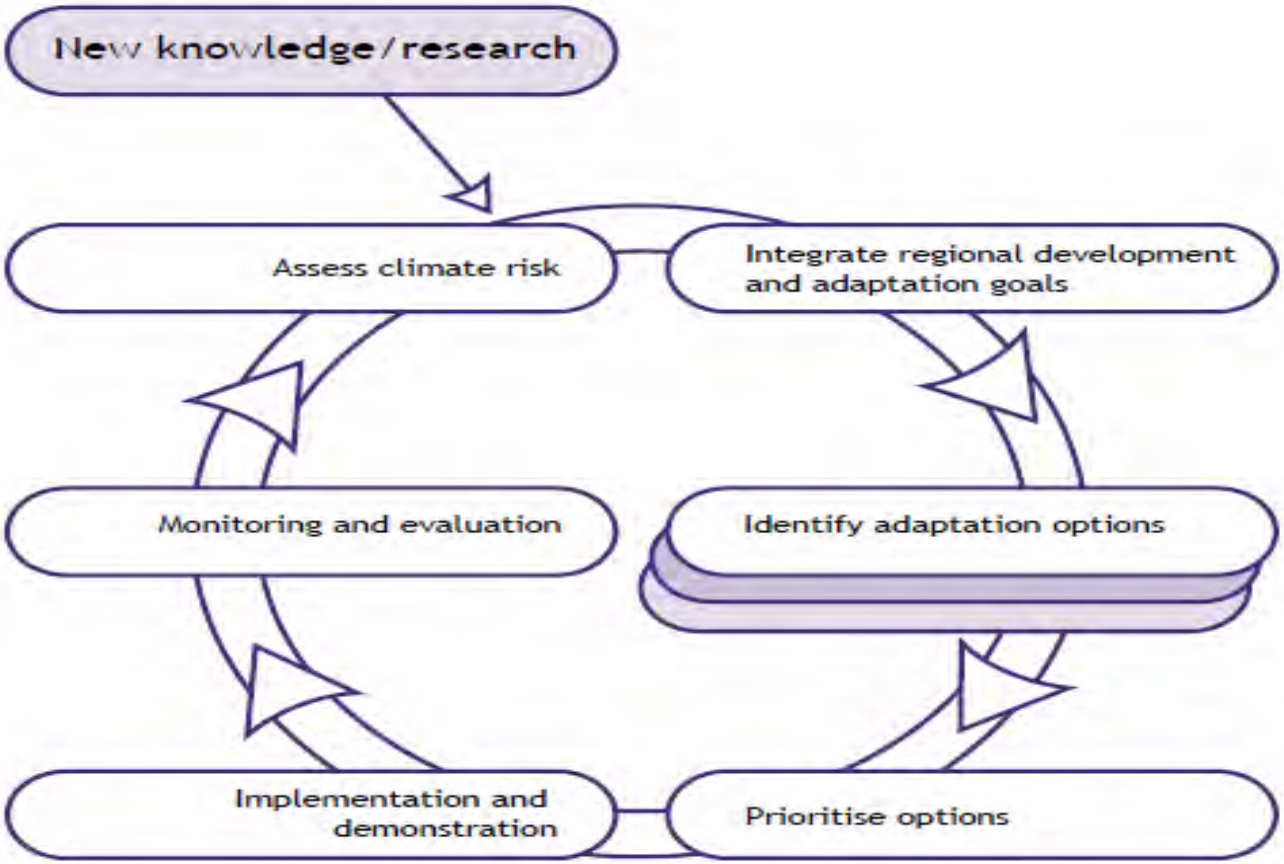

Figure 1. The adaptation framework - each step may require elements of capacity building

E.g., Priority of Risks and Options: Himalayan region

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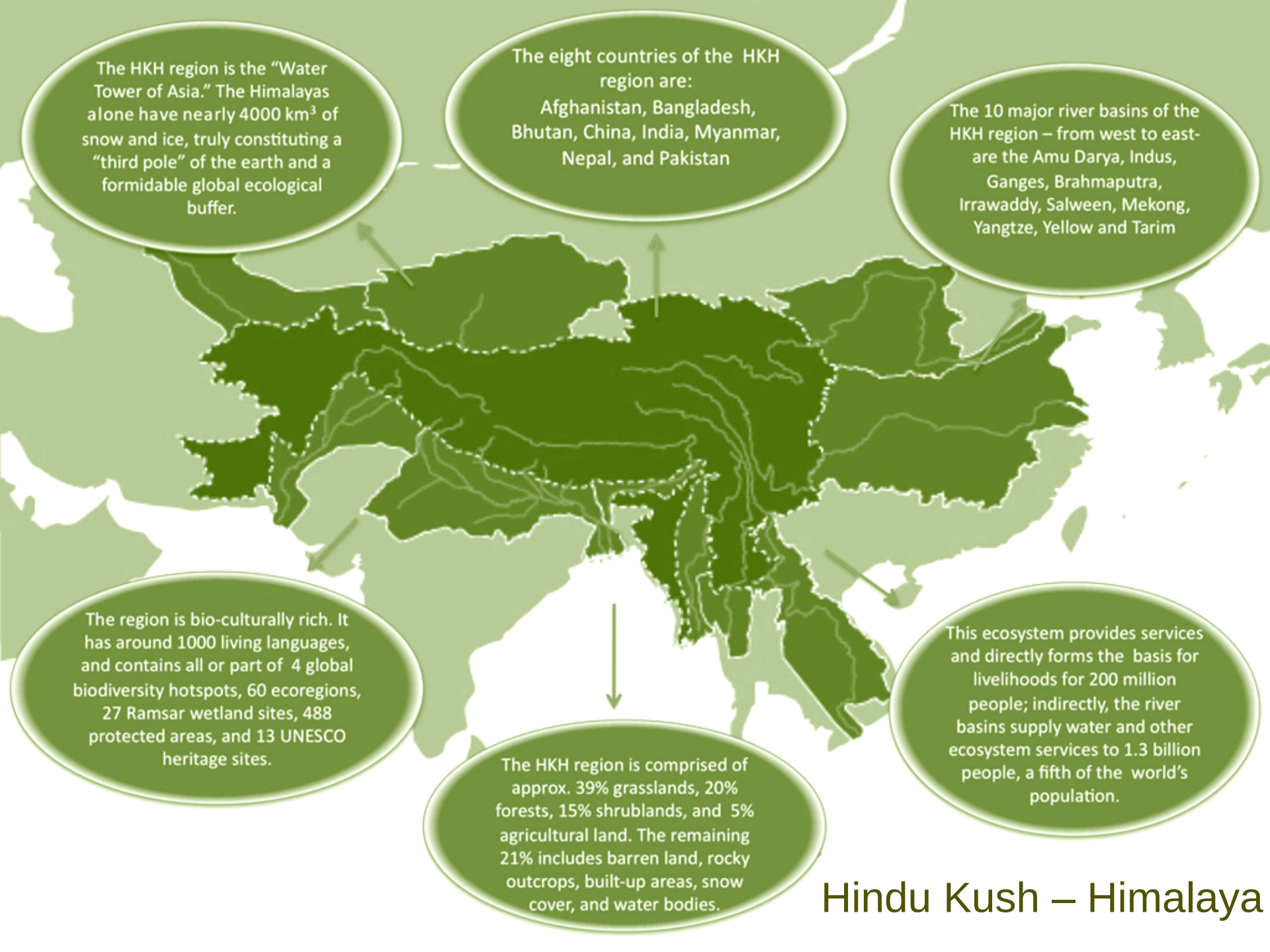
Event	Risk Priority	Possible options	Responsible Organizations
Extreme Events (Flash floods)	High	Improve early warning; training and skill development; dissemination of information	Hydro & Meteorological Organizations ; Disaster Management agencies
Drought	Medium	Improve early warning; develop technologies and skills; share good practices	National and regional research centres; River commissions
Landslides/Biodiversity Loss	Medium to High	Review and reform forest & biodiversity policies/ practices; Monitor ecosystem changes; promote landscape approach	Forest, Land and watershed Departments and research and knowledge sharing agencies; conventions
Change in River Flow/ seasonal variability	High	Improve intra-regional management of Water (IWRM)	Water resource management agencies; Hydro-Met. organizations;



Hindu Kush – Himalaya

Retreat of Trakarding Glacier & Growth of Tsho Rolpa Lake

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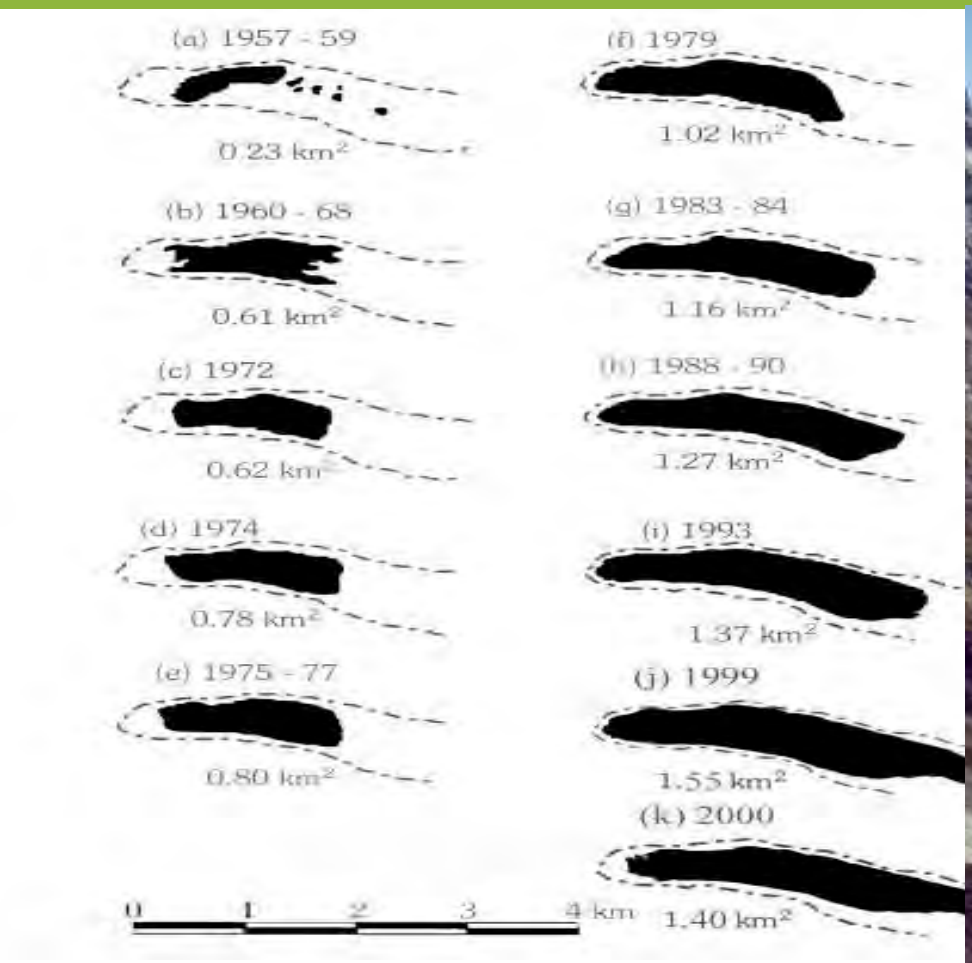

Successive development of the Tsho Rolpa Glacial Lake from 1957 to 2000

Vulnerability assessment results: Biodiversity

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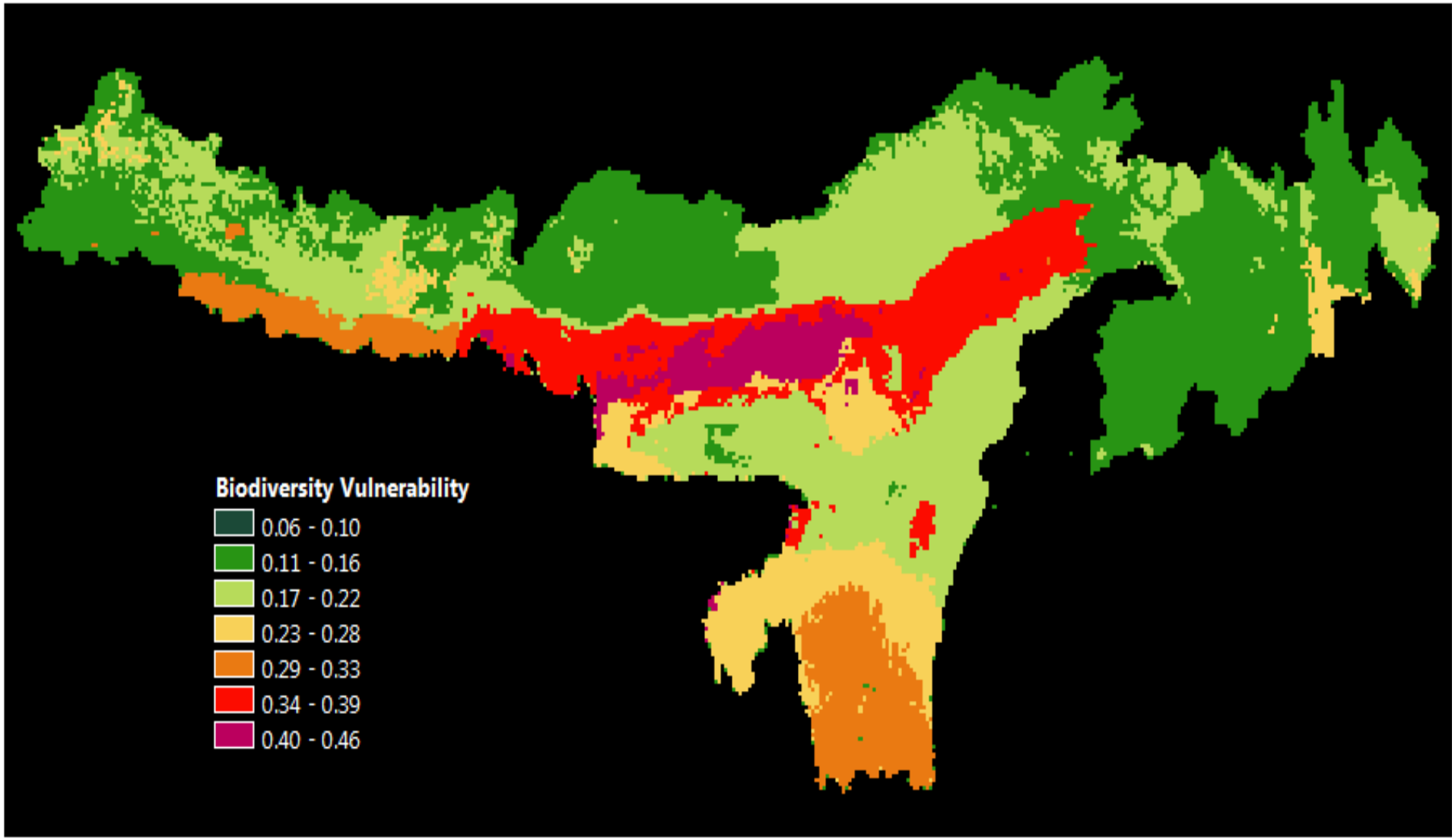

Restoration of landscapes

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in 1978

Namdu, Nepal

in 2005

Source: SDC

Some characteristics of HKH region from cc perspective

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- One of the most vulnerable area
- Poverty is widespread and deep
- Subsistence economy with low dependency on carbon intensive lifestyle
- Lowest emitters being non-industrialized
- Adaptation now is the priority

Interface between mitigation and adaptation

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- Many adaptation pathways lead to long term mitigation, and likewise mitigation options can lead to planned adaptation
- Major sources of GHG are forestry and agriculture sector, also the sectors most at risk
- Ecosystem based strategy address both mitigation and adaptation
- REDD+ is an example for HKH

What does REDD/REDD+ deal with?

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- REDD+ recognized (reducing deforestation, degradation, conservation, SFM, enhancement)
- REDD+ is an incentive based mechanism agreed at the global level
- Polluters pay for conservation and sustainable forest management (PPP)
- Source of finance for conservation (through IBM under UNFCCC)
- Biodiversity conservation and improved livelihood are co-benefits (mitigation-adaptation interface)

REDD+ Pilot Project Community Managed Forest in Nepal

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- Design and setting up of a governance and payment system for Nepal's Community Forest Management under Reduced Emission from Deforestation and Degradation (REDD)
- Partners: ICIMOD, FECOFUN & ANSAB
- Project demo site: 3 watersheds in Dolkha, Gorkha and Chitwan districts
- Working in Community Managed Forests with local community forest user groups

Goals

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- Strengthen the capacity of civil society actors in Nepal to ensure their active engagement in the planning and preparation of national REDD-strategies.

- Facilitate the establishment a Forest Carbon Trust Fund that is sustainable, equitable and creditable in the long run.

- Contribute to the development of REDD strategies that can effectively and efficiently monitor carbon flux in community managed forests.

- Provide a high degree of replicability and applicability and act as a model- “paving the way for new practices” not only for the Hindu Kush Himalaya region (ICIMOD members countries) but globally wherever CFM is practiced.

Outcome of pilot project

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- Provide experience for developing a framework for REDD strategies at national and local level developed.
- Provide lessons to upscale the REDD payment mechanism demonstrated by this project.
- Forest biomass enhancement occurs in the 3 watershed.
- Stakeholders and civil societies build capacity to implement decentralized REDD+

Project activities

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REDD+ sites in Nepal Himalaya

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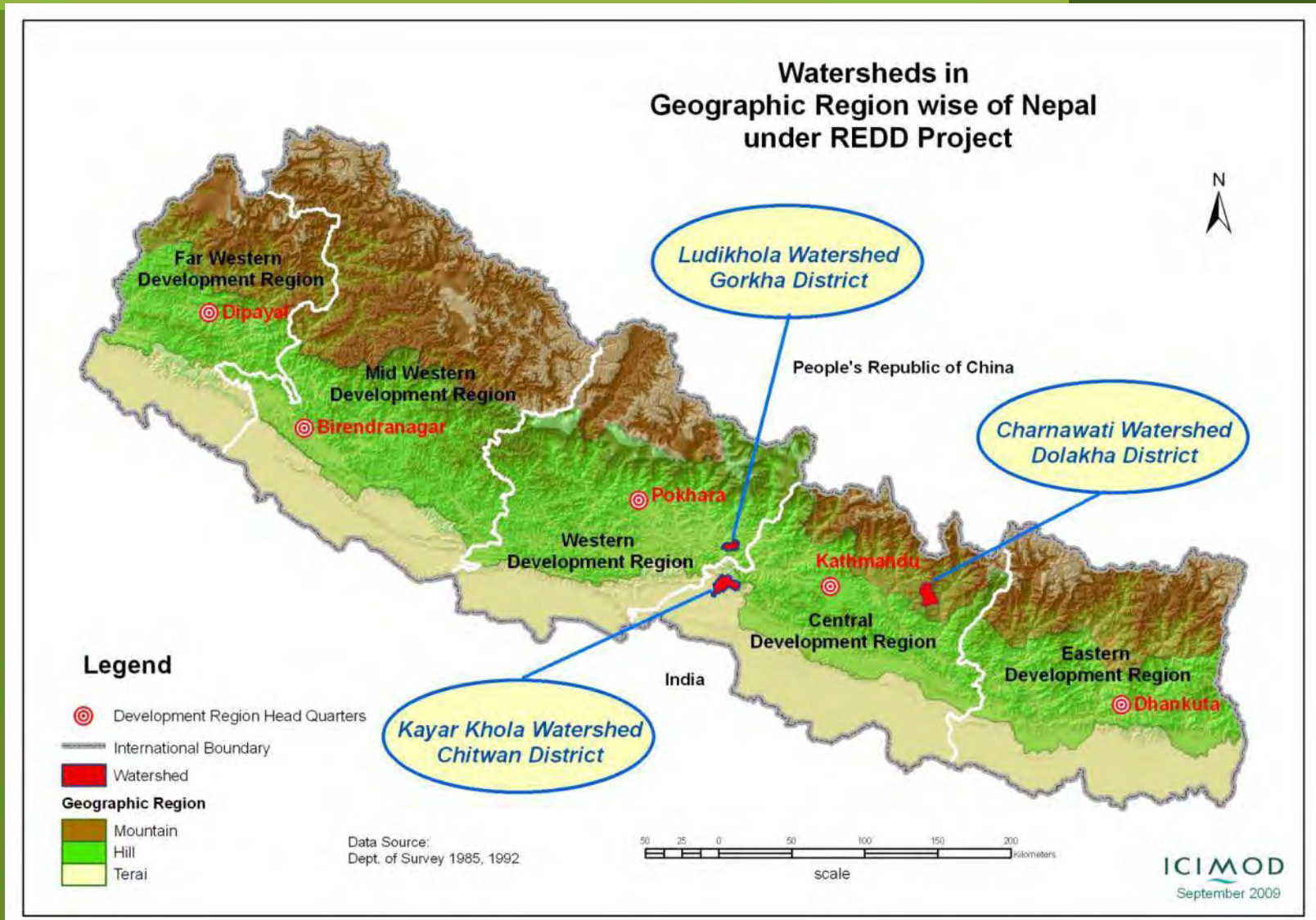

Different land uses within a watershed

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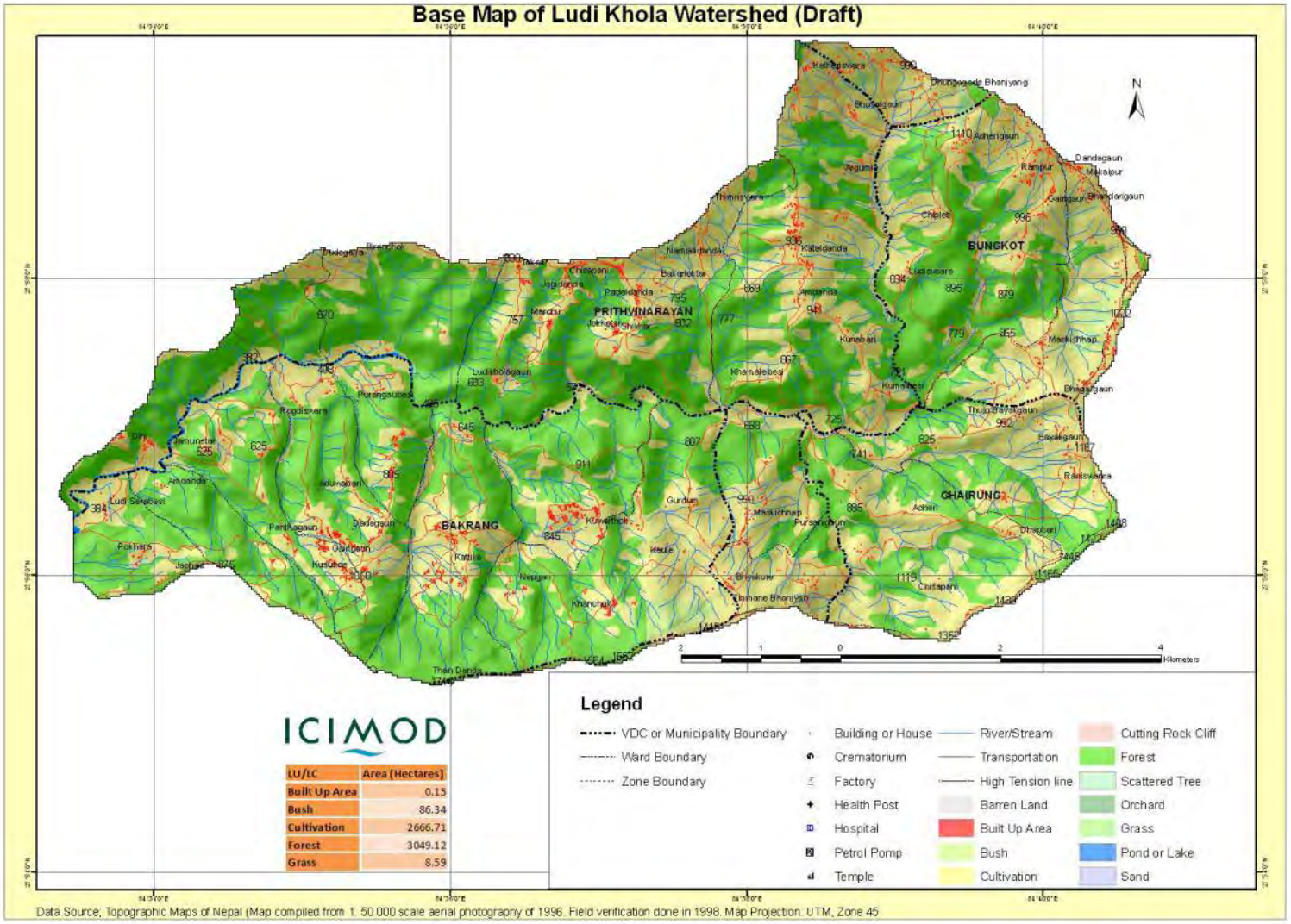

Forest area in watershed

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Table 4. Area of different forest strata in three watersheds

Name of the Watershed/ District	Total Watershed area [ha]	Total forest area [ha] within the Watershed	Total Community Forest area [ha]		
				Dense forest area [ha]	Sparse forest area [ha]
Charnawati (Dolakha)	14,037	7,492	5,996	3,899	2,097
Kayarkhola (Chitwan)	8,002	5,821	2,381	1,902	479
Ludikhola (Gorkha)	5,750	4,869	1,888	1,634.	252
Total	**27,789**	**18,182**	**10,266**	**7,437**	**2,829**

Socio-demographic information

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Table 2. Socio-Demographic information of Community Forest within three watershed sites

Name of the Watersheds/ district	No. of CFUGs	No of CFUGs Households	Population	Major ethnic groups
Charnawati (Dolakha)	58	7870	42609	Tamang, Chhetri, Brahmin, Thami, Dalit
Kayarkhola (Chitwan)	16	4146	23223	Chepang, Tamang
Ludikhola (Gorkha)	31	4110	23685	Magar, Gurung, Tamang, Dalit, few Brahmin and Chhetri
Total	**105**	16144	89517	

Baseline Assumption

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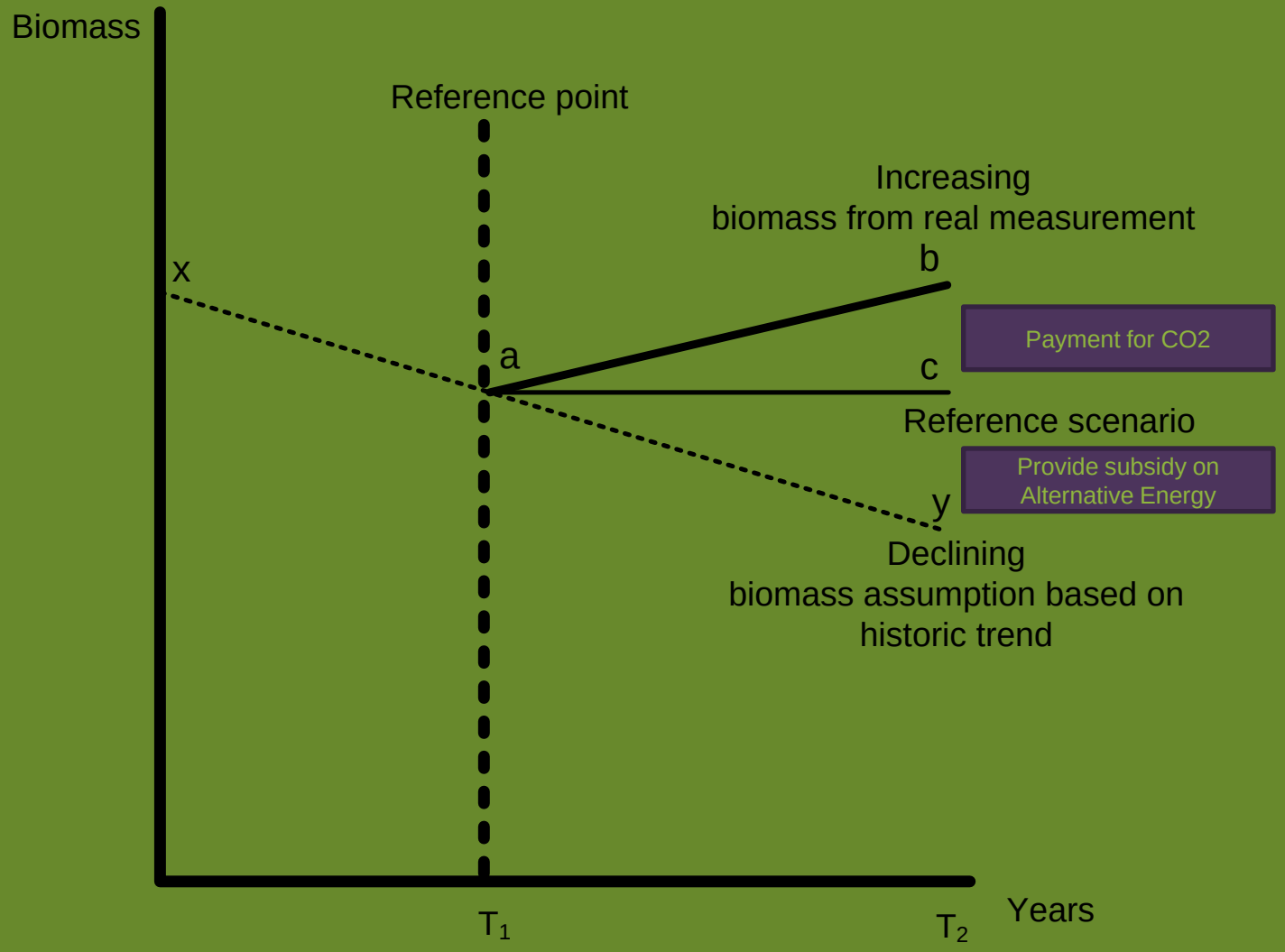

Carbon pool in the Community Forests (in Tons) (2009-2010)

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Name of the watershed	area of forest (ha)	weighted mean tC/ha for 2010	weighted mean tC/ha for 2011	difference tC/ha
Charnawati, Dolakha	5,996.25	206.95	209.29	2.34
Kayarkhola, Chitwan	2,381.91	288.44	289.83	1.39
Ludikhola, Gorkha	1,887.54	209.12	214.43	5.31
Total	10,265.70	234.84	237.85	3.01

Forest Carbon Trust Fund

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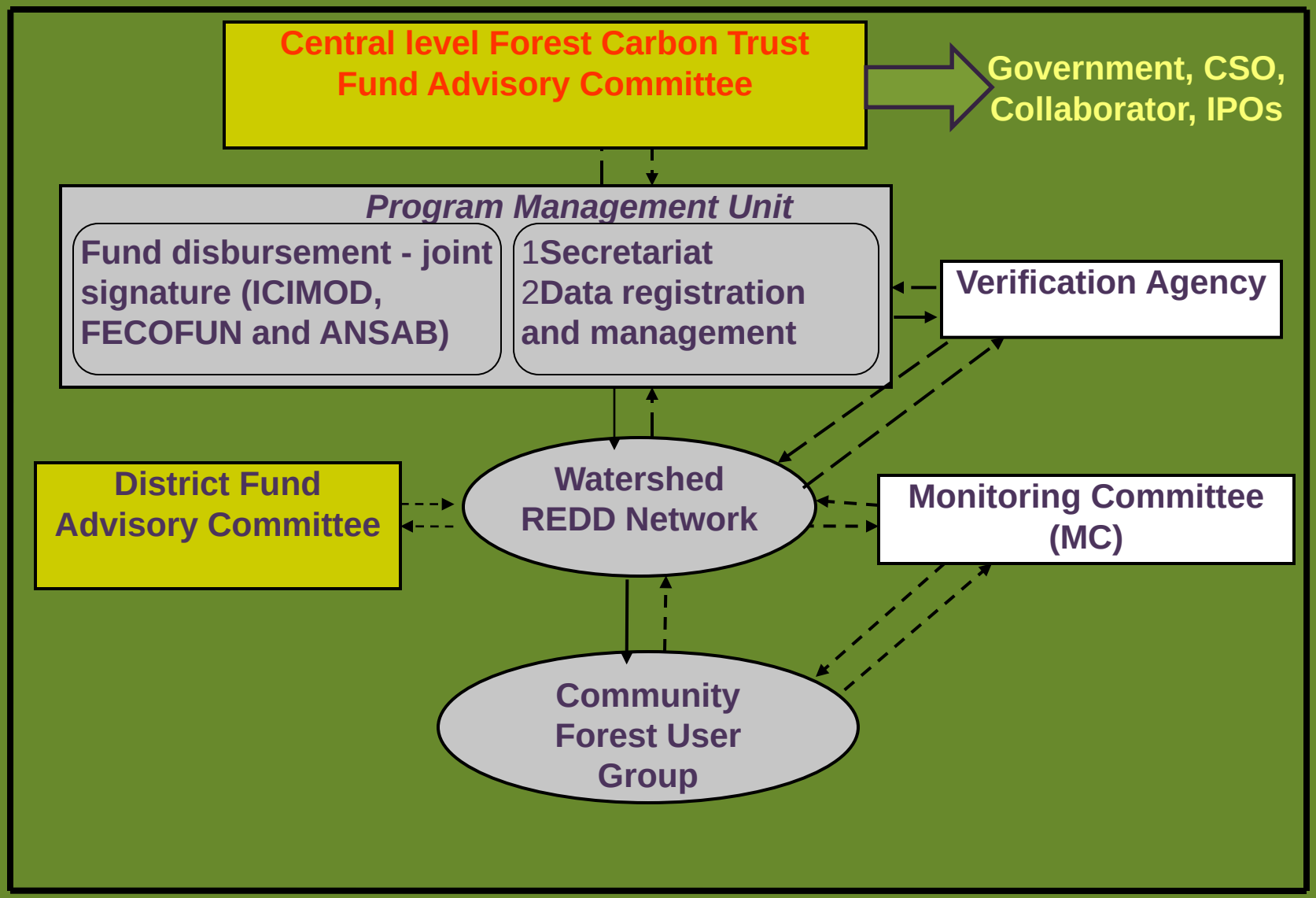
- Establish a Forest Carbon Trust Fund at project level with seed grant from CFI of Norad (post 2013 this can be up scaled)
- CFUGs through REDD Network groups make claim to this Trust Fund
- Transparent benefit sharing mechanism
- Single desk to regulate carbon trade (accountability)
- Market/funds to purchase credits (CERs) from this Trust Fund for post 2013 period
- Payment rate: in average US$ 10.46/ha equivalent
- 1.15 US$ per t CO_2 for increment al carbon

REDD payment (seed grant) through Trust Fund: Structure and System



Payment mechanism

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- Project partners are the signatories of the fund, payment made to REDD Network groups in the watershed that distributes to CFUGs
- Carbon data are registered and verified by committees under the supervision and management of Project Management Unit
- RDDD+ payment with safeguards

  Payment= f (CO_2 + Indigenous People Population + Sex Ratio + Poverty Index)
- Criteria develop for utilization of REDD payment:
  - REDD activities, poverty reduction activities, target programmes for indigenous peoples

Conclusion

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- Adaptation is the priority in HKH region

- Role of forestry and biodiversity management for adaptation and resilience.
- Appropriate technology adaptation and transfer mechanisms
- REDD+ has adaptation co-benefit while it is a mitigation activity
- Strengthening the functions of natural sinks, builds the resilience capacity of local mountain populations
- We need to work with mitigation-adaptation interface

Key messages

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- Livelihood diversification emerges as a central adaptation strategy,
- Early warning and decentralized disaster preparedness can save lives & livelihoods,
- Screening climate risk and hazards scenario in green infrastructure development can contribute to enhancing sustainable management,
- Climate change adaptation requires striking a balance between short-term priorities and long-term gains.

Thank you

www.communityredd.net

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