Opportunities for improving Ecosystem Services in the Hindu Kush Himalayas

Bhaskar Singh Karky, David Molden & Neha Bisht





THREE DECADES
FOR MOUNTAINS AND PEOPLE

The HKH region is the "Water Tower of Asia." The Himalayas alone have nearly 4000 km³ of snow and ice, truly constituting a "third pole" of the earth and a formidable global ecological buffer.

The eight countries of the HKH region are:

Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan

The 10 major river basins of the HKH region – from west to eastare the Amu Darya, Indus, Ganges, Brahmaputra, Irrawaddy, Salween, Mekong, Yangtze, Yellow and Tarim

The region is bio-culturally rich. It has around 1000 living languages, and contains all or part of 4 global biodiversity hotspots, 60 ecoregions, 27 Ramsar wetland sites, 488 protected areas, and 13 UNESCO heritage sites.

The HKH region is comprised of approx. 39% grasslands, 20% forests, 15% shrublands, and 5% agricultural land. The remaining 21% includes barren land, rocky outcrops, built-up areas, snow cover, and water bodies.

This ecosystem provides services and directly forms the basis for livelihoods for 200 million people; indirectly, the river basins supply water and other ecosystem services to 1.3 billion people, a fifth of the world's population.

Hindu Kush – Himalaya

Threats and challenges



Climate change

Temperature

Glacier shrinking

Poverty

Out-migration

Environmental degradation

Increased natural disasters

Change Offers New Opportunities



- Climate change and disasters have opened the doors to regional cooperation
- Growing market for niche and high valued products (mtn tourism)
- Mountains provide habitat refuge
- Remittances source of sustainable development finance?

What are the opportunities for Business?



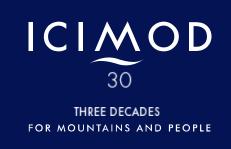
Water-An essential resource

- Climate change will create risks for businesses
- Private sector can contribute towards improving productivity of water

Sustained Ecosystem Services

- Ecosystem-based adaptation as a measure to meet the twin objectives of UNFCCC (adaptation & mitigation)
- Incentive-based mechanism (PES and REDD+)
- Sound economic valuation of ecosystem services

What are the opportunities for Business?



Livelihood Prospects-Poor Communities

- Interventions for sustainable livelihood
 - Mtn tourism, agribusiness, herbal plants, and other NTFPs
 - Climate resilient development planning

Technological Innovation

- Better access to market information
- Increasing water productivity
- Value addition of mountain niche products
- Technology transfer and R & D

However Mountains are not attracting investment!!

Livelihood Options



Communities Adaptation to Climate Change

Value Chain Approach

Link producers to markets



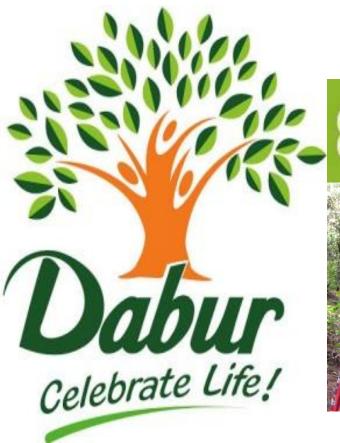
Sustained Ecosystem Services



Medicinal Plants

REDD++

Beekeeping







ICT4D





- Mobile cum web based platform
- Communication database
- Information through mobile phones





HVP Value Chains and upgrading strategies



THREE DECADES
FOR MOUNTAINS AND PEOPLE

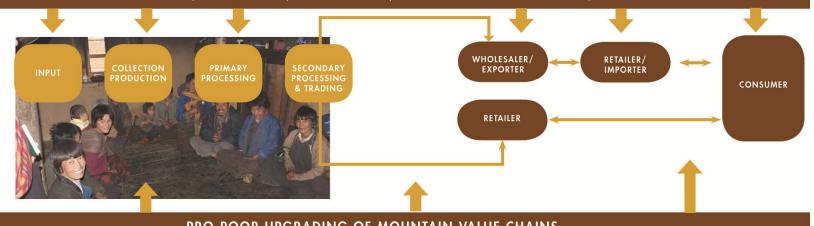
VALUE CHAIN ANALYSIS

CHAIN STAKEHOLDERS

PARTNERS AND VALUE

ICIMOD,

VALUE CHAIN MAPPING OF ACTORS, PROCESS STAGES, MONETARY FLOWS, GOVERNANCE & POWER STRUCTURES, INFORMATION & KNOWLEDGE FLOWS



PRO-POOR UPGRADING OF MOUNTAIN VALUE CHAINS

CHAIN INTERVENTIONS

PRODUCT UPGRADING

- Identification of mountain products and services with high pro-poor growth potential
- Sustainable (organic)
 management and harvesting
 (MAPs, honey, horticulture
 products)
- Product quality improvement and diversification (Malta oranges)
- Technology for packaging, storage and transport
- Involvement of laboratories for quality testing and validation of processed HVPs

FUNCTIONAL UPGRADING

- Identification of product diversification and value addition opportunities
- Capacity building for value addition
- Improved practices for mountain poor to dry/ the grade/sort their products
- Facilitation of producer groups
- Employment generation through/for mountain people by local value addition functions

PROCESS UPGRADED

- Organise and mobilise producers and collectors of MAPs, honey, horticulture and other HVPs to achieve economies of scale and improve bargaining power
- Train mountain people in organisation, management, and business plan development
- Contractual arrangements with the private sector to grant the mountain poor stable prices and longterm market access for their products and services

MARKET UPGRADING

- Market research
- Identification of new markets for MAPs, bee products, horticulture and other HVPs
- Public private partnership
- Support national partners is organising trade fairs
- Exposure for upstream stakeholders across local and national markets and with traders and buyers
- Marketing and outreach
- Partnerships with other promotion and development programmes of mountain products and services

GOVERNANCE INTERVENTIONS

- Equitable participation and benefits for different social and ethnic groups and women
- Develop access mechanisms for bay leaves by women SHGs and community forest user groups with the forest department
- Strengthen community based natural resource management groups
- Operational plans for management of wild crafted MAPs and bee products
- Lobby for ethical trading practices

Mountain Value Chains



- Diversity of high value products NTFP/MAPs Value Chains (Bay Leaves, Honey, soap nuts); Agro Value Chains (Fruits, Mushroom, Spices); Service Value Chains (Tourism)
- Poor, unorganised producers lack bargaining power.
- Unsustainable, inequitable and captive value chains.
- Lack of information, skills and services.
- Weak value chain coordination, institutional and policy support.





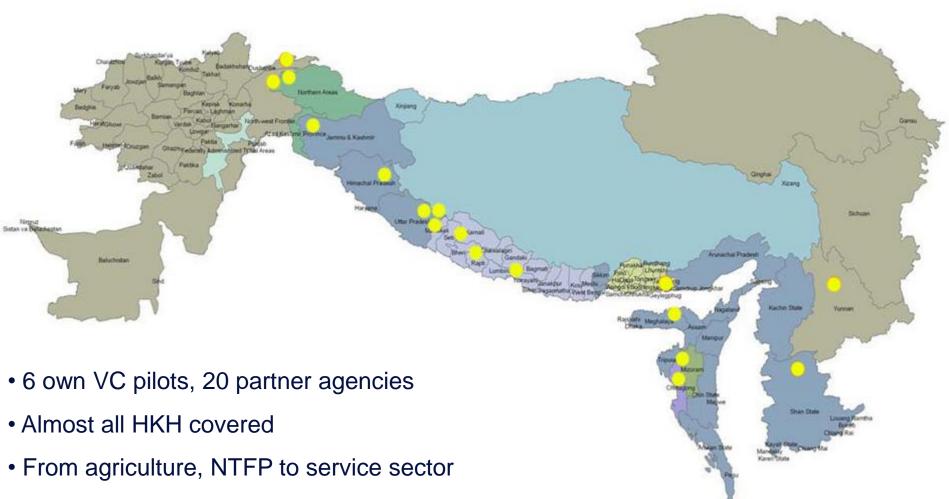




ICIMOD's regional VC pilots



THREE DECADES
FOR MOUNTAINS AND PEOPLE



Focus cross-border VCs and comparison same product but from different RMC

Successful Community Forestry under conducive policy environment



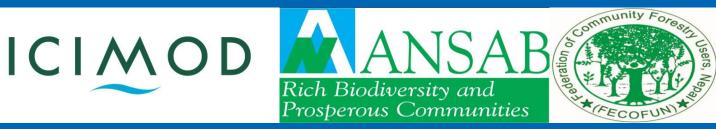


Photo Source: SDC, Nepal

Piloting REDD+ Payment System through seed grant distribution in Community Forestry in Nepal







June 2009 – May 2013



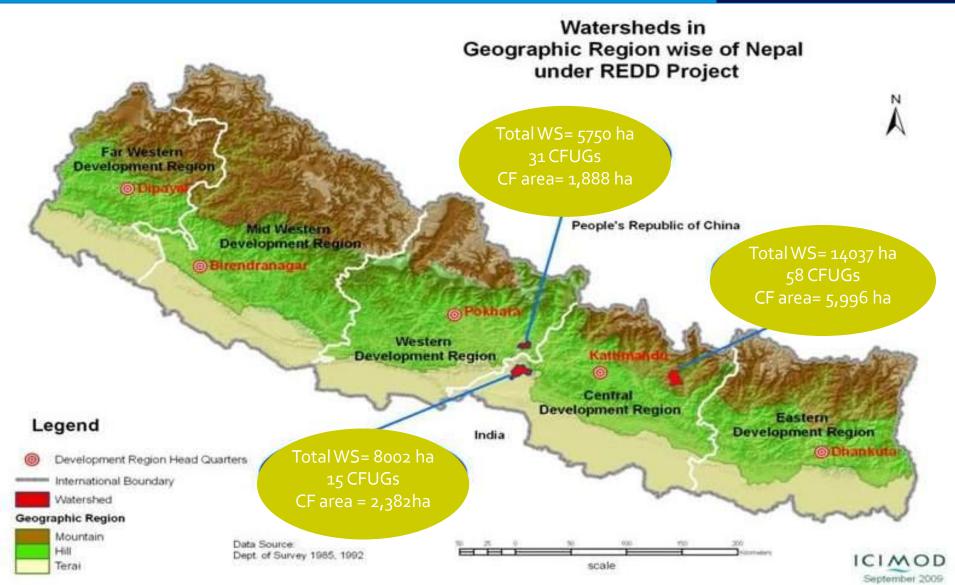
REDD Pilot Project





Project Areas





Forests and project area in three watersheds



Watershed (District)	Watershed	Forest in watershed [ha]	Total Community Forest [ha]	Forest area [ha]	
	[ha]			Dense	Sparse
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-demography data



Watershed (District)	CFUGs	CFUG 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	

Project activities

ICIMOD



Forest carbon measurement



Awareness raising



Piloting Forest Carbon Fund



Stakeholder engagement



Carbon sequestration data



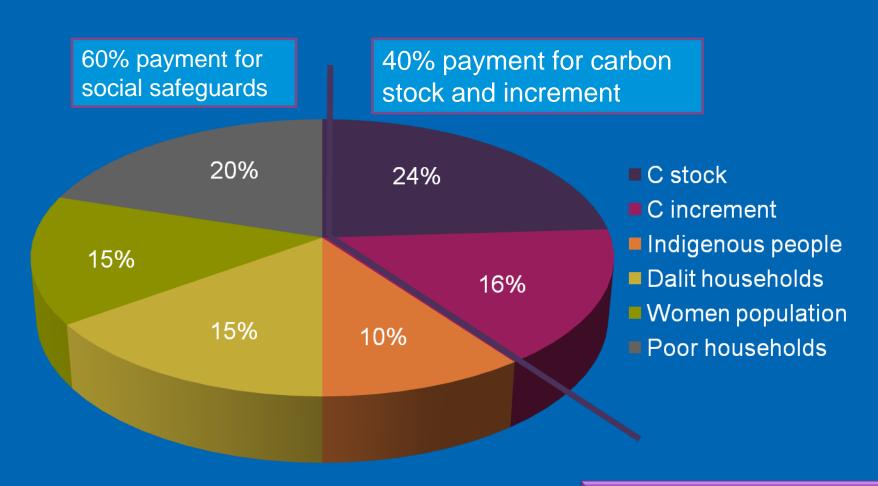
			Average carbon tonnes/ha		
Watershed	Area (ha)	Range (ha)	2010	2011	2012
Charnawati	5996	1.5-819.4	207	209	212
Kayarkhola	2382	34.5-329.2	288	290	291
Ludikhola	1888	5.2-270.7	209	214	217
Total	10266		226	229	231
Increase				2.62	2.68

Source: REDD+ project,

2012

REDD+ payment basis





In 2012, additional USD 100 per CFUG was given to reduce disparity between groups.

Payments in 3 watersheds

Charnawati \$ 7

\$ 10.4/ha

Ludikhola

\$ 13.8/ha

How was REDD money used?



	Expenditure Status in %			.n %
Expenses activities	Dolakha	Gorkha	Chitwan	Average
1. Livelihood improvement activities	53.8	50.3	48.5	50. 9
2. Capacity building (awareness, workshop)	9. 7	9. 4	8.3	9. 1
3. Forest carbon monitoring (training LRPs for forest inventory)	7. 2	4. 3	27. 7	13. 1
4. Alternative energy schemes	11.9	15.0	13. 5	13. 5
<pre>5. Others (Forest mgmnt activities</pre>	17. 4	21. 0	1.9	13. 4
	100.0	100.0	100.0	100.0
Co-financed by CFUGs (% in total invested amount)	43. 9	2. 3	69. 9	49. 2

UN General Assembly 68th session Sustainable Mountain Development



Renew efforts to ensure that mountain issues are prioritized within development agendas and processes dealing with poverty reduction, food security, climate change, green economy and other issues critical to sustainable development in mountain areas;

Thank you



THREE DECADES
FOR MOUNTAINS AND PEOPLE

