

Kyoto : Think Global Act Local Project

The Indian Himalayan Story

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Participating Organization

CHEA - India KTMNC - Nepal

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**Central Himalayan Environment Association
(CHEA)**

Himalayan People

- Consist of small holders, less than 1ha land per household of 5-6 persons.**
- People live at a subsistence level with very low CO₂ emission (0.2 t/ capita/ yr).**
- Depend critically on community forests.**
- There is enormous pressure on forest from encroachment, conversion and for supporting higher levels of lifestyle.**

Uttaranchal's (UA's) Van Panchayats (VPs)

(forest councils and community forests)

- ❑ A VP consists of 5-9 elected members (with at least one woman) with a 'Sarpanch'
- ❑ UA has close to 7,000 VPs, covering more than 0.5 million ha land
- ❑ Probably one of the largest case in common property management in a state government collaboration

Characteristics of banj oak (*Quercus leucotrichophora*) and chir pine (*Pinus roxburghii*) forests of the region

- 1) Evergreen forests with 1 year leaf lifespan
- 2) Ectomycorrhizal
- 3) Productivity 15-20 t/ha/yr

Management practices

- Appointment of forest guards on payment basis/ voluntarily
- Regulation on fodder collection
- Firewood collection for cooking and other purposes limited to dead, standing and fallen branches
- Fire control measures are weakening

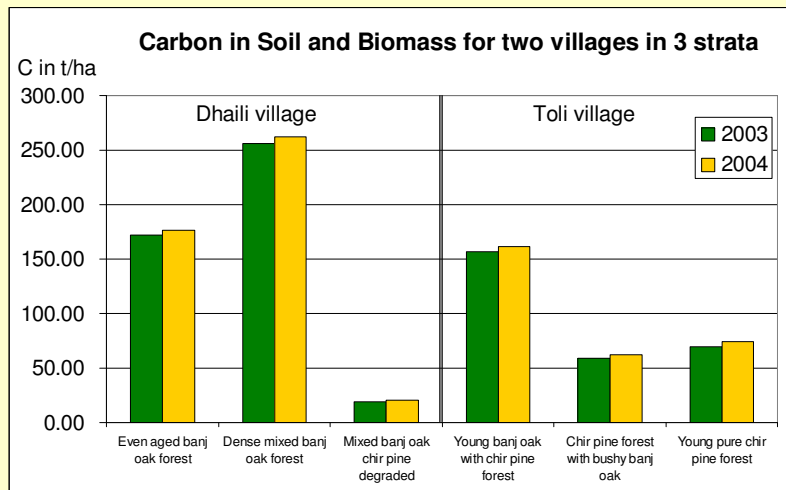
Variations in Forest management practices across observed VPs

Activities that may improve carbon balance	Names of VP's		
	Dhaili	Toli	Guna
Area	60 ha	103 ha	---
Control on grazing/firewood collection	No control	No control	Rotational grazing and firewood collection
Imposition of fines on illegal extraction	Rigorous	Mild	Mild
Any institutional advancement	None	None	*A self empowered woman group is playing a significant role

* Collaborating with the VP in conservation

C in forest biomass (aboveground + belowground), and C-sequestration rates in different forest strata and in an unmanaged forests. ΔB is change in carbon ($t\ ha^{-1}$), B1 total carbon in year 1 ($t\ ha^{-1}$), and B2 total C in year 2 ($t\ ha^{-1}$).

Dhaili forest strata	Carbon in initial year ($t\ ha^{-1}$)	Carbon in year 2 ($t\ ha^{-1}$)	C sequestered ($t\ ha^{-1}$)
Even aged banj oak forest	172.09	176.5	4.41
Dense mixed banj oak forest	255.70	262.2	4.5
Mixed banj oak chir pine degraded	18.77	20.80	2.03
Toli forest strata			
Young banj oak with chir pine forest	156.91	161.20	4.29
Chir pine forest with bushy banj oak	58.89	62.40	3.51
Young pure chir pine forest	69.45	74.00	4.50



Soil carbon pool needs to be considered

- C-pool in soil is about twice as much as those above ground
- Top 30 cm of soil depth accounts for only 20-25% of total soil C-pool
- Deep soil C remains effectively sequestered
- If forest is lost, inevitably soil C is lost
- Hence avoiding deforestation is critical for the climate change issue

