# Reversing the "Vicious Cycle" of Poverty and Environmental Degradation

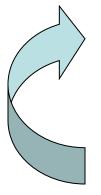
## **Two Nilgiris Examples**

Pavan Sukhdev Trustee, GIST

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## The 'Vicious Cycle' of Poverty and Environmental Degradation



..... Low assets  $\rightarrow$  low income  $\rightarrow$  no surpluses  $\rightarrow$  the poor consume nearby 'natural capital' in which they are stake-holders  $\rightarrow$  even lower assets .....

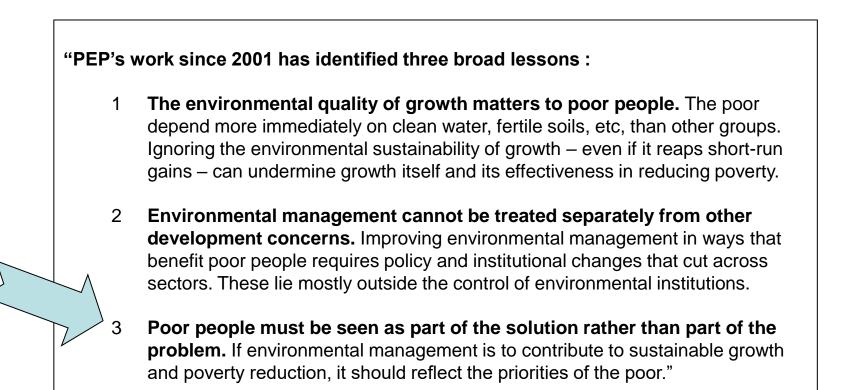
The Backdrop : lack of markets in public goods / externalities pricing ... eco-system conservation benefits all, but hits the resident poor with disproportional opportunity costs of conservation ..

➤The Challenge : finding alternative, sustainable, local, income models such that residents can earn a return on conservation ...

>The Goal : converting the accidental custodianship of forestdwelling poor into purposeful stewardship ... the 'win-win' solution



#### Lessons from PEP\* .... Seeing the Poor as Part of the Solution



"Certain environmental services, e.g. watershed protection, management of landscape beauty, and carbon sequestration, can be supplied competitively by poor groups and rural communities – given the labour- and land-intensive nature of such services."



Note : "PEP" or Poverty-Environment Partnership is a network of development agencies, Multilateral & UN organizations, and International NGO's that aims to address key poverty-environment issues within the framework of the Millennium Development Goals

## The Vicious Cycle of Poverty & Environmental Degradation An Example from the Nilgiris Biosphere Reserve

> land 'patta' allocated by local corporator from forested 'Revenue Land'

clear felling by Tribals

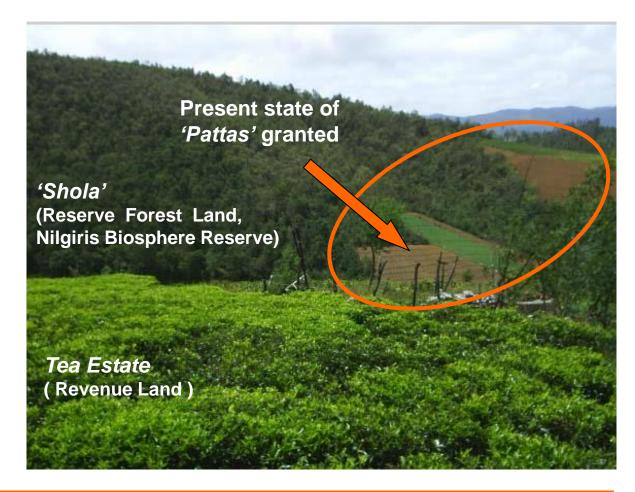
lease to local farmer(INR 4,000- p.a. per acre)

cash crops or grain

 seasonal employment to Tribals (INR 50 per day)

➤ land goes fallow...

next 'patta' allocated ...





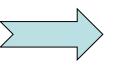
Tribal Family gains ~ Rs. 50-100 K / hectare.... India Natural Capital losses ~ Rs 800-1,200 K / hectare ..

## Are there Sustainable Models for Poverty Alleviation ? Yes, Several ! ...... Two Nilgiris Examples...



#### Access to capital :

(a) Govt of India (carved out of "EGS" scheme INR 240 Bio, 100 days @ Min Wage)
(b) Institutional & Philanthropic
(c) Microfinance



Local income models ...

employable local labour

- 1. Eco-restoration
- 2. Eco-tourism
- ... earn a tribal family 5%-8% on conserved natural capital



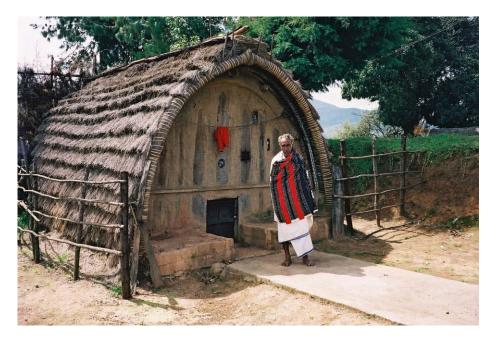
# Example (1) Eco-Restoration *is* a viable, replicable, "alternative livelihood" model (EBR, Nilgiris)



- ✓ Rental of land @ INR 5,000 per acre OR... purchase @ INR 100 K per acre
- ✓ Removal of unharvestable Tea @ INR 10,000 per acre OR... De-weeding
- ✓ Pitting, Planting, Watering, Weeding @ INR 65 per day (Tea Garden Rates )
- ✓ Resident watchman wages @ INR 50 75 per day (1 x through the year)
- ✓ Nursery Maintenance & Sapling preparation (1 x through the year)
- ✓ Tribal harvesting of medicinal plants & herbs, floriculture, and nursery sales
- ✓ 1 Hectare can be afforested @ low cost, and 3 tribals employed



# Example (2) : Cultural- / Eco-Tourism is another sustainable income opportunity ..



- The *Todas* have a unique & complex ancient culture, a separate pantheon, an evolved mythology ... a fascinating anthropological subject
- Their unique, eco-friendly huts are a tourist experience
- Their land (elevation 6,000-7,000 ft) is among India's most beautiful

Income Model : Microfinance-assisted Construction of Five Huts "for tourists only", and maintained by one Toda village

spots

"Fair Trade" share of Tourist booking Incomes to the Toda Tribals



### Economics of Nilgiris "Alternative Livelihood" Models (1) Eco-Restoration & (2) Eco- /Cultural Tourism

#### Income streams from (1) Eco-restoration on degraded land

- ✓ Rental of land at Rs. 5,000 per acre (OR... purchase @ Rs. 80,000 per acre)
- ✓ Removal /clearance (eg : unviable tea bushes @ Rs. 10,000 per acre local rates
- ✓ Pitting, Planting, Watering, Weeding -100 days at Rs. 65 per day (local rates)
- ✓ Resident watchman wages @ INR 75 per day (1 x through the year)
- ✓ Nursery Maintenance & Sapling preparation (1 x through the year)
- $\checkmark$  Villagers harvesting of medicinal plants & herbs, floriculture, and nursery sales
- Target : 1 Hectare afforested at low cost , and 3 adults employed earning a total Rs. 75,000 p.a.. much higher than Rs 25,000 p.a. from current "patta lease + seasonal farm labour" which causes deforestation & environmental degradation

### Income streams from (2) Eco-tourism or Cultural tourism

- ✓ <u>Either</u> "Village Homestay" model with visitors sourced from urban youth , and sales of handicrafts (estimated total income Rs 25,000 p.a.)
- ✓ <u>Or</u> "Built Tribal Home" model, micro-finance funded Rs 50,000 construction of 'Traditional Toda Hut' with profits / income sharing for villager partners of project investor (estimated incomes / profits per family Rs. 25,000 – Rs 1 lakh p.a.)

