Incentivizing communities for Ecosystem services in the Himalayas

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Forest, degradation, restoration

(PC: Jitendra, Nakul, Anil)
Forest ecosystems are fundamental to maintain water cycle (UN FAO, forests and water strategy and action plan)

SDG 6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes

MEA 2005: highlights degrading ecosystem services, with number of drivers of change, need immediate actions both at Global and national level
There is a need to provide incentive to upstream (Bhedetar) communities for conserving forest… which only can sustain our water supply in Dharan” (Indra Rai, Politician)

translate the policy pronouncements into practice, and (f) incentive measures, which promote conservation-friendly behaviors, are necessary to encourage local people in biodiversity conservation.
Changing Climate: Changing Landscape: Changing flow of ecosystem services
Water availability

National water policy
Multilayer of institutions
Water induced disaster management policy
Multilayer of institutions:
Upstream-Downstream linkages: Infrastructure

Watershed management Act; EIA for infrastructure development
Sectoral planning vs collective efforts
Forests and Biodiversity Resources

Forest policy; Forest, National park Act
Community forestry, NBSAP
I/PES: Possible solution for Sustaining ecosystem services?
I/PES Design

- Literature and document review.
- Expert consultations.

**Background Analysis**
- Preliminary investigation of stakeholders, issues and existing mgmt. practices.
- Identification of factors that affect services.

**Institutional Design**
- Sharing of results from CE survey and stakeholder discussions.
- Design of local level institution to implement PES.
- Discussions with local stakeholders.
- Dialogue with local government and community leaders.

**PES**
- Mapping of local areas
- FGDs
- Expert consultations.

**Assessing Market Feasibility**
- List of attributes prioritized by service users.
- Status of current and potential desired watershed activities.

**Analysing demand and supply**
- Estimation WTP of service users
- Interests of upstream communities
- Choice experiment design
- Household survey

**Design of local level institution to implement PES.**
Case: Tankhukhola forests, Water and Dhankuta municipality

- 80% water supply to Dhankuta town
- Mean annual household WTP for 24 hour water supply NRs. 632.20 per hh/per month
- Additional WTP for erosion control and water source protection is 0.52 and 0.35
- A PES mechanism is under operational to protect upstream forests. NRs 15/hh/month payment to upstream communities
Mean annual household WTP for 24 hour water supply NRs. 632.20 per hh/per month.

Additional WTP for erosion control and water source protection is 0.52 and 0.35.

NRs 15 per households per month additional WtP (during negotiation).
Drivers of ESS change: water availability

- Landslide: 22%
- Forest degradation: 16%
- Agriculture: 17%
- Sand mining: 7%
- Infrastructure: 3%
- Grazing: 15%
- Combination of more than one: 17%
Linking upstream-downstream: possible payment mechanism

- Contribution from downstream users in upstream forest mgmt.
- Multistakeholder institutional instrument
- Linking with water supply company providing water to municipality using upstream source
- Ensuring municipal level policy provision
- Payment – cash or kind
Suggested institutional set up

**Watershed Community**

- Household (ES Producers)
- Implement watershed management activities as per the plan,
- Ensure water quantity and quality to municipal users,

**Water User Committee**

- Support financially for watershed management,
- Coordinate with relevant organizations for additional sources if required,

**Monitoring Committee**

- District Development Committee
- Municipality
- District forest office
- Drinking Water and Sanitation Division Office
- FNCCI
10 steps in PES/IES schemes
Policy Recommendations:

- Tripartite institution involving existing local institutions
- Relationship between land use and ecosystem services, Support land use activities identified by both ecosystem service consumers and producers
- IES supplementary scheme of the existing resource management approaches- rather than in isolation
- Cash payment may not feasible – rather incentives in form of development projects/incentives
- Local ownership
Ecosystem management, landscape restoration is rather much linked with institutions, governance, and social issues—instead of total technicalities.