

## **Moving forward: biodiversity, payment of ecosystems services (PES) and poverty alleviation**

In response to the Call for submissions - Thematic report to the UN General Assembly on the "just transition": people in poverty and sustainable development, the organizations described below present this joint submission about biodiversity, payment of ecosystems services (PES) and poverty alleviation.

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CHINAR (Central Himalayan Institute for Nature & Applied Research) [www.chinarindia.com](http://www.chinarindia.com), is a not for profit organization working in the Indian Himalaya on environmental and sustainable development issues. It is a member of FAO United Nations Mountain Partnership and IUCN Nature For All.

Vtours (Vie Toujours, *LIFE Forever*) based in Montreal, is a private consulting company in the sector of international and sustainable development. VTours works to protect biodiversity and ecosystems, to eliminate poverty, to make advance human rights and sustainable development working with and for PEOPLE, creating and implementing concrete and lasting solutions.

### **To the attention of:**

Mr. Olivier De Schutter, Special Rapporteur on extreme poverty and human rights

### **I. Context**

#### **a. Pollination, indigenous beekeepers and payment for ecosystem services**

The Millennium Ecosystem Assessment (2005) describes how ecosystem functions and processes directly and indirectly underpin people's health and wellbeing.

Pollination is one of the most important ecosystem services for the survival of mankind. Pollination is not only a supporting service but also a regulatory service as it regulates the production of food crops. Due to adoption of modern agriculture farmers have shifted from subsistence agriculture to commercial agriculture. This has changed the crop diversity from diverse to mono cropping and the use of insecticide and pesticide has led to depletion of pollinators around the world. Today, in many parts of the world farmers (i.e., almond growers in California) are now paying for this ecosystem service, which was once free of cost.

The situation in Indian Himalaya is not different. One such state where agriculture has completely changed is Himachal Pradesh where subsistence farming has been replaced by horticulture mainly apple crops. Earlier, most of the village has traditional beekeeping practices in the wooden logs or in wall hives. But due to shift to mono cropping most of this beekeeping practices have been lost. In a survey conducted in the mountain villages only 10-20% of the traditional beekeeping practices were functional. There are only few beekeepers that are still practicing these indigenous practices. These practices **are not only source of livelihoods** for these marginalized communities, but they also provide important environmental services like pollination and **maintain farm and forest biodiversity**.

Despite the importance of these traditional practices, they are in threat due to mono-cropping and introduction of modern agricultural practices (insecticide and pesticide). Changing architecture made from brick and cement without any provision of bees is leading to decline of bee population and will soon influence the food security in mountains. In some areas of Himachal Pradesh, apple growers have already started paying for the ecosystem service by hiring beehives (at \$15-20 Indian rupees per beehive) for a period of 15 to 20 days during pollination time.

One of the objectives of The International Pollinator Initiative Plan 2018-2030 is “Implement pollinator-friendly practices at field level”. Therefore, conservation of indigenous beekeeping practices would be done as part of this initiative. Research institutions, horticulture departments, bee research institutions, beekeepers, farmers and local organizations should be involved for the conservation of these indigenous bees.

Support to the indigenous beekeepers should be provided as PES to develop their capacity for the conservation of the indigenous bees and to improve their economic condition. This will also inspire new beekeepers and help them to adapt to climate change. There is a need to develop mechanisms to support the existing beekeepers for PES at local level. The payment mechanism can be i.e, other farmers of the area pay to the indigenous beekeepers who have been conserving the bees and providing ecosystem services for free or the government should come forward to pay for the ecosystem service by these beekeepers. This way, not only conservation of bees will be done but a better livelihood option could be provided to marginalized farmers with small land holding and will also help in biodiversity conservation and address issues like poverty, and zero hunger. Policies need to be developed at the local, national and global level for the PES based conservation, which will benefit community at a large.

#### **b. Conservation and territory**

Many indigenous peoples and local communities around the world act as custodians, stewards and guardians of natural resources and biodiversity traditionally occupied or used by them. The idea of custodianship/stewardship/guardianship builds on their relationships with their territories, which include cultural, spiritual, and social practices directed towards

the protection of natural cycles, ecosystems, species and landscape features (ICCA, 2019).

One such system of community conservation in the Himalaya is the Van Panchayats. The British started in India the Van Panchayat or Forest Councils, in the 1890's when they forcibly took over the forests in the country. According to Agarwal (1999), "In 1931, the Van Panchayat regulation was constituted under the District Scheduled Act of 1974 that paved the way to the formation of Van Panchayat in British administered Kumaon district". Today, Uttarakhand is the only state in India with these community driven forest councils that are active. All three villages have a forest council in them adhering to the rules of Uttaranchal Panchayati Forest Rules, 2005 regarding members, election and jurisdiction. The Van Panchayat plays an important role in providing access to individuals in the village, as forest is the primary source for their survival. There are forests areas assigned that are meant for village use and this is on rotation to ensure regeneration of forests for continued dependency. Additionally, The Van Panchayat has its own rules and regulation for conservation where each family has rights on forest resources like fuel wood, timber, fodder and grasses. This model of community-based conservation has shown results in sustainable conservation of natural resources and equal distribution of resources among community members thus maintaining social justice and ownership of people on natural resources.

Another project, The 'Kyoto: Think Global, Act Local' (K:TGAL), which was a community-based forest monitoring project in 7 countries between 2003 and 2009. It developed and tested a methodology and survey tools that could be used by communities to create and maintain forest inventories and aimed to maximize the capacity of communities to control the monitoring process once they had received adequate training and support.

Community members were trained and assessed for their ability to monitor changes in forest carbon stocks. This was part of a broader aim: to investigate the potential for community-based forest management to be included under international climate policy as an activity that reduces or prevents emissions from deforestation and forest degradation.

The project findings concluded that paying communities to monitor their forests would be more straightforward and equitable than paying them according to the quantities of carbon stocks they maintained or enhanced. The latter could lead to inequalities (for example due to some forest types being faster growing), as well as perverse incentives. The project found that if agreements focused on monitoring, they could also include a commitment to manage forest sustainably, without explicitly linking management results to payments.

Therefore, there is a need for policy reforms to consider these community institutions for PES for carbon sequestration from their forests, which act as carbon sinks. The payments could be made in the form of cooking gas, solar lights, fencing,

plantations, etc., so the communities can meet their needs and conserve the forest for biodiversity conservation and climate mitigation.

### **c. Generalities about PES**

Wunder (2005), defines PES as: a voluntary transaction where, a well-defined ES (or a land-use likely to secure that service), is being 'bought' by a (minimum one) ES buyer, from a (minimum one) ES provider, if and only if, the ES provider secures ES provision (conditionality). PES has become a generic term for initiatives that transfer benefits or rewards to providers/stewards of ecosystem services, whether these be via cash payments, in-kind transfers or provision of services (Schreckenberg et al. 2018).

The Economics for Ecosystems and Biodiversity (2010) analyses the use of valuation and the implications for people, businesses and policymakers. It illustrates the frameworks for valuing and evaluating ecosystems and biodiversity. And, in regards to the design of PES initiatives, it states the considerations that policy makers should confront: the form of payments and how to disperse them; which services to pay for – and who to pay; the size of the payment; how to evaluate the program's cost-effectiveness and effectiveness; the role of intermediaries; whether secure tenure rights are necessary; how compliance with the program's requirements will be monitored and enforced; whether PES should be linked to poverty alleviation.

Mace et. al (2019) remark that while valuation of ecosystem services might be considered useful in designing PES schemes, designing effective and equitable schemes for incentivising environmental stewardship requires an understanding of local social-ecological system dynamics, including potential winners and losers, trade-offs and existing institutional arrangements and governance.

Some major concerns are related to the participation process in PES. Many types of intermediaries act between providers and buyers on the design and the implementation of PES. Chhatre et al. (2012) stated that tenure security and effective participation of local communities are seen as means to ensure both pro-poor and pro-environment outcomes. The collaboration between scientists, governance actors and local stakeholders to explore and understand complex social-ecological dynamics and potential outcomes of different management actions (Galafassi et al., 2017) could increase the participatory process, especially increasing participation of marginalized populations.

Lansing (2017) studies the participation of smallholder farmers in the PES program in Costa Rica, finding that targeting PES toward smaller landowners does not necessarily equate to a policy that reaches the rural poor. Cultural barriers, lack of knowledge and understanding about the program, and the absence of connections explain the differences in the access to the program.

Ren et al, (2018), examine to what extent different dimensions of poverty impact households' participation in the Sloping Land Conversion Program in China finding

that the degree of multidimensional poverty weakened households' efforts to manage and protect the trees on enrolled lands. Pagiola et al., 2005 state that PES improves the efficiency of natural resource management, and not poverty reduction.

Many studies suggest that generalized conclusions about PES design and implementation are not possible at this point in time. Wood et al.(2018) illustrates the contribution of ecosystem service management into the realization of sustainable development goals.

## **II. Recommendations**

We encourage the Special Rapporteur to put Human rights at the center of conservation of biodiversity and poverty elimination to:

- Structure mechanisms to empowerment ALL people, in order to translate policies into action for the sustainable improvement of quality of life and wellbeing
- Increase efforts regarding ownership and control over land and other forms of property for ALL: secure tenure rights to land in particular to the poor and the vulnerable, local populations that include farmers, indigenous peoples, and local communities
- Facilitate research and innovation of more targeted approaches and strategies that take into consideration the diversity and complexity of each context regarding conservation challenges, diversity of needs and contexts.
- Advise on the establishment of governance's mechanisms to recognize the rights of all, the share of benefits and the responsibility of conservation of territories and biodiversity
- Promote means of full participation of all actors (women, farmers, local institutions and communities) into long-term conservation and preservation of ecosystems and biodiversity, enhancing communication and outreach activities at the local level in order to raise awareness about ecosystems and their importance for life, the crucial role of local people into conservation initiatives, as well as, the relevance of those actors into policymaking and implementation of conservation strategies
- Advice for participatory approach in conservation and development for better success rate.
- Incentivize the inception of biodiversity conservation programs for better livelihoods of the communities

- Develop national and international policies to increase protected areas through community participation and making provisions for PES for the communities to minimize poverty and hunger
- Urge the implementation of Nagoya Protocol to benefit the communities through Access & Benefit Sharing

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