

Workshop on

"Benefit Sharing Mechanisms for Provision of Environmental Services from Extensive Grazing under Common Property"

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Workshop Report



LEAD

Livestock
Environment
and
Development

inter
cooperation

Natural Resource Management
Rural Economy
Local Governance and Civil Society



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Introduction

The increasing human impacts on the proper functioning of the ecosystems reduce the quality and availability of all natural resources (ie: air, water, biodiversity etc.). Rapid economic development is accelerating degradation/depletion process of the natural resources and is often justified by the common perception that natural resources degradation is an integral part of economic development. Poverty is another key contributing factor to environmental degradation.

The LEAD study conducted in five selected watersheds in India confirmed that the common lands in the rainfed areas particularly in the arid and semi-arid zones of India are in the process of continuous degradation. This affects the livelihoods of the poor as they often rely on the natural resources. The study highlighted the need for improved common land management, reforestation and improved water harvesting techniques in order to reduce the pressure on the remaining common, forest and pasture lands.

The government of India has been making sincere attempts to implement productive, environmentally sustainable land and water management systems. After over ten years of experience with wasteland development, the Government of India introduced in 1995 a policy for rainfed areas, particularly in the arid and semi-arid zones under the title "Watershed Development". Two Ministries at the Central level (Rural Development and Agriculture), are financing Watershed Development Programmes (WDPs) in the country, and the Department of Land Resources has coordinated the activities since 1999. These activities are designed to harmonise the use of water, soil, forest and pasture resources in a way that conserves these resources while raising agricultural productivity. The country is currently implementing one of the largest watershed development programmes in the world. Some 28 million hectares of degraded rain fed land comprising of nearly 20,000 micro-watersheds have been covered so far and about 15 million hectares is envisaged to be covered during 2002-07 (10th five-year plan period). The Integrated Watershed Development Programs have clearly established that they are an important vehicle for the restoration of agro ecological balance and to improve the livelihood status of the rural communities together with the conservation of watershed ecosystems functions.

Payments for Environmental Services (PES) schemes are increasingly being tested in various developing countries (including Costa Rica, Bolivia, Nicaragua, Colombia, Philippines, Vietnam, Ecuador) and are presented as appropriate sustainable development mechanisms from an environmental point of view. Developing such concept in India where the socio-economic environment and the institutional framework are complex and challenging, but represents a great opportunity to be tested within the development of an exit protocol for the watershed development programme.

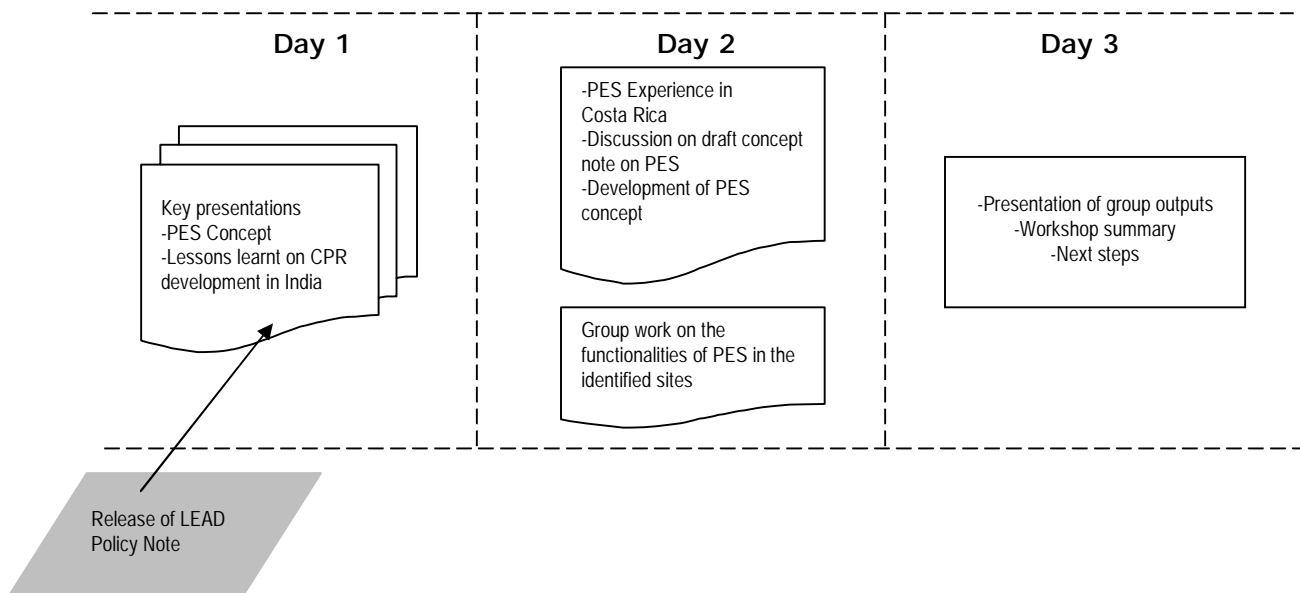
Based on the suggested interventions of the LEAD study and the LEAD experience in developing payment for environmental services schemes in Latin America, the LEAD initiative drafted a concept note on community-based payments for environmental services in the watersheds of India. The workshop "benefit sharing mechanisms for provision of environmental services from extensive grazing under common property" was planned in the above context to brainstorm and develop required insights for the finalization of the project concept note. The proposed concept note is meant to be submitted to the Global Environmental Facility for funding a pilot project in selected sites in India.

The objectives of the workshop were:

- To improve the understanding of the concept on 'payment for environmental services' among key stakeholders in India;
- To identify and discuss the related implications and projects' feasibility within the context of common property resources in India

Workshop Proceedings

The workshop included (1) technical presentations (2) working groups and (3) plenary discussions.



On the first day, after a welcome address by Dr A. K. Joseph (Senior Programme Coordinator, CALPI), the workshop was opened by Mr P. Narain (Joint Secretary, Ministry of Agriculture), who presented the land tenure situation in India, Mr P. Dwivedi (Agricultural Production Commissioner, Chhattisgarh) who briefly described the state of Chhattisgarh and Ms V. Hulmann (Deputy Director, Swiss Agency for Development and Cooperation) who presented SDC's involvement in LEAD activities.

The opening session was followed by presentations on CALPI-LEAD (by Mr Padmakumar, CALPI), FAO-LEAD (by Dr H. Steinfeld, FAO) and PES-Background and purpose (by Dr V. Castel, FAO-LEAD). It continued in the afternoon with presentations on experiences in common land development by Mr J. Rao (Foundation for Ecological Security), Mr V. Lobo (SPWD) and Dr Sooryakumari (Centre for People's Forestry).

During the first day, Mr Parthasarathy (IAS) officially released the LEAD policy note published by CALPI/IC and underlined the continuous need for advocacy and dialogue.

On the second day the technical presentations were continued. Ms Neelima presented Sevamandir's experience in common land development in Rajasthan; Dr M. Ibrahim presented the LEAD-GEF project on PES in Latin America and Dr C.de Haan introduced the participants to GEF strategies and procedures.

After the technical presentations Dr. V. Castel presented the draft concept note on PES–India and submitted it for discussion. During the working group session, two groups were formed in order to analyse suitability of the potential sites.

On day 3, the outputs of the previous day's group discussions were presented in the plenary. Ms R. Mukerji, Delegate – Intercooperation presented the workshop summary. The participants agreed on the next steps for the finalization of the concept note. The workshop was closed by Dr A.K. Joseph.

The workshop was moderated by Professor F. Schneider, Vice Director, Swiss College of Agriculture and Backstopper of CALPI programme.

The key concepts, experiences, concerns and critical issues evolved during the workshop are distilled and summarized in this 'Workshop Document'.

Workshop Outputs

(1) Payment for Environmental Services (PES) – Concept and relevance in India

Well managed agro-ecosystems have the potential to produce multiple environmental benefits of local and global significance. The benefits can be classified into goods (excludable) and services (non-excludable). The main local benefits include for example fodder, fuel wood and food.

Environmental services are those services that are required to sustain human societies and other living beings and include among others clean air, clean and sufficient access to water resources, and biodiversity conservation. Environmental services can be of local importance (water) or of global importance (biodiversity, carbon sequestration). A wide range of land use type contributes, when appropriately managed, to the provision of these environmental services and significantly contribute to prevent land degradation in fragile ecosystems.

Agricultural landscapes characterized by the use of agro forestry systems are capable of fixing significant amounts of carbon in the soil under the improved pastures and trees and in the standing biomass. Moreover, they tend to sequester most of the carbon in the deeper part of the soil profile, thus making it less prone to oxidation, and hence loss.

With improved soils and vegetation condition, infiltration rates increase, extending water availability throughout the dry season. Water harvesting techniques used in arid and semi-arid regions of India, have proved to be very successful for water management at watershed level.

The increased complexity of vegetation cover of sustainable land management practices as opposed to degraded grasslands means they often bring important biodiversity benefits as they tend to support much higher species diversity and they reduce the fragmentation of the natural habitats, serving as biological corridors. Improved ecosystems provide alternative sources of wild products such as fuel wood and other wood products, helping to reduce pressure on remaining natural habitats.

Nevertheless efforts to enhance the environmental conditions in agricultural landscapes need to consider constraints faced by the different land users. From the land users' perspective, biodiversity conservation, improvement of water quality and availability and carbon sequestration benefits are often considered as externalities. As such, land users do not take them into consideration in making their land use decisions, thus reducing the likelihood that they will adopt practices that generate such benefits.

Payment for Environmental Services (PES) are flexible and direct payment mechanisms by which environmental service providers are paid for the environmental services they produce. Generally, improved water quality and availability, carbon sequestration and biodiversity conservation are the services considered for payment. PES have the potential to be a successful tool for ecosystems improvement and the reduction of land degradation processes, as they can be used to facilitate the shift to land use options which are favourable to the environment. While the payment for these services are meant to act as incentive to

tip the balance for adopting sustainable practices, other goods /services generated through change in the land use system such as enhanced water access and quality, increased availability of fodder and fuel wood, improved land and animal productivity etc. provide direct benefit to the local community. Rather than a subsidy for land use change, payments for environmental services are made on the basis of the environmental services provided.

Potential environmental service providers within agricultural landscape include: small, marginal, medium and large farmers and /or local community. Potential payers include: the global community, national governments, potential polluters (e.g. industries, industrial livestock /poultry production units) and commercial users of the environmental services provided (e.g. mineral water companies, bore well users).

Payments for Environmental Services have already been successfully implemented in several countries but have usually focused on privately rather than communally owned lands. Nevertheless communal lands and associated ecosystems are in many parts of the world under great threats. The development of tools and policy for the use of payments of environmental services targeted to communities rather than individuals is one option to preserve the fundamental function of these ecosystems of global significance.

Furthermore a specific policy and legal framework is required in order to successfully develop within a country the concept of PES. Most of the PES schemes already tested and implemented operate without a specific legal basis. Some service providers take advantage of this legal gap to establish property rights for land and natural resources

Existing PES schemes are found in developed countries and the majority of these are state run. For instance, EU charges 2.5% of fuel cost as environmental tax, which is used for environmental conservation activities. Some pilot schemes exist in the developing countries. In the Philippines the energy producers (private), have to contribute one third of the total value of their electricity sale to a special fund, which is used for agro forestry and afforestation activities. The private sector /industrial polluters have significant potential as payers /buyers of 'environmental services'. The sellers /producers of environmental services are mainly the land holders but there are cases where the landless are also participating in PES schemes (e.g. Philippines) when user right is provided to them to develop and use public land owned by the state. PES schemes have also been developed in several countries in Latin America (Costa Rica, Colombia, Nicaragua) and are reported to be successful (see PES experience in Costa Rica).

The LEAD study conducted in the arid and semi-arid zones of India revealed that the common /public lands are in the process of continuous degradation. The traditional system of collective management and use of CPRs have been broken down in most parts. Most of the traditional practices involved a low degree of resource use intensity and were governed mainly by local needs and local capacities for resource extraction. Through local control, pressure on resources was deliberately kept low with the help of various measures of demand rationing, including social and cultural sanctions, periodic migration etc. These measures contributed in different ways to generating conditions favourable to sustainable use of biomass and other products in a subsistence context. Unfortunately this system is found to be decelerating. The growing human and livestock population and the adoption of non sustainable

practices, have lead to a rapid depletion of natural resources (more especially the common property resources) and affect the functions of the watershed ecosystem as a whole. The decrease of natural resources availability have already seriously affected the poor, marginalized and landless people, especially women, who depend on these resources for maintenance of their livestock and their own livelihood.

As part of the Watershed Development Programmes' action plan defined by the ministry of rural development of India, a clear exit protocol has to be formulated. The exit protocol shall: "specify a mechanism for maintenance of assets created, augmentation including levy and collection of user charges, utilization of the watershed development fund etc". In support to the exit protocol village development funds have been developed in some areas, but in many cases no specific action has been undertaken. As a result in many places the outcomes achieved collapsed when WDPs activities ended. There is a crucial need today to support the formulation of an exit protocol in order to guarantee the sustainability of program achievements.

In that context Payment for environmental services schemes may serve as an exit protocol and might act as sustainable mechanisms for production and maintenance of the environmental services provided in common lands. Poor communities depending on these lands can produce environmental services and should be financially compensated by the beneficiaries. Poor communities, besides the income generated from the environmental services provided, would also get other production benefits like increased biomass for their livestock, improved animal productivity etc.

Beside from the potential source of funding represented by the global community (the GEF) financial mechanisms need to be explored and developed to connect payment sources (national government, global community, commercial users, polluter tax, environmental tax, etc.) with producers of environmental services. Other existing mechanisms in India could be investigated to provide alternate sources of income for PES. For example government investment used for environmental development /afforestation activities, revenue from ecotourism, environmental tax etc. are also potential sources of payment. Considering the negative socio-economic impact that would have a taxation scheme targeted to individuals , the private sector would be the main target for accessing external funding for the sustainability of project activities. In any case the financial mechanisms should never become a new burden to the poor.

It is acknowledged that the socio-economic conditions and institutional mechanisms are complex in India and the PES concept will have to be adapted to fit local conditions. Indeed while production of benefits is primarily a result of biophysical processes / land use change, its distribution across different communities depends on social arrangements and user rights. A change in the land use system generates complex trade-offs between different kinds of benefits to different kinds of beneficiaries (tribals, pastoralists, small ruminant keepers, landless, agriculturalists). Impacts on land tenure systems will also be closely monitored. Alternate options for the poor and migratory communities who are likely to be negatively impacted should be developed and incorporated as an active component of the project proposal. Co-funding arrangement with national partners would be sought to support this component so that all components together forms a basket capable of addressing the key needs of the poor. Synergies with government programmes having poverty reduction agenda will be a sure option.

In order to initiate the activities within poor communities an advance against the first year payment can be made in order to meet the cost of investment into the activities. This initial payment could possibly use national resources through the watershed development program for example. This initial payment will also act as insurance mechanism against severe drought or other natural calamities. In new /untreated areas, watershed investment can be used for the basic works. The Project should also provide technical assistance to communities for land use changes that generate environmental services of global importance.

The payments will be ideally made on annual basis to the community as a whole, which will address part of the equity issues also. Impact on poverty will be assessed throughout project implementation. However, payment to private owners can be also considered.

Different forms of payments can be tested including:

- Payments in cash (with or without conditions regarding to its use)
- Payments in kind (breeding services, education, health care services, development of market access, development of water access etc.).

Payment modalities will be decided in consultation with the different communities and project activities will make sure to guarantee to the poor a fair access to all discussions

The project should focus on dry lands and adopt a multi-functional approach (water as local benefit + carbon and biodiversity as global benefits). The project should assess the existing demand for local and global services during the elaboration of the project proposal and the existence of such potential should be among the first criteria for site selection. Nevertheless the production of environmental services in very dry areas will be challenging due to very low level of rainfall and poor vegetation. Nevertheless these conditions reflect also the importance of environmental services such as improved water availability in these areas.

The project should build on successful PES experience including the GEF - LEAD PES full size project in Latin America entitled : "Regional Project in Latin America entitled: "Integrated Silvo-Pastoral Approaches to Ecosystem Management". The successful outputs to be used includes: the development and implementation of methods to quantify and evaluate environmental services, the improvement of the legal framework, community organization, financing mechanisms and income distribution, All these components will have to be adapted to the Indian context within dry-lands ecosystems.

To reduce the transaction costs, the project should look for least cost participatory and community involved methods for monitoring. Again the Project will benefit from the achievements of the GEF - LEAD project "Integrated Silvo-Pastoral Approaches to Ecosystem Management" which successfully reduced transaction costs.

(2) PES Experience in Latin America and its adaptability to the Indian context

Throughout Latin America, the cattle ranching model based on management of cleared pastures, contributes to the destruction of native forests and generates adverse environmental impacts such as soil degradation, loss of biological diversity, green house gas emissions and water pollution.

Against this background, the PES project funded by the GEF and LEAD-FAO and implemented by CATIE (in Costa Rica), CIPAV (in Colombia), Nitlapan-UCA (in Nicaragua) in three Latin American countries (Costa Rica, Colombia, Nicaragua) seeks to financially compensate livestock producers who increase the generation of environmental services in agricultural ecosystems by implementing improved silvopastoral practices.

The main objectives of this pilot project are:

1. To test whether payments for environmental services will 'tip the balance' in the adoption of improved forms of land use ;
2. To determine the impact of PES schemes on carbon sequestration, biodiversity and water resources and the livelihoods of rural poor;
3. To develop a methodology for monitoring the environmental services provided and to make the associated payments ;
4. To propose mechanisms which guarantee the sustainability of the PES scheme from a financial point of view.

The project established a database for each farm involved (total 378 farmers in the three countries) in the pilot areas where cattle production is dominant and pasture is degraded. This included the identification of the various land use types and a five year land use plan. After the initial land use survey in 2002, project partners have monitored each farm annually to determine changes in land use systems. To enable land use change, the project provides technical assistance and training to farmers and technicians. Implementers then calculate the incremental environmental services provided with respect to the baseline situation, and award payments to rural producers. To measure the services provided for making payment, the project developed an approach, based on an eco-service index, composed of a biodiversity and a carbon sequestration components. Index by land uses and its potential for carbon sequestration and conservation of biodiversity is shown Table 1. The carbon index point is defined based on the assumption that matured secondary forest fixes about 10 tonnes of carbon per ha. Similarly for biodiversity index point, the assumption is that the primary forest has the highest biodiversity and therefore a value of one is fixed and the value of other land uses were assigned based on proportion of biodiversity in relation to primary forest.

Payment

Payment consists of a one-time financial recognition of US \$ 10 per point index of each farm's baseline situation on the first year of the project. Following the baseline payment, beneficiaries receive an annual payments during the project's four year duration at US \$ 75 for each incremental index point.

Carbon stocks were measured at the beginning of the project in both above and below the ground. Ants, butterflies, birds and bats were the first indicators considered for biodiversity. Nevertheless species richness and canopy cover emerged as the most robust indicators for biodiversity and carbon sequestration. Measurement indicators for water were run off, infiltration and transpiration.

Table 1: Land use and eco-service index /Ha

Land use	Index Carbon	Index Biodiversity	Total Ecological Index
Degraded pasture	0	0	0
Native pasture without trees	0.1	0.1	0.2
Live fences	0.3	0.3	0.6
Native pasture high tree density*	0.5	0.5	1.0
Improve pasture high tree density*	0.6	0.7	1.3
Young secondary vegetation	0.6	0.8	1.4
Riparian forest	0.8	0.7	1.5
Secondary forest	0.9	1.0	1.9
Primary forest	1.0	1.0	2.0

*more than 30 trees /ha

The impact

It was found that the impact of PES in terms of land use change was commendable. Over a period of three years, the ecological index point has increased (more than double) compared to the control farms. The rate of change in live fences increased from 30% (control farms) to 55%. The percentage of pastures with high tree density has increased from 12% (control) to 18%. Forest area has increased from 0.2% (control) to 1%.

Lessons learnt

Where baseline payment was higher the incremental payment was lesser in subsequent years. This generated frustration among the farmers who invested into conservation practices before project activities. This issue needs to be addressed. Furthermore small farmers received higher PES/ha compared to large farms: However large farms received significantly higher payments/farm.

PES was based on incremental system and therefore small farmers with less capital to invest on silvopastoral technologies did not benefit as much as the large farmers. One option identified is to provide upfront payment in order to allow the small farmers to invest into adequate technologies.

Transaction costs in project implementation are rather high (17% for monitoring alone). Project activities focused on the minimization of these costs (such as monitoring of the tree cover as a proxy for biodiversity conservation practices). In that context the Land use index is a useful cost effective tool for monitoring environmental services.

The threshold values of tree cover in pastures for optimum biodiversity is higher than that managed by farmers and efforts to promote optimum biodiversity must be based on payments of opportunity cost.

(3) Development of CPR in India – Some Experiences

(a) The Foundation for Ecological Society (FES) is a non-profit organization, working on 75000 Ha of land in five eco regions in India with 1000 village institutions and 125,000 rural families. FES is working for the regeneration of waste lands by taking long term lease of waste land at nominal fee through MoUs with state governments and state and district level coordination committees. They started their work by developing 40 Ha of revenue waste lands. They work towards conservation of the uplands and other eco-fragile, degraded and marginalized zones and to set in place the processes of coordinated human effort and governance to achieve this objective. FES collaborates with Panchayat Raj and other democratic village institutions, as well as appropriate civil society organizations, in their effort to contribute towards the objectives and provide technical and financial assistance to them. Looking back after 20 years of program implementation, FES is convinced that ecological security is the foundation of equitable and sustainable economic development.

FES work consists in the restoration of forests and common lands in ecologically degraded and economically deprived areas. They seek to integrate forests, agriculture and animal husbandry activities at landscape level through strengthening systemic drivers such as water, nutrients, soil and biodiversity. FES built platforms for discussions on interdisciplinary, coherence and competing interests.

Conservation is contributing to poverty alleviation. Advancing the twin goals of conservation and poverty alleviation together is key in ecologically degraded and economically deprived areas. Indeed the environmental services provided by forests and pastures contribute to sustain traditional agriculture and animal husbandry. There is a need to highlight true value of forests and water in the livelihoods of the people. Nevertheless real poor need immediate and long term benefits from a diverse range of activities.

Lessons learnt

Institutions should mediate upstream and downstream uses, resource rich and resource poor areas or competing transactions. In that context the Panchayats should play a role in the management of forests and other natural resources. This will foster the decentralisation of governance over natural resources. There is a need to bring together departments, academia, NGOs within a community-driven process for the design of local land use plans at sub-river basin level. The evolution of the role of the government in a decentralized scenario would be from implementation and regulatory to facilitating and adjudicatory.

Commons provide crucial and irreplaceable support to subsistence livelihoods of the poor. Security of tenure over resources ensures increased and sustained commitment to conservation. Structural spaces for negotiations on the commons can be political spaces for groups that are otherwise marginalized or silenced. The involvement of all stakeholders will alone ensure sustained review of rules and make possible adaptive management.

Nevertheless often even when maximized the potential of natural resource is unable to meet community needs.

(b) Centre for People's Forestry (CPF). The sustainable forest management envisaged within the National Forest Policy requires the effective participation of communities and NGOs in forest management. While the concerned officials at national and state governments were striving to design appropriate projects to translate the policy into field realities, there was also a need to build capacities within the communities who are going to be involved and who will get the benefits through the various interventions envisaged. It was in this background that the Centre for People's Forestry was established in 2002 in order to develop and implement sustainable forest management mechanisms for the enhancement of the livelihood security of marginalized people. CPF is working in partnership with local NGOs and established a critical collaboration with the forest department and other related government agencies. Their areas of work include: alternate land use systems, sustainable forestry development etc.

In connection with the JFM project, CPF extends support in institution building including: VSS formation, micro-plan preparation, Forest Biodiversity register preparation, conflict resolution, linkages with other village institutions, dialogue with other user groups, capacitating to realize the promised benefits, focus on addressing equity & equality concerns etc.

To address the fodder needs of small ruminant rearers, CPF facilitates collaboration among village institutions for effective use of land (forest, revenue and assigned lands). The collaborators include VSS, Panchayat Raj, SHG, Individuals having assigned land, farmers, small ruminant rearers (at community level), Forest Department, AH Department, Fodder Research station, CRIDA (at government level) and NRMPA/SRDP, CALPI (at resource agency level).

Lessons learnt

Making communities understand certain issues is possible when properly communicated. Lacks of awareness, misinformation, apprehensions, communication gaps etc. are the root causes for several problems. Furthermore vested interests of different players hinder progress.

In general, attitude of Govt. officials, local press and local politicians about most of the local NGOs is not favorable and hence task of professional NGOs coordinating the activity becomes very difficult. Nevertheless there are good opportunities to work with the Forest Department and the government.

(C) Seva Mandir is an NGO working in Rajasthan. Their efforts in natural resource management started in 1986 with private wasteland development. Later, JFM program opened up possibilities of working in forestlands. After nearly 20 years they have covered 12,345 Ha of land, of which 76% are private land and remaining 24% are public land. 70 % of old common land plantations are now running well and benefits are being shared equally. Average returns vary from Rs 1600/- to Rs 3000/- per Ha per year.

The proportion of common lands covered by the project has slowly gone up to 50% of the total land to be covered. There is an increasing involvement of local committees and local federation and common lands have become strong rallying points for people to resist disempowering processes. Furthermore where land and water development work has been done, we can note an emerging demand for other land-related activities (horticulture, dairying etc.).

Despite the fact that migration becoming an important source of income for people, land remains a vital source to strengthen local livelihoods, which constitutes a source of empowerment and a support for good governance. However, the pace is still slow and the solidarity is still fragile.

When the community is involved in the development of CPRs, there is more cohesion in the community while they work. This cohesion allows the development of village institutions that will manage resources and assets formed in a democratic way. Nevertheless the lack of clear institutional recognition for CPRs ends up fragmenting social cohesion for the sustained development of watersheds as a common good resource. Tenurial issues play an important role in getting people's participation and improving governance through local village institutions.

All policy guidelines related to common land development (CFM, watershed) are based on the assumption that common lands exist free of all contests and disputes and that these only require some resources and planning and some community efforts for their development. But the conditions on the ground belie this assumption. Common lands are highly contested and privatized or encroached. A snapshot study conducted in 10 villages within the district of Udaipur revealed that 27% of forestland, 54% of village pastures and 100% of the revenue lands are encroached. .

While the percentage of land actually encroached is important, much more important is the fact that the encroachments tend to be scattered and hence foreclose public investment over a much larger area of land. Further, the encroachers whether big or small enter into an illicit obligation towards a powerful patron outside the village leading to disempowerment. Hence, encroachments not only lead to problems of inhibiting collective governance of commons, they have much deeper implications in terms of community solidarity. Govt. Policy tends to regularize the encroachments. Negotiations in such cases for vacating the encroachment on forestland become extremely difficult.

Lessons learnt

The constraints to work within common lands are: Low social capital; Privatization pressure and allure; Government's attitude to these lands—using them to dispense patronage; Low economic returns from these lands; and Migration. This requires a strong focus on awareness rising at village level to overcome the above mentioned constraints.

Land tenure issues have to be addressed by project activities. There is a need to strengthen local leaders and civil society associations of villagers to effectively negotiate on these concerns. Projects have to provide assistance for developing both private and public lands.

(4) Scanning of Sites

Two sites were tentatively identified (Kalyanpur watershed in Rajasthan and Kananakala Watershed in Karnataka) in order to screen their suitability as project areas. These sites were identified using available information such as rainfall, robustness for biomass production, livestock intensity, LEI Hotspots, presence of proactive NGOs etc.

The final choice of project areas will be based on the information collected during the formulation of the project proposal. The participants focused on semi-arid areas but the area can range from arid to humid. The sites can be a new area or treated area. One can also think whether watershed is the right entry.

The participants elaborated the following list of criteria in order to screen the suitability of the selected sites for project implementation:

1. Existence of a local demand for environmental services ;
2. Potential of the watershed to generate environmental in common lands (global and local);
3. Size of the watershed ;
4. Impacts on poverty;
5. Conducive policy framework and willingness of governmental institutions to enter into the development of a PES scheme;
6. Diversity (representatives) of the watershed selected.

Preliminary information on the identified sites and ideas on the type of services, demand etc. are given below:

(a) Kalyanpur

Demand for environmental services

- Primary Industrial production system and mining activities pollute locally the environment water resources
- Downstream pollution by livestock activities
- Problems of water availability and quality in summer within the watershed
- Cases exist where water is purchased for irrigation
- High water demand in Udaipur
- Decreasing water table (Government is collecting a tax for the delivery of surface water
- Ground water extraction is based on private investment and is free of charge)
- Low capacity in the direct vicinity of the Town for recharging the ground water resources

Potential to generate environmental services in common land

- Previously forested area
- Decreased water availability since the deforestation process
- Potential for reforestation (Dry forest) – Land regeneration
- Increased water resources locally–Contribution to recharge of Udaipur aquifer to be assessed
- Carbon sequestration
- Biodiversity (bird endemic species), high tourism in Udaipur

Policy environment and constraints

- Willingness of governmental institutions in favor of pilot testing PES
- High interest of local institutions (forest department) and NGO
- Village groups already constituted and already engaged into common resources management and controlled grazing activities (Cut and carry in reforested areas– Payment for access to forage resources in cash and in kind)
- Policy framework to be assessed.

(b) Kanakanala

Demand for Environmental Services

There is water pollution, erosion, deforestation, overgrazing and land degradation

Potential for producing Environmental Services

Demand can be created through awareness creation / proof of concept (water quality and distribution, increased productivity, carbon sequestration, biodiversity etc.)

Criteria for measurement

- Participatory measurement-criteria to be agreed in addition to technical measure. criteria
- Careful thought about baselines – incentives for severely degraded land without creating perverse incentives

Forms and sources of payment

- exclusive resource use/access rights as a form of payment to specific groups-user linkages
- payments in cash (conditional/ unconditional)
- Subsidies / input services often disproportionately captured by the 'rich' and 'powerful'
- 'experimenting' with different forms of payment
- Greater need to build on / learn from / use existing benefit sharing mechanisms such as JFM
- PES - payment for outputs/results

Policy environment and constraints

- Decentralization of decision-making / true participatory process
- government needs to be involved, but not manage the scheme
- Continuity of staff of officers
- access / users rights of CPRs

(5) GEF – Strategies and Procedures

Presentation of the GEF

The GEF (Global Environmental Facility) is an independent financial organization established in 1991 in order to provide grants to developing countries for the development and the implementation of projects that benefit the global environment and promote sustainable livelihoods in local communities.

The GEF is the designated “financial mechanism” for the Convention on Biological Diversity (CBD), Convention on Climate Change (UNFCCC) and Persistent Organic Pollutants (POPs) Convention. It is also a designated mechanism for the Convention on Combating Desertification (UNCCD).

GEF projects address six complex global environmental issues and are referred as focal areas namely:

- Biodiversity;
- Climate Change;
- International Waters;
- Ozone Depletion;
- Land Degradation;
- Persistent Organic Pollutants – POPs.

The GEF includes three Implementing Agencies, namely the United Nations Environment Programme (Technical assistance/ capacity building projects), the United Nations Development Programme (Global regional/ and trans-boundary projects) and the World Bank (Investment projects). The implementing agencies play key roles in developing and implementing projects.

Seven international organizations, known as GEF Executing Agencies, *contribute to the management and execution* of GEF projects. They are The African Development Bank, The Asian Development Bank, The European Bank for Reconstruction and Development, The Inter-American Development Bank, The International Fund for Agricultural Development, The UN Food and Agricultural Organization and The UN Industrial Development Organization. The Executing Agencies have shared responsibilities for project cycle management.

GEF projects can be managed by Government Agencies, Non-Governmental Organizations, Bilateral Development Cooperation Agencies and others from the private sector/institutes.

Implementing Agencies and Executing Agencies are responsible for creating project proposals and for managing GEF projects.

Non-governmental Organizations (NGOs) participate in the GEF activities and assist in the design, execution, and monitoring of projects.

GEF is a co-funder and it encourages partnerships by bringing together multiple sources of funding for projects. The key concept is that GEF is not a project financier but a project co-financier. GEF projects complement (through additional funds) national programmes and policies to maximize global benefits. In short:

- GEF is a co-financing mechanism bringing together GEF resources with those from Government, banks, NGOs, bilateral and multilateral agencies
- GEF Projects address the global environment within the framework of country priorities.

There are different GEF funding categories:

1. Full-size projects (\$1 million and up);
2. Medium-sized projects (up to \$1 million);
3. Small Grants Programme (up to \$50,000);
4. Financing can be available for preparing projects - Project Development Funds:
 - a. PDF-A up to \$25,000;
 - b. PDF-B up to 350,000;
 - c. PDF-C up to \$1 million.

The project eligibility requirements are:

- Country-driven and endorsed by host Government;
- Produce identifiable global benefits;
- Participation of all affected groups and transparency;
- Consistency with the Conventions;
- Possess strong scientific and technical merit;
- Financially sustainable and cost-effective;
- Include processes for monitoring, evaluation, and incorporation of lessons learned.

The project cycle starts with (1) development of project concept note (2) The GEF focal point reviews for eligibility and pipe line entry and issues endorsement (3) Securing project development funding option (4) Preparing project proposal (5) GEF reviews for work programme (6) CEO issues clearance (7) GEF Council reviews and approves for CEO endorsement (8) Implementing, monitoring and evaluating the project.

The GEF and the concept note on Payment for Environmental Services

The concept note will principally address the focal area on land degradation but biodiversity and climate change focal areas will also be addressed by project activities. A social assessment will be conducted as part of project appraisal. Project activities will address poverty issues since it is considered as one of the principal causes of land degradation.

The concept note will target a full sized grant. It was suggested that the implementing agency would be the World Bank and the executing agency would be FAO. The choice of the final recipient (which can be an NGO) will be addressed during the development of the project proposal and will have to be approved by the Indian government.

(6) Concluding discussion and Next steps

It was suggested that the finalization of the concept note and the development of the project proposal will require the consultation of a broader group of stakeholders (Govt., NGOs, local stakeholders, bilateral donors etc.)

A small group of 2-3 people (CALPI+FAO and possibly CATIE) is also required to drive the process forward. The anchor person will be in CALPI Mr Padmakumar and in FAO-LEAD Dr Castel. LEAD will facilitate the process and it was suggested that SDC/IC-CALPI should be leading the finalization of the concept note. Further consultation is required before finalising the concept note. Field assessment missions will have to be organised in the pre-selected states. Regular consultation with the Indian Ministries and the GEF focal point will be necessary.

I was planned to submit the concept note to the GEF in April 2006 for pipe line entry by May 2006 (next GEF meeting planned for May 2006).

The following time line was set for finalising the concept note:

- Concurrence from IC : Two weeks
- Workshop proceedings : 8th February
- Further Consultations : 3rd week of February
- Briefing Ministries & GEF : 4th week of February
- Finalisation of Concept note : End of February

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