The Clash between Global Master-plans and Local Contexts: conflicts and contradictions within initiatives for payment of ecosystem services in Brazil and Nepal

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Abstract: With the development of large-scale international agreements, such as REDD (United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries), it is becoming increasingly important to examine the synergy between global masterplans, national endeavors and local actions in relation to environmental services provision and to mitigation and adaption to climate change. This paper will draw on a comparative study of two countries', Brazil and Nepal, strategies and practices to deal with carbon emissions, i.e. examining the tensions and contradictions between mitigation agendas and the roles, practices and interests of the actors in the programmes and projects related to REDD. The data has been collected from contrasting case studies within the two countries (REDD and non-REDD cases). Preliminary evidence suggests that while the lack of synergy between global plans and local practices might be seen as simply a matter of 'coordination', it actually reflects competing interests and agendas, both at national and local levels. The REDD plans are guided by a generic template, but how these plans are interpreted and implemented at national and local levels varies greatly, both between and within participating countries. The complexity of the REDD schemes creates a demand for actors who can plan and broker the processes. This complexity and the lack of an overarching reflexivity create a number of problems linked to transparency, complexity, lack of accountability and room for exploitation by powerful economic and political actors. This paper argues that these aspects often transform the planned results into unintended outcomes, depending on the particular configuration of local contextual factors and processes.

Keywords: paymentof ecosystem services, forest management, smallholder agriculture, climate change, Amazon, Himalaya

Introduction

There are currently two principal approaches for encouraging local ecosystem managers to regulate and value ES provision: the first creates a market system for ecosystem services (ES) and pays for ES provisioning (i.e. Payment for Ecosystem Services, PES); and the second supports existing crop/forestry production systems that are mainly based on local renewable resources (or ES or non-PES), and that integrate production of food and fibers with provision of ES. The research project 'Payment of Ecosystem Services – consequences and alternatives' (PECA) is exploring these two approaches in four contrasting locations (Brazil, Nepal; Peru and Tanzania) examining the tensions between addressing the global public good and supporting the wellbeing of smallholder farmers. This paper draws on preliminary results from fieldwork in Brazil and Nepal.

The largest global PES initiative is the UN-REDD[87] (United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries). This is focused on developing countries and the protection of forests to secure carbon sequestration, biodiversity and the integrity of water and nutrient cycles.

In spite of the considerable documentation of the ecological effects of PES there are few ethnographic studies of the communities that sign the PES contracts and the specific ecological, economic, social and cultural impacts of these agreements (Caplow et al., 2010). There is also a lack of understanding of the on-going economic, political and social struggles and negotiations over PES and of how local communities are engaged and affected by this (Corbera&Schroeder, 2011).

This paper explores four key themes contrasting the two approaches– the outcome of competing interests and actions of state bureaucracies and other actors, the role of brokers, the challenges of implementing PES-schemes in complex physical and social landscapes, and the consequences of the strong focus on carbon sequestration for poor farmers.

Study Sites and Methods

We report here on two contrasting case studies (PES and non-PES) in both Brazil and Nepal; one where land users are paid for the ES they provide and one where land users' actions deliver ES, without receiving financial compensation. Table 1 summarizes the specific characteristics of the case studies. Data has been collected through participant observation, informal conversations and various forms of interviews, as well as archival sources and literature. Fieldwork has been carried out since November 2012 in close collaboration with colleagues at Forest Action in Nepal and EMBRAPA Eastern Amazon in Brazil.

[87] Throughout the document for the sake of comprehension we use the concept REDD for REDD and REDD+ incentive's.

Table 1 Country Research Sites

Country Research Sites	Field Case Studies	Informants
Brazil Municipality of Anapú, state of Pará	PES - IPAM/FVPP project with financial resources from the Amazon Fund with 450 families* (including an organic cocoa cooperative); Non-PES - Two cases of alternative land reform, labelled Projects for Sustainable Development (PDS); with a total of near 400 families; one of the cases engage in reduced impact logging * only 100 of these households are settled in Anapu. The others reside in two neighbour municipalities: Pacajá and Senador José Porfírio.	- Small-scale farmers and forest users - Regional NGO - Municipality officials - Governmental official and extension workers - National research institute - national and regional level - Farmer cooperatives - Farmer union - Church land organization - PES agents from the NGO IPAM
Nepal Charikot, Dolokha District	PES - Community Forest User Groups participating in REDD piloting project - Local PES arrangements Non-PES - Community Forest User Groups - Leaser holder Forest User Groups	- Small-scale farmers and forest users - International NGO - National NGO - Local NGO – implementing - REDD piloting project - Government officials at national and regional levels - Community Forest User Leadership groups - Leaser Holder Forest User groups - International research institute

Findings

Country Contexts: contrasting farming systems

We first briefly summarize the key characteristics of the farming systems onto which the PES systems have been superimposed. The study site in Nepal, Dolakha district, is located in the mid hills. The villages are long established and the lands are spread over the hillside. The slopes are covered by a mosaic of forests, field and grass areas. Most of the agricultural land is rain fed, but down slope irrigated terraces are found.

Forest has long been a central resource to small holders, since it is an area for collection of animal fodder (branches and grass), animal bedding (dried leaves), as well as firewood and extracting timber for construction and selling. In common with many Nepalese villages, the study villages have established over twenty years ago a Community Forestry User Groups (CFUGs) that not only led to forest recovery (Pokharel et al., 2007) but gave the community user rights to the forest areas surrounding the village. The CFUG regulations allow for individual extraction i.e. use for household but not for commercial purposes. The CFUGs on an annual basis harvest timber and non timber forest products for sale and this income is used for village development (e.g building bridges, schools, paths), social purposes (payments to the poorest households, etc.) and forest management. CFUGs mainly planted pine forests, but there are areas of mixed pine and broadleaved trees and only broadleaved trees. Fodder trees on agricultural land are becoming increasingly more important and peoples' collection of fodder in the forest is decreasing.

The characteristics of the Nepalese farming system are its mountain landscape, long history of settlement, small farm sizes of 0.1 – 1.5 ha, integration of forest and arable systems through livestock and a mosaic landscape with regenerated forest. However the system is in transition driven

by two contrasting processes. On the one hand, as a result of shrinking farm sizes and a failing rural economy, there has been significant outmigration leading to declining labour availability and a retreat into a low input subsistence system by those left behind. In the study CFUGs, up to 50% of the households have a young male member working elsewhere. The resident households are sent remittances, which may be used to buy labour and food to a larger degree than before. On the other hand, in favourable locations with market access there has been a degree of intensification with more commercialized agriculture, intensified livestock production and some use of external inputs.

In contrast, the study site at the Brazilian Amazon is characterised by its recent settlement (families moved into the areas after 2002), relatively large farm sizes, forest clearance and extensive farming practices through swidden-based systems. Most farmers in the municipality of Anapu, a hotspot for deforestation, are settlers who arrived in the area since the Transamazon highway was constructed in the 1970s, responding to the state offer of plots of land, often 100 hectares, for colonization (Simmons et al., 2007). According to the 1996 forest legislation, the settlers are required to maintain 80 percent of the area's original forest on their land, and may only cultivate 20 percent.

The basic subsistence crops of rice, cassava, maize and beans are usually cultivated through a system of land use rotation that uses natural vegetation regeneration to restore soil fertility. Yet, farmers will return to a previously cropped plot only when primary forest is no longer available. This not only reflects the Amazonian dwellers' traditional practice, but it is also a labour saving technique (and labour is scarce) for opening up forest land. In addition, the basic ashes provide nutrients and improve the often very acid soil conditions for the crops. The main cash crop in Anapu is cocoa. However, the soil quality is frequently poor and for those farmers cultivating the poorer soils the cash crop alternatives are cassava, pasture, bananas, and the management and extraction of native palm fruit acai (*Euterpe olearacea*). Livestock is common in the region and cattle numbers are increasing. The grazing is often conducted very extensively and farmers sometimes cultivate pasture with the purpose to rent it out. The farmers do not collect manure, and rarely utilize chemical fertilizers. More often they use pesticides, if they can afford them.

Global and national REDD/PES masterplans and context specific implementation
Onto these two contrasting farming systems the REDD global masterplan has been superimposed but as will be seen with very different modalities and effects.

In Nepal the REDD initiative has been led by the Ministry of Forests and Soil Conservation (MOFSC) and welcomed by both state and non-state actors. It has basically followed the REDD-global model, pushed by the World Bank (through the Forest Carbon Partnership Facility). Nepal has a weak state, subject to strong influence by external donors and the model of REDD has not been questioned. However, MOFSC is a relatively strong ministry and there has been a long history of contention over forest resources between it and local forest users. Since the early 1990s activism by national NGOs in relation to forest rights has led to the growth of community based forest groups supported by strong participatory forest management initiatives and institutions. The growth of community based forestry at a time of relative state weakness may currently be under challenge as there are signs that the MOFSC is seeking to take back some of the powers that has ceded to the communities, using REDD to achieve this (Khatri, 2012 , Paudel et al., 2012).

In contrast in Brazil many forms of payment of ecosystem services (PES) have been initiated and REDD is only one of them. However, REDD in Brazil may achieve the scale of a mega venture as the country intends to set off 320 000 km^2, an area equivalent to two thirds of Sweden, in the Amazon region (Serviço Florestal Brasileiro, 2010). Common to government-sponsored PES incentives is that the state is reluctant to allow foreign driven schemes, and strives to maintain

financial and administrative control over the PES-projects. External money is funnelled into the Amazon Fund, managed by the Brazilian Social and Economic Development Bank (BNDES) and then redistributed to PES-projects presented by both government organizations and NGOs, and submitted through competitive calls. There are, however, also private initiatives where specific groups measure and certify carbon within demarcated territories and then attempt to find carbon sequestration investors on the private transnational voluntary market (Bonfante et al., 2012).

In Nepal REDD has been piloted in a catchment in Dolakha with with 58 CFUGs during 2009-2013 as well as in two other catchments (Gorkha and Chitwan). The pilot has largely focused on aspects of carbon sequestration measurement and payment mechanisms (Skutsch, 2012), reflecting a narrow technocratic agenda (Paudel et al., 2013) and the collective management of forests. The incentives and the payments are appointed toward the CFUGs. The PES project studied in Anapu region is actually broader in scope. It includes REDD funding and it targets 450 small-scale farms and individual farmers. The scheme prohibits slash-and-burn and the intention is to offer the farmers continuous extension services and provide alternative land use systems and technologies. The farmers receive a modest monetary compensation and the main incentive for farmers to join the scheme is the opportunity to receive extension services, which for all farmers are very scarce in the region, and eventually access to other sources of financial or built capital.

Demand for actors who can plan and broker the processes

The current REDD process in Nepal has been led by the MOFSC in collaboration with donors (particularly the Norwegian Agency for Development Cooperation, Norad). FECOFUN, the NGO initiated to represent the interests of the CFUGs has been the principal broker between the CFUGs and REDD. FECOFUN represents small-scale forest users in 15000 CFUGs and other community based forest management groups, promoting and protecting users' rights. In the past FECOFUN has been more of an adversary than a collaborator with MOFSC. However, in seeking to be active in the REDD process, in part related to reasons of funding, FECOFUN became the implementing NGO of the pilot REDD project (in collaboration with other two international NGOs). At each site/watershed level a REDD Network, represented by chairpersons of all the involved CFUGs, District Forest Office (DFO) and local governments has been established. FECOFUN has been quite instrumental in introducing REDD but with a mixed agenda; it appears to be on the side of forest users but it is perceived as 'captured' by project funding and became subject to criticism from its members. CFUGs outside the REDD pilot have questioned whether FECOFUN continues to represent all the CFUGs when its attention have been focused towards the REDD pilot CFUGs at the regional level. In this process, the model of REDD has not been questioned and not even the key non-government actors have challenged its impact on forest governance and local livelihoods. Instead they have treated REDD as a source of funding (Paudel et al., 2012).

In the Brazilian case, regardless of whether the farmers of the Anapu area are part of the PES-project or not, they often negotiate with numerous state agencies and NGOs. Both federal and state bodies deal with the farmers, both directly or through consultancies and NGOs. The rural unions, social movements, the Catholic land committee, NGOs, university faculty and researchers also play an important role. Specifically in Anapu, a convoluted political process resulted from internal disputes within farmers' organizations. Members of the farmers' union have been accused of cooperating informally with illegal loggers and the union has a severe conflict with the federal land reform agency, INCRA, which is one of the most important rural actors. In this complex web of actors there is no neutral position, and the conflicts and tensions are reproduced within the farmer communities, causing deep tensions. The traditional patron-client relationships with large landowners have thus been replaced with a multi-stranded patron-client network, which the farmers have to find their way through, either directly or through mediation by brokers. Leaders of the farmer communities have greater contact with these external actors than ordinary farmers,

and facilitated access to material resources and wider networks stimulates residents to apply for management positions at local organizations, what does not necessarily reflect actual leadership.

PES-schemes in complex physical and social landscapes

The REDD pilot project in Nepal is as noted (Skutsch et al. 2012) with a technocratic agenda. Further it has determined that 40% of the payments should be used for forest management and 60% for social purposes. However this exercise has taken place in a complex physical landscape. The village forest areas in the hills are fragmented, diverse and not very large (seldom over 100 ha), relatively spare and slow growing and are not carbon rich forests. Brazil on the other hand, has fast growing, carbon rich forest vegetation in one of the most biodiverse biomes on the planet. In both areas the timber represents a high value resource and illegal loggers are present, however the value of the timber in the forest frontier in Brazil is considerably greater than in Himalayan Mountains of Nepal

The REDD pilot or PES projects are also engaging with complex, dynamic and diverse social settings. In the case of Nepal REDD it has been superimposed onto a history of already accumulated carbon through social forestry during the last decades. It has also been superimposed on an existing social organisation (the CFUG). But the membership of CFUG shows strong social (caste) and economic differentiation in terms of assets, incomes and forest dependence is variable. Thus there is a contrast between the interests and relative power of a high caste family with monthly pension from the army, one ha of irrigated and rain fed land, with 2 cows and 4 goats and a low caste family with 0.3 ha of poor quality rain fed land and 1-2 goats who survive on daily farm wage labour. Both are members of the same CFUG but do not have the same social position within the group or the same possibilities to participate in activities. Some interviewed households said that they could not afford to go to the REDD meeting as they had to work for wages to earn their living. Caste identity also services to restrict or enable different households within the CFUG in different and various ways (World_Bank, 2007).

The scope of REDD related programs in Brazil has been controversial due to the extremely skewed land distribution in the country. Some discourses target the poorest farmers, extractivist groups as well as indigenous people. However, other sectors argue that land-based schemes such as REDD will benefit the largest landowners who will receive compensation for not expanding their pastures or soy fields. Farmers who participate in the REDD program in the municipality of Anapu have been selected by the rural union and the Amazon Environmental Research Institute (IPAM), an NGO which plays an important mediating role between the state, social movements and farmers. This means that the specific farmer groups targeted, with their mode of production, social organization, sources of livelihood and the forms and intensity of the non-economic support have important impacts on the implementation and results of REDD.

Since 2010 the participating CFUGs in Nepal in the pilot areas have received sums about 500-1000 € per year. The targeting to the poorest has mainly been interest free loans to buy animals or to start vegetable farming and different kinds of training. The interviewed CFUGs however say that forest management practices have remained the same as before the REDD pilot projects. CFUGs outside REDD also direct some of the community forest earnings to the most marginalized people.

In Brazil the financial payments that farmers who participate in PES (approximately 50 USD per month) corresponds to about 15% of a monthly minimum wage in the country, which is not enough to compensate reduced yields due to the lack of burning, insufficient to hire workers and thus leaving the farmer with a cost rather than a gain when participating. So far the PES project has run one year out of the planned five year period, and it is too early to evaluate whether or not it will succeed, but it is speculated that the low level of compensation might prevent farmers for participating, however on the other hand the other project benefits may provide the needed attrac-

tiveness, if the extension work is well implemented. The first year consisted mainly of an administrative and communicative starting-up phase. As noted the technical assistance provided by the PES-project is not coordinated with assistance from other actors, except the land agency INCRA, but rather constitutes a parallel autonomous strand.

PES and the focus on carbon versus other environmental services provided in existing farming systems

Our research findings indicate that existing strong formal, sectorial and bureaucratic divisions that compartmentalize forestry and agriculture tend to be exacerbated by REDD. But that division is not reflected in peoples' livelihoods or farming systems and it is the connections between forestry and agriculture that emerges strongly in all cases in resource management practices of poor people. There is a disjuncture between the ecosystem service dynamics in the existing livelihood systems on the one hand and the structure and governance to deal with the ecosystem service payments from forests on the other.

In Nepalese traditional hill farming systems there is significant nutrient flow between forestry and agriculture, a transformation of ES with the help of livestock; forest nutrients are processed through livestock feed and leaf litter used for bedding and become the manure applied to fields. Most farmers produce mainly for subsistence although there is a growing amount of commercial vegetable cropping using external inputs. Declining livestock numbers and intensification of production combined with an increasing role for on-farm agroforestry and private forests in providing fodder may be reducing nutrient outflows from forests. The community forests are quite well established mature forests, managed mainly for timber and to a certain degree NTFPs (e.g. cardamom, *loktha* and *daphne* (used for paper), *argeli* (used as pepper).

One of the unintended consequences when CFUGs were given the user rights over their adjacent forests, and livestock grazing in forests became more regulated was that in combination with the high outmigration to the cities, an increasing number of trees and forests were planted on private agricultural land. Somewhat ironically from the REDD perspective, it seems like it is actually in the agricultural land where the rate of carbon sequestration is significant. In the studied CFUGs10-20% of the agricultural land was covered by trees and forest, which corresponds to an area equivalent to 20-40% of their forest areas. The interesting aspect of these private forest/trees is that they are planted and managed according to the use and need of the local household (fodder, timber, NTPF) rather than the regulations of the CFUG or the global community. There are indications that in several of the REDD pilot participating CFUGs, the strong focus on carbon sequestration is contradictory to villagers' use and need for forest with respect to species preference, degree of canopy cover and management actions.

Further the mosaic of forest and agricultural land, with heavy investments in terracing, creates landscape stability, an essential ingredient in an environment where landslides are a major hazard. Nevertheless, this diverse mosaic landscape the farmers act in, is not reflected in how natural resources are dealt with in decision and policy making. Rather, there is a sharp sectorial divide between forestry and agricultural land, each having distinct tenure regimes and property rights. Equally when it comes to ministries, governmental officials, and professional training, they all have sectorial specialization, which are not conducive to creating strategies for natural resources and ES provision at a landscape level and integrating the roles of forestry and agriculture land use.

In Brazil the settlers in the Anapu municipality practice swidden farming, cultivating subsistence crops such as rice, maize and cassava and as a main cash crop cocoa, practices that challenge forest conservation. However, REDD money in Anapu has been channelled into a PES initiative and a strict carbon and forest focus that departs from a broader farm perspective. The extension

services have mainly focused on agricultural practices, such as farming without burning, limiting the pasture size through intensification, and the establishment of permanent tree crops (cacao), i.e. actions that are all favourable for ES, but mainly within agricultural lands. A new national forest law has been approved in 2012, which obliges a majority of farmers' land to be kept under forest cover. Advanced remote sensing surveillance is being used to monitor deforestation at the landholding level, and farmers who do not comply with the standards are barred from access to credit. Yet, no mechanisms have been devised to foster reduced impact logging or sustainable forest management in these lands. Farmers' possibilities and will to maintain the forest cover is of course dependent on how their production develops on their agricultural land, but there are also powerful actors influencing the small holders' forest management decisions.

There are a number of actors -federal and state entities, as well as NGOs and private consultancies - that offer the farmers extension services. The actual technical assistance the farmers receive is however insufficient and poorly coordinated, thus decreasing the synergy and impact potential. The crucial factor for limiting deforestation does not seem to be the choice between PES and non-PES programs, but rather the scope and depth of extension services offered by state and non-state actors. However, the challenge to find long-term sustainable agricultural alternatives in areas that are not suitable for agriculture in the first place remains so far unsolved. Our research shows the importance of initiating agrarian and social processes of change (including perception of forest and wild biodiversity) together with the local farmers, as a way to find possible alternatives or variants to the present swidden agricultural system. A major problem in the case study in the Amazon is the lack of public support for sustainable forestry, what exacerbates the expression of interests of private companies and illegal logging. Increased enforcement to environmental regulations in the past decade has heavily hit the logging sector, but informal and illegal operations are still widespread. Economic and political power of the logging sector, and the occurrence of illegal logging is still strong in Anapu. The money they pay for timber offers needed capital to small-scale farmers. Even the forest management initiative carried out in one of the case studies resulted strongly dependent on the interests of a private logging company. In five years of implementation, the lack of public monitoring of practices imposed by the logging company allowed patron-client relations and even prompted the expression of distrusts within farmers' organizations. Furthermore, both leading politicians and members of the rural union are allegedly cooperating with loggers, thus eroding the resistance to both deforestation and to community initiatives towards sustainable forest management. It is unclear how the PES-project shall be able to mitigate the loggers' activities, not least since the project is executed in close cooperation with the rural union.

Indigenous reserves may constitute a major potential location for forest related PES projects. There are 663 reserves in Brazil, covering more than one million km^2, mostly in the Amazon. Here PES-projects, particularly REDD, could provide indigenous people with investments and external monitoring of the threatened borders of their reserves. However, except in situations funded by the voluntary market, these schemes should also follow regulations imposed by the federal government. So far only the Suruí people in Rondonia state have established a REDD demarcated area.

Discussion

The outcome of competing interests and actions of state bureaucracies and other actors
The bureaucratic organization and the schemes designed to create sustainable agriculture and forest management rarely take into consideration the local contexts and how these influence the outcome of these schemes. The bureaucracy is often poorly coordinated and unable to efficiently tackle illegal logging and their role in local informal economic and political alliances. Affluent actors are often able to use money and political contacts to dodge political restrictions, in contrast to farmers. This is particularly salient in the case of forest management in Brazil, where the state prioritizes the interests of large companies, while monitoring and sanctions against mismanagement and illegal logging seldom target the real culprit, but mostly the farmers.

The role of brokers
The bureaucratic complexity and hierarchy of REDD make small-scale farmers dependent on multi-stranded patron-client relationships to achieve financial and political ends. The gap between smallholders and decision-makers is often bridged by brokers, who tend to have their own agendas, thus affecting the communication between farmers and authorities. One example in Brazil is the prominent role played by the rural union in the selection of households that are offered to participate in the PES scheme. Another example is the important advisory role of NGOs (i.e. FVPP and IPAM) functioning as brokers between farmers and government agencies. In the case of Anapu, however, the alleged cooperation of members of the rural union with loggers thus has the potential of dividing smallholders into antagonistic factions and counteract sustainable forest management objectives as well as the provision of ES.

In Nepal FECOFUN has traditionally been the NGO representing the CFUGs but presently transformed into a promoter of REDD. At a regional level FECOFUN has become dependent on REDD for financing and at the same time has failed to ask critical questions on the effects REDD might have on rural households in the mountainous landscape such as Dolakha. There is a risk that FECOFUN as the implementing agent in seeking to piloting how to monetize the value of ecosystem services in the forest, has not actually safeguarded the interest of the CFUGs. A further question is who the local CFUG represents. The set up of CFUGs and their experience of projects have been factors that most probably have been highly favourable for implementation of the REDD pilot. However, it might also have contributed to overlooking how the poorest households depend on the forest for their livelihoods and farming systems.

The PES schemes' technical complexity, its implications, and the strong focus on carbon sequestration
Our research shows that it is of vital importance to avoid the sectorial divisions between forest and agriculture and offer smallholders extension and training where agriculture and forest management are integrated components of the farm and the landscape and where biodiversity, water, soil fertility, landscape stability are interlaced parts of the aim of the management, as well as carbon sequestering. Moreover, these biophysical components should be treated in unison as a constituent part of a broader social-ecological system, therefore taking into consideration the singularities of the involved social groups.

A strong carbon focus appears to have marginalised locally and nationally relevant discussions on provision; and thereby diminished the potential significance of ecosystem service management by poor people in adapting to climate change. There is no quick fix to achieve and integrate sustainable agriculture and forest maintenance, instead several different policy areas and measures are necessary, where individual or community group based PES could be one option, if it is included as one part of an integrated support package for small-scale farmers, interlacing food production and provision of ES on a landscape level

Most of the REDD-projects which have been implemented are called pilot projects; i.e. their function and their outcomes one might suppose are being closely monitored and assessed so that if and when the REDD scheme is launched it can build on these experiences and address the weaknesses of the pilot projects. However, it would appear that the pilot has been designed to vindicate the REDD approach and criteria for assessments have been poorly developed. While the initiative studied in Brazil is still in its early stages for a proper assessment, we suggest that the REDD pilot scheme in Nepal has focused more on how to monetize carbon sequestration and how to make payments, rather than address the practices to increase carbon sequestration and improve rural livelihoods and the sustainability of farming systems.

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