REDD net case study

Networking for equity in forest climate policy

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REDD+ and Adaptation in Nepal

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A community in Nepal dividing up the fuelwood harvest from their community forest
Source: Maksha Maharjan

INTRODUCTION

Nepal's geographic position in the Himalayas makes it particularly vulnerable to the effects of climate change. With rising temperatures there is an increased likelihood of natural disasters including glacial lake outburst floods (GLOFs), landslides and flooding, as glaciers melt and rainfall becomes erratic (GAR, 2009; IPCC, 2007). These natural factors exacerbate social vulnerabilities such as widespread poverty, a large agriculture-dependent population, poor governance and low institutional capacity (NCVST, 2009). Strengthening the adaptive capacity of communities in the face of climate change thus constitutes a development priority for Nepal (GoN, 2010a).

KEY POINTS

- Nepal has approached REDD+ not only as a mitigation opportunity but also as a means of contributing to development and poverty reduction objectives in the context of adaptation to climate change.
- Nepal has placed community forestry at the heart of its REDD+ and adaptation strategies. However, adaptation and mitigation measures are not automatically compatible and tradeoffs may be required. For instance, the emphasis on forest protection in both community forestry and REDD+ may restrict access of the poor to key assets, weakening the adaptive capacity of the most vulnerable.
- While community forestry provides an established, powerful and appropriate local grounding for REDD+, persistent concerns about elite capture and inequitable benefit sharing within community institutions will need to be addressed if REDD+ is to enhance the adaptive capacity of the entire community, poor included. Evidence suggests that the adoption of collaborative management principles within community structures can help to address these issues and prevent the adaptive strategies of one social group weakening the adaptive capacity of others.
- A key challenge to producing a REDD+ strategy in Nepal that is 'adaptation friendly' will be the effective empowerment of community forest groups to map out local climate impacts, adaptation needs and strategies to enhance resilience – enabling local communities to balance adaptation and mitigation imperatives themselves. On the one hand this will require widespread capacity-building of communities and local institutions, and on the other will require better links between institutions to facilitate information and resource flows. One important way of achieving this will be establishing principles of adaptive and collaborative management within and between national and local institutions,

DISCLAIMER

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providing for overall emissions reductions ('top-down' measures) while securing the ability of communities to flexibly respond to a changing environment ('bottom-up' actions). The links between local institutions and district/watershed coordination bodies will therefore be critical in the design of a REDD+ beneficial for adaptive capacity.

- To ensure that appropriate consideration is given to enhancing the synergies between REDD+ and adaptation, there should be greater coordination between adaptation and REDD+ policies at the policy level. Adaptation appears to be conceived in the NAPA as a series of projects rather than as a decision-making process to be embedded in the culture of all ministries, including those implementing REDD+.
- The structure of carbon rights, benefit-sharing and land tenure will have a significant impact on whether REDD+ in Nepal strengthens or weakens adaptive capacity at the local level. Participation of forest communities and civil society in policy and design processes is essential if local adaptive capacity is to be strengthened. Many important decisions are yet to be taken, for instance the government is committed to a process of land reform but is yet to publish specific proposals.

Nepal's rural majority relies heavily upon forest resources and natural assets: 84% of the population resides in rural areas with agriculture providing the primary income source for 66% (GoN, 2010a). Collection of fuelwood, grazing of livestock and cultivation/collection of non-timber forest products (NTFPs) such as Lokta are key subsistence activities (Pandit and Thapa, 2004; FAO, 2009; Maharjan, 2009). Management of forest ecosystems and biodiversity is consequently seen as a priority area when considering adaptation to climate change, as healthy and diverse ecosystems are integral to maintaining and enhancing the adaptive capacity of local communities and the forests themselves (IUCN, 2009). Sustainably managed forest can secure a range of ecosystem services beneficial for adaptation, including provisioning services (ensuring consistent food supply, income from NTFPs and fuelwood and fodder for livestock), regulating services (stabilizing soil and providing shelter from landslides and flooding), supporting services (such as soil formation and nutrient cycling), as well as a range of cultural services (UNEP, 2009).

Reduced Emissions from Deforestation and Degradation (REDD+) has emerged as a major international mitigation mechanism supported broadly by developed and developing countries, aimed at reducing forest sector emissions in developing countries (FCCC/CP/2010/7/Add.1: Decision 1/CP.16). However, Nepal's interest in REDD+ lies not only in mitigation but in the potential ability of REDD+ to contribute to wider development goals including poverty alleviation, development of rural livelihoods and adaptation to a changing climate (GoN, 2010b). Indeed, the NAPA and the R-PP envisage the existing institutions of Nepal's community forestry programme playing a key role in implementation of both adaptation and REDD+ strategies.

While synergies between mitigation and adaptation projects are achievable in many cases they are certainly not guaranteed (Locatelli et al., 2010; Somorin et al., 2011;). REDD+ appears likely to contribute to the adaptive capacity of forest ecosystems by enhancing the existence of natural assets, but there is more uncertainty regarding the impact of REDD+ on the institutions regulating access to these assets and consequently the adaptive capacity of human forest communities (Locatelli et al., 2010; Graham, 2011). For instance, while REDD+ in Nepal may enhance the adaptive capacity of communities by diversifying income streams, creating economic opportunity and strengthening local institutions, REDD+ may also weaken adaptive capacity by restricting or redistributing forest management rights, encouraging re-centralized forest governance, creating dependence upon external funding, or exacerbating social inequities caused by uneven benefit-sharing. The potential for trade-offs between REDD+ and adaptation emerges from the tension between the characterization of forests as a carbon sink in REDD+ (prompting an emphasis on forest protection) and as a livelihood source for local communities in adaptation (emphasizing the importance of forest management) (Locatelli et al., 2011).

This case study examines how REDD+ and adaptation policies are currently aligned in Nepal's national policy, before assessing whether planning for REDD+, outlined in the Readiness Preparation Proposal (R-PP), is likely to contribute to adaptive capacity at the local level. While adaptive capacity cannot be directly measured, the Local Adaptive Capacity (LAC) framework developed by the African Climate Change Resilience Alliance (ACCRA) will be used to analyze not only the existence and availability of assets necessary for adapting to climate change but also the development of processes and functions needed for supporting the adaptive capacities of communities (Jones et al., 2010a).

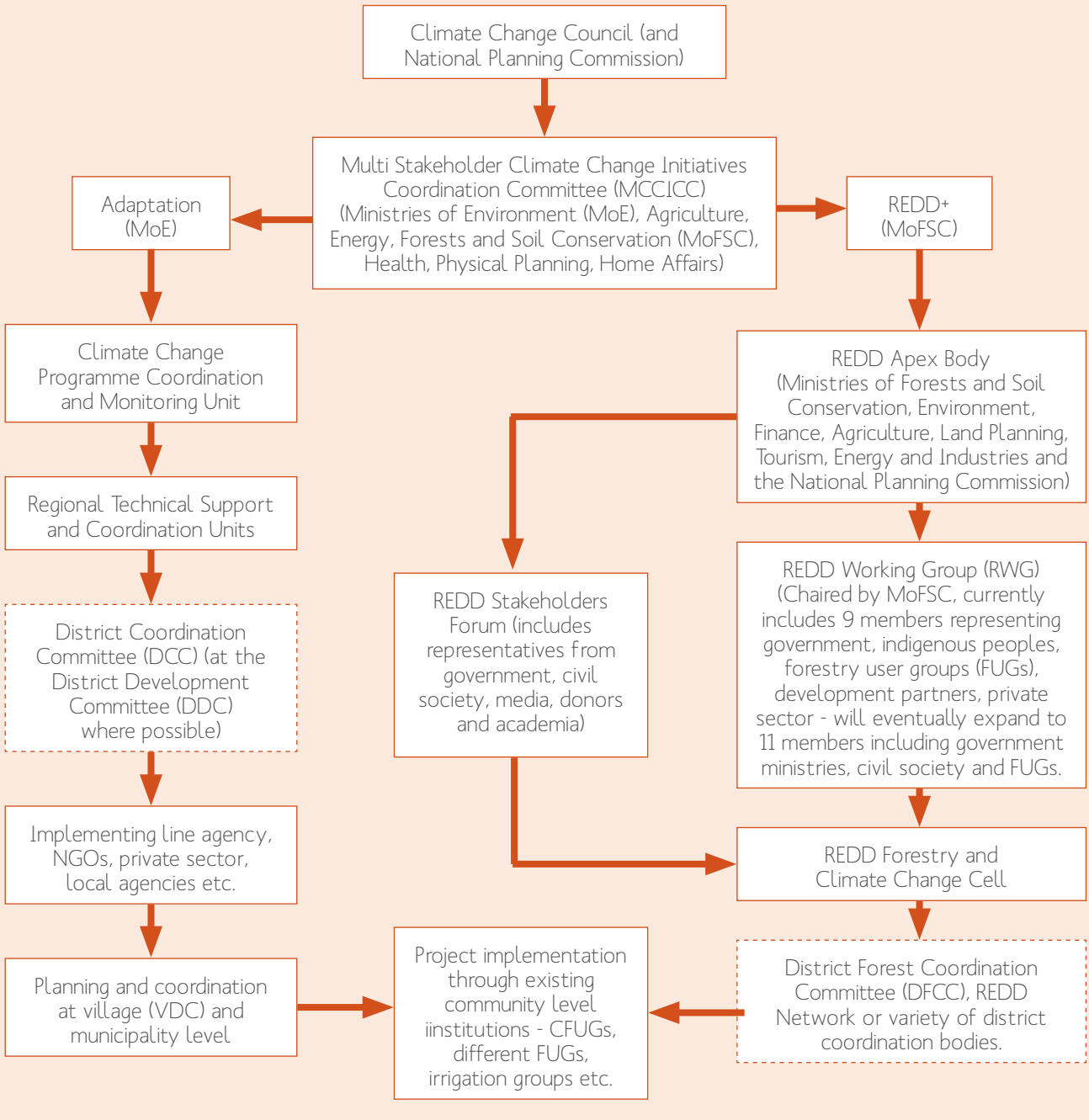
ADAPTATION IN NEPAL

At the local level climate change adaptation has been practiced on an ad-hoc basis by rural communities for several decades. Community Forestry User Groups (CFUGs) (forestry user groups constituted under the government's community forestry (CF) program) and District/Village

Development Committees (D/VDCs) have been particularly active. Widespread forest degradation under the nationalized forest regime implemented in 1957 prompted the government to begin a process of decentralization, allocating forest management rights to communities with the aim of encouraging forest restoration and conservation (Agrawal and Ostrom, 2001; Ojha et al., 2009). This process was institutionalized by the Forest Act (1993) and the Forest Regulations (1995). By April 2009 about one third of the Nepalese population was participating in CF, managing more than a quarter of the total forest area (Ojha, 2009).

CFUGs are handed forest management rights enabling them to market and sell forest produce, establish private enterprises, make profits, mortgage standing forest products to obtain loans and enter independent agreements with private parties and NGOs. These freedoms are subject to an operational plan (OP) agreed between users and the District Forest Office (DFO) including conservation measures, and conditioned by the requirement that 25% of revenues are invested back into forestry management and social development schemes (Ojha, 2009). CFUGs have been using these revenues to respond to climatic changes, for example through selection of multi-purpose tree species,

FIGURE 1: REDD+ AND ADAPTATION PLANNING IN NEPAL



development of new subsistence crops and stabilization of hillsides through tree-planting (McDougall et al., 2007; Pokharel and Byrne, 2009). Groups of CFUGs have also pooled their resources to leverage the development funds of D/VDCs for larger infrastructure projects such as rural electrification, school-building and disaster risk management which can also potentially enhance adaptive capacity (Maharjan et al., 2009). Operational Plans drawn up since 2008, guided by the Community Forestry Guidelines (2007), emphasize that the primary role of the CFUG is to increase climate resilience and practice disaster risk management (Kumar, 2012 forthcoming).

At the national level, Nepal's adaptation strategy has emerged from the National Adaptation Programme of Action (NAPA) finalized in 2010 pursuant to UNFCCC requirements (FCCC/CP/2001/13/Add.1: Decision 5/CP.7). Noting that an estimated annual warming rate, averaged nationwide, of 0.04 - 0.06 degrees centigrade (Shrestha et al., 1999; Practical Action, 2009) has resulted in declining crop yields, increased risk of floods, droughts and landslides damaging to agriculture and infrastructure, upward shift of agro-ecological zones and increased spread of pests and alien invasive species, the NAPA identifies a range of adaptation actions situated within the overarching development goal of poverty reduction (GoN, 2010). Proposed forestry-related activities include plantation forestry to increase fuelwood supply, scale-up of biomass energy generation to reduce fuelwood consumption, government support for the adaptation priorities of CFUGs and facilitation of market linkages and voluntary carbon financing (GoN, 2010).

Acting as the designated national authority (DNA), the Ministry of Environment (MoE) has developed the institutional architecture for NAPA implementation (see Figure 1). Crucially, integrated management of natural resources (including agriculture, water, forests and biodiversity) is proposed through the development of local adaptation plans of action (LAPAs) and community adaptation planning (CAP). LAPAs provide a site where climate vulnerability assessments conducted by local communities and CFUGs can be integrated with national risk assessments and presented for inclusion within village and district development strategies (GoN, 2010; Regmi and Karki, 2010).

However, while the NAPA provides a comprehensive assessment of projects needed and supplies a potentially powerful implementation apparatus building on local institutions, there remains a severe lack of capacity and excessive donor-reliance which threatens the enhancement of adaptive capacity in the long-term. A lack of capacity at the ministerial and agency level has resulted in key projects, including the pilot LAPA process, bypassing the identified structures and being implemented by consultancies and donors (Wiseman and Chhetri, 2011). This reliance on external actors retards institutional learning and development of Nepali human resources and puts at risk the great enthusiasm of local communities participating in the LAPA process (Rabin Bogati, pers. comm). LAPAs and proposed Community Adaptation Plans of Action (CAPA) should be supported institutionally by government bodies and a route for uptake of local knowledge in the policy process must be provided. The establishment of the MCCICC, tasked with coordinating a sustainable structure through which climate change programmes can be implemented and financed, and the Climate Change Knowledge Management Centre, which provides a learning platform through which government capacity could be enhanced, should be used as a starting point to address these institutional gaps (Dixit, 2010; Wiseman and Chhetri, 2011). If REDD+ is to enhance adaptive capacity in Nepal it must strengthen the processes of climate planning and development by integrating local and national initiatives.

DEVELOPMENT OF REDD+ IN NEPAL

Forests cover just under 40% of Nepal and have experienced an annual deforestation rate of about 2% for the past 30 years, although this varies by region with deforestation now occurring largely in the lowland Terai (at about 2.7% annually) and in the high mountains bordering Tibet. Forests in the mid-hills are predominantly stable or even increasing in size (GoN, 2010b).

REDD+ has been embraced by the Nepalese government as a means of addressing deforestation in the Terai, contributing to sustainable forest management and poverty reduction and attracting investment to a forest sector that has experienced declining revenues in recent years (GoN, 2010b). Nepal completed its REDD Readiness Preparation Proposal (R-PP) in 2010 and is in the process of developing its REDD+ Strategy with finance and policy assistance from the World Bank's Forest Carbon Partnership Facility (FCPF).

Responsibility for REDD+ strategy and implementation has been placed with the Ministry of Forests and Soil Conservation (MoFSC), which, as in many countries, has developed an implementation structure largely separate to that of adaptation (see Figure 1); however, like the NAPA the R-PP envisages existing structures of community forestry playing a critical role at the local level. The R-PP forsees REDD+ funds, garnered from donors and potentially the international carbon market, paid into a central government trust fund and distributed to district-level coordinating

entities, before being shared amongst participating communities and forest user groups. This structure has been designed to address scale, leakage and permanence concerns widely discussed at the international policy-making level (Verchot and Petkova, 2009; West, 2010).

However, integrating the relatively autonomous institutions created by various participatory forestry approaches (including CF, collaborative forest management (CFM), leasehold forests, religious forests and protected areas) with district level coordination and development bodies remains a primary challenge as each forestry regime enjoys contrasting portfolios of management rights negotiated to reflect their particular circumstances. For instance, while the R-PP proposes the extension of District Forest Coordination Committees (DFCCs) under the DDC, as used in CFM largely within the Terai region this approach is vehemently opposed by CFUGs and their associative body FECOFUN (Federation of Community Forest Users, Nepal) because they fear greater government control over CFUG revenue (Luintel, 2006). Centrally or regionally imposed restrictions on local management rights are likely to affect adaptive capacity, potentially increasing revenues for richer community members but likely reducing household income and access to subsistence resources for the poorest (Maharjan et al., 2009; Brown et al., 2002). The lack of pilot REDD+ projects in the Terai region with the CFM model has prevented a thorough analysis of the potential impacts of REDD+ on these communities.

SIMILARITIES AND SYNERGIES BETWEEN REDD+ AND ADAPTATION AT THE POLICY LEVEL

There are significant opportunities for synergistic REDD+ and adaptation policy development in Nepal. For instance, activities identified in the NAPA such as expansion of plantation forestry for fuelwood and state support for biogas development have the potential to enhance REDD+ effectiveness by addressing the drivers of deforestation (Gregersen et al., 2011). Both adaptation and REDD+ policy documents seek to enhance the capabilities of existing community forestry institutions to deliver successful outcomes under the overarching development goals of poverty alleviation, rural development and sustainable natural resource management. The success of both adaptation and REDD+ strategies is recognized to be contingent on the creation of effective structures for the interaction of 'bottom-up' and 'top-down' approaches (Regmi and Karki, 2010; Graham, 2011). In terms of 'bottom-up' approaches, Nepal benefits from a strong community forestry sector with a proven ability to reduce deforestation and implement locally relevant adaptation actions, while 'top-down' commitment from central government is exemplified in the high-level Climate Change Council.

One important way of fulfilling these potential synergies will be to design mutually supportive coordinating entities at the district and watershed levels. However, significant obstacles exist here as there is no institutional mandate to address REDD+ and adaptation together (pers. comm. Rimal Sagar, REDD Cell), risking a proliferation of conflicting or duplicating 'coordination' bodies. The R-PP does not situate REDD+ within the 3-stage NAPA process designed to incorporate adaptation into all areas of development planning, an omission that appears to compromise the ability of REDD+ to enhance adaptive capacity. The incorporation of REDD+ into LAPA planning in particular could ensure that REDD+ supports local-level adaptation priorities.

AN 'ADAPTATION-FRIENDLY' REDD+ STRATEGY IN NEPAL

An 'adaptation-friendly' REDD+ strategy is necessary to ensure that the synergies between REDD+ and adaptation are enhanced and the trade-offs reduced. This will be particularly important in a context where rural poverty reduction is an overriding development goal and one of the largest emerging threats to rural development is climate change. Where a REDD+ scheme, for example, restricts the freedom of the poor to collect firewood, an 'adaptation-friendly' strategy may consequently ensure that a proportion of the revenues from REDD+ are invested in an alternative community energy source, e.g. biogas, accessible by the poor. A REDD+ mechanism that is adaptation-friendly will be necessary not only to achieve equity but also to secure ecological integrity. Experience from CF suggests that CFUG decision-making is unresponsive to the changing resource needs of community members is likely to result in leakage, with forest degradation moving to neighbouring government forests (Malla et al., 2003). This is a reminder that while including adaptation imperatives in REDD+ may appear to reduce the efficiency of emissions reductions in the short-term, such coordination is likely to improve effectiveness in the long-term.

Adaptive capacity can be defined as the ability of a system 'to adjust, modify or change its characteristics or actions to moderate potential damage, take advantage of opportunities or cope with the consequences of shock or stress' (Brooks et al., 2003) - assessment of adaptive capacity therefore

looks closely at what a system does to enable adaptation as well as what it has (Jones et al., 2010a). A REDD+ mechanism that will work to enhance adaptive capacity will balance the need for strong and effective governance with the flexibility required by local communities to adapt to changing challenges and opportunities. If REDD+ can be structured to impact positively on five crucial aspects of local adaptive capacity - the asset base, institutions and entitlements, knowledge and information, innovation and flexible forward-thinking decision-making and governance - it may provide Nepal with an effective climate compatible development strategy (providing the 'triple-win' of keeping emissions low, building resilience to climate change impacts and promoting development simultaneously) (Mitchell and Maxwell, 2010).

THE LOCAL ADAPTIVE CAPACITY FRAMEWORK (LAC)

The asset base

Implementation method: A communities' ability to adapt to change is heavily influenced by the types of tangible and intangible assets it holds (Prowse and Scott, 2008). The method of implementing REDD+ is crucial in achieving a positive impact on the availability, diversity, and redundancy of assets (Ospina and Heeks, 2010). Nepal has chosen to implement REDD+ through existing community forestry structures, which have proven adept at improving forest cover and density, and the overall existence of natural assets (Winrock 2002; Nurse and Malla, 2005). However, widespread capture of CFUG committees by local elites, and an institutional emphasis on forest protection rather than sustainable management, has resulted in prioritization of the interests of the more well-off and prompted restrictions on access to key assets such as fuelwood on which the poor are proportionately more reliant (McDougall, 2007; Ojha et al., 2009). In order to achieve positive impacts on the availability of assets, REDD+ will need to encourage institutional change within CFUGs. Studies suggest that CFUGs are willing and able to develop adaptive and collaborative forms of governance that effectively address the needs of the marginalized (Bhattarai, 2007; Banjade et al., 2008) but that these changes must be incentivized and institutionally supported from above to ensure that gains are 'locked-in' (McDougall, 2007).

Benefit Sharing: Benefit sharing is capable of either reducing or enhancing the availability of, and access to, assets. Community forestry in Nepal has been shown to generally reduce individual household income by restricting access to natural assets; this income is redirected to collective CFUG funds (Maharjan et al., 2009). Equitable benefit sharing will therefore be essential in maintaining the adaptive capacity of communities participating in a future REDD+ programme likely to maintain or increase such restrictions. While CFUGs have proved adept at using these collective funds to implement local adaptation and development projects, such projects do not always enhance the adaptive capacity of all. For instance, CFUGs have restricted fuelwood collection and attempted to replace this asset through rural electrification schemes ('in-kind' benefit sharing). However, in some cases, poor households are unable to afford the consequent electricity bills and suffer a net reduction in access to assets (Maharjan et al., 2009). On the other hand targeted benefit-sharing could increase access of the poor to assets by conditioning payments on social criteria, e.g. inclusion of women and dalits in decision-making. While this method has been successful in increasing the availability of assets to certain marginalized groups, close attention would need to be paid to ameliorating the potential social discontent caused as equity requirements are likely to be perceived as 'hand-outs' imposed upon traditional social structures by 'outsiders' (Maharjan et al., 2009).

Forest Governance: The effect of REDD+ on forest governance will fundamentally affect the availability of and access to assets for local communities (Springate-Baginski and Wollenberg, 2010; Transparency International, 2011). A decentralisation agenda including devolution of management and ownership rights to local communities has been strongly linked to an increase in availability of assets (Agrawal et al. 2008; Macqueen, 2011), although problems occur when either too much responsibility is devolved without requisite capacity-building, or too little in an attempt to maintain centralised control over forests (Larson and Ribot, 2009). Trade-offs and synergies between mitigation and adaptation actions are site-specific and institutions that enhance adaptive capacity will likely empower local communities to make decisions relevant to their particular situation (Dangi, 2011). Nepal has been a frontrunner in devolving forest management rights to local communities over the past decades.

However, while the 'standard' CF model has been successful in reversing the deforestation trend in the mid-hills region, the GoN remains reluctant to concede control of the lowland Terai region - home to the most valuable tree species for timber. Here a variety of factors including larger forest size, increased heterogeneity among user groups, greater exploitation by distant users, greater proximity to timber markets and a government desire to retain revenue streams from high value Sal timber have contributed to the emergence of a different forest management model (Banjade et al., 2011). Collaborative forest management (CFM)

BOX 1: REDD IN COMMUNITY MANAGED FORESTS IN NEPAL

(Pilot Project Implemented by the International Center for Integrated Mountain Development (ICIMOD), the Network for Sustainable Agriculture and Bio-resources (ANSAB) and the Federation of Community Forest Users, Nepal (FECOFUN).

ICIMOD, ANSAB and FECOFUN have jointly implemented a REDD+ pilot project in three districts of Nepal, covering 10,266ha of community forest. The project aims to develop an effective results-based payment structure for REDD+ by linking 105 individual CFUGs and more than 18,000 households to watershed level coordination bodies called REDD Networks. REDD Networks include representatives from participating CFUG committees, while a Watershed Fund Advisory Committee (WFAC) advising on fund distribution includes representatives from the District Forest Office, FECOFUN and local government (DDC and DCC). Funds are disbursed from the central Forest Carbon Trust Fund (FCTF) constituted of the MoFSC, FECOFUN, REDD Networks, ANSAB and ICIMOD (among others) to the WFAC which then distributes funds to the REDD Networks which in turn pass on funds to individual CFUGs.

The project recently distributed US$ 21,905 to Kayarkola watershed in Chitwan, US$ 45,535 to Charnawati watershed in Dolakha and US$ 27,560 to Ludikhola watershed in Gorkha. Payments are made to CFUGs on the basis of four elements: 40% dependent on carbon sequestered, 25% on the proportion of indigenous peoples and dalits, 15% on the proportion of women and 20% on the number of poor households. While this structure has resulted in material gains for specified households and has successfully incentivized forest conservation, it has been noted that the focus on social equity has resulted in a complex mechanism difficult even for professionals to understand. The overlapping nature of the criteria (e.g. individuals can be female, poor and from a minority) may have resulted in multiple payments potentially causing social disorder, while the size of the payments, made in the absence of any international agreement on REDD+ or forest carbon pricing, may unduly raise expectations among communities. Furthermore, the DFO and local government have remained on the sidelines, raising concerns about prospects for the scheme when funding is exhausted. Problems encountered by the project confirm that benefit-sharing structures will have an uneven and potentially volatile effect on the availability of assets and consequently the adaptive capacities of, and relations between, different social classes within CFUGs.

Sources: GoN, 2011; ICIMOD, ANSAB and FECOFUN, 2011, pers. comm. Rabin Bogati, 2011.

attempts to bring together central government agencies, local government, civil society and political parties under a District Forest Coordination Committee (DFCC). While any existing rights to resources are respected, no new legal rights for communities are created (Rana, 2009).

Nepal's R-PP proposes the extension of DFCCs to all regions, including forest areas currently managed under CF, as a means of coordinating REDD+ activities. While district level coordination bodies appear necessary for providing certainty, permanence and MRV for REDD+, FECOFUN has rejected the DFCC model on account of overwhelming government involvement (75% of forest revenue under CFM is returned to government) and a lack of clear community management rights, pointing to continued deforestation on pilot CFM sites (Luintel, 2006; Rana, 2009; GoN, 2011). It appears now that it would be politically untenable to extend DFCCs in their current form across Nepal, but periodic attempts by the GoN to exert control over forest assets (such as a 2011 ban on green timber harvesting and attempts to raise taxes on CFUG revenue) suggest that re-centralisation will remain a enduring concern for local communities as REDD+ is implemented (Banjade et al., 2011).

Institutions and entitlements

Land tenure: REDD+ is likely to have a significant impact on both the distributional and procedural aspects of institutions in Nepal, both of which have been shown to affect adaptive capacity (; Jones et al., 2010a; Graham, 2011). Establishing secure land tenure for forest communities is a crucial incentive for long-term adaptation strategies and sustainable forest management (Pokharel and Byrne, 2009). In Nepal's CF programme, tenure is defined through an agreement between a household and a CFUG committee. This arrangement, whilst lacking legal certainty and remaining susceptible to interference from local elites at the household level, has succeeded in stemming deforestation by granting institutions at the community level secure management rights and a significant degree of local autonomy (Ojha, 2009). In the CFM model, on the other hand, the lack of secure tenure and preponderance of distant users has resulted in continuing deforestation (Ojha, 2009; Banjade et al. 2011) The potential income streams created by REDD+ establish an incentive for central government to withhold land tenure from communities and maintain centralized control over assets (Dahal and Banskota, 2009; Sunam et al., 2010). While land reform

is recognized as integral to effectively implementing both REDD+ and adaptation strategies (GoN, 2010a; GoN, 2010b), and the Ministry of Land Reform has been included in both the MCCICC and the REDD Apex Body, detailed proposals are yet to emerge and in the delicate context of constitutional reform appear some distance away (pers. comm. Harisharan Luintel; Wily et al., 2008).

Resource management and carbon rights: Secure and equitable access to resources held on community land is essential to enhancing adaptive capacity. Under CF, CFUGs enjoy rights to grow cash crops and forest crops, to freely market and make profit from their forest produce, to enter independent agreements with NGOs/private enterprises, and to mortgage their standing forest products with financial institutions to obtain loans (Ojha, 2009). However, Nepal's R-PP states that development of the REDD+ strategy will proceed under the principle that the rights to carbon held within community forests will be tied to land rather than management rights - therefore with the government (GoN, 2010b). This approach poses a number of technical difficulties and has the potential to negatively impact the adaptive capacity of forest communities by providing an incentive for government to enforce a strict protection approach to forest management, for instance by restricting collection of fuelwood, timber and leaflitter - all repositories of carbon but all crucial to forest livelihoods.

REDD+, by its very nature, is likely to restrict resource use and consequently holds the potential to affect the adaptive capacity of different social groups in different ways. Membership of CFUG committees is a matter of social prestige, and studies have shown that wealthier community members tend to dominate (Malla, 2000; Thoms, 2008; Jones et al., 2010b). In turn, capacity-building and training exercises conducted through the District Forest Office (DFO) are channeled through CFUG committees, tending to reinforce knowledge differentials and emphasize forest protection (Malla et al., 2003; Banjade et al., 2011). These factors combine to produce local institutions that, for instance by placing strict restrictions on the collection of fuelwood and fodder from community forests, prove unresponsive to the needs of the poor. On the other hand, REDD+ implemented through a strict protection approach may reduce emissions faster and increase carbon revenues, which, if combined with an equitable benefit-sharing mechanism could increase the redundancy and diversity of assets and enhance adaptive capacity.

CFUGs have demonstrated an ability to adopt collaborative and adaptive management principles which facilitate deliberation and negotiation between social classes, empowering poor members to challenge inequitable practices within their communities (McDougall, 2007; Sunam et al., 2010). This has led to a greater focus on the needs of the marginalized in some communities; for instance CFUG funds have been used to subsidize school uniforms for poor families (McDermott and Schreckenberg, 2009). Institutionalized support, capacity-building and education and involvement of CFUG members within advocacy groups such as FECOFUN can 'lock-in' these practices (McDougall, 2007). One way in which REDD+ could enhance the adaptive capacities of forest communities more broadly would be to incentivize a broader range of social objectives and improved governance. However, experience gained through the ICIMOD pilot project suggests that this may result in a highly complicated and socially controversial benefit-sharing mechanism.

District/Watershed level coordination: The degree to which REDD+ will be able to enhance adaptive capacities of forest communities across the social spectrum will largely depend on the mid-level coordinating bodies designed to provide, through benefit-sharing, MRV and capacity-building, the link between the 'top-down' emissions objectives of the international policy arena and the 'bottom-up' imperatives of local communities adapting to changing environmental conditions. Such institutions will need to provide the certainty and permanence required to ensure emissions reductions with the flexibility to enable communities to adapt, thus balancing power equitably between government agencies and communities. This is a sensitive issue in Nepal due to decades of political conflict and fears of 'recentralisation' are widespread (Sunam et al., 2010). While excessive government control characteristic of the DFCC model has failed to reduce deforestation in the Terai because it fails to provide adequate community incentives to protect forests (i.e. through community ownership), ICIMOD's community dominated REDD+ pilot project has failed to adequately mobilize government involvement and consequently may not establish the institutional support necessary for capacity-building and joint learning in a nationwide program. In order to enhance adaptive capacity REDD+ will need to facilitate strong yet flexible coordination bodies which, in providing for collaboration and deliberation between government and communities, utilize the better qualities of each (Shannon, 2003; Bushley and Khatri, 2011).

Knowledge and information

Communities are better able to cope with change if they have access to information about potential future threats and knowledge of how to adapt to them (Jones et al., 2010a). A REDD+ program that enhances adaptive capacity in Nepal will therefore support capacity-building and the dissemination of information about forestry, agricultural techniques, and climate change to local communities, as

well as facilitating the 'upward flow' of information from communities to government institutions (Jones et al., 2010a; McGray, 2009).

Capacity building: Knowledge and information flows in Nepal currently reflect the social inequities apparent in uneven institutions and entitlements. Knowledge about forestry techniques within CFUGs is low as DFOs often treat the handover of forests to communities as the final step in the CF process (Neupane, 2003). An ongoing process of interaction and information-sharing between communities and DFOs is needed if local knowledge of sustainable and productive forestry management techniques is to be enhanced; however, this is currently hindered by the capture of CFUG committees by local elites who are less reliant on community forests and therefore less inclined to maximize the forests' productive capacity (Neupane, 2003). Government assessment of DFO and CFUG performance on the basis of forest protection rather than sustainable forest management (factoring in contributions to livelihoods, for instance) further disincentivises a move towards a more livelihoods-oriented approach, and has led to a situation where community forests are under-producing (taking into account carbon and biodiversity goals), while government forests are experiencing severe degradation often caused by poor CFUG members excluded from the management of their own community forests (Malla, 2000; Neupane, 2003). REDD+ could improve knowledge and information by encouraging systematic training of Local Resource Persons (LRPs) who are able to maximize the productive capacity of the forest to enhance livelihood options for the poor whilst increasing carbon sequestration potential, by institutionalizing collaborative governance techniques within CFUGs to enable these livelihood needs to be voiced, and by fostering a culture of collaboration between CFUGs and DFOs (McDougall, 2007).

Participation: At the national level familiar inequities have prevented forest communities from providing input to national REDD+ policy processes. The consultation process for the REDD+ Strategy has been amended in response to criticisms that participation was limited to a 'Kathmandu elite' (Bushley and Khatri, 2011). Awareness activities and educational programmes have been hampered by a lack of capacity, and while this is slowly being rectified in the form of mass-programmes conducted by FECOFUN and RECOFTC, the huge upfront costs required are providing a major barrier to a truly inclusive REDD+ policy process (pers. comm. Rabin Bogati). These costs can be reduced, and education enhanced, by streamlining REDD+ and adaptation planning, for instance the incorporation of REDD+ when drawing up LAPAs over the next few years would appear to maximize the chances of creating an 'adaptation-friendly' REDD+ structure.

Innovation

A system's ability to foster innovation and support new practices is a fundamental aspect of adaptive capacity (Jones et al., 2010a; Smith et al., 2003). The ability of local communities to innovate in response to changing circumstances depends on the availability of assets, the flexibility of institutions, and access to information. The ability of REDD+ to encourage innovation beneficial to adaptive capacity will depend largely on the structure of community engagement and provision of incentives.

Benefit sharing structure: REDD+ funds can either be distributed as cash or 'in-kind', either directly to individuals or to community institutions. The appropriate method is likely to change in accordance with the particular social dynamics of the project area. For forest areas managed under CF, REDD+ payments are likely to be made into CFUG funds which will then be distributed to individuals or put into the 'forest development' fund. While benefit-sharing requirements based on social criteria, e.g. dalit, women, poor (in accordance with the percentage based system outlined in the CF Guidelines) may increase the availability of assets thus encouraging innovation, they may also create a negative incentive whereby such members feel they will receive a reward whether they actively innovate or not. Rather than actively directing payments to specific demographics (an approach criticized as constitutive of 'social engineering'), a payment structure which rewards the

Woman speaking out at a Community Forestry User Group meeting, Nepal

Source: Maksha Maharjan

removal of undemocratic barriers to minority participation in local institutions, whilst strengthening the capacity of all community members through education, may prove to be more likely to enhance innovation (Luintel, 2006; McDougall, 2007; Sunam et al., 2010).

Co-benefits and 'performance': A performance-based payment mechanism is widely considered critical to the success of REDD+ in terms of emissions reductions - but the definition of 'performance' will be crucial if REDD+ is to enhance innovation. If 'performance' is limited to fulfillment of carbon sequestration targets, penalisation for failure to reach targets could disincentivise the innovation necessary to develop more efficient agricultural methods or conserve biodiversity (Sunstein, 2005), particularly given that while CFUG operational plans are negotiated with DFOs to cover a 5-year period, REDD+ will require contracts that stretch over 25-30 years.

A definition of performance which incorporates a wider portfolio of social and good governance goals, Including contribution to adaptive capacity, may be necessary to avoid placing participating REDD+ communities in a developmental 'straightjacket,' bearing in mind that this approach may prove complicated. An innovation fund, perhaps integrated into the CFUG 'forest-development' fund, could go some way to ameliorating the innovation disincentive. Likewise more meaningful institutional connections between CFUGs and DFOs will be necessary if knowledge about agriculture and forestry techniques, essential for innovation, is to be consistently made available to communities (Pandit et al., 2008). For instance, such connections could encourage the scaling-up and dissemination of knowledge obtained by successful REDD+ pilots.

Flexible forward-thinking decision-making and governance

Adaptive governance based on flexible, learning-based and collaborative decision-making helps to increase a system's capacity to anticipate change and incorporate relevant initiatives into future planning (Shannon, 2003; Jones et al., 2010a). REDD+ and adaptation strategies are emerging in Nepal at a time where the political landscape is being reshaped. There is consequently huge potential for REDD+ and adaptation to be integrated into political structures encouraging a decentralised yet coordinated approach to natural resource management.

At the ministerial level there is awareness that adaptation and REDD+ strategies could be integrated into a broad climate compatible development strategy. To this end, the coordination bodies for adaptation (MCCICC) and REDD+ (REDD Apex Body) both include a range of ministries, including finance, agriculture, land reform and energy. At the local level CFUGs and local communities have demonstrated their ability to contribute to climate change mitigation by reducing deforestation and implementing principles of adaptive management and long-term planning; for instance DFID's Livelihoods and Forestry Programme has been working to develop local adaptation planning and enhance governance in 6000 FUGs encompassing 34% of community forest nationwide (DFID, 2008). Policy-makers and NGOs have been overwhelmed by the enthusiasm and willingness of local communities to participate in the ongoing LAPA process (Rabin Bogati, pers. comm).

If this promise is to be fulfilled, a critical role will be that of the district and watershed-level coordinating entities that will work to 'join up' community initiatives and government level planning. REDD+ could contribute to local adaptive capacity by providing the impetus to create inclusive, multi-stakeholder coordinating bodies capable of working towards long-term goals based on the scientific and technical expertise of government whilst retaining the relative autonomy of local communities to adapt to specific social and environmental realities.

However, the current separation of responsibility for adaptation and REDD+ between the MoE and MoFSC, exacerbated by occasionally 'territorial' behavior, appears to be hindering effective integration by encouraging multiple coordination and implementation bodies (pers. comm. Harisharan Luintel). The structure of responsibility between CFUGs, V/DDCs and government agencies will be crucial to enhancing local adaptive capacity; a simplification and harmonization of ministerial mandates will be necessary if REDD+ is to foster a flexible culture of collaboration between communities, civil society and government.

CONCLUSION

Nepal's vulnerability to the natural and social effects of climate change mean that, in order to achieve ecological, economic and political sustainability, REDD+ must not only deliver GHG mitigation but contribute to wider rural development goals, enhancing the adaptive capacity of rural communities. To achieve this balance, REDD+ must work to embed principles of adaptive governance in local and national institutions, providing for long-term goals and strategies whilst maintaining the freedom of rural communities to respond effectively to changes in their natural environment. While Nepal has made significant progress in developing an 'adaptation-friendly' REDD+ Strategy in a context of political discord, much remains to be done to ensure that this promise is fulfilled.

Nepal has already succeeded in:

- Completing comprehensive NAPA and R-PP processes in consultation with a wide array of civil society.
- Establishing a consensus at the ministerial level that adaptation and mitigation actions should be mutually beneficial and should be placed in the context of contributing to livelihoods and reducing poverty.
- Establishing that community level organizations should be the primary level for both REDD+ and adaptation implementation, and that devolved forest governance should be encouraged as a development strategy.
- Establishing a learning-based roadmap to REDD+ implementation which incorporates pilot projects and a programme of research on REDD+ and forest management. Prospective studies will examine aspects of forest governance critical to enhancing adaptive capacity such as tenure security.

Nepal has not yet succeeded in:

- Generating cross-ministerial proactivity in integrating REDD+ and adaptation into wider development programmes and decision-making processes.
- Designing effective mid-level coordinating institutions over districts and watersheds - and establishing how these bodies will work together to coordinate adaptation and REDD+ activities.
- Including government agencies and the District Forest Offices in pilot REDD+ programmes and LAPAs, and establishing systematic capacity-building programmes for government staff.
- Outlining how carbon rights allocated to central government will work alongside existing forestry management rights allocated to CFUGs, and how the rights of forest communities will be protected and enhanced.
- Establishing detailed plans for land reform to provide tenure security to forest-dependent communities, particularly in the Terai.
- Establishing sufficiently large capacity-building programmes for communities, DFOs and government ministries.
- Conducting research into how REDD+ and adaptation measures may conflict, and if so, what measures might be taken to manage any trade-offs.

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ABOUT REDD-NET

REDD-net is an international knowledge forum for southern civil society organizations through which they can access information about efforts to Reduce Emissions from Deforestation and forest Degradation, share their own experiences and help to build pro-poor REDD projects and policies. REDD-net is a partnership between Centro Agronomónico Tropical de Investigación y Enseñanza (CATIE), the Overseas Development Institute, RECOFTC - The Center for People and Forests and Uganda Coalition for Sustainable Development. REDD-net is funded by Norad.

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