



Networking for equity
in forest climate policy



REDD+ and adaptation:

will REDD+ contribute to adaptive
capacity at the local level?

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Key points

- Adaptation is of high priority in many developing countries where the impacts of climate change are already being felt.
- REDD+ is a mitigation opportunity for many developing countries, however for the benefits to be maximised it should be designed in a way that also meets national development objectives, including adaptation objectives.
- Maximising the synergies between REDD+ and adaptation strategies, and ensuring that REDD+ contributes to the adaptive capacity of local communities is one way to ensure that it meets national objectives and offers an opportunity for climate compatible development. REDD+, as it is being envisaged in many countries, can already contribute to adaptive capacity, however some changes to how REDD+ is implemented will allow REDD+ to have considerable positive impacts on the adaptive capacity of local communities.
- This paper analyses the impact of REDD+ on the adaptive capacity of local communities, and offers suggestions for ways to maximise the synergies between these objectives, and highlights tradeoffs that need to be explicitly addressed.
- The impact of REDD+ on the adaptive capacity at the local level will largely be affected by the policies and measures chosen to implement REDD+, the benefit sharing mechanism used to distribute REDD+ finance and the way that REDD+ influences governance of forests and natural resources, as well as governance more generally.

Introduction

Reducing Emissions from Deforestation and forest Degradation (REDD+) has been broadly supported by developed and developing countries as a climate mitigation mechanism aimed at reducing forest sector emissions in developing countries. Despite the expectation for REDD+ to transform the forest and land use sector, there has been little discussion to date of the impact of REDD+ on adaptation efforts in developing countries, and even less about how to design REDD+ in a way that maximises potential synergies and acknowledges and minimises tradeoffs between mitigation and adaptation goals.

Climate change mitigation and adaptation research, policy and practice are largely separate at the international and national levels, however there is increasing interest in analysing the synergies and tradeoffs between these and identifying the optimal policy mix for addressing climate change (Dang, 2003; Klein et al., 2005; Locatelli et al., 2008; Locatelli et al., 2011; Robledo et al., 2005; Swart and Raes, 2007). At the local level however the distinction between mitigation and adaptation is much more blurry with many 'mitigation' projects having unintentional impacts on the adaptive capacity of communities (Locatelli et al., 2011), 'adaptation' projects having unintentional impacts on the mitigation potential of forests (Locatelli et al., 2011) and 'development' projects impacting adaptive capacity and land based mitigation (Ludi et al 2011).

For many developing countries, climate change mitigation activities including REDD+ are a way to attract international climate finance, and are likely to be pursued only if the finance provided is sufficient, and they also contribute to development priorities in the relevant sector (for example forestry, agriculture

and energy) (CCAD and SICA, 2010; Mwencha, 2011). Many of the benefits of mitigation activities are global, and do not necessarily accrue locally without careful design, so adaptation is often of higher priority in developing countries (CCAD and SICA, 2010; Klein et al., 2005; Mwencha, 2011; Swart and Raes, 2007; World Bank, 2009). Benefits of adaptation actions are more locally concentrated and respond to the impacts of climate change and climate variability, which are already being felt in many developing countries (Huq and Ayers, 2007; IPCC, 2007).

At the moment, particularly given that long-term finance for REDD+ is uncertain, one of the key challenges as REDD+ moves towards implementation is ensuring that REDD+ strategies are nationally owned and fit within national priorities in REDD+ countries (Graham, 2011). Adaptation to climate change is one of these priorities (for example in Central America (CCAD and SICA, 2010)) and will become increasingly important, particularly for poor communities within developing countries who are expected to bear the brunt of climate change related impacts (Ayers and Huq, 2007; Smith et al., 2003). As a result of this there is increasing attention on building the adaptive capacity of vulnerable communities to enable them to adapt to shocks and stresses from climate change and other development pressures (Jones et al., 2010). Maximising synergies and carefully acknowledging and minimising tradeoffs between REDD+ and the adaptation of local communities will be important to ensure that REDD+ is contributing to national priorities and is able to benefit the most poor and vulnerable people. Taking this approach to REDD+ could also provide an effective climate compatible development strategy, producing the 'triple wins' of keeping emissions low, building resilience to the impacts of climate change and promoting development simultaneously (Mitchell and Maxwell, 2010).

What is adaptation?

Adaptation is the adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities (IPCC, 2007). Adaptation within social systems relates to the processes people use to reduce the adverse effects of climate change and variability on their livelihood and well-being, and take advantage of new opportunities provided by their changing environment (TERI, 2007).

Vulnerability is the degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability is a function of the character, magnitude and rate of climate change and variation to which a system is exposed, and sensitivity and adaptive capacity of that system (IPCC, 2007).

Resilience is the ability of a system to recover after a shock or stress and to maintain certain functions and structures (Pelling, 2011).

Adaptive capacity is 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, 2005).

Close links exist between resilience and adaptive capacity, and the two are often used interchangeably. Traditionally, the term resilience has often been associated with the ability of a system – whether community or household – to 'bounce back' after a shock or stress. Climate change however adds an extra layer of complexity, as it is widely acknowledged that significant structural changes may be needed to adapt to local impacts. With this in mind, trying to bounce back and keep the same functions and structures (resilience) may not be sufficient. Systems therefore need the capacity to adapt and transform themselves (in some cases radically); this we call adaptive capacity.

There are also close links between adaptation and development. Adaptation interventions may be seen as an integral part of 'good development', as addressing the underlying drivers of poverty and vulnerability will help people and communities respond to shocks and trends, including climate change (Jones et al 2010).

What is REDD+

REDD+ stands for **R**educing **E**missions from **D**eforestation and forest **D**egradation, with the plus representing additional forest conservation, sustainable management of forests and forest enhancement activities (FCCC/CP/2010/7/Add.1: Decision 1/CP.16). An important aspect of REDD+ is that it involves a financial transfer from developed countries to developing countries to encourage the implementation of policies and programmes that reduce greenhouse gas emissions from the forest sector, and to reduce emissions from land use change from forest to non-forest (Peskett 2010).

Over 40 developing countries are currently undertaking REDD+ readiness activities with support from the World Bank Forest Carbon Partnership Facility and the UN-REDD programme (FCPF, 2011; UN-REDD, 2011). These activities include the development of a national REDD+ strategy. Additionally there are a number of REDD+ pilot project initiatives being developed by national, provincial and local governments as well as the private sector and NGOs.

REDD+ will be used in this paper to refer to national level policy and programmes that establish 'REDD+' activities, as well as pilot projects or subnational schemes which have as their objective reducing emissions or enhancing carbon sequestration from forests or land use change.

Further information on what REDD+ is, including explanation of various design elements, can be found at www.redd-net.org.

The approach of this paper

REDD+ is likely to contribute to the resilience of forest ecosystems and therefore the ability of forests to adapt to climate change. It will also have an impact on the ability of forest-dependent people and other rural communities to adapt to climate change. There has been much more work done on the influence of REDD+ on the resilience of forests (Locatelli et al., 2008; Locatelli et al., 2010a, Locatelli et al., 2011) than on the influence of REDD+ and other forest-based mitigation initiatives on the adaptive capacity of people. Given this, and the focus of REDD-net on the social aspects of REDD+, this paper will focus on the potential impact of REDD+ on the adaptive capacity of people.

In analysing this, the paper will use the local adaptive capacity framework (LAC) developed by the African Climate Change Resilience Alliance (see Jones et al., 2010). This framework moves beyond traditional, asset-focussed frameworks for conceptualising adaptive capacity, to encompass the role of processes and functions, both of which are important in supporting adaptive capacity of people at the local level (Jones et al., 2010). The framework progresses from looking at what a system *has* that enables it to adapt, to what a system *does* to enable it to adapt (Jones et al., 2010; WRI, 2009). The focus on local level adaptive capacity is appropriate as this is the level at which most of the action to adapt to shocks or changing trends will occur (Wongtschowski et al., 2009), and also the level at which the implementation of REDD+ will have its impacts.

REDD+ and the adaptation of forests

Despite the focus of this paper being on the impacts of REDD+ on people's ability to adapt, it is worth briefly outlining the largely positive contribution that REDD+ is likely to have on the resilience and therefore capacity of forest ecosystems to adapt to a changing climate. Adaptation of forests will be important to enable them to maintain their carbon stocks over time, although in many areas the structure and functions of forests are likely to change in the long-term (Noss, 2001).

Adaptation strategies for forests have been identified and include enhancing landscape connectivity and reducing fragmentation, establishing corridors along climate gradients, conservation of ecosystems across environmental gradients and reducing pressures and threats such as degradation, fragmentation and habitat destruction (Locatelli et al., 2008; Noss, 2001). Flexible forward-looking institutions to manage forests have also been identified as important to adaptively manage forests under climate change, and therefore contribute to the resilience of forest ecosystems. These institutions need to be able to learn in the context of dynamic human and environmental systems (Locatelli et al., 2008; Seppala et al., 2009). This is likely to include models of governance that enable meaningful stakeholder participation, provide secure tenure and forest user rights and sufficient financial incentives (Seppala et al., 2009).

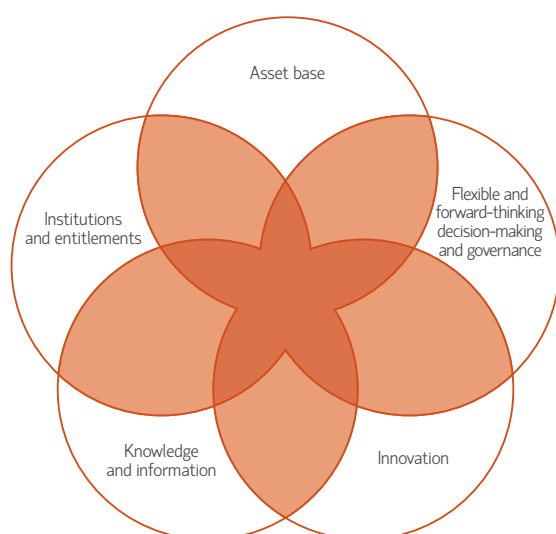
The whole purpose of REDD+ is to encourage the conservation, sustainable management and enhancement of forests, as well as reducing degradation and deforestation (FCCC/CP/2010/7/Add.1: Decision 1/CP.16). These aims closely align with the strategies identified to contribute to the adaptation of forests, and so long as afforestation and reforestation activities are undertaken in a way that contributes to biodiversity and focuses on locally appropriate species, REDD+ is likely to contribute positively to the adaptation of forests.

Enabling forests to maintain their functions in a changing climate obviously has flow on effects to the adaptive capacity of forest dependent people, with forests providing a range of ecosystem services such as provision of fuel and food, regulation

of water, climate and erosion as well as cultural services such as recreational, spiritual and religious services (McSweeney, 2004; Millenium Ecosystem Assessment, 2003; Seppala et al., 2009). It is generally the poorest who are most dependent on forest resources for subsistence and commercial uses, with forests providing an important 'safety-net' function to complement agricultural production (Fisher et al., 2010; McSweeney, 2004; PEN, 2011; Seppala et al., 2009). In some countries e.g. Malawi, forests appear important as a reactive adaptation strategy, particularly for households with no other options, but do not currently play a role in anticipatory adaptation (Fisher et al., 2010). Ecosystem-based adaptation highlights the importance of healthy, functioning ecosystems in enabling human adaptation, and contributing to adaptive capacity of forests may reduce the exposure, sensitivity or vulnerability of human-environmental systems (Locatelli et al., 2008; Locatelli et al., 2010).

The extent to which REDD+ will contribute to flexible and adaptive models of governance, identified as being important for the adaptation of forests, will depend on how REDD+ is implemented at the national level, and the current forest governance context of the country. This will be discussed further in the following section.

FIGURE 1: THE RELATIONSHIPS BETWEEN CHARACTERISTICS OF ADAPTIVE CAPACITY AT THE LOCAL LEVEL



Source: Jones et al., 2010

REDD+ and the adaptation of people

Forest-based mitigation projects and REDD+ policies can have positive or negative impacts on local people's efforts to adapt to climate change (Locatelli et al., 2010). In most REDD+ and other forest-based mitigation projects there is little consideration of the influence of the project on the adaptive capacity of local people, and at the national policy level REDD+ and adaptation policies are seldom aligned (Locatelli et al., 2010 (Latin America); West, 2011 (Nepal); McFarland, 2011 (Ghana)). To further explore the potential impacts of REDD+ on adaptive capacity the LAC framework will be used. This is intended to highlight areas of potential synergies between REDD+ and building local level adaptive capacity, and also tradeoffs which could be minimised through the design and implementation of REDD+ policies and projects.

The LAC framework

The framework was developed based on research undertaken by ACCRA members, and extensive consultation with academics, policy-makers and practitioners. As adaptive capacity refers to the ability of a system (see box on 'What is adaptation?') it is not able to be directly assessed. The LAC was therefore developed to characterise adaptive capacity and identify features that influence it. It identifies five distinct yet interrelated characteristics that strongly influence adaptive capacity at the local level (Jones et al., 2010, Figure 1). These are; the asset base, institutions and entitlements, knowledge and information, innovation, and flexible forward-looking decision making and governance. Each of these characteristics will be discussed briefly and then the impact of REDD+ on these characteristics will be analysed.

The five characteristics of adaptive capacity are not separate and should not be considered in isolation, where one or more can be selected for attention. They shape and depend on each other, and considering adaptive capacity does not mean adding five different versions of an intervention to address each of the five characteristics. It means understanding these dimensions of people's and communities' lives, and designing and implementing any intervention in ways which enhance the way in

which assets, institutions, innovation, knowledge flows and decision making contribute to increased agency, and more informed decision making for the long term.

The asset base

A communities' ability to respond to change is strongly influenced by the types of assets it holds, and access to and control over those assets (Daze et al., 2009; Prowse and Scott, 2008). It is generally the poorest who are the most vulnerable to climate change, largely as a result of their lack of, or limited access to key assets (Jones et al., 2010). There are a number of types of assets, including tangible capitals (natural, physical and financial) and intangible assets (human and social) (Prowse and Scott, 2008). The diversity of assets, including redundancy of assets (access to assets that are interchangeable and therefore increase the overall resilience of the asset base in the face of change), may be as important as the overall availability of assets in enhancing adaptive capacity (Ospina and Heeks, 2010).

Key point:

A greater and more diverse asset base (including natural, physical, financial, human and social assets) is likely to enhance adaptive capacity at the local level.

How REDD+ is likely to influence the asset base

REDD+ has the potential to contribute to or impact all 5 types of assets, largely depending on how it is implemented (i.e. what policies or measures are chosen to implement REDD+) and the benefit sharing mechanism established to distribute REDD+ finance from the international to local levels. How REDD+ affects forest governance, including whether it contributes to decentralisation of natural resource governance is also likely to affect access to assets at the local level.

Choice of REDD+ policies or measures

As REDD+ incentivises reducing deforestation and forest degradation, and improving conservation, sustainable management and enhancement of forests, it is likely to support maintenance and improvement of natural assets. Ecosystem services provided by forests including non timber forest products, (NTFPs), carbon sequestration, and cultural and spiritual services are likely to be maintained under REDD+. However, access to other resources provided

Definition of different asset types

Natural capital is the natural resource stocks which provide resources and ecosystem services that are necessary for people's livelihoods.

Physical capital is the basic infrastructure, tools and equipment needed by people to function more productively in support of their livelihoods. They include elements such as affordable transport, secure shelter and buildings, adequate water supply and sanitation, clean, affordable energy and access to communications services.

Financial capital is the financial resources people use to adopt different livelihood strategies. It is essentially the availability of cash or equivalent, including savings (which can be held in a number of forms e.g. cash, bank deposits, or liquid assets such as livestock or jewellery), and regular inflows of money (excluding earned money) such as remittances, pensions or other regular transfers.

Human capital is the skills, knowledge, ability to work and good health that together enable people to pursue different livelihood strategies. As well as being valuable in and of itself, it is also required to make use of any of the other four types of assets.

Social capital is the social resources which people draw upon in pursuit of their livelihood objectives. These social resources are developed through informal networks and connections, membership of formalised groups and relationships of trust and mutual benefit that facilitate cooperation and may provide informal safety nets for the poor.

Source: DFID 1999

by forests, such as timber products or wood fuel, may be restricted because their extraction contributes to deforestation and degradation (DD). Access to forests may also be restricted if a strict protection approach to REDD+ is taken, reducing peoples access to natural capital including NTFPs for subsistence and commercial use.

There are options for implementing REDD+ that can contribute to the natural assets of local communities. These include community forestry, and promoting sustainable management of forests, including reduced impact logging, while ensuring forest access for continued use of forest resources, which are important for the livelihoods of local communities. All of these have been demonstrated to contribute to the overall aims of REDD+, while maintaining ecosystem services and access to these that is important for communities' livelihoods (Cchatre and Agrawal 2009, Agrawal and Angelsen 2009, Sunderlin et al., 2009, Nasi et al., 2011). By integrating local use of natural assets into the design of REDD+, the opportunity costs of local people will also be minimised, and people are therefore more likely to be willing to participate in REDD+ (Caravani and Graham, 2011).

The future value of natural assets and the ongoing rights of communities to utilise these under REDD+ is an issue that has been raised (Peskest et al., 2008). Many REDD+ contracts specify ongoing protection, or certain management actions be continued over the long term (30 years or greater), reducing choices of the next generation on how to use natural assets for their livelihoods. As populations grow, and in response to other development pressures, REDD+ may mean that communities are not able to rely on natural assets as much as they have previously e.g. for cash income from logging, for building materials, as a source of agricultural land or as a safety net in the face of shocks. To ensure that REDD+ contributes to the natural asset base of local communities now and also in the future, sufficient flexibility in REDD+ agreements is needed to ensure communities can continue to draw on forest resources, and that there is the opportunity to renegotiate access and use in response to external shocks and changing conditions.

How REDD+ is implemented will also influence other types of community assets. For example if REDD+ is used as an opportunity to provide train-

ing and education to local communities on sustainable forest management, improved agricultural techniques, and monitoring, reporting and verification of REDD+ activities then human capital will be built, with positive impacts on adaptive capacity. Similarly if REDD+ is used as an incentive to improve the efficiency, sustainability and governance of the timber industry, the financial contribution of the industry to communities could increase, thereby contributing to adaptive capacity.

Improving timber industry governance in Ghana to contribute to REDD+

Existing forest policies in Ghana create an economic environment that encourages exploitation of forest resources for both export and domestic markets, as well as providing little incentive to actively regenerate timber stocks. As Ghana depends on forest resources for the majority of its energy supply (Edjekumhene and Cobson-Cobbold, 2011) and 11% of export earnings (Agyarko, 2001), current policy frameworks are jeopardising the long-term sustainability of economic development. Poor forest governance has also been highlighted as a contributing factor, with non-competitive and cheap allocations of timber concessions reducing the 'rent' government receives from forests, inflating private profits and creating excess capacity in the sector. It is estimated that in 2005 the Ghanaian Government only charged forest enterprises 26% of the optimal forest resource rent (Birikorang et al, 2007).

In order to reform the sector for REDD+, it is proposed that a transparent, competitive, timber rights allocation system is introduced that derives more resource rent through up and downstream taxes and levies on forest sector companies. This would incentivise more efficient use of timber resources, while generating greater 'resource rent' to be disbursed amongst forest stakeholders (Birikorang et al, 2007). Simultaneously, higher domestic prices for timber products and stumpage fees would be implemented to incentivise investment in timber plantations and regeneration of poor-quality forest (Hansen et al, 2009).

Source: McFarland (2011)

REDD+ finance and benefit sharing mechanisms

REDD+ is likely to generate large amounts of finance for developing countries that are able to reduce emissions from the forest sector (Pes-kett, 2010; REDD-net, 2010). This finance includes 'readiness' funding received largely from donors and intended to build institutional infrastructure and capacity to implement REDD+ policies and programmes and measure emissions reductions. Most readiness funding will be spent on developing a REDD+ strategy, stakeholder consultations, developing a monitoring, reporting and verification (MRV) system and in some countries piloting different approaches for REDD+.

Long-term finance for REDD+ is likely to be provided to countries based on 'performance' which will include emissions reductions, however performance is still poorly defined. How these finances are then distributed to local levels (benefit sharing) to incentivise and compensate for REDD+ activities will determine their impact on the asset base of local communities and individuals. Benefit sharing may include cash or in kind distribution to the local level, or a combination of both.

If benefits are distributed in cash to participating households (e.g. landholders who are engaged in agroforestry, or households within villages reducing deforestation and degradation in village forests), then REDD+ finance can provide an additional income stream which contributes to financial assets at the local level, increasing the diversity of the asset base. Research from a forest carbon project in East Africa suggests that carbon revenues (cash payments) allow participants to increase savings e.g. through purchasing livestock (financial), or to invest in other types of assets e.g. contribute to children's school fees (human), or employ labourers to work on cash crops (physical) (Finighan, 2011).

The method of distribution of REDD+ cash payments may also have an impact on how beneficial the cash benefits are and how they can be used to leverage improvement in other assets. For example in a recent study of mobile cash transfer technology in rural Niger, not only were transaction and distribution costs reduced for the implementing agency, but people who received money through mobile transfers spent the money on more types of items, consumed more diverse foods and cultivated

more diverse crops than those receiving money through conventional means. It is thought that this is largely a result of the time savings for recipients, greater privacy of the mobile transfer mechanism and therefore less inter-household sharing of transfers, and a shift in women's influence within the household (Aker et al., 2011).

In kind benefit distribution to the local level may take many forms, building a range of different asset types. If benefits are to be distributed in kind to the household level this could include training and knowledge sharing e.g. on agroforestry techniques or agricultural production systems that have dual benefits for food production and forest conservation (human) (Graham and Vignola, 2011). It could also include the distribution of tools or production inputs such as seeds or fertilisers (physical), or assistance with marketing and product development to develop alternative livelihoods from NTFPs (human).

If benefits are distributed to the community instead of individual household level, there are a number of different design options which will influence which types of assets are contributed to. One innovative benefit sharing mechanism used in a NRM/forest carbon project in Uganda and Kenya, the Mt Elgon Regional Conservation Programme, is the establishment of microfinance facilities for project participants. One of the benefits of participating in the programme, which is done through community based organisations, is the ability to borrow money from community revolving funds for income generating activities (Mwayafu and Kimbowa, 2011). This builds social and financial capital in these communities, as well as building human capital for office bearers within CBOs who are administering the community revolving funds.

Other types of community trust funds may be used to invest in community development or infrastructure projects (e.g. road upgrade, health clinic, water distribution infrastructure), which have proven a popular way to distribute PES revenues for indigenous communities in Costa Rica (Milla Quesada and Vignola, 2011), building physical and human capital. The use of REDD+ revenues in this way however should not reduce the obligation on governments to provide basic services for all citizens. Other community level in-kind benefit sharing mechanisms may include improving physical

infrastructure to enable better access to markets (physical), or the creation of producer cooperatives to maximise community revenues from NTFPs (social and human) as is used in the Programa Indígena REDD+ en la Amazonia Boliviana, in Bolivia. Clarification of communal land tenure and support to communities to gain legal recognition of customarily held land, as is being done in a pilot REDD project being implemented by FFI in West Kalimantan, is another way to use in-kind communal benefit sharing to build assets of local communities (natural and social).

The range of options for community level in-kind benefit sharing, or a combination of cash and in-kind benefit distribution is broad, and close community consultation should be used in the design of such mechanisms to ensure that they are building asset types most needed by communities in their livelihoods and are therefore able to make the largest impact. For example research in a REDD+ pilot project site in Cambodia suggested that communities would prefer benefits to be distributed to community institutions and invested in development projects of benefit to all villagers, rather than be distributed to individual households as cash payments, as com-

munity investment was thought to lead to a larger, longer-term impact (Caravani, 2011).

Forest governance

The influence of REDD+ on forest governance, and the need for REDD+ to stimulate improvement in transparency, accountability, and local level influence in forest decision making in order to be effective, has been the topic of much research (Springate-Baginski and Wollenberg, 2010; Transparency International, 2011; Vatn and Vedeld, 2011; WRI 2009). For REDD+ to provide a positive contribution to the livelihoods of local communities, and to various types of assets, much will depend on the governance model adopted, and a continued move towards decentralisation of forest governance, including real devolution of management and ownership rights to local communities (Agrawal et al., 2008; Macqueen, 2011; Macqueen and Korhialliller, 2011; Padgee et al., 2006). There have been some concerns raised however that the financial flows linked to REDD+ will provide a stimulus for recentralisation of forest governance and ownership (Phelps et al., 2011), which would be detrimental to the natural, and probably financial asset base of local communities.

Forest governance and REDD+ in Nepal

The Government of Nepal has promoted a policy of decentralization in the forest sector over the past decades, initiating a steady handover of forest management rights from government to community forest user groups (CFUGs). While this policy has been successful in the mid-hills region of Nepal, the government remains reluctant to concede control of the lowland Terai – home to the most valuable tree species for timber. Here Collaborative Forest Management (CFM) has emerged as a government initiative to prevent illegal logging. CFM institutes a District Forest Coordination Committee (DFCC) which brings together central government agencies, local government, civil society and political parties in a multi-stakeholder forum (Rana, 2009). While any existing rights to resources are respected, no new legal rights for communities are created.

In the REDD Readiness Preparation Proposal (R-PP) submitted by Nepal to the Forest Carbon Partnership Facility (FCPF), it is proposed to extend the DFCC to all regions, including forest areas currently managed by CFUGs, as a means of coordinating and implementing REDD+ activities. Nepal's Federation of Community Forest Users (FECOFUN) opposed this move, claiming that it constituted an attempt to reassert government control over forests. While it appears now that it would be politically untenable to extend DFCCs in their current form across Nepal, periodic attempts by the Nepalese government to exert control over forest resources – such as a 2011 ban on green timber harvesting and attempts to raise taxes on CFUG revenues – suggest that re-centralization will remain an enduring concern as REDD+ is implemented (Banjade et al., 2011; Springate-Baginski and Blaikie, 2007).

Source: West (2011)

Key points:

For REDD+ to positively contribute to this aspect of adaptive capacity it should;

- Ensure continued access of local communities to natural assets.
- Allow sufficient flexibility for this access and use to change in response to development and climate change pressures.
- Adopt benefit sharing mechanisms that diversify the asset base, and are able to leverage improvement in a number of different types of assets e.g. community revolving funds, innovative cash transfer mechanisms.
- Ensure that communities have sufficient flexibility to determine community level priorities in benefit sharing schemes to respond to local needs e.g. money distributed to community level and then community may choose what to do with it from there e.g. non-cash distribution to household level, cash payments etc.
- Contribute positively to the asset base of all groups within communities. This will require the development of equitable benefit sharing mechanisms, with effective and meaningful participation from all groups being essential in their design.
- Focus on strengthening forest governance which will be necessary for REDD+ to work. This should include decentralisation of forest management and real devolution of management and ownership rights of forests to local communities.

Institutions and entitlements

Institutions are the 'rules' that govern belief systems and organisational structure (Ostrom, 2005). They may be formal or informal, and generally communities with well-developed social institutions are better able to adapt to change. Institutions, often informal, govern access to and control of assets at the local level. These include rules such as land tenure rules like claims to common property resources; cultural beliefs and practices concerning

the rights and roles of women; and family, clan and church networks through which assets are shared (Jones et al., 2010).

It is often presumed that institutions that ensure equitable access (i.e. demonstrate distributional equity) to resources promote adaptive capacity. However there are also aspects of procedural equity in institutions that are important in determining the degree to which communities are able to adapt, and the direction in which this goes, including whose interests this reflects. Participation in decision making at the community level and how institutions empower or disempower certain individuals or groups are all-important (Jones et al., 2010).

The adaptability and flexibility of institutions to respond to climate change impacts will also influence how well communities are able to adapt (Jones et al., 2010).

Key point:

Both distributional (i.e. equitable access to resources) and procedural (equitable participation in local decision making) aspects of institutions are important in promoting adaptive capacity. More responsive, adaptable institutions will also contribute to the adaptive capacity of communities.

How REDD+ is likely to influence institutions and entitlements:

Some equity definitions

Distributional equity: is concerned with the allocation among stakeholders of costs, risks and benefits resulting from resource management decisions, and therefore represents primarily (but not exclusively) the economic dimensions of equity.

Procedural equity: refers to fairness in the political processes that allocate resources and resolve disputes. It involves representation, recognition/inclusion, voice and participation in decision-making.

Source: REDD-net, 2011

Effect on distributional equity (access to resources generally)

Access to and distribution of forest resources is governed by formal and informal institutions. In many countries, the formal institutions such as forest legislation are not adequately implemented, resulting in quasi open-access forest resources or informal institutions governing access to forests and their resources (Agrawal and Chhatre, 2006). It is often the poor who benefit most from these open access resources, depending on them more than better off households for subsistence products and income (Angelsen and Wunder, 2003; Fisher et al., 2010; McSweeney, 2004; PEN, 2011). For example in Malawi poorer households headed by older, less educated individuals are particularly dependent on forests for coping with climatic shocks, probably as they have limited access to other coping mechanisms (Fisher et al., 2010).

If REDD+ is implemented by improving enforcement of existing forest legislation, or through strict protection of forests currently being used by communities, it is likely to reduce their access to resources, particularly for the most poor and vulnerable within the community. Implementing REDD+ through existing community forestry programs, as Nepal is planning (Government of Nepal 2010), will mean that existing community forestry institutions, and the corresponding distributional equity impact, will be supported by REDD+ as REDD+ finance is channelled through these existing institutions. In the case of Nepal, there have been concerns about how equitable the distribution of forest resources are in some of these community forest user groups, with more powerful elites within the community being more able to access forest resources. Community forestry institutions in Nepal have however demonstrated their ability to change and improve distributional equity as a result of these criticisms. For example some Community Forest User Groups (CFUGs) started producing more products that were of greater priority for the poor such as firewood, or provided scholarships or school uniforms to very poor children to enable them to take advantage of community level benefits, such as schools (McDermott and Schreckenberg, 2009).

The benefit sharing arrangements for REDD+, particularly if they are designed to enhance equity by targeting poor and marginalised groups, may be used to increase distributional equity within communities, thereby contributing to adaptive capacity. In Tanzania, pilot project locations have been chosen specifically to target poor districts with the aim

'Locking-in' improvements in equity in Nepal

Nepal remains a heavily class-structured society differentiated by access to natural, physical, financial, social and human capital (Ojha et al., 2002). The community forestry (CF) regime, through which REDD+ is to be implemented, exposes these inequalities through uneven benefit sharing structures and elite capture of decision-making. Membership in the committee of a Community Forestry User Group (CFUG) is a matter of social prestige, and studies have shown that wealthier community members tend to dominate these positions (Malla, 2000; Thoms, 2008). In turn, capacity-building and training exercises conducted through the District Forest Office (DFO) are channelled through CFUG committees, which tend to reinforce knowledge differentials and emphasize forest protection (Malla et al., 2003). An emphasis on forest protection rather than sustainable use and management, exacerbated by the proportionately lower reliance of the local elite on common pool forest resources, has resulted in limited livelihood benefits of CF for the poor (Neupane, 2003). In response, NGO and donor projects have conditioned financial incentives on social criteria. While this has resulted in some material gains for the poor, such programs are often viewed with hostility by the better off (Gauli and Hauser, 2009). An approach that has registered significant success in addressing inequities within CFUGs has been based on adaptive and collaborative management, which facilitates negotiation between social classes and empowers poor members to challenge inequitable practices themselves (McDougall, 2007). One way REDD+ could enhance adaptive capacity of the poor is to institutionalize such adaptive and collaborative approaches to forest management.

Source: West (2011)

of ensuring that the poor are able to benefit from REDD+ (Peskett et al., 2011; URT 2011). This type of targeting could also be used to directly target REDD+ payments to enhance distributional equity within communities. Without targeting, or specific support for participation of poor and vulnerable households it is unlikely that REDD+ will contribute to enhanced distributional equity (Peskett et al 2011; Peskett et al 2008).

In Costa Rica, the main measure being used to implement REDD+ will be the existing PES scheme, however REDD+ has provided a stimulus for enhancing procedural and distributional equity in the design of this program (Vignola and Aymerich, 2011), particularly to ensure Indigenous Communities are more able to participate. This example demonstrates the potential positive impact of REDD+ and the international and national interest generated by the potential financial flows, which can, if harnessed properly be used to enhance distributional equity, and therefore contribute to adaptive capacity at the local level.

Procedural equity

In international REDD+ debates, procedural equity in the development of REDD+ projects and national programmes is a key issue. Procedural equity at these levels is generally dealt with by outlining consultation processes (Peskett et al., 2011). Although there have been some criticisms of these processes, international scrutiny of countries developing their national level REDD+ strategies and safeguards established for REDD+ under the Cancun Agreements (Appendix 1) provide hope for the improvement of these consultation processes, which are more comprehensive than those in the development of many other national policies affecting forest dependent people.

The application of the principle of free, prior and informed consent (FPIC) in REDD+ (REDD+ SES, 2011; UN-REDD, 2011) at the local level enhances procedural, and hopefully distributional equity in REDD+ decision making, however its effect on procedural equity within existing decision-making systems of local communities is unclear. There has been some suggestion that the highly technical nature of REDD+ and the lack of clarity in national policy and legal frameworks means that community leaders are ill-equipped to negotiate with project developers on behalf of their communities, which has had led to some conflict within communities on the issue (Trevejo Loayza, 2011).

There is much work to be done on how to practically apply FPIC so that it respects and enhances procedural equity in community level decision-making. International concerns about procedural equity in REDD+ from the national to the local level have the po-

tential to positively influence procedural equity in many types of community decision making, which would then contribute to adaptive capacity at the community level, however this outcome is far from assured.

Adaptable institutions

The influence of REDD+ on the flexibility of local level institutions is uncertain. If, by entering into REDD+ agreements with either the national government or project developers, communities are required to adopt static and rigid institutions governing forest use (which could be required for permanence of emissions reductions) this could negatively impact adaptive capacity at the local level.

In many places communities rely on forest resources more in the face of shocks, either climatic or other economic shocks (PEN, 2011). There is also some suggestion that in the face of climate and weather shocks, many community based institutions change to enable the use of forests as safety nets and respond to immediate needs, demonstrating the importance of flexible and adaptive institutions in community responses to these shocks already (McSweeney, 2004; Vignola, pers comm.).

Key points:

For REDD+ to positively contribute to this aspect of adaptive capacity it should;

- Acknowledge and work with the existing community use of forests which is important to livelihoods, and the institutions (both informal and formal) that govern this.
- Target REDD+ benefits to enhance distributional equity at the community level.
- Be harnessed as a stimulus to increase distributional and procedural equity in community decision-making on forests, natural resources and possibly even for other decisions.
- Recognise that government and civil society support will be needed for local communities to ensure that their existing decision making systems are equipped to cope with the complexities of REDD+.
- Explicitly deal with the likely trade-off between permanence of emissions reductions and adaptable institutions around access to and management of forests.

Knowledge and information

Appropriate knowledge about the future threats of climate change, methods to adapt to these and the support available to do so is likely to contribute to adaptive capacity of communities (Jones et al., 2010). The ability to assess the adaptation options available, given longer term development pressures and changing community needs, as well as the capacity to implement them is also required for communities to be able to use knowledge and information in a way that will contribute to adaptive capacity (Frankhauser and Tol, 1997).

The way in which information is generated, collected, analysed and disseminated will be important in determining community level adaptive capacity, as well as the adaptive capacity of groups within communities. This is obviously closely linked to institutions, and communities will need systems to optimise 'informal' knowledge generation and sharing as well as well as best utilise more formal kinds of knowledge (e.g. disseminated by government departments) (Jones et al., 2010).

Key points:

To build adaptive capacity, knowledge is needed on the future threats of climate change, methods to adapt to these, and the support available to do so. Capacity is also needed to assess the various options and implement the most appropriate.

How REDD+ is likely to influence knowledge and information:

At first glance it appears that REDD+ is unlikely to have large impacts on access to climate related information and the ability of communities to assess various adaptation options. There are however more complex linkages between the two, and for REDD+ to provide a long-term mitigation strategy communities will need to have knowledge and access to adaptation options that also contribute to REDD+ objectives. Similarly, communities involved in forest management would also benefit from climatic information to inform forest management, for example long term rainfall and climatic predictions to ensure that the most appropriate varieties are used in afforestation/reforestation. REDD+ can be designed in a way that enhances synergies between REDD+ objectives and this element of adaptive capacity.

To promote better synergies between the two in areas where agriculture is likely to be affected by climate change, REDD+ finance could be used to provide access to accurate weather and climatic information for farmers, improve agricultural extension services focussed on climate smart intensification techniques e.g. agroforestry, or to improve farmers access to better adapted crop varieties.

REDD+ may help build the capacity of communities to consider various adaptation options or development pathways, which is an important part of adaptive capacity. Because of the long time period of commitment needed to be involved in REDD+ (to ensure permanence of emissions reductions) for most communities deciding whether to participate or not will involve the assessment of various development pathways and careful consideration of alternative options. Decision making is likely to include the costs and benefits of alternative options, with a final decision based on what will be the most beneficial option for the community in the long term. Experience with this assessment of long-term development options and with a community decision making process for deciding whether or not to be involved in REDD+ may assist communities in doing the same for adaptation options.

Similarly, by encouraging communities to think about REDD+ over the long-term as part of this cost benefit analysis process, REDD+ can also be viewed as an adaptation strategy. From this perspective its contribution to local level adaptive capacity can be compared with other adaptation options.

The final link relates to the knowledge intensive, technical nature of REDD+ and knowledge sharing and capacity building on REDD+ can be used to increase the ability of communities to use formal information e.g. research results or scientific knowledge, in decision making. It may also assist communities to incorporate 'informal' information into their decision making (although whether REDD+ will help this or not is unclear). This may enable communities to also use this ability to make adaptation related decisions, using a combination of technical information and more informal knowledge sources.

Key points:

For REDD+ to positively contribute to this aspect of adaptive capacity it should;

- Maximise synergies by using REDD+ finance to deliver climate related information and knowledge to assist agricultural communities adapt.
- Use REDD+ capacity building and knowledge sharing activities and networks as an opportunity to build more general skills and processes in communities such as using formal and informal information in community decision making and; assessment and decision making processes for considering options for long-term community development pathways.

Innovation

The ability of a system to support new practices and foster innovation is a key characteristic of adaptive capacity (Smith et al., 2003). This will be required as social and environmental conditions change and existing practices and behaviours need to be altered in response, and in some cases totally changed. Experimentation, innovation and adoption are key features that enable a system to do this (Jones et al., 2010). Innovation includes not only high-tech, large-scale new ideas, technologies or practices, but also more micro-level initiatives. Innovation is closely linked to knowledge and information sharing as individuals analyse how best to take advantage of opportunities or respond to threats presented by climate change. It is also closely linked to the asset base, which determines people's economic ability to take risks and invest in innovation (Ludi et al., 2011). However, some evidence suggests that people with more assets may be less willing to undertake transformational change, although this has not been widely tested (Jones et al., 2011).

Key points:

Fostering innovation, including supporting experimentation and adoption of new practices, technologies and behaviours is a key characteristic of adaptive capacity.

How REDD+ will influence innovation:

The influence of REDD+ on local level innovation will depend heavily on how communities are involved in REDD+ implementation and how payments (benefit sharing systems) and contracts are structured.

REDD+ is likely to be performance based at the national level i.e. in Phase 3¹ payments will be made to countries contingent on them achieving reductions in emissions below a certain reference (emissions) level (REDD-net, 2010b). Whether performance based payments will also be made to local communities is unclear, as no country has yet finalised its benefit sharing mechanism. There is also increasing discussion at the international level about how to define 'performance' and whether some REDD+ funding should be made available for emissions reductions that also contribute to poverty reduction and biodiversity conservation, over and above what is required by the safeguards.

If payments are made to communities based on emissions reductions achieved, innovation in forest management techniques may be stifled as communities prefer to stick with management actions that have achieved emissions reductions, and therefore payments in the past. Evidence on loss aversion suggests that where there is a financial penalty for failure, in this case not receiving a payment regardless of work put in, people are likely to make more risk averse decisions and therefore innovation may be stifled (Sunstein, 2005). Many current REDD+ project contracts are structured in this way, with the benefits received by communities dependent on emissions reductions achieved (e.g. the Oddar Meanchay project in Cambodia (Peskett et al., 2011), The 'Making REDD work for communities and forest conservation in Tanzania' project in Tanzania, (Mwayafu et al., 2011)).

If community payments are instead based on undertaking agreed management actions, to enable innovation in forest management, the specified management actions will need to be sufficiently flexible, or be able to be renegotiated at regular intervals (e.g. every 5 years). For example different species may become more appropriate for reforestation or restoration activities as the climate changes. Without this flexibility built into the agreement with communities, they risk being locked into specific actions that may become increasingly inappropriate under climate change, possibly not even achieving the emissions

¹ Under the Cancun Agreements it was agreed that REDD+ would be implemented using a phased approach, with Phase 1 including development of national strategies, action plans, policies and capacity building; Phase 2 being the implementation of these policies, which could involve technology development and transfer and results-based demonstration activities; and Phase 3 being results-based actions with full monitoring, reporting and verification (para 73)

reductions they did previously. Similarly as community needs change in response to development pressures and climate change, benefit sharing mechanisms will need to be sufficiently flexible to continue to provide the types of benefits most needed by the community.

To foster innovation, encouragement of active experimentation for forest management techniques that reduce emissions, or enhance success of restoration activities may be needed e.g. a portion of the payment based on undertaking and learning from experimental actions in a certain part of the forest area.

An additional way that REDD+ could foster local level innovation is by using some community level funds as an 'innovation fund', to provide financial support to new and innovative livelihood techniques, enabling community members to experiment and learn from this experimentation without risking their own assets. Similarly funding could be provided for the scale up of innovations or techniques that contribute to adaptation and knowledge sharing and lesson learning which is essential to disseminate and improve uptake of new innovations. This has been done successfully through adaptation focused projects (Africa Adapt, 2011).

Key points:

For REDD+ to positively contribute to this aspect of adaptive capacity it should;

- Acknowledge and deal with the trade-off between fostering innovation and payment for performance at the local level.
- Ensure that if payments are made based on management actions undertaken, there should be sufficient flexibility within agreements to alter the specified management actions as conditions change.
- Recognise that innovation will also be needed in benefit sharing mechanisms to ensure they continue to deliver the types of benefits most needed by the community, as these needs change over time in response to climate and other development pressures.
- Enable REDD+ finance can be used to fund innovation directly at the local level through an innovation fund, or payments partly based on experimentation with new forest management or reforestation/restoration techniques.

Flexible forward-looking decision making and governance

The ability of a system to anticipate change, incorporate relevant information and integrate relevant initiatives into future planning and governance is an important aspect of adaptive capacity (Jones et al., 2010). This is broadly known as adaptive governance. Key features of adaptive governance include transparency, prioritisation, collaboration and the use of relevant information in the decision-making process. This type of governance and decision-making is likely to be more responsive, adaptable and better able to cope with changing circumstances (Jones et al., 2010).

To build the capacity of formal organisations to operate in this way, it will be important to ensure that they learn and are forward-looking in nature, anticipate future weaknesses and vulnerabilities and create opportunities for appropriate adaptive actions (Jones et al., 2010). A long term vision in decision making, while ensuring that governance structures are sufficiently flexible to respond to change will be important to avoid maladaptive actions (Ayers and Huq, 2009).

The capacity of individuals to adapt to change will be impacted by what decisions are made, and whether their interests are reflected in these. This is influenced by power relations within communities, in turn affected by a range of social and cultural factors (Jones 2010).

Key points:

To contribute to adaptive capacity, governance systems and decision making should be 'adaptive' in nature. Key features of adaptive governance include a long-term vision, yet sufficient flexibility to respond to change, transparency, prioritisation, collaboration and the use of relevant information in the decision-making process.

How REDD+ is likely to influence decision making and governance

A large number of factors influence whether local governance is adaptive or not and the role of individuals, their social relationships and social networks have been acknowledged to be particularly important in promoting and implementing adaptive governance (Folke et al., 2005).

Although the influence of REDD+ on local level governance is likely to be less important than these factors, REDD+ can be designed in a way that contributes to them. REDD+ may also encourage adaptive governance by ensuring that REDD+ governance systems and institutions incorporate the key features of adaptive governance in their design, and into the implementation of national policies at local levels. This includes ensuring transparency in REDD+ decision making through appropriate civil society participation and open and timely access to information, fostering multi-sectoral and multi-stakeholder collaboration in REDD+ decision making, and encouraging the use of relevant information in decision making e.g. on the drivers of deforestation, and the socio-economic impacts of various REDD+ strategy options. Whether this occurs will largely depend on the extent to which REDD+ focuses on reforming forest governance.

There are a few key elements of REDD+ that are likely to have more specific impacts on local level governance systems. As discussed previously (see section on Knowledge and Information), REDD+ may stimulate communities to undertake an assessment of long-term development options, and the forward looking, long term nature of these decisions may build capacity in communities to use these decision making processes for other decisions as well e.g. to assess available adaptation options.

Many have highlighted the need for the development of REDD+ strategies to involve multiple stakeholders from multiple sectors in order to effectively deal with the complex drivers of deforestation and degradation (Graham and Vignola, 2011; WRI, 2009). Indeed the success of FLEGT in addressing the trade of illegal timber has been attributed to the use of multi-stakeholder platforms as part of the negotiation process (FERN, 2010). Many countries have established these for REDD+ at the national level, or plan to, (e.g. the Central African Republic, Liberia, Indonesia, Argentina, Costa Rica, Ethiopia, Vietnam, Cambodia, Solomon Islands (WRI, 2011)) however the effectiveness of these and whether they will also be established at the local level is yet to be determined. If set up at the local level, or including local level representatives, these platforms may build adaptive governance capacity of local communities, providing community members experience of working in these types of

fora. They would also build the capacity of bridging organisations which have been identified as important information 'sharers and translators', essential for adaptive governance (Folke et al., 2005).

In addition to all these potentials, REDD+ needs to be designed acknowledging that in the longer term, transformational change may be needed in the areas most affected by climate change. Forest frontier communities who are currently cattle grazers or produce a range of crops for subsistence and local markets may find that under climate change agro-ecological conditions are no longer suitable for these activities. This may mean they migrate into another forest area which is more climatically suitable and undertake agricultural activities there, or that they turn to chainsaw logging and saw milling for their livelihoods. REDD+ policies and their implementation at local level will need to be sufficiently flexible to be able to respond to changing pressures, as demonstrated by the box overleaf.

Key points:

For REDD+ to positively contribute to this aspect of adaptive capacity it should;

- Focus on improving and strengthening forest governance, ensuring that REDD+ governance systems and forest governance generally use adaptive governance.
- Be used as a stimulus to develop multi-stakeholder platforms to ensure collaborative decision making on forests and land use more generally.
- Build capacity of communities to use long-term vision in decision making.
- Recognise that it will need to respond to changing pressures e.g. changing drivers of deforestation and degradation, changing adaptation needs of communities etc., and adaptive governance will be required to ensure its long term sustainability and political support.

Adaptive governance

For the long-term success of REDD+ an adaptive governance framework will be necessary for a number of reasons. First, the uncertain impacts of climate change on carbon sequestration (e.g. vegetation die-back, fires, pests); second, the changing nature of land use pressures (e.g. commodity markets altering the opportunity costs of REDD+); and third, the multiple objectives to be achieved in REDD+ countries (e.g. increasing agricultural productivity and REDD+).

The uncertainties mean that objectives for REDD+ and other key sectors (e.g. agriculture, energy, infrastructure, water resources management) at the national level will be subject to change, and decisions will need to be able to adjust to these.

Adaptive governance requires the updating of decisions to reflect updated information and will require organisations to facilitate this process through the provision and exchange of updated information between sectors, as well as the facilitation of multi-stakeholder groups (Cash et al. 2003; Duit and Gala, 2008). For adaptive governance to work in the context of REDD+ it will also be important that monitoring and evaluation systems involve organisations and institutions (not only in the forest sector) that are able to monitor how national REDD+ policies interact at the local level with other economic activities and the socio-economic impacts of these interactions. An adaptive governance framework will enable this information to be fed into REDD+ strategy evaluation and redevelopment.

Source: adapted from Graham and Vignola, 2011.

Conclusion

The impact of REDD+ on adaptive capacity at the local level will largely be affected by the policies and measures chosen to implement REDD+, the benefit sharing mechanism used to distribute REDD+ finance and the way that REDD+ influences governance of forests and natural resources, as well as governance more generally. REDD+ as it is being envisaged in many countries can already contribute to adaptive capacity, however some changes to how REDD+ is implemented will allow REDD+ to have considerable positive impacts on the adaptive capacity of local communities. The discussion in this paper also highlights that however REDD+ is designed, it will not always be possible to meet the dual objectives of mitigation and local level adaptive capacity, and tradeoffs will need to be made.

The following points highlight how REDD+ can be designed to maximise the synergies between climate change mitigation and local level adaptive capacity, as well as demonstrating areas where tradeoffs between the two will be necessary.

Policies and measures

To maximise synergies, REDD+ should;

- Ensure continued access of local communities to local assets and resources, recognising the need for flexibility of this access and use, which will need to change in response to changing development and climate pressures.
- Acknowledge and work with the existing community use of forests for livelihoods, and the institutions (both informal and formal) that govern this, recognising that these institutions also influence the adaptive capacity of certain groups within communities and are sometimes a barrier that needs to be addressed.
- Incorporate flexibility into agreements with communities to enable parties to redefine appropriate management actions and encourage innovation, allowing forest management to adapt as conditions change. It should also encourage active and deliberate experimentation in forest management techniques to take advantage of new opportunities as they arise.

- Use capacity building as an opportunity to build more general skills and processes in communities such as;
 - using formal and informal information in community decision making; and
 - assessment and decision making processes for considering options for long-term community development pathways.
- Acknowledge and deal with the trade-off between permanence of emissions reductions and adaptable institutions around access to and management of forests.
- Acknowledge and deal with the tradeoffs between fostering innovation and performance based payments. The design of benefit sharing mechanisms and their effect on innovation is important and complex, and if payments are instead based on management actions undertaken, flexibility within agreements will be required to alter specified management actions as conditions change.
- Recognise that innovation will also be needed in benefit sharing mechanisms to ensure they continue to deliver the types of benefits most needed by the community, as these needs change over time in response to climate and other development pressures.

Benefit sharing mechanisms

To maximise synergies, REDD+ should;

- Adopt benefit sharing mechanisms that diversify the asset base for all groups within communities, and are able to leverage improvement in a number of different types of assets e.g. community revolving funds, innovative cash transfer mechanisms. This will require the development of equitable benefit sharing mechanisms, with effective and meaningful participation from all groups being essential in their design. It is also likely to require targeting of benefits to particular groups to ensure distributional equity is achieved.
- Ensure that there is sufficient flexibility within benefit sharing mechanisms for communities to determine community level priorities in benefit sharing schemes to respond to local needs e.g. money distributed to community level and then community may choose what to do with it from there e.g. non-cash distribution to household level, cash payments etc.
- Use REDD+ finance to deliver climate related information and knowledge to assist agricultural communities adapt, and to fund innovation directly at the local level through an innovation fund, or payments partly based on experimentation with new forest management or reforestation/restoration techniques.

Governance and institutions

To maximise synergies, REDD+ should;

- Ensure that it strengthens forest governance, identified as essential for REDD+ to work. REDD+ can be used as an opportunity to develop much more adaptive forest governance, which will contribute to REDD+ objectives, strengthen forest governance and build adaptive capacity at the local level.
- Recognise that over time it will need to respond to changing pressures e.g. changing drivers of deforestation and degradation, changing adaptation needs of communities etc., and adaptive governance will be required to ensure its long term sustainability and political support.
- Be used to provide a stimulus to develop multi-stakeholder platforms to ensure collaborative decision making on forests and land use more generally. It can also be used to build capacity of communities to use long-term vision in decision making.
- Be harnessed as a stimulus to increase distributional and procedural equity in community decision-making on forests, natural resources and possibly even for other decisions.
- Recognise that government and civil society support will be needed for local communities to ensure that their existing decision making systems are equipped to cope with the complexities of REDD+.

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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 the Overseas Development Institute, Centro Agronómico Tropical de Investigación y Enseñanza (CATIE), RECOFTC – The Center for People and Forests and Uganda Coalition for Sustainable Development. REDD-net is funded by Norad.



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