REDD+, Community Forestry & Gender:
Lessons Learned and Paths Forward

Melissa Rodgers
6075702

Supervisor: Christine Straehle

Graduate School of Public &
International Affairs
University of Ottawa
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Abstract:

Proposals for Reducing Emissions from Deforestation and Forest Degradation (REDD+) that are gaining prominence in international climate change negotiations offer both risks and opportunities for members of forest-dependent communities in developing countries. The livelihoods of rural women are often particularly dependent on forest resources, and yet REDD+ appears to be developing as a gender-blind institution. In this paper, I argue that REDD+ should be framed as an international development initiative. Following Amartya Sen's capabilities approach, this requires that all members of forest-dependent communities be provided with opportunities to substantively participate in REDD+ programs. Community forestry programs offer a valuable precedent for REDD+. Drawing on Nepal's extensive experience with community forestry, this paper explores the barriers to women's participation in forest governance and possible strategies to overcome them, and examines gender equity in Nepal's REDD+ preparedness activities to date.

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Introduction

The contribution of emissions from tropical deforestation in developing countries to global climate change has emerged as a topic of considerable discussion at recent climate negotiations. Consequently, initiatives focused on reducing emissions from deforestation and forest degradation, or REDD, are gaining momentum at the international level. The essential aim of REDD programs is to create incentives for developing countries to reduce their emissions from deforestation by assigning monetary value to forest carbon stocks. As REDD is still in the relatively early stages of development, there remain a multitude of questions regarding the feasibility and desirability of this approach to reducing emissions.

Given that climate change is a social as well as a scientific problem, the merits of initiatives designed to address global climate change should be weighed in terms of their effectiveness, efficiency, and equity. While the effectiveness and efficiency of REDD have been widely discussed, questions of equity have been considered less closely. In this paper, I will focus specifically on the ways in which REDD programs may have differential impacts on men and women. The necessity of a gendered analysis of the risks and opportunities associated with REDD is grounded in the material realities of men's and women's dependence on forests, which are in turn based on socially constructed gender roles.

The institutional design, governance structures, and benefit distribution systems associated with REDD will profoundly influence the degree to which this enterprise is equitable for both men and women. The experience with participatory forestry management systems that many developing countries have accrued in recent decades could potentially provide a structural foundation for REDD programs. For instance, Nepal has extensive experience with community forestry and is in the pilot phase of REDD, which makes it an interesting case study to examine the human impact of forest governance

structures through a gender lens. Community forestry in Nepal is generally considered to be successful, yet it has not consistently achieved an equitable distribution of benefits or allowed for women's full participation. Building REDD programs upon these existing institutions therefore risks perpetuating and amplifying existing inequalities. Conversely, there is an opportunity for REDD to draw lessons from this experience, and design programs that will enhance women's decision-making, agency, and voice in forest governance decisions.

Ongoing climate negotiations offer a window of opportunity to influence how REDD is framed and understood. Although the primary focus of REDD is to increase forest carbon sequestration, strategies to reverse deforestation are necessarily tied to the livelihoods of forest-dependent peoples. In many developing countries, including Nepal, women are particularly dependent on forest resources yet lack equitable representation in forest governance structures. Similar to community forestry, REDD incorporates both conservation and development objectives, yet it is not clear how these priorities should be balanced nor which should take precedence if they conflict. I therefore suggest that development aims should be more explicitly incorporated into REDD programs, drawing on Amartya Sen's capabilites approach to illustrate this concept. In order to be equitable and advance international development objectives, REDD must give due consideration to the effect that programs will have on all members of forest-dependent communities. More specifically, REDD programs should incorporate local governance structures that will provide forest-dependent communities with autonomy to made decisions related to REDD and disburse funds generated by these programs. These institutions should offer both men and women opportunities for substantive participation in decision-making processes

related to forests involved in REDD. In this paper, I will focus on the case of Nepal to examine the gender-specific opportunities and constraints that have emerged from community forestry initiatives, and consider the lessons that can be drawn from this experience as REDD programs move forward.

REDD: A Brief History

Deforestation activities are a significant driver of anthropogenic climate change, as they are responsible for nearly 20% of global emissions (UN REDD 2009, IPCC 2007). Forests act as carbon sinks, meaning that they remove and store carbon dioxide from the atmosphere through a process known as carbon sequestration. Deforestation and forest degradation release this stored carbon back into the atmosphere. Conversely, avoiding deforestation prevents the carbon stored in forests from being released into the atmosphere and helps to remove existing carbon dioxide. For this reason, providing incentives to protect forests can be a cost effective climate change mitigation strategy. Moreover, forests provide a range of important ecosystem services, such as soil and water conservation, and help to maintain biodiversity (IPCC 2007).

Reducing emissions from deforestation and forest degradation (REDD) was first discussed in negotiations under the United Nations Framework Convention on Climate Change (UNFCCC) at the 11th Conference of the Parties (COP) in Montreal in 2005. At COP13 two years later, the Bali Action Plan provided a formal mandate for REDD programs in developing countries (UNFCCC 2012). Based on the Bali Action Plan, REDD expanded beyond its initial considerations of deforestation and forest degradation to include the role of conservation, sustainable management of forests and enhancement of forest carbon stocks. Under this broader vision, REDD became known as REDD+. The importance of

REDD+ was reconfirmed at COP15 in Copenhagen, and then proposals for specific work to implement REDD+ were put forward at COP16 in Cancun. The most recent (2011) COP in Durban did not significantly advance the negotiations surrounding REDD+, although it did achieve some progress on technical issues, such as reference emission levels and measuring emissions reductions. In a move criticized by many non-governmental organizations, some of the specificity of the wording surrounding social and environmental safeguards was removed. The sources of finance and mechanisms for benefit sharing under REDD+ remain largely unresolved and are expected to be negotiated at future COPs (Kovacevic 2011; RECOFTC et al. 2012).

Two main multilateral institutions, the UN REDD program and the World Bank's Forest Carbon Partnership Facility (FCPF), have been established to help developing countries prepare for REDD+. Donor governments including Norway, Germany, and the UK have also established bilateral REDD+ agreements. Various stages of REDD+ activities are now underway in over 40 developing countries (Corbera and Schroeder 2011). REDD+ preparedness activities involve drafting strategies to engage stakeholders, establishing reference deforestation levels based on historical land use data, and establishing monitoring mechanisms to provide data on deforestation and forest degradation (Dhintal 2009). Nepal is a participant in the FCPF program. The REDD+ Readiness Preparation Proposal that Nepal prepared as part of this program will be discussed later in this paper.

REDD+, Carbon Sequestration, and Local Livelihoods

The primary motivation behind REDD+ is to enhance forest carbon stocks and thereby contribute to climate change mitigation. While pro-poor development is frequently cited as a co-benefit of REDD+, it is not central to the program's stated objectives. Yet understating

the potential livelihood impacts of REDD+ entails serious risk. According to the World Bank, forests contribute to the livelihoods of 1.2 billion people (FCPF 2012). Changing patterns of forest use in order to increase carbon sequestration under REDD+ will necessarily affect the livelihoods of forest-dependent people; whether these impacts are positive or negative will depend in large part on the institutional design and governance structures of REDD+ programs.

Past attempts to incorporate forest carbon accounting measures into climate change policies have taken place on a relatively small scale, meaning that there is not a strong, established precedent on which REDD+ programs can be modeled. The experience under the international climate change regime that is likely most relevant to REDD+ is the Kyoto Protocol's Clean Development Mechanism (CDM). This program allowed Annex I countries to offset their emissions through the implementation of emissions-reductions projects in developing countries. Experience with afforestation and reforestation projects under the CDM was limited[1] but raises some possible red flags for REDD+. CDM projects could only be implemented on lands with no forests before 1990, and in practice were often monoculture plantations that served the interests of elites but were not appropriate to the livelihood needs of local populations (Staddon 2009: 26).

In addition to posing risks to local livelihoods, large-scale, fast-growing monoculture plantations designed to maximize carbon sequestration and generate carbon trading credits can also have other unintended environmental consequences, such as water table effects

[1] Concerns about the permanence and additionality of emissions reductions from forestry projects, as well as difficulties in establishing baselines and measuring, reporting, and verifying emissions reductions, resulted in few afforestation and reforestation projects under the CDM. These same issues are being deliberated at the international level in preparation for REDD+.

(Adhikari 2009: 19). REDD+ can include various types of forests, from privately owned monoculture plantations to state-owned forests. It is often the poorest and most vulnerable segments of the population who do not have access to private property that are most dependent on common pool resources, such as state-owned forests, for their livelihoods. If REDD+ programs encourage monoculture plantations in order to maximize carbon sequestration benefits similar to CDM projects, this could have serious consequences for the livelihoods of forest-dependent people. Furthermore, CDM forestry projects were concentrated in a few countries with relatively developed infrastructure and institutions, with a bias against Africa and towards Latin America. A global survey of REDD+ projects underway as of 2009 shows similar trends in terms of the geographical distribution of projects (Cerbu et al. 2011).

To date, carbon forestry projects have generally not actively engaged in development activities or sought to transform local power relations (Cobera et al. 2007: 607). If local power structures are reinforced through international projects aimed at increasing forest carbon sequestration, these projects are likely to exclude and perhaps further marginalize the poorest and least powerful members of the community. REDD+ thus raises a series of important questions about equity. For instance: Is the success of REDD+ contingent on carbon sequestration targets alone, or are social development goals also relevant? Do REDD+ market actors have a responsibility to ensure that REDD+ benefits are fairly distributed? Should REDD+ projects be concentrated where the greatest carbon sequestration outcomes are possible, or should questions of need and distributional equality of REDD+ benefits also be considered? If REDD+ is a market-based instrument and concerned only with carbon sequestration outcomes, additional requirements to make

REDD+ 'socially responsible' may represent an "unwelcome constraint" (Luttrell et al. 2007). Conversely, a failure to seriously consider the potential impact of REDD+ on local livelihoods can compromise conservation outcomes and could have the unintended consequence of making some members of forest-dependent communities worse off than they were prior to the introduction of REDD+ programs.

Climate Change, Forests, and Gender

REDD+ is a response to two interrelated issues: climate change and forest use. As a result of socially constructed gender roles, men and women may have different experiences in terms of their vulnerability to climate change and reliance on forest resources. Therefore, gender analysis is necessary to REDD+ programs to ensure that these potentially different experiences are taken into account when designing REDD+ initiatives.

Women in rural communities may have a particular, vested interest in ensuring that the global response to climate change is sufficient to avoid widespread environmental damage. As REDD+ is a climate change strategy, it should be responsive to and seek the active involvement of these stakeholders. Women are not inherently more vulnerable to climate change, but climate change is likely to exacerbate existing vulnerabilities caused by persistent gender inequalities that place women in positions of disadvantage relative to men. Women may therefore face additional social, economic, and political barriers that limit their coping capacity (UN WomenWatch 2009). These barriers include differential access to environmental resources, fewer opportunities for income diversification, lack of knowledge and financial resources, limited market opportunities, mobility restrictions, and lack of power to influence decisions at the household and community levels (Demetriades and Esplen 2009; Denton 2002; Djoudi and Brockhaus 2011). Women are not a homogenous

group, however, and it would be highly problematic to assume that women are universally more vulnerable to climate change. Both men's and women's experiences of climate change will vary depending on their locality, social status, age, ethnicity, power, and other mediating factors (Agarwal 1992; Demetriades and Esplen 2009). The diversity of experiences should be taken into account when designing programs like REDD+.

Nonetheless, socially constructed gender roles influence women's general vulnerability to climate change. In many rural areas of the developing world, women are expected to perform tasks that rely on natural resources, such as collecting firewood for cooking, caring for livestock, and fetching water. Women whose livelihood activities rely on natural resources are more vulnerable to the effects of climate change, as climate change can be expected to contribute to resource scarcity (Denton 2002). Men's and women's reliance on natural resources and vulnerability to climate change are a product of their daily interactions with their surrounding environment; these interactions are dependent on men's and women's material realities and gendered roles and rights associated with access to and use of natural resources (Agarwal 1992; Schlatek 2009). Forest resources, which are the focus of REDD+ programs, are critical to rural livelihoods in many developing countries. Moreover, there is some evidence that rural women are more dependent on forest resources than men (FAO 2012). Women's reliance on forests can be attributed to factors such as lack of property rights, and commonly assigned household responsibilities that require forest products, such as cooking. While it is difficult to generalize about the specific ways in which men's and women's dependence on natural resources differs due to divergent social and cultural expectations of gender norms, it is crucial to identify where such differences exist and take them into account when designing REDD+ programs.

For instance, gender norms in Nepal structure men's and women's reliance on forest resources. Women's dependence on forest products is "different from, greater, and more everyday than men's" (Agarwal 2010a: 32). Eighty-four percent of Nepalese women collect non-timber forest products (NTFPs), such as firewood, fodder, and grass, on a regular basis (Kameswari 2004: 170). Women's reliance on forest products is the result of accepted gendered divisions of labour, combined with lower access to private resources. Whereas men are occasionally responsible for securing timber for construction, women and girls are usually responsible for gathering firewood on a daily basis (Agarwal 2001: 9, 2010: 9; Buchy and Subba 2003: 316). Since women use forest products for different purposes than men as part of their daily livelihoods, they also tend to have different preferences related to forest management decisions, such as which tree species to plant or rules of access (Pandofelli et al. 2008: 5-6).

REDD+ programs must recognize women as primary stakeholders in forest management and ensure that their views and preferences are taken into account. To date, there has been limited effort to mainstream gender into REDD programs (Gurung et al. 2010). Some recent studies have begun to consider the potential for gender-differentiated outcomes from REDD programs, but this literature remains underdeveloped. There are numerous risks that REDD programs could pose for women. For instance, REDD programs offer an incentive to prefer fast-growing species of trees that can sequester more carbon over trees that can serve multiple purposes. Pine trees, for example, are fast growing, commercially valuable, and capture relatively large amounts of carbon, but provide no fodder or leaf litter (Buchy and Subba 2003: 318; Lama and Buchy 2002: 33). In cases

where women are responsible for obtaining fodder for livestock feed and bedding, this can increase their workloads as they are forced to look elsewhere for these resources.

The financial incentives for increasing carbon sequestration created by REDD+ also raise concerns that restrictions will be placed on access to forest resources. Bina Agarwal's research in India and Nepal indicates that forest closures have a disproportionately negative effect on women, as they are responsible for stall feeding livestock and securing alternative sources of fodder, grass, and fuel for cooking (Agarwal 2001: 1634; 2002: 193). The increased time burdens associated with forest closures can have a negative impact on the educational outcomes of girls (Agarwal 2001: 1634). Furthermore, fuelwood substitutes like twigs, dung cakes, agricultural waste and dry leaves require careful tending, thereby increasing cooking time and preventing women from attending to other work, as well as posing potential health hazards (Agarwal 2002: 192). Although alternative solutions such as fuelwood plantations adjacent to protected areas, investments in alternative sources of livelihood, or biogas stoves for cooking could be implemented, in many cases women lack bargaining power to collectively advocate for these measures (Agarwal 2001: 1630, 2002: 193).

Although REDD+ is intended to generate benefits on a scale greater than present forest uses, the capacity of these benefits to affect positive outcomes is highly dependent on their distribution. If benefits accrue only to elites, they could serve to exacerbate existing inequalities. Furthermore, REDD+ monitoring, reporting, and verification requirements could add to women's workloads, without compensation if the value of their contribution is not recognized. Opportunities for training, education, and participation associated with REDD+ could also further contribute to knowledge gaps and asymmetrical power relations

between men and women, unless women are explicitly encouraged to take part in REDD+ initiatives.

Alternatively, REDD+ has the potential to establish transformative institutions that will assist in opening new opportunities for substantive participation in decision-making processes by both men and women (Pokharel and Baral 2009; Gurung et al. 2010). Good governance structures for REDD+ at the community level could be an important institution for ensuring that REDD+ programs contribute to the wellbeing of forest-dependent communities. Delegating responsibility for REDD+ to the local level could facilitate the practical administration of REDD+ programs while empowering marginalized populations. This type of local forest governance structure has a precedent in the form of community forestry programs. Experience from community forestry programs shows that in addition to being important in its own right, women's participation is instrumental in achieving conservation outcomes. Decision-making procedures that are inclusive of women and attentive to their needs are more likely to generate rules that will be followed.

Therefore a gender-inclusive approach to REDD+ can help to reduce transaction costs, ensure the permanence of carbon sequestration and emissions reductions, and contribute to the sustainability of these initiatives (Rutherford et al. 2011). Participatory REDD+ interventions that effectively engage all members of forest-dependent communities can thus function more efficiently while building skills, self-confidence, and collective identity, and expanding the socially acceptable boundaries of women's space. Drawing on the lessons learned from community forestry, we can see that that generating such outcomes is both worthwhile and possible, but is unlikely to be achieved unless explicit measures to taken to overcome barriers to women's participation.

REDD+, Development, and Capabilities

REDD+ is on its way to becoming a key pillar of a post-2012 international climate regime (Corbera and Schroeder 2011: 89). Predicted financial flows for emissions reductions under REDD+ could reach $30 billion (Laurance 2008 in Dulal et al. 2012: 126). Given the possible scope and scale of REDD+ activities, coupled with its specific and exclusive focus on forests in developing countries, REDD+ has the potential to profoundly influence the lives of millions of forest-dependent people.

In addition to being potentially large in scale, REDD+ carries risks to local populations. For instance, forest-dependent communities could be displaced from traditionally used land in order to create plantations of tree species with high carbon sequestration potential, or prevented from using essential forest resources in order to increase carbon sequestration. REDD+ programs administered at the national or international level risk insensitivity to local conditions and needs, and may exclude forest-dependent communities from sharing in the potential benefits of REDD+ programs. At minimum, REDD+ should respect existing international human rights conventions and norms. The Cancun Agreements and UN-REDD policies state that all relevant international obligations, national circumstances and laws must be taken into account when designing REDD+ programs. These include provisions for women's equal access to land ownership and resource rights under CEDAW, the Beijing Platform for Action, the Millennium Development Goals, the Convention on Biodiversity, and other agreements (Gurung et al. 2011 23-4). To date, however, REDD+ initiatives have not consistently acknowledged, let alone proactively addressed, existing forest governance issues, such as disputes over property rights or human rights violations (Larson 2011: 547).

While respecting basic rights is a crucial first step in ensuring that REDD+ programs are efficient, effective, and equitable, REDD+ has the potential to make a transformative contribution to international development goals understood more broadly. The centrality of natural resources to livelihoods in rural areas of the developing world means that resource management decisions have social, political and economic implications. A central assumption underpinning REDD+ is that it will generate higher benefits than alternative forest uses. Indeed, this is required in order to provide an incentive for REDD+ participation. Yet providing payments through carbon markets is not sufficient to ensure that REDD+ programs work to the benefit of forest-dependent communities. Ensuring that the needs of forest-dependent communities are met in conjunction with REDD+ requires giving these communities a voice in decisions regarding how forests are managed and how REDD+ payments are distributed.

In order to ensure that REDD+ programs work to the benefit of forest-dependent communities, REDD+ needs to be explicitly framed as an international development initiative with a central focus on its impact on the livelihoods of local populations. More specifically, drawing on the capabilities approach as articulated by Amartya Sen and Martha Nussbaum, I argue that REDD+ should be designed as a development initiative in the sense that it should enhance the *wellbeing* of forest-dependent people. Amartya Sen defines development as "a process of expanding the real freedoms that people enjoy" (1999: 3). He is primarily concerned with people's capacity to make choices about the type of life they want to lead (Sen 1992: 36). Sen describes human life as a set of "doings and beings" that he refers to as "functionings" (Sen 1989: 43). Capabilities are the result of various functioning combinations that are autonomously chosen and enacted by the individual (Sen 1989: 48).

Goods and resources are necessary means to achieving freedom, but are not the focus of Sen's analysis (Sen 1992: 38). The capabilites approach is thus centrally concerned with individuals and the real, substantive life options that they enjoy.

Since the capabilites approach places particular emphasis on choice, human agency is at the core of this approach to development. Sen describes an agent as "someone who acts and brings about change, and whose achievements can be judged in terms of her own values and objectives…" (Sen 1999: 19). In its concern for agency, the capabilites approach goes beyond basic needs. However, certain background conditions must be met before individuals can exercise agency. The importance that Sen assigns to contexuality and public deliberation makes him reluctant to elaborate a particular list of necessary capabilites (Sen 2004: 78). Conversely, Nussbaum takes a universalist approach and formulates a list of ten central human capabilites that she believes must be fulfilled in order to live a full and dignified human life. These include: life, bodily health, bodily integrity, sense, imagination and thought, emotions, practical reason, affiliation, interaction with other species, play, and control over one's political and material environment (Nussbaum 2000: 78-81). Nussbaum identifies affiliation and practical reason as the most crucial basic capabilities that provide the structure on which the rest of her central capabilities are constructed (Nussbaum 2011: 39). Affiliation includes engagement in social interaction, freedom from discrimination, and dignified treatment premised on self-respect and non-humiliation. Practical reason is the ability to autonomously create a life plan based on a personal and critical reflection of what is good (Nussbaum 2011: 34).

Sen sees the individual capacity to participate in economic, social, and political actions in public life as particularly important to agency (1999: 19). Similarly, participation

in political decisions that affect one's life is one of Nussbaum's central capabilities, and also closely related to affiliation and practical reason (Nussbaum 2000: 79-80). Particularly for common pool resources, communities must have the capacity to deliberate about how resources should be shared. Having a voice in how these resources that are essential to rural livelihoods are shared can be key to exercising agency in other aspects of one's life.

Forest Governance

Using the capabilites framework, it becomes clear that in order to be sensitive to the needs of local populations, opportunities for substantive participation must be built into the institutional design of REDD+. Furthermore, REDD+ should facilitate sustainable resource use by forest-dependent communities. In this sense, community-based resource management programs that valorise local knowledge and autonomy while seeking to fulfil livelihood needs could serve as an institutional model for REDD+.

Community forestry is a type of community-based natural resource management that encompasses a variety of initiatives and management programs. Broadly speaking, it refers to the exercise of power and influence by direct forest users in decision-making processes related to forest management, rules of access, product use, and profit-sharing (Maryudi et al. 2012: 2, McDermott and Schreckenberg 2009: 158, Ohja et al: 2009 51). Community forestry emerged from a paradigm shift towards participatory, "people-oriented forestry" that gained momentum in the 1970s. This reorientation of forestry policy goals took place within the broader context of revisions to the commonly understood causes of chronic poverty and changing attitudes towards the participatory inclusion of local populations affected by development initiatives (Arnold and Persson 2009: 117, Cornwall 2003: 1326). There has been a gradual evolution in the conceptualization of

community forestry management from "participation," which implies that local people are not already managing forest resources and should be participating in other external management systems, to a more user-driven autonomous approach with "acknowledged rights and responsibilities to manage forests cooperatively and equitably" (Colfer Pierce and Byron 2001: 275-7).

Since forests are often the most valuable asset available to rural communities, empowering local users to benefit fully from these resources is a logical yet underused rural development strategy (McDermott and Schrekenberg 2009: 158; Pierce Colfer 2011: 2147). This is particularly true since there is a geographical overlap between persistent poverty and remaining tracts of natural forest (Sunderlin et al. 2005: 1384). For instance, in Asia an estimated 350 million poor people live in rural, forest-adjacent areas (Mahanty et al. 2009: 269). The correlation between poverty and forests can be attributed to the secluded, remote nature of these areas, which is subsequently associated with a lack of market access, lower levels of education and skills, low levels of rural investment, and weak land tenure (Sunderlin et al. 2008: 24). Thus forest-dependent communities can be expected to have generally low levels of capability fulfilment. Devolving forest rights and responsibilities to local populations can help these disadvantaged communities accrue both material and non-material benefits, such as stronger local institutions and networks, greater autonomy, access to markets for timber and non-timber forest products (NTFPs), and improved air, water, and soil quality (McDermott and Schreckenberg 2009: 158; Mahanty et al. 2009: 270). Moreover, local people who live near natural resources have the motivation and capacity to manage resources, often more efficiently and effectively than outsiders. Community forest management is a particularly salient example in this respect, since

sustainable forest management involves regular care (i.e. pruning, thinning, planting, fire prevention or extinction, etc.), and experience has shown that state-owned forest resources are vulnerable to overuse and degradation if communities do not have a stake in their management (Adhikari et al. 2004: 246-9, Pierce Colfer 2011: 2147).

Building on experiments with community forestry in the 1980s and 90s in the global South, fifty governments around the world now have some form of community forestry arrangement (McDermott and Schreckenberg 2009: 159, Adhikari et al. 2004: 246). This trend continues to grow. As of 2008, an estimated 27% of total forested areas in developing countries was designated for collaborative community management programs (Ohja et al. 2009: 51).

The growing prevalence and popularity of community forestry programs points to possible lessons for REDD+, in terms of best practices for forest governance. Where community forestry programs exist, incorporating REDD+ into these existing institutions could efficiently lower transaction costs. In areas without community forestry, REDD+ could provide an opportunity for enhancing the participation of local populations in forest governance decisions where applicable. More generally, the successes and challenges of the recent history with community forestry initiatives should be taken into consideration when designing REDD+ programs. Although these lessons may not be applicable to all REDD+ projects, they have the potential to offer valuable insights that could help to ensure that the rights of vulnerable populations are not violated. Furthermore, REDD+ offers a fresh opportunity to examine forest governance institutions and correct existing inefficiencies and inequalities. If REDD+ is to become a large-scale initiative with sizable financial flows, it is of crucial importance to design REDD+ such that it will maximize positive impacts and

minimize potential damages. Increasing carbon sequestration in the interest of long-term carbon mitigation is an important goal, but is not sufficient reason to jeopardize the immediate livelihoods of forest-dependent people in developing countries. Therefore REDD+ should aspire to be a transformative initiative that acknowledges and addresses existing sources of inequality, and provides opportunities to enhance the autonomy and wellbeing of all members of forest-dependent communities.

REDD+, Community Forestry & Governance

Community forestry programs exist under a variety of conditions and governance structures, some of which have proven to be more successful than others. REDD+ should examine this experience to learn which institutional forms have been most conductive to conditions of fairness, inclusivity, and efficiency. Community forestry programs are an appropriate model for REDD+, as experience has shown that community forestry programs have the capacity to generate positive conservation outcomes while enhancing the autonomy of forest-dependent communities. A survey of over 80 forest commons in 10 countries across Asia, Africa, and Latin America concluded that larger forest size and greater rule-making autonomy at local level are associated with high carbon storage and livelihood benefits (Chhatre and Agrawal 2009). Community forestry has been most successful when forests are of a sufficient size with distinctly marked boundaries, benefit-sharing mechanisms are transparent and predictable, provisions for monitoring and sanctioning rule violations are established, and local communities have autonomy to design clear and enforceable rules (Agrawal and Angelson 2009; Hayes and Persha 2010). Establishing effective local institutions is crucial to addressing the drivers of deforestation. As recent experience with community forestry suggests, local users are generally capable of

managing forest resources efficiently if they are given the power to do so, provided that the resources essential to their livelihoods remain accessible. The rules and incentives established by local governance institutions and the enforcement capacity of these institutions are key to addressing the drivers of deforestation. Local governance practices can therefore be expected to have a profound impact on the success of REDD+ programs.

The World Resource Institute's Governance of Forests Initiative suggests five principles of good governance: transparency, accountability, coordination, participation, and capacity (in Pettenella and Brotto 2012: 47). Early evidence indicates that, like community forestry, accountability and transparency are particularly important to the success of REDD+ projects (Pettenella and Brotto 2012; Mustalahti and Tassa 2012). More specifically, REDD+ initiatives should have a clearly formulated project design that addresses land tenure rights, incorporates indigenous peoples' rights and knowledge, coordinates between local and international actors, and establishes clear governance practices.

Under the UNFCCC process, debates about the institutional design of REDD+ have focused on national governments as the relevant agents to implement REDD+ (Chhatre and Agrawal 2009). This outcome is to be expected given that international climate negotiations are structured interactions between sovereign states, but risks perpetuating centralized control over forests. The important role that communities play in managing forests should be acknowledged at all levels of REDD+ negotiations. Coordination between all relevant stakeholders is necessary to ensure that REDD+ is both efficient and legitimate. In order to be legitimate, REDD+ must provide opportunities for participation; legitimacy necessitates that actors with power can be held accountable for their actions, but also "concerns the way

in which rules and outcomes are negotiated, administered and accepted by stakeholders, including a fair distribution of decision-making power" (Corbera and Schroeder 2011: 94). Local forest users are obvious stakeholders in the REDD+ process. Ensuring that local users have opportunities for substantive participation in REDD+ governance may necessitate enhancing local and institutional capacities (Dulal et al. 2012).

REDD+ preparation activities should include an assessment of the capacity and equity of pre-existing forestry governance institutions, where applicable. This is important to ensure that greater benefits under REDD+ do not lead to larger inequalities. As Skutch et al. (2011) describe, community forestry management policy instruments are "not permanent mechanical 'fixes' for forest management, but are really ongoing strategies for coordinating behaviour to achieve collective purposes. They evolve as behaviour and purposes change." (141). REDD+ thus presents an opportunity for a paradigm shift towards increased investment in more equitable and participatory institutions.

Gender and Community Forestry

Gender is one key aspect that REDD+ programs should take into account when assessing existing governance institutions. In many types of decision making, including environmental management, women experience particular, structural constraints on their agency. As Sen notes, "there are systematic disparities in the freedoms that men and women enjoy in different societies, and these disparities are often not reducible to differences in income or resources" (1992: 122). Gender norms influence women and men's relationships to natural resources as well as their capacity to participate in the management of these resources. Providing women with equal opportunities and entitlements may therefore require measures additional to those that men require to realize their capabilites.

As Gupte (2004) observes, "local village level institutions in developing societies are gendered institutions that do not easily facilitate the participation of women in the decision-making process" (367). There is a growing body of literature about the gender-differentiated impacts of community forestry programs that could offer insights relevant to REDD+. Assessments of the gender-specific impacts of community forestry programs show mixed results. For instance, Bandiaky-Badji (2011) characterizes Senegal's recent experience with the decentralization of forest governance as gender-blind and finds that as a result women have been marginalized. A study in Zimbabwe found that the social costs of participating in forest governance was far higher for women than for men, as they feared being labelled 'too forward' and having their good character called into question. Although the forest authority required the women to participate, most did so reluctantly and unenthusiastically (Sithole 2005: 179-80). Conversely, Nuggehalli and Prokopy (2009) found that although women in Sri Lanka are less dependent on forest products, they were highly motivated to participate in forest governance out of a sense of "social responsibility," which the authors attribute to their relatively high levels of education and gender equality. Agarwal's extensive body of work on gender and community forestry in India and Nepal shows that women's involvement varies considerably across regions, but makes a strong case that women's participation in community forestry governance is essential if these programs are to be effective and equitable.

Furthermore, governance structures that are inclusive of both men and women may generate better forest conservation outcomes. A study of men's, women's, and mixed community-based resource management groups in twenty developing countries by Westerman et al. (2005) found that collaboration, solidarity, conflict resolution, and norms

of reciprocity were more highly developed in groups where women were present. Similarly, Sun et al. (2011) concluded that women's participation in community forestry programs in East Africa and Latin America improves forest regeneration, reduces illegal harvesting, and enhances the group's capacity to resolve conflicts (206). Agarwal's research on community forestry governance in India and Nepal found that executive committees with higher numbers of female members achieved greater improvement in forest conditions, even where rules were less strict (Agarwal 2009b: 2793-5). Moreover, rural women accumulate extensive knowledge about local ecology through their constant contact with forest products (Giri and Darnhofer 2010a: 1217; Agarwal 2001: 1628; Agarwal 2009a: 2788-9). Agarwal notes cases in Nepal and India where women felt that all-male forest patrols were ineffective and organized their own informal patrols in response. She reports that informal patrols by women often more able to recognize illegal cuttings as they were more familiar with forest. Their inability to enforce formal rules, however, made this arrangement inefficient (Agarwal 2001:1637; Agarwal 2009a: 2788).

Decision-making procedures that are inclusive of women and attentive to their needs are more likely to generate rules that will be followed. Even those adversely affected by stringent rules will be more likely to comply if they feel the community has reached a consensus after considering all points of view. Moreover, moderate rules for forest product access may encourage cooperation, enhance biomass growth through careful extraction, and reduce the risk of fire (Agarwal 2009b: 2297). REDD+ programs should build upon strategies that have been proven to be efficient and effective in reducing deforestation and degradation, and choose methods that will also maximize the positive livelihood impacts on local forest users. Experience from community forestry indicates that local users can be

effective agents of forest conservation. However, community forestry governance arrangements may vary in their inclusivity, autonomy, and responsiveness. As key stakeholders in local forest use, women should have an opportunity to participate in forest management decision for reasons of equity, effectiveness, and efficiency. There is an opportunity for REDD+ programs to learn from women's experience in community forestry initiatives to date.

In order to illustrate the particular opportunities and challenges that forestry governance structures may present men and women in practice, I will now turn to a more detailed examination of community forestry in Nepal. This discussion will consider how the additional benefit flows expected under REDD+ could exacerbate existing inequalities within these governance structures or work to improve the capacity of these institutions to enhance the livelihoods of local forest users.

Community Forestry in Nepal: Background

Nepal has a long and well-established history with community forestry and is widely acknowledged to be an example of best practices in participatory forestry (Pokharel et al. 2007: 8; Ojha et al. 2009: 51; McDermott and Schreckenberg 2009: 160). In response to widespread deforestation, limited forest management responsibilities were delegated to existing village-level organizations (*panchayats*) in 1978, then separate and more autonomous community forest user groups (CFUGs) were established by the 1993 Forest Act. This change occurred in the context of Nepal's democracy movement in the 1990s, which called for greater decentralization and accountability (Pokharel et al. 2007: 9).

The Government of Nepal has now handed over approximately 1.6 million hectares, around 25% of Nepal's forested land, to more than 14 000 CFUGs. As of 2007, 38% of

Nepal's population participated in community forestry programs (Ojha et al. 2009: 48, Maharjan 2009: 255). The number of CFUGs has grown rapidly in the past few years and the Government expected to hand over most potential community forests to local users by 2010 (Adhikari et al. 2004: 246). Community forestry programs are membership-based; users pay regular fees and contribute to forest maintenance activities in exchange for benefits that are decided upon by the local CFUG. CFUGs follow a two-tier structure, with an executive committee of about nine to fifteen members that meet monthly and a general assembly with all members that is usually called bi-annually (Agarwal 2002: 188). Rangers from the local District Forest Office provide CFUGs with technical expertise. CFUGs from across Nepal have also organized into a civil society organization called the Federation of Community Forestry Users, Nepal (FECOFUN). Founded in 1995, FECOFUN has grown to include over 8.5 million members and approximately 13 000 CFUGs (FECOFUN). This organization has increased the collective bargaining power of forest user groups and facilitated policy changes (McDermott and Schreckenberg 2009: 160).

Over 70% of Nepal's population relies on forest products for at least part of their livelihood (Ojha et al. 2009: 47). Firewood fulfils 75% of the country's energy needs, and Nepal's rich biodiversity contains over 700 medicinal plants (Lewark et al. 2011: 197). Forests also supply fodder for livestock, which are important to subsistence farming and income-generating activities (Adhikari et al. 2004: 248). Timber is used for local construction and can have commercial value if market access is available. In 2002, the estimated cash income from commercial sales of products from community forests in Nepal

was $10 million USD.[2] If the value of subsistence products and other income generating activities are also accounted for, the total estimated value of community forestry products was $24 million USD (Malla 2007: 11-12). Though the state retains legal title to forestland allotted to communities, CFUGs retain the revenue generated from community forests (Pokharel et al. 2007: 10; Maharjan et al. 2009: 273). These secure legal rights and clear benefits have likely contributed to strong support for community forestry programs (Malla 2007: 10; Pagee et al. 2006: 49).

Benefit Distribution in Forest Governance Institutions

Nepal's community forestry program initially focused on handing over degraded land in the interest of cost-effective environmental conservation (Pokharel et al. 2007: 12; Dangol 2005: 54; Ohja 2009:47). While there is considerable evidence that forest conditions have improved, community forestry programs have not been as successful in alleviating rural poverty (Kanel 2004). Similarly, if REDD+ focuses entirely on carbon sequestration, there is little reason to believe that an equitable flow of benefits will emerge naturally. As Nepalese communities proved to be adept at forest conservation, forests of better quality began to be handed over to communities and the program focus shifted to include rural development initiatives to address growing concerns about equity and participation (Yadav et al. 2009: 2; Malla 2007: 10; Lama and Buch 2002: 28; Agarwal 2002; Chhetri 2006). Participatory inequalities are problematic for reasons of both equity and efficiency, for there is evidence that strong institutional arrangements aimed at redressing inequalities also have a positive effect on forest conservation (Andersson and Agrawal 2011: 873). Carbon sequestration

[2] Annual CFUG revenues vary considerably by region, forest size and quality, and number of users. They range from about US$50 per year in the high hills to $1,200 in the Terai region (Ojha et al. 2009: 49)

goals under REDD+ are therefore more likely to be met if these programs are governed by strong and equitable institutions.

CFUG experience in managing and distributing benefit flows may also offer valuable lessons for REDD+. In Nepal, CFUG membership dues and other sources of revenue are pooled into a community fund, which local users must decide to how to spend. Some of these funds are reinvested in forest management, and another portion is typically invested in community development (Maharjan et al. 2009: 260; McDermott and Schreckenberg 2009: 162). New guidelines in 2009 require that 35% of CFUG funds be spent on activities to benefit disadvantaged groups, such as members of low castes and women. According to the available evidence, however, only about 3% of the cash income generated by community forestry in 2002 was directed towards pro-poor activities (Malla 2007: 13). Recently, a project in the Doti region found that CFUGs spent about 6% of the revenues on pro-poor activities (Adhikari et al. 2010: 5-6).[3] A study of eight communities in the Churia region by Maharjan et al. (2009) found that spending on community development activities ranged from 5% to 69% (260). However, most of the funds were spent on physical infrastructure projects, such as electricity and schools, which excluded the poorest members of the community from sharing in these benefits (Maharjan et al. 2009: 261). Similarly to Maharjan, Agarwal (2001) found that women were frequently unhappy with the allocation of community funds (1635). REDD+ programs should seek to ensure that all members of the community have a voice in deciding how REDD+ funds are spent,

[3] This spending decreased from an average of 19% of the CFUG fund in 2007 to 6% in 2008. Only about half of the CFUGs in the sample contributed to pro-poor activities, although virtually all had social equity policies established in their constitutions.

particularly if higher levels of funding enable communities to take on more long-term or transformative projects.

Maharjan's case study also found that the forest use restrictions implemented by the CFUG contributed to a decline in income of the poorest households (Maharjan et al. 2009: 259). It is clear that community-based property rights over natural resources do not guarantee an equitable distribution of the associated benefits (Adhikari et al. 2004: 255). In addition to community funds, CFUGs decide on rules for access and distribution of forest products. These rules are frequently based on market principals, such as ability to pay, rather than need or contribution to forest maintenance (Agarwal 2001: 1636).

These inequities are the product of elite capture. Relatively wealthy individuals face lower opportunity costs and gain social status through participation in CFUGs and consequently often dominate executive committees (Yadav et al. 2009: 10-11; Ojha et al. 2009: 49; Buchy and Subba 2003: 327). The interests of these local elites often diverge from those of poorer forest users, given their differential access to private endowments such as land and livestock (Varughese and Ostrom 2001: 749; Yadav et al. 2009: 5; Adhikari et al. 2004: 255). When dispensing community funds, local elites tend to be more interested in infrastructure projects than pro-poor activities (Lama and Buchy 2002: 31; Maharjan 2009).

Evaluations of community forestry projects tend to emphasize environmental conservation and efficiency (Mahanty et al. 2009: 269; Pagee et al. 2006: 40). This could be because economic and conservation metrics are easier to quantitatively evaluate than considerations of inclusivity or equity. Discussions of social outcomes of community forestry usually examine the village level rather than individual benefits, and therefore still

risk masking important inequalities (Akhikari et al. 2004: 246). Broad and inclusive participation is necessary before a majority of forest users can agree that CFUG decisions are made to benefit all members of the community (McDermott and Schreckenberg 2009: 163; Yadav et al. 2009: 2).

While the exact procedures for accounting and distributing REDD+ benefit flows remain unclear, it is most likely that payments for carbon sequestration will be made to national governments. National governments will then be responsible for determining how to spend or distribute REDD+ payments. It seems probable that at least a portion of REDD+ benefits will be distributed to local users to create incentives for participation in REDD+ programs and further encourage sustainable forest management processes. If REDD+ is explicitly understood as an international development initiative, then a requirement to share these revenues with forest-dependent communities could be put in place.

In Nepal and other countries with well-developed forest governance institutions, it could be effective to channel REDD+ benefits though pre-existing forest governance institutions, such as CFUGs. However, as the discussion above demonstrates, these institutions have not consistently distributed benefits in an equitable manner. Increased forest revenues generated by REDD+ could create further opportunities for elite capture and exacerbate these inequalities. REDD+ programs must therefore carefully consider the most equitable and efficient means of benefit distribution. REDD+ benefits could be distributed as cash transfers or in-kind contributions of goods and services, and flow to individuals, households, or communities. It will be important to consider who actually receives and is able to make use of these benefits. For instance, there is some recent research suggesting that direct cash transfers to women may increase their bargaining

power within the home and improve intrahousehold allocation of resources for human development (Rutherford et al. 2011: 27). Simply transferring funds to women instead of men, however, could create resentment and may not influence existing power dynamics.

One possible solution to managing financial flows under REDD+ could be to offer payments for forest management and labour inputs, such as digging fire lines, extinguishing fires, controlling cattle, enrichment planting, thinning, and pruning (Skutch et al. 2011). Given the significant measurement, reporting, and verification requirements for carbon payments under REDD+, employing local forest users to monitor forest conditions could be cost-effective while also enhancing local ownership of REDD+ projects and provide community members with new skills and capabilities (Fry 2011; Corbera and Schroeder 2011).

However, it is important that fair opportunities for employment are open to all members of the community. In the context of Nepal, Dahal and Banskota (2009) suggest that local people with secondary-level education can carry out carbon measurement tasks independently after a short training (47). Educational or literacy requirements for employment opportunities could prevent members of the community who are likely to have lower levels of educational attainment, including women and members of poor households, from participating (Staddon 2009). Furthermore, women with already heavy workloads may not be able to take on additional employment. The perception that women's time is less valuable since their household labour is not monetized may also influence attitudes concerning women's needs, contributions, and entitlements (Agarwal 2002: 201). As such, additional efforts or incentives may be required to ensure that women have equitable access to paid employment opportunities under REDD+.

Thus, as experience from community forestry demonstrates, equitable benefit flows do not necessarily emerge naturally even when local communities are given autonomy to manage the funds generated by forest activities. Allowing local communities to manage REDD+ funds has the potential to contribute to local autonomy while providing a strong incentive for responsible forest stewardship, but REDD+ programs should include safeguards to ensure that decisions of how to use REDD+ funds are inclusive and sensitive to the interests of various forest users.

REDD+ in Nepal

Nepal is a participant in the early stages of development of REDD+ programs, but it is not yet clear how REDD+ will be implemented in Nepal, or how existing community forestry governance structures will be integrated into REDD+ programs. In 2008, the World Bank announced that Nepal would be one of 14 countries to receive funding for REDD+ preparedness activities under the Forest Carbon Partnership Facility (FCPF). Nepal submitted its Readiness Preparation Proposal (R-PP) to the FCPF in 2010. The purpose of this proposal is to present the results of consultations about REDD+ with various stakeholders in Nepal, identify data gaps and areas for further research, and provide an overview the potential applications of REDD+ in Nepal. The main components of Nepal's R-PP include capacity building, consultation, and awareness activities, as well as gradual expansions of pilot project activities. At the time of the report, six pilot projects on climate change and REDD+ were underway in Nepal (Government of Nepal 2010: 27-8).

A primary goal of the R-PP process is to assess the feasibility of REDD+ and identify country-specific opportunities and challenges. Nepal faces several technical challenges, including establishing baseline rates of deforestation, proving additionality, and clarifying

carbon ownership rights, which must be resolved before REDD+ programs can be implemented. Establishing historical baselines of forest density and deforestation rates is important to prove that REDD+ programs are effectively working to generate new and additional forest carbon sequestration benefits. Collecting complete and reliable data, however, is a costly and intensive process, particularly in countries with low levels of infrastructure and development, such as Nepal.

As Nepal's R-PP notes, recent, accurate data on deforestation rates or forest biomass reference scenarios are not available, and older data is often incomplete and contradictory (Government of Nepal 2010: 32). Based on the best available data, Nepal's R-PP estimates that deforestation occurred at a rate of 2.7% between 1991 and 2001, but this conclusion is drawn from data that use two different methodologies during two different time periods. Furthermore, rates of deforestation vary across Nepal. Deforestation is highest in the Terai region, where there are lucrative incentives to illegally harvest timber, particularly given the proximity to the Indian border. Conversely, deforestation rates are lower in the mid-hills region, largely because community forestry programs have been successful in managing forest resources. Little information is available for the high mountain region (Government of Nepal 2010: 33). Nepal's R-PP suggests a hybrid national and sub-national baseline accounting approach and acknowledges the need to solidify the details of this approach through additional pilot projects and further study.

The R-PP identifies nine main drivers of deforestation: high dependency on forests and forest products (timber, firewood and other non-timber forest products), illegal harvest of forest products, unsustainable harvesting practices, forest fire, encroachment, overgrazing, infrastructure development, resettlement, and the expansion of invasive

species (Government of Nepal 2010: 33). It is crucial to understand where deforestation is occurring and for what reasons in order to design effective REDD+ programs. However, REDD+ also risks excluding forests where sustainable management practices are already in place, as REDD+ participants will be required to prove that carbon sequestration benefits are additional to those that would have occurred in the absence of REDD+ incentives. More specifically, REDD+ benefits may be greater in the Terai region where deforestation rates are higher than in the mid-hills, which could exclude a large portion of forest-dependent communities from participating in REDD+ carbon markets.

It remains unclear, however, whether community forest user groups can legitimately claim ownership rights over the carbon sequestered in the forests that they manage. While local communities are granted rights to forest products, the state retains legal title to the land. Operational plans for community forests must be renewed every 10 years and be approved by the Department of Forests. The possibility that forest management plans could change each decade could affect investments in longer-term carbon projects. Current operational plans do not specify which party can claim ownership over carbon sequestered in the forests (Staddon 2009: 28). Initially, only degraded tracts of forest were handed over to communities and managed for the provision of subsistence products with little commercial value. As community forestry expanded to the Terai region and CFUGs began to manage high-value timber assets, however, the Government of Nepal introduced a tax on commercial forest products (Luttrell et al. 2007). This tax provides a precedent for government involvement when community forestry assets increase in financial value. Nepal's R-PP notes the need for clarification of carbon rights, but asserts that carbon rights should be tied to land and forest tenure.

The issue of carbon ownership rights is particularly relevant given the potential for large financial flows from REDD+ in Nepal. Estimates of the total revenue that REDD+ could generate in Nepal vary widely, from $5 million to $90.9 million (Dahal and Banskota 2009: 42, Staddon 2009: 27). Much will depend on the market price for carbon, market factors of supply and demand, and Nepal's capacity to provide proven and accurate carbon sequestration increases. A case study of two districts in the mid-hills region of Nepal estimated that at a $13 per ton carbon price, a community forest with an area of 100 hectares could generate $2730 in REDD+ payments (ANSAB 2006 in Adhikari 2009: 17).

Thus Nepal faces potentially serious concerns about the additionality of carbon sequestration under REDD+ programs and significant technical challenges in establishing deforestration baseline and accounting procedures and assigning carbon ownership rights. Overall, however, the provision of FCPF funding for REDD+ preparation activities suggests a degree of confidence that Nepal is a viable candidate for participation in REDD+ carbon markets. The concerns above are applicable to REDD+ activities in virtually every participant country, and, particularly given that Nepal has a pre-existing and strong forestry governance infrastructure, there is every reason to expect that REDD+ preparations will continue to move forward in Nepal.

Nepal's R-PP explicitly acknowledges that the country's long experience with community forestry governance offers valuable lessons that should be taken into account when designing REDD+ programs. It states:

> Experience in Nepal so far has shown that a top down approach to policy and planning has had little success. A decentralization/localization approach to forest governance has been the key to controlling forest degradation and deforestation by creating more downwardly and horizontally accountable structures which empower local stakeholders who have better 'time and space' knowledge of local conditions to resolve their collective problems in the forestry sector through consensus

(Government of Nepal 2010: 38).

This consciousness that it is crucial to involve local users in forestry governance is an important first step. However, the above statement justifies the involvement of local users in forestry governance in instrumentalist terms; local governance is a means of controlling forest degradation and deforestation. If the main concern when designing REDD+ programs is that forestry governance structures are efficient, this does not necessarily mean that they will also be equitable. Equitable participation and representation of all community members may enhance conservation outcomes, but also risks complicating the process of consensus-based decision making. Nevertheless, if REDD+ is understood as a development initiative that aims to enhance the capabilities of local communities, it should provide equitable opportunities for participation.

Nepal's R-PP places emphasis on linking REDD+ activities to the country's overall development strategy. The introduction states:

> Our vision for Nepal's REDD strategy is that by 2013 and beyond, our greenhouse gas emissions resulting from deforestation and forest degradation will be significantly reduced by forest conservation and enhancement, by addressing the livelihoods concerns of poor and socially marginalized forest dependent people, and by establishing effective policy, regulatory and institutional structures for sustainable develop of Nepal's forest under the forthcoming new constitutional framework (ii)

As this vision statement makes clear, Nepal's R-PP is explicitly concerned with ensuring that REDD+ activities make a positive contribution to the livelihoods of forest-dependent people. While pro-poor development is recognized as a REDD+ co-benefit by the FCPF, livelihood development features more prominently in Nepal's R-PP than it appears to have factored into REDD+ activities more generally to date. This could be reflective of Nepal's

status as a Least Developed Country (LDC). If financial flows from REDD+ are substantial, they have the potential to promote Nepal's human and economic development.

The FCPF is funded by donor governments, and provides grants and technical support for the production of R-PPs by participant countries. The FCPF must approve these reports before REDD+ preparation activities move forward. Thus REDD+ preparation activities under the auspices of the FCPF could be considered an international development initiative, in the sense that donor governments provide funds for governments in developing countries to carry out research, consultations, and other relevant activities. This transfer of funds, however, is not sufficient to qualify REDD+ as international development.

First, there is an expectation that REDD+ carbon markets will be established following sufficient preparation. These markets will allow developed countries to receive goods, in the form of carbon credits, in exchange for payments. Carbon markets are therefore more accurately characterized as mutually beneficial arrangements than as development aid. Donor government funding to the FCFP is a measure to facilitate the establishment of carbon markets. Second, assuming we accept the capabilites approach as the standard of international development, REDD+ activities must contribute to the expansion of the substantive freedoms that people enjoy. This condition could be fulfilled if REDD+ preparation activities are planned and implemented in close consultation with the population concerned, in a way that is sensitive to their needs and contributes to their autonomy and capacity to participate. National REDD+ Preparation Plans are therefore important documents, as they officially identify stakeholders that the national government considers to be relevant, begin a process of consultation, and outline priorities and a plan for action. For these reasons, Nepal's R-PP merits closer consideration.

Nepal's R-PP lists an ambitious series of action items to address the drivers of deforestation and enhance the livelihoods of local populations. These include improvements in policies and regulations, enhanced forest sector governance, improved management practices and technical skills, investment in forestry and non-forestry employment generation, demand based land-use planning, transfer of forest management and tenure rights to communities, awareness raising, and investment in wood efficient and alternative energy technologies (Government of Nepal 2010: 5-6). The priorities and plan for action outlined in the R-PP is presented as the product of consultation workshops at the national, regional, and community level involving a total of 3180 individuals. Of this total, 488 participants were from forest-dependent communities. Stakeholder groups identified in the R-PP process include indigenous populations, local communities, forest dependent people, dalits, women, civil society organizations, government departments, political parties, the media, universities, international organizations, constitutional assembly members, international development partners, and the private sector. Four separate workshops were held for indigenous people, three for women, and one for dalits (Government of Nepal 2010: 19).

The R-PP lists several key lessons that emerged from this consultation process. It finds that the level of understanding of climate change and REDD+ among stakeholders is diverse, but is generally low. To date, there has been little interest and involvement in REDD+ activities from non-forestry ministries and government bodies. However, linking REDD+ to other development initiatives and environmental services such as biodiversity and watershed services may help to lower transaction costs. Furthermore, the R-PP recommends simultaneously pursuing climate change adaptation and mitigation strategies,

given the important role of forests in assisting poor and marginalized people to adapt to climate change (Government of Nepal 2010: 21). Nepal's R-PP calls for a rights-based approach to REDD+ that will integrate safeguard measures, capacity building, awareness, and outreach activities. This process of public engagement will include radio programs, television programs, extension materials, journal and newspaper articles, awareness workshops, website updates, training sessions, journalism workshops, public hearings, public notices and feedback collection (Government of Nepal 2010: 23). The ability of the Government of Nepal to implement this ambitious strategy, however, will likely depend on the level of funding from international donors available for REDD+ preparation activities.

Gender Equity and REDD+ in Nepal

The approach outlined in Nepal's R-PP includes mainstreaming gender and equity concerns at all levels (Government of Nepal 2010: 6). Groups of women including civil society leaders, NGO staff, journalists, forest users, and women's organizations participated in workshops held as part of the R-PP consultation process. Based on these discussions, the R-PP states that, "Women are concerned that the adoption of REDD should not affect their current practices of collection and use of forest products to sustain their livelihoods" (Government of Nepal 2010: 20). It also notes that, "Communities mentioned various other issues, like ensuring the participation of women in the decision-making process and an equitable benefit-sharing mechanism" (Government of Nepal 2010: 20). While these statements raise important issues, they do not demonstrate a nuanced understanding of the ways in which REDD+ has the potential to impact men and women differently. The R-PP refers to women as a vulnerable group without a stated understanding of the underlying factors that contribute to women's vulnerability (Gurung et al. 2010: 89). Furthermore, it

does not acknowledge that women are not a homogenous group and that the concerns of particular women may not be representative of all groups of women. The R-PP does not explicitly detail strategies to ensure that concerns from diverse groups of women will be heard and addressed.

A report by Gurung et al. (2010) explores the issue of women's representation during the R-PP preparation phase in greater detail and concludes that women were not adequately represented during this process. For instance, a REDD+ working group nominated by the Ministry of Forestry and Soil Conservation based on their degree of involvement in forestry and climate change related topics did not include representatives from women's organizations. Similarly, of the ten contributors involved in the R-PP preparation process, only one was female and was not Nepali. Twenty-seven experts were consulted, only two of whom were women, and both were representatives from indigenous groups (Gurung et al. 2010: 87-88). Consultations are typically shaped by existing social groups and organizations that are best positioned to provide input. Ensuring that the views of all concerned stakeholders are taken into account may require additional effort to build the capacity of marginalized groups to participate. For example, given the R-PP's stated goals of respecting the rights of local forest users and ensuring gender equality in REDD+ programs, the Himalayan Grassroots Women's Natural Resource Management Association (HIMAWANTI) is a likely source of advice for REDD+ programs, as a national civil society organization that seeks to ensure women's natural resource management rights are respected. In practice, HIMAWANTI was not initially consulted. Although this oversight was recognized and HIMAWANTI was later invited to participate in REDD+ stakeholder forums,

Gurung et al. argue that HIMWANTI was unable to influence the emerging REDD+ agenda since they did not receive sufficient training or information (88).

Stated policy directives for gender equality are necessary but not sufficient to ensure that women are fully included in participatory processes. The parallel experience of women's involvement in community forestry could prove to be instructive for REDD+. Just as the R-PP states a commitment to gender equality in REDD+ programs, there are several policies in place to support women's participation in community forestry governance structures. A Gender Equity Working Group exists under Nepal's Ministry of Forest and Soil Conservation, and since 2003 25 organizations have been collaborating around Gender, Poverty and Social Equity (GSPE) issues in natural resource management (Adhikari et al. 2010: 1). The Ninth Five Year National Development Plan (1997-2002) includes a directive for women's participation in CFUG executive committees, and Community Forestry Operational Guidelines from 2001 suggest that CFUG membership should include equal numbers of men and women (Agarwal 2010b: 114; Giri and Darnhofer 2010a: 1218). Women's empowerment is also identified as one of FECOFUN's eight strategic priority areas.

Despite these policies, women remain underrepresented in the community forestry governance structures. Women's participation in community forestry goverannce has increased over time[4] but this participation remains uneven, tends to meet only minimal requirements, and remains largely nominal (Pokharel and Suvedi 2007: 71; Chhetri et al. 2008: 20). According to the Department of Forestry, women held 25.6% of CFUG executive positions in 2010 (in Adhikari 2011: 7). A study of three mid-hill districts found that

[4] A 1994 study in Eastern Nepal found that 3.5% of recorded CFUG members were women (in Agarwal 2001:1626)

although women's representation in executive committees varies from 20-33%, women's representation in key executive positions (i.e. chairperson, secretary, treasurer) is substantially lower, at 3% in two districts (Ghimire-Bastakoti and Bastakoti 2006: 2). A study in the Doti district had similar findings (Adhikari et al. 2010: 5).[5] Women's participation in general assemblies appears to be similarly low in most cases (Ghimire-Bastakoti and Bastakoti 2006: 3; Giri and Darnhofer 2010b).

Even when women are members of the executive committee, they do not necessarily exercise influence. Relatives or other villagers may nominate women in order to fulfil quotas and maintain good relations with the District Forest Office (Lama and Buchy 2002: 32, Giri and Darnhofer 2010a: 1221, Gupte 2004: 377). These women may not even be aware that they are executive members (Agarwal 2002: 189). For instance, Chhetri (2001) describes a case where a female executive member was asked to put a thumbprint signature on the CFUG register, then, much to her dismay, told that she had just formed a women's forest management committee (64). Male relatives sometimes participate in the place of female executive members (Ghimire-Bastakoti and Bastakoti 2006: 3). It is not uncommon for male members reach a consensus and then inform women of their decision (Buchy and Subba 2003: 320; Lama and Buchy 2002: 32; Giri and Darnhofer 2010a: 1221). In the majority of cases, it appears that women are minimally involved if it is required; since active involvement in decision-making is not mandatory, women are typically not included (Chhetri 2001: 64; Chhetri et al. 2008: 20). Women's membership in CFUG bodies and representation in executive positions are necessary but not sufficient conditions for full participation; attending and speaking at meetings, initiating resolutions, expressing

[5] In this case, women's representation in key executive positions increased from 3% to 7% between 2007 and 2008

unsolicited opinions, and influencing decisions are types of participation that go beyond tokenism and indicate agency (Gupte 2004: 372; Agarwal 2010b: 101; Agarwal 2001: 1624).

In the absence of additional and targeted capacity building measures, it seems likely that women will remain underrepresented in REDD+ decision-making processes in the same way as they are underrepresented in community forestry governance. Despite the positive language related to gender equality in Nepal's R-PP, women and women's organizations do not appear to have been adequately consulted during the initially REDD+ preparedness process. If women receive recognition as important stakeholders in forestry governance, however, REDD+ could provide an opportunity to address these barriers and build the capacity of women to participate. There is evidence to indicate that community forestry management in Nepal has helped to decrease deforestation and forest degradation, and that engaging women in forestry governance appears to enhance these conservation outcomes. Ensuring that both male and female local forest users have the opportunity to actively participate in and shape REDD+ programs is therefore important for reasons of both equity and efficiency.

In order to achieve this goal, it is important to first understand the barriers that prevent women from fully participating in community forestry governance in Nepal, as these same obstacles are likely to occur in the context of REDD+. The next sections of this paper will outline the barriers to women's participation in community forestry governance processes. I will then examine strategies that have been effective in enhancing women's involvement in community forestry and suggest possible ways in which REDD+ could improve gender equality in forest governance.

Barriers to Women's Participation in Community Forestry Governance

Lack of information

Numerous studies have documented women's low levels of awareness about community forestry operational plans, meetings, rules, and rights (Adhikari et al. 2004: 250; Chhertri 2001:64; Giri and Darnhofer 2010a: 1220; Agarwal 2002 :196; Lama and Buchy 2002: 29; Kameswari 2004: 177). For instance, 95% of respondents in Giri and Darnhofer's (2010a) survey believed only one person per household was entitled to attend the general assembly, which was by default the male household head (1220). The overwhelming majority also believed the Forest Constitution was a fixed document with entrenched legal status, when in practice it is updated every three to five years in order to remain responsive to the needs of the community (1221). Significantly, nearly half of the women in Giri and Darnhofer's (2010a) case study attended the general assembly despite their perceived lack of entitlement to do so, though they typically observed rather than spoke (1223).

The inadequate diffusion of information on the part of CFUG executives may be understood as an exercise of power by local, predominately male, elites (Lama and Buchy 2002: 29; Giri and Darnhofer 2010a: 1221). Poor information flows translate to tangible disadvantages; individuals who are not aware of their rights cannot claim these entitlements, and are unable to influence forest management decisions. For example, Adhikari et al. (2004) found that households involved in decision-making activities collected more firewood, likely because they gained information at community meetings about when and where it was permissible to collect wood (253). Climate change, carbon sequestration, and REDD+ are all complex and abstract concepts that will require clear and

culturally appropriate communication strategies in order to facilitate informed decision-making by local communities. It will be essential to link these concepts to the daily realities of local communities in order to demonstrate their relevance. Community or household level REDD+ communication strategies may therefore not be adequate, given that the forest use activities of men and women may differ. REDD+ programs should seek to ensure that information flows to all members of forest-dependent communities in a manner that is comprehensible and relevant to their personal circumstances.

Cultural Gender Norms

Women's low access to information is related to their internalized understanding of their proper role. Perceptions of their own inferiority prevent women from exercising power (Pierce Colfer 2011: 2159). Cultural norms of female modesty, shyness, and servility are deeply engrained across much of rural Southeast Asia. Kameswari's (2004) study in India indicated that a quarter of women cited cultural barriers as the primary reason why they did not attend meetings, while no male respondents identified this obstacle (177). Whereas men sit on cots or chairs, women who attend meetings often sit on the floor or to the side and are reluctant to voice their opinions or openly oppose male participants (Agarwal 2001: 1639; Gupte 2004: 377). Furthermore, women who discuss freely with men in public village spaces are viewed with suspicion (Agarwal 2001: 1638; Lama and Buchy 2002: 35). Eighty-eight percent of the women that Giri and Darnhofer (2010a) surveyed believed it was inappropriate for them to speak at meetings – yet over a third of female participants at meetings spoke nonetheless (1224). This points to the capacity of CFUGs to serve as a space where gender roles are contested and reshaped. Over half of the women Giri and Darnhofer (2010a) surveyed were not entirely satisfied with their current

capacity to influence forest management decision, which the authors take as evidence of questioning traditional norms (1225).

Men are perceived by both genders as "more knowledgeable" about community matters because of their higher levels of formal schooling (Giri and Darnhofer 2010a: 1221). As one male CFUG member said bluntly to Agarwal, "women are illiterate. If they come to meetings, we men might as well stay at home" (in Agarwal 2001: 1639). Men may resist women's inclusion if they feel women have nothing to contribute or will neglect the household duties that they perceive as women's proper role (Giri and Darnhofer 2010a: 1222; Lama and Buchy 2002: 34). This relates to the broader issue of undervaluing women's unpaid work; although women contribute substantially to forest maintenance and are knowledgeable about forest products, their abilities are not viewed as valuable.

In the context of REDD+, these barriers could mean that women will not be offered equal opportunities for employment, or will be expected to perform tasks related to REDD+ monitoring, reporting, and verification without compensation. Particularly given that REDD+ is a complex concept, it may be perceived as the domain of male elites. Channelling information about REDD+ through these elites will serve to reinforce this impression. In reality, women often possess traditional knowledge about forests that could be highly valuable to REDD+. This experience should be explicitly valued and recognized.

Heavy Workloads

Nepalese women often shoulder heavier workloads than their male counterparts (Chhertri 2001: 54; Lama and Buch 2002: 33). Rural women may spend more than four hours each day collecting fodder and caring for livestock, and are also responsible for meal preparation and childcare (Buchy and Subba 2003: 315). Whereas men's agricultural

responsibilities are cyclical, women's primarily responsibility for livestock care and cooking are constant (Chhetri 2001: 61). Kameswari (2004) found that work requirements, in the form of wage labour or chores, were the primary reason why both men and women did not attend forestry meetings (177). As CFUG meetings are often several hours in duration and not necessarily scheduled according to women's availability, female members are at a disadvantage in trying to balance their livelihood and domestic responsibilities with political obligations (Agarwal 2001: 1639; Pierce Colfer 2011: 2153). Female executives who do not attend meetings may be replaced (Chhetri 2001: 65). In addition women's time may also be in demand for projects in other sectors, such as agriculture or health (Dangol 2005: 70).

REDD+ programs could present an additional burden for women in forest-dependent communities, particularly as understanding the relevance of these programs may require an investment of time and energy. For this reason, there is a risk that local communities in general, and women in particular, will demonstrate a lack of interest in REDD+ programs. This once again reinforces the importance of ensuring REDD+ programs have the capacity to offer opportunities for substantive decision-making and equitable benefit-sharing, in order to make REDD+ directly and demonstrably relevant to the wellbeing of local communities. Women with heavy workloads are unlikely to seek to be involved in REDD+ unless these programs offer clear benefits to them.

Capacity Building and Participation

The sections below outline possible strategies to overcome barriers to women's participation in forest governance, drawing on lessons from community forestry that have potential applications for REDD+.

Direct Solicitation

Directly soliciting women's opinions, organizing meetings according to their availability and specifically inviting them to attend are simple strategies that can have a profound influence on women's participation (Chhetri 2001: 67; Giri and Darnhofer 2010a: 1226; Lama and Buchy 2002: 32). This can improve women's access to information and work to overcome cultural norms of female passivity. As noted above, REDD+ preparedness consultations in Nepal were not sufficiently proactive in soliciting input from female forest users. It is also bears repeating that women are not a homogenous group, and various groups of women may not share the same forest management priorities. Other characteristics, such as age, caste, social status, and access to personal resources, may shape women's capacity to participate in forestry governance (Lama and Buchy 2002; Agarwal 2009a; Agarwal 2010b, Nightengale 2002). These same factors can be expected to influence women's various perspectives on REDD+. For this reason, gender mainstreaming and equitable consultation practices are necessary across all categories of REDD+ stakeholders.

Women are recognized as key forest stakeholders in Nepal's R-PP, but a more tangible commitment to enable their full participation in REDD+ programs is required. Chhetri et al. (2008) note that Nepalese women are frequently referred to as the relative of their male family members, rather than by their own name. A focus on women as independent political actors with distinct identities is therefore a necessary foundation on which to build women's participation (Chhetri et al. 2008: 23).

Holding REDD+ workshops targeted towards women is a good start to ensure that women are equitably represented in REDD+ programs, but is unlikely to be sufficient. This is particularly true if these workshops do not actively involve a broad cross-section of

women at the grassroots level. Forest extension staff could play a role in communicating REDD+ messages to rural communities. Hiring female extension staff is widely recognized strategy to engage with rural women. Forestry staff of both genders should receive gender sensitization training, as they may be more comfortable dealing with local elites (Buchy and Subba 2003: 323). However, low salaries and a lack of travel allowance offer little incentive for forestry staff to go out of their way to contact the most marginalized and least accessible members of a community (Lama and Buchy 2002: 38). A portion of the carbon payments generated under REDD+ could be used to enhance extension services, which could help to inform and engage marginalized forest users as well as contribute to positive conservation outcomes.

Quotas and Critical Mass

Policies requiring women's participation in programs such as REDD+ can be an effective means of sanctioning and normalizing women's involvement, but also present some risks. Agarwal (2010b) identifies a threshold effect for women's participation; once a critical mass of 25-33% of female CFUG executive committee members has been reached, other women are significantly more likely to attend meetings (102). This further supports the claim that gender rules in CFUG governance are mutable and subject to change in response to policies, programs, education, and socioeconomic change (Giri and Darnhofer 2010a: 1218; Dangol 2005: 57-8). Additional forestry management requirements or changes associated with REDD+ could offer a window of opportunity to introduce further changes to forestry governance norms.

Policies or legislation requiring the participation of a certain proportion of women may normalize women's inclusion (Giri and Darnhofer 2010a: 1227). Enforced

requirements are preferable to voluntary guidelines. However, quotas do not lighten women's workload, may force participation where it is not desired, and necessitate only nominal rather than active participation. Thus quotas will only be effective if they facilitate concomitant changes in attitudes towards gender norms. Quotas are also still vulnerable to elite capture, as Chhetri et al. (2008) note that some elite women participate in several committees, filling quotas for female inclusion on each (16). Caste, age, and social status are other relevant characteristics that quota requirements should take into account. Despite these possible risks, instituting a quota for women's participation in REDD+ governing bodies at the local, national, and international levels could significantly help to normalize women's participation in forest governance and strengthen political recognition of women as key stakeholders in forest management decisions**.**

Capacity Building: External Support, Education, and Training

There is a need for REDD+ to engage in targeted capacity building measures, which could be facilitated by the involvement of civil society organizations. Government policies and programs and the involvement of NGOs seem to strongly enhance women's capacity to participate in community forestry governance (Gupte 2004: 378; Agarwal 2010b: 106; Lama and Buchy 2002: 33; Leach, Mearns, and Scoones 1999: 241). Training, support and awareness activities for both genders facilitate women's inclusion by increasing their self-confidence and the perceived value of their contributions (Chhertri 2001: 54; Ghimire-Bastakoti and Bastakoti 2006: 3). These initiatives can catalyze shifts in gender norms. A history of advocacy activities in other areas, such as self-help or saving and credit groups also enable women's participation in forest governance, since they help to build the skills necessary in the public sphere and raise the profile of women's activities (Gupte 2004: 379;

Agarwal 2010b: 108). REDD+ should be designed within the context of the overall development strategy relevant to the local context, to ensure that REDD+ programs complement rather than duplicate existing interventions. Where applicable, REDD+ initiatives should contribute to the sustainable development of forest-dependent communities, for instance by recycling REDD+ revenues into savings and credit programs for income-generating activities. The appropriate intervention for each particular context should be decided with the full participation of forest-dependent communities.

In a survey conducted by ForestAction Nepal, women identified access to education and training as the most important factor to facilitating participation, followed by support from their families. Employment or involvement in groups was viewed as less important (Chhetri et al. 2008: 19-20). Buchy and Subba's research found that while men were interested in more technical aspects of forest management, such as operational plans and resource assessments, women identified capacity building measure such as saving and income groups, literacy, and leadership training as their first priorities (Buchy and Subba 2003: 317-19). This finding points to the importance of broadening the REDD+ discussion beyond the technical deliberations that have been the focus of REDD+ to date. REDD+ will directly impact women, and therefore should address the issues that are most important to women.

More broadly, capacity-building activities such as literacy and numeracy training open new opportunities for women and can therefore contribute to community development goals understood more broadly. Although literacy does not appear to have a significant influence over whether women speak out at CFUG meetings, literacy may enhance women's social status, increase access to key positions on the CFUG executive, and

build confidence (Agarwal 2010b: 107, Giri and Darnhofer 2010b: 59-60, Lama and Buchy 2002: 35-6). Finally, attention to context is important; strategies for women's inclusion should consider the resources and opportunities available to women and men, for programs that marginalize or exclude equally disadvantaged men risk failure and backlash.

Accessible and gender equitable training in areas such as literacy, numeracy, advocacy, public speaking, political participation, and community development and organization can be expected to enhance women's ability to participate in REDD+, as such training increases the capacity for self-advocacy (Rutherford et al. 2011; Gurung et al. 2010). REDD+ programs should also ensure that both men and women have the opportunity to participate in training on topics such as negotiation techniques and monitoring, reporting and verification activities, and equitable access to employment opportunities (Aguilar and Quesanda-Aguilar 2011).

Conclusion

REDD+ programs present both risks and opportunities for millions of people who rely on forests for their daily livelihoods. Decades of experience with community forestry management could offer valuable lessons for the emerging REDD+ governance regime. This experience has shown that delegating forest management responsibilities to local users can enhance conservation outcomes, but entails its own set of risks in terms of representation, inclusivity, and participation. Effective communication and substantive participation of local forest users in shaping REDD+ programs is necessary to ensure that the risks of this enterprise do not outweigh the benefits.

A process of consultation and REDD+ preparation is currently underway across numerous developing countries. In this paper, I examined how this process is proceeding to

date, its potential impact on both male and female forest users, and lessons that could be drawn from Nepal's long experience with community forestry. Although Nepal's REDD+ Preparation Report calls for gender equality in all aspects of REDD+, these principles do not appear to be applied in practice to a satisfactory degree. Similarly, a study of REDD+ activities in the Congo Basin of Central Africa also found that despite gender-inclusive statements in the R-PPs produced by Cameroon, the Central African Republic, and the Democratic Republic of Congo, opportunities for substantive participation offered to women have been minimal (Brown 2011). REDD+ activities are still in the early stages of development and few studies related to gender equity in REDD+ have been completed to date, but the existing literature seems to indicate a troubling trend of lip-service to gender equality without substantive action. Large numbers of rural women in developing countries rely on forest resources to fulfill their daily livelihood needs, and yet REDD+ appears to be developing as a largely gender-blind institution.

In its current form, REDD+ is understood as a climate change mitigation strategy that is concerned with carbon sequestration outcomes. Explicitly framing REDD+ as a development initiative and including requirements such as gender equity and positive livelihood outcomes for local forest users into the mandate of REDD+ would decrease the vulnerability of forest-dependent populations. Requiring additional social safeguards in REDD+ programs could risk diluting climate change objectives. Nevertheless, the rights of forest dependent populations should not be violated in the interest of climate change mitigation strategies. It is also important, however, that funding for REDD+ does not detract from existing forms of development assistance. Framing REDD+ as an international development strategy provides a more explicit imperative and mandate for REDD+

programs to actively engage in capacity building measures to increase the autonomy of forest-dependent communities. As REDD+ moves forward, further data collection, including gender differentiated data sets and project-specific baselines against which to measure gender-specific impacts, knowledge sharing platforms, pilot projects, participatory research, and diffusion of best practices will be required. REDD+ has the potential to become an integral component of a global climate change mitigation regime; there is currently an opportunity to design REDD+ programs such that they can enhance the autonomy, wellbeing, and freedom of men and women in forest-dependent communities.

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