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Who Should Benefit from REDD+? Rationales and Realities

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ABSTRACT. Benefit-sharing mechanisms are a central design aspect of REDD+ because they help to create the necessary incentives to reduce carbon emissions. However, if stakeholders do not perceive the benefit sharing as fair, the legitimacy of REDD+, and support for the mechanism, will be weakened. In this paper, drawing on data from CIFOR's Global Comparative Study on REDD+, we analyze national policy processes in 6 countries and incipient benefit-sharing arrangements in 21 REDD+ project sites. Through our analysis of current practices and debates, we identify six rationales that have been put forward to justify how benefits should be distributed and to whom. These rationales encompass a range of perspectives. Some hold that benefit sharing should be related to actual carbon emission reductions or to costs incurred in achieving the reduction of emissions; others emphasize the importance of a legal right to benefit, the need to consider aspects such as poverty reduction or the appropriateness of rewarding those with a history of protecting the forest. Each rationale has implications for the design of benefit-sharing mechanisms and the equity of their outcomes. We point out that, given the wide range of rationales and interests at play, the objectives of REDD+ and benefit sharing must be clearly established and the term "benefit" defined before effective benefit-sharing mechanisms can be designed. For stakeholders to support REDD+, the legitimacy of decision-making institutions, consideration of context, and attention to process are critical. Building legitimacy requires attention not only to fair distributional outcomes but also to consensus on relevant institutions' authority to make decisions and to procedural equity.

Key Words: *benefit sharing; carbon rights; equity; REDD+; REDD+ costs*

INTRODUCTION

The distribution of benefits has been identified as "one of the most challenging hurdles" facing REDD+ (Costenbader 2010:3). Benefit sharing is important for the creation of the necessary incentives and measures to reduce carbon emissions, but it must be perceived as fair by stakeholders or it will threaten the legitimacy of, and support for, REDD+. We focus on the main rationales in the benefit-sharing debate, which encompasses the questions of how to create effective incentives for emission reductions and what is "fair" in the distribution of benefits of REDD+.

We define "rationale" as a "justification for a course of action" and we examine the implications of a number of rationales for the design of a benefit-sharing mechanism. First, we set the scene by defining key concepts and offering clarifications that tend to be overlooked in the benefit-sharing debate. One of these is the recognition that benefit-sharing mechanisms are the sum of a large set of mechanisms of REDD+ design and implementation, and thus are an integral part of REDD+. Another is the importance of recognizing costs when designing benefit-sharing mechanisms because it is the net gains that matter, that is, "benefits" should be interpreted as "net benefits." We lay out the main rationales that have been put forward for how benefits should be distributed, describe how they influence the design of benefit-sharing mechanisms, and discuss their implications for equity outcomes. The review of these rationales enables a critical perspective on current debates and the objectives of the various REDD+ mechanisms.

We also discuss the importance of legitimacy in decision-making processes and describe ways to navigate the trade-offs between the effectiveness, efficiency, and equity objectives underlying these rationales. The paper concludes by highlighting the need to explicitly communicate the relative importance assigned to each rationale and the trade-offs between them.

Data sources and methods

Our analysis examines the debates, discourses, and actions in six countries surrounding the question of who should receive REDD+ benefits. We drew primarily on data from CIFOR's Global Comparative Study on REDD+ (GCS), a four-year project between 2009 and 2013, designed to provide early insights on the performance of REDD+. These data were supplemented by analysis of national policy documents, secondary literature, and media reports, active observations, and semistructured informant interviews carried out in Tanzania, Indonesia, and Brazil in 2011 and 2012. Information was also drawn from "country profiles" (literature reviews on the context of REDD+) produced as part of the GCS (see for example those for Brazil [May et al. 2011] and for Indonesia [Indrarto et al. 2012]). Based on these data, we developed an analytical framework to identify the main rationales put forward by actors to justify how benefits should be shared.

In addition, we drew on the results for Brazil and Indonesia of the social organizational survey carried out as part of the GCS between 2010 and 2012, in which respondents were

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asked to indicate their agreement with various statements, including some on benefit sharing (Figs. 1–3). Respondent organizations were selected by members of an expert panel, who were asked to identify organizations that are involved and influential in the REDD+ national domain. For the purposes of this analysis, the organizations were categorized into four groups: government, NGOs and research organizations, the private sector, and donors and international organizations (see Fig. 1 for details of these groups).

The project-level data are based on GCS field research at 21 project sites in 6 countries, Brazil, Cameroon, Indonesia, Peru, Tanzania, and Vietnam. Data were collected at project, village, and household levels in each project site through a variety of surveys, including interviews with the project proponents. Descriptions of the GCS methods and surveys are provided in Sunderlin et al. (2010), Brockhaus et al. (2012), Brockhaus and Di Gregorio (2012), and Verchot et al. (2012).

DEFINING REDD+ BENEFITS, COSTS, AND OBJECTIVES

While analyzing the debate about benefit sharing for REDD+, we noticed considerable variation in the use of terms. In particular, we noted that the term “benefits” is used in current debates to refer to both gross and net benefits. Here, we define benefits as net benefits, i.e., gross benefits minus costs. Costs are understood as either direct financial outlays or opportunity costs in the sense of income foregone because of a REDD+ action.

We distinguish between three main types of (net) benefits, as follows. The first type comprises the (net) benefits from implementation of a REDD+ project, program, or policy. Those implementing REDD+ may derive gains from international and national transfers related to REDD+, such as the sale of REDD+ credits in a carbon market, or from donor or government funds linked to REDD+ readiness and/or payments based on results. The direct costs consist of transaction and implementation costs, such as for guarding forests to prevent illegal logging and forest clearing. The second type consists of (net) benefits from changes in forest use. The REDD+ debate tends to focus primarily on the foregone agricultural and timber rent (profit), or the opportunity costs of forest conservation, that is, lost opportunities because some uses are stopped or downscaled (e.g., Börner et al. 2010). However, there might also be gains in the form of better access to and higher income from forest products that do not reduce forest carbon. REDD+ implementation also aims to enhance indirect ecosystem benefits, such as the protection of soil and water quality, biodiversity protection, and local climate stabilization. The third type of benefits consists of indirect (net) benefits from REDD+ implementation. These include improved governance, e.g., strengthening of tenure rights and law enforcement, technology transfer, enhanced participation in decision

Fig. 1. Percentage of respondents in the social organization survey in Brazil and Indonesia that agreed with the statement “Benefits should reward large-scale industries/companies for reducing forest emissions.”

This note provides an explanation of the composition of the four categories:

“Government”: Brazil - 6 bodies under the Ministry of Environment, 6 other ministries, 2 presidential bodies, Civil House of the Presidency, Cabinet of National Congress, state governments of Amazonas and Acre, the Legal Amazon Governors’ Forum, and the Amazon Fund.

Indonesia - 10 ministries, 5 coordinating agencies, and 3 local government agencies, NGOs, and research institutes; Brazil - 5 international environmental NGOs, 9 domestic environmental NGOs, 4 social movements/indigenous peoples groups, 2 research institutes under the Ministry of Science and Technology, Institute of Applied Economic Research, Getúlio Vargas Foundation, Brazilian Enterprise for Agricultural Research, Federal University of Minas Gerais - Indonesia - 13 national NGOs, 6 international NGOs, 3 national research institutes, and 3 international research institutes.

“Private sector”: Brazil - Business Council for Sustainable Development, National Confederation of Agriculture, Brazilian Petroleum, and 2 professional associations; Indonesia - Renewable Energy Society, Chamber of Commerce, PT Sumalindo, April Group, Sinar Mas Group, PT Rimba Makmur, Starling Resources, Sustainable Conservation, 3 professional associations.

“Donors and international organizations”: Brazil - 3 bilateral donors, Governors’ Climate and Forests Task Force, World Bank; Indonesia - 11 bilateral donors, two multilateral donors, International Tropical Timber Organization (ITTO), and Forest Carbon Partnership Facility (FCPF).

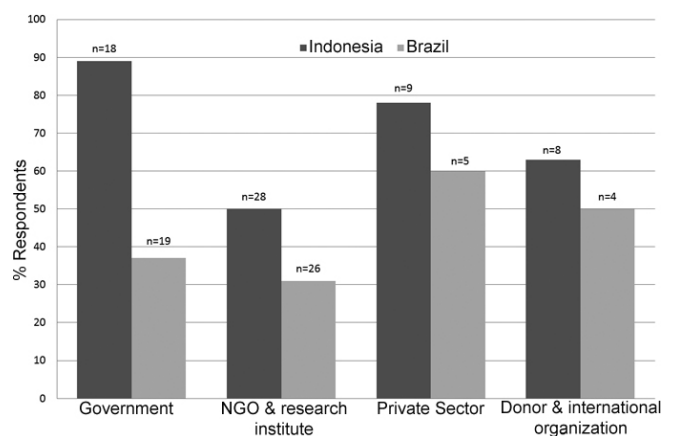


Fig. 2. Percentage of respondents in the social organization survey in Brazil and Indonesia that agreed with the statement “REDD should mainly reward local people for emission reduction activities.” Note: For the composition of the four categories, see Fig. 1.

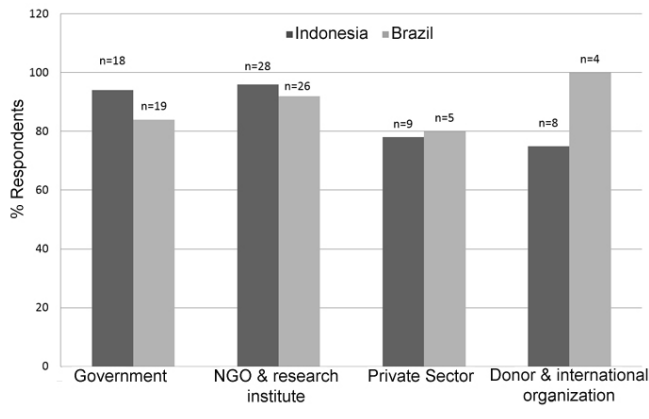
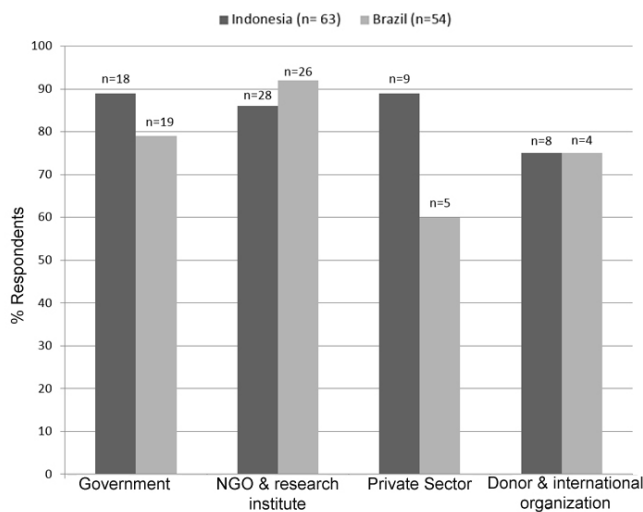


Fig. 3. Percentage of respondents in the social organization survey in Brazil and Indonesia that agreed with the statement “Without involvement of local people in their implementation, REDD projects are unlikely to be effective.” Note: For the composition of the categories, see Fig. 1.



making, and infrastructure provision. Infusion of REDD+ funds may also stimulate the local economy (multiplier effects) and generate new income-earning opportunities. However, reduced agricultural income can have similar, but negative, indirect effects, and these need to be factored in. Examples of these types of benefits that are anticipated from

activities that are planned or underway in some of the REDD+ project sites that we studied are listed in Table 1.

The three types of benefits laid out above include both monetary and nonmonetary benefits. The degree to which they can be readily quantified, and, as a next step, monetized, varies greatly, both conceptually and practically. Despite the wide range of possible direct and indirect benefits, the REDD+ literature tends to focus on monetary, and hence relatively easily quantifiable, benefits in the form of direct financial transfers, and the implementation costs, transaction costs, and opportunity costs of forest conservation (Streck 2009, Lindhjem et al. 2010, Peskett 2011a). Omitting the value of indirect benefits in the second and third categories can make local costs appear higher than they are (Pagiola and Bosquet 2009). The inclusion of noncarbon cobenefits might suggest that local communities do not necessarily need large amounts of monetary compensation to be better off under REDD+.

In talking about net benefits, we make a critical distinction between cost recovery or compensation on the one hand, and the distribution of any surplus once all relevant costs have been recovered, i.e., net gains or “REDD+ rent”, on the other. This distinction between cost compensation and net gains (REDD+ rent) is rarely made explicit in the national or project debates around REDD+ (as also noted by Karsenty et al. 2012a), but we believe it is highly relevant. Others argue that a REDD+ system in which the full costs are accurately compensated should not, in theory, generate surplus rent, and that pursuing efficiency in a REDD+ mechanism would require minimizing the REDD+ rents to be distributed (Meridian Institute 2009).

We define “benefit sharing” under REDD+ as the distribution of benefits from the implementation of REDD+ projects and policies among individuals and groups (stakeholders). A distinction here can be made between vertical benefit sharing between national- and local-level stakeholders, and horizontal benefit sharing, between and within communities, households, and other local stakeholders (Lindhjem et al. 2010). We use the term “benefit-sharing mechanism” to refer to the full set of institutional means, governance structures, and instruments that distribute finance and other net benefits from REDD+ implementation (following Vhugen et al. 2012).

An important consideration for benefit sharing is the appropriate balance between, on the one hand, mechanisms that act as transfers to forest users to create direct incentives for reducing deforestation and forest degradation, and, on the other, expenditures to enhance the governance and policy context needed to enable successful REDD+ implementation, such as the clarification of tenure and the strengthening of law enforcement (Gregersen et al. 2010, Karsenty and Ongolo 2012). In practice, all countries and many projects are considering both these types of mechanism (see Table 2), in recognition that the success of compensation schemes requires

Table 1. Types of benefits from 12 of the REDD+ projects studied and the level of the distribution. Projects were selected for this table to capture a range of the anticipated outcomes classified by projects as “benefits”[†] (adapted from Luttrell et al. 2012).

Project	Level	Type of upfront benefit
TFCG – Making REDD Work for Communities and Forest Conservation in Tanzania (Kilosa and Lindi, Tanzania)	Household	Alternative livelihoods [‡] ; capacity building [‡] ; improved agriculture [‡] ; cash
Mpingo Conservation Project (Tanzania)	Community	Tenure security [‡] ; certification of timber production [‡] ; cash
CARE-HIMA – Piloting REDD in Zanzibar through Community Forest Management (Tanzania)	Community	Alternative cooking energy [‡] ; alternative livelihoods [‡] ; capacity building [‡] ; cash
Transamazon – Sustainable Settlements in the Amazon: [§] The challenge of transition from family production on the frontier to a low carbon economy (Brazil)	Household	Cash; sustainable agriculture [‡] ; land tenure regularization [‡]
Central Xingu REDD+ Pilot Program (Brazil)	Community	Organizational strengthening
	Household	Land tenure regularization [‡] ; livelihood alternatives [‡] ; capacity building; agricultural intensification
Acre – Acre State System of Incentives for Environmental Services (Brazil)	Household	Cash [‡] ; alternative agriculture strategies [‡] ; sustainable forest management; land tenure regularization [‡] ; certification; capacity building
Bolsa Floresta Program (Brazil)	Community	Public services
	Household	Capacity building [‡] ; cash [‡] ; sustainable income generation [‡] ; income diversification [‡] ; support to associations [‡] ; healthcare [‡] ; education [‡]
Cotriguaçu – Northwest Mato Grosso Pilot REDD+ Project (Brazil)	Household	Sustainable forest management [‡] ; cattle and dairy production [‡] ; alternative agriculture strategies; land tenure regularization [‡] ; capacity building
SNV Site, Cat Tien Lam Dong District (Vietnam)	Household	Improved land management [‡] ; livelihood alternatives [‡]
	Community	Public services
KFCP – Kalimantan Forest and Climate Partnership (Indonesia)	Household	Employment [‡] ; alternative livelihoods such as rubber planting and fish cultivation [‡] ; income from reforestation and rehabilitation trials [‡] ; training [‡] ; cash compensation for blocking small canals [‡]
	Community	Governance training; institutional capacity building technical support for development planning, participatory natural resource mapping
KCCP – REDD Pilot Project Development, Community Carbon Pools (Indonesia)	Household	Capacity building [‡] ; tenure strengthening by establishing <i>hutan desa</i> (village forests) [‡] ; alternative livelihoods
RRC – Rimba Raya Biodiversity Reserve Project (Indonesia)	Household	Employment [‡] ; capacity building; alternative livelihoods [‡] ; credit; infrastructure; ecotourism
	Community	Public services

[†] Data were compiled from “site narratives,” “project checklists,” and unpublished reports prepared by the GCS component 2 country teams for Tanzania, Brazil, Vietnam, and Indonesia, as well as direct interaction and additional inputs from the C2 country research teams. Additional information on projects in Brazil was taken from Duchelle et al. (2010, 2013).

[‡] Indicate benefits from mechanisms that are already being implemented.

[§] This project is now part of a larger project titled “Sustainable settlements in the Amazon: the challenge of transition from family production on the frontier to a low carbon economy.”

a conducive and enabling policy environment. The relative emphasis given to each type of benefit-sharing mechanism depends on the specific country and project context and the drivers of deforestation. For example, Brazil’s draft National REDD+ Strategy concentrates on strengthening policy and enforcement and on recognizing tenure and property rights, whereas Vietnam is more interested in the approach used in payments for environmental services (PES) schemes and the compensation of costs. Although many of the projects are considering providing conditional financial benefits, Table 1 shows that most currently define benefits as activities such as capacity building, creation of alternative livelihoods, livelihood enhancement, and the strengthening of tenure rights, which can be viewed as prerequisites for the successful introduction of PES systems (Sunderlin and Sills 2012). This implies that the type of benefit-sharing mechanism in place is

likely to change with the type of finance as the projects move from REDD+ readiness toward payments for realized emission reductions.

Future finance for REDD+ is likely to come from a variety of sources. To date, international funding has come mainly from development aid budgets (Streck and Parker 2012). The initial idea of REDD+ being funded by the carbon market through a global “cap and trade” mechanism hinges on agreement on a new global and comprehensive climate protocol (Karsenty et al. 2012b). In the meantime, market funding will come from the voluntary market and possibly also from emerging national or regional carbon markets. National funding will also play a major role, particularly for middle-income countries such as Brazil. The source of funding will have an impact on the distribution of benefits: market finance is more likely to reward those that reduce emissions directly, whereas fund-based

Table 2. Examples of rationales shaping REDD+ benefit-sharing policy and practice in four key REDD+ countries (adapted from Luttrell et al. 2012).

Country	REDD+ benefit-sharing policy and practice	Benefit-sharing rationale (s)
Brazil	The draft National REDD+ Strategy focuses on the recognition of property rights and decentralization. A number of state and substate projects (see Table 1) are defining their own benefit-sharing arrangements. The definition of property rights is an important focus.	Legal rights
	No national carbon rights legislation has been enacted but Amazonas, Acre, Tocantins, and Mato Grosso have moved ahead to pass state legislation.	Legal rights
	The “safeguard” function of benefit sharing is being emphasized (Gebara 2011, MMA 2012). The Ministry of Environment is leading an initiative to create a safeguards system that includes equitable benefit sharing as one possible safeguard (Vértice Associados 2011).	Pro-poor
	Two influential models for subnational funding allocation (Moutinho et al. 2011, MMA 2012) suggest that funding could be allocated (i) according to the contribution to reducing emission reductions and the maintenance of forest stock or (ii) depending on the contribution of specific land use categories (e.g., indigenous lands, extractive reserves) to the reduction of deforestation and conservation of forest stock.	Emission reductions and stewardship
	Lobbying for recognition of the role of forest stewards is widespread (e.g., Nepstad et al. 2007, Moutinho et al. 2011)	Stewardship
Indonesia	Some states, among them Mato Grosso, are targeting the highest emitters (Moutinho et al. 2011)	Emission reductions
	Some NGOs, such as the Amazon Environmental Research Institute (IPAM) and the Socio-Environmental Institute (ISA), and REDD+ projects are emphasizing the importance of giving compensation for implementation and opportunity costs (Nepstad et al. 2007, May et al. 2011, Moutinho et al. 2011).	Cost compensation
	A common view in the policy debate is that incentive structures should encourage project developers to engage in REDD+. This is reflected in Ministry of Forestry Regulation No. 36/Menhut-II/2009, which specifies the proportions of REDD+ revenue that will accrue to each group and suggests that higher proportions of revenue will accrue to project developers or communities than to the state.	Facilitation
Tanzania	A Ministry of Forestry regulation states that benefits should be distributed to communities adjacent to the REDD+ project site. However, a concern is that customary/local communities may have less involvement in REDD+ benefit sharing than other actors because customary communities find it harder to define themselves legally (Indrarto et al. 2012).	Legal rights and pro-poor
	The 2012 National REDD+ Strategy emphasizes the importance of all groups benefiting equally.	Stewardship
	An important concern in the policy debate is whether REDD+ benefit sharing should follow tenure regimes for land and forest (national- and project-level interviews, 2011-2012).	Legal rights
	Tanzania’s National REDD+ Framework (United Republic of Tanzania 2009) and TFWG (2010) focus on options for (i) rewards for emission reductions and (ii) compensation for implementation and opportunity costs. The Framework calls for payments to be based on performance.	Emission reductions and cost compensation
Vietnam	A concern at the project level is ensuring that upfront payments can serve to encourage early commitments (project-level interviews, 2011-2012).	Cost compensation
	The policy debate has favored a performance-based approach, as seen in the country’s PES schemes and the compensation of costs incurred (To et al. 2012). The importance of cobenefits is receiving attention in the policy debate; for example, the UN-REDD Programme and the NGO SNV are exploring the use of an R coefficient for calculating payments based on both emission reductions and socio-environmental impacts (UN-REDD Programme 2010).	Emission reductions and cost compensation Cost compensation and pro-poor

finance such as development aid can allow a more flexible approach to benefit sharing.

With the possible exception of Brazil, there is little clarity in any of the countries about the institutional governance arrangements for the transfer of REDD+ finance. Project-based REDD+ involves a contract between the provider and the buyer, but can be more removed from state structures, whereas national systems designed to reward national performance have a wider range of players and more layers of subnational systems to accommodate (UN-REDD Programme 2010). Many countries have several alternative proposals on the table. For example, Tanzania’s National REDD+ Strategy proposes a centralized national REDD+ system with payment into a National Trust Fund, whereas Tanzanian projects, and the Readiness Preparation Proposal, are proposing a nested

approach that allows for direct international payments to projects. In Indonesia and some other countries, multiple processes of defining benefit-sharing mechanisms are underway, although the legality of the arrangements being proposed is not clear. The fact that many REDD+ projects are operating in insecure legal and policy frameworks means that existing benefit-sharing arrangements could be subject to upheaval once the national-level policy is formalized.

WHO SHOULD BENEFIT FROM REDD+?

Theoretical principles of distributive equity

The objectives of REDD+ are often characterized in terms of the “3E” criteria of effectiveness, efficiency, and equity outcomes. In the REDD+ context, effectiveness is a measure of “the amount of emissions reduced or removals increased

Table 3. Relationship between selected principles of distributive equity (following McDermott et al. 2012 and Pascual et al. 2010) and the benefit-sharing rationales.

Theory	Principle for the distribution of benefits (and costs)	Benefit-sharing rationale
Merit-based	Distribution should be proportional to the contribution or inputs of the stakeholders (Pascual et al. 2010). Konow (1996) uses the term “accountability principle” to suggest that distribution should be relative to work effort and Miller (1999) refers to “desert”: that superior performance should attract superior recognition. Pascual et al. (2010) distinguish between the criteria of “compensation” for foregone benefits related to the provision of the service and the “actual provision” of the service.	Emission reductions Facilitation Cost compensation
Needs-based	Distribution should be according to needs and those with the greatest needs should receive a higher reward (Rawls 1979, Dobson 1998, Konow 2001) in order to ensure that the position of the least advantaged individuals is as high as possible (Pascual et al. 2010).	Pro-poor Stewardship
Egalitarian	Distribution should be equal among all providers of a service independent of the cost and level of service provision (Pascual et al. 2010).	Stewardship
Libertarian	Distribution should be according to property rights and the moral of liberty of action. Right-libertarianism supports private rights and argues that natural resources should be appropriated by those who discover them, claim them, or provide labor inputs. Left-libertarianism advocates for common ownership and that those who claim rights should pay others for the value of those rights (Valentyne 2010).	Legal rights

by REDD+ actions” and efficiency a measure of “the costs of these emissions reductions or removal increases” (Angelsen 2009:5). A far more complex debate has emerged in the literature about the definition of “equity,” which Konow (2001) describes as an idea that resists simple formulations. In this paper, we refer to Corbera et al.’s (2007:589, following Dobson 1998) definition that “equity relates to the distribution of socio-economic factors and goods in a society according to an agreed set of principles or criteria, which often include principles such as desert and need.” Common to many of the discussions around equity are notions of fairness, justice, and distributional consequences (Konow 2001, Adger et al. 2003). Several authors have proposed frameworks to distinguish between different dimensions of equity, for example between distributive and procedural equity. Distributive equity refers to the allocation of outcomes and their impacts on different stakeholders in terms of costs, risks, and benefits (Corbera et al. 2007, Proctor et al. 2008, Pascual et al. 2010, McDermott et al. 2012). Within the dimension of distributive equity are a number of principles that can be traced back to different rules-based theories related to distributive justice (Table 3). These include the “merit-based” principle that distribution should be proportional to contribution, the “needs-based” principle that distribution should be according to need, the “egalitarian” principle of equal distribution, and the “libertarian” principle that distribution should be according to property rights.

Another element of equity, namely procedural equity, refers to participation in decision making and inclusion and negotiation of competing views (Brown and Corbera 2003). Central to the emphasis on procedural equity is the notion that it strengthens legitimacy. To be legitimate, a system must be justifiable, according to given moral principles and social

norms (Johnson 1997, Jentoft 2000), with evidence of consent (Beetham 1991) and acknowledgment by the governed to validate the ruler’s claim to authority (Weber 1978).

A third dimension of equity has also been proposed, one that McDermott et al. (2012) term “contextual equity” and that Brown and Corbera (2003) refer to as “equity of access” to resources and markets. This dimension reflects a broader argument (see, for example, Miller 1999) that what is perceived as equitable is not universal but rather depends on the specific context in which decisions about the distribution of resources are made (Konow 2003, Schokkaert and Devooght 2003, Muradian et al. 2010). For example, contextual factors such as capacity, power, cultural values, social capital, and the level of dependence on forest have important effects on the equity of distribution (Konow 2001). In this sense, some “indirect benefits” such as tenure reform, capacity building, or improved governance could also be categorized as “contextual” features, in that they constitute the necessary preconditions for benefiting from the implementation of REDD+.

A typology of benefit-sharing rationales

Through our analysis of current practices and debates on sharing benefits from REDD+, we identified a typology of six rationales for the distribution and targeting of benefits that cut across all three objectives of effectiveness, efficiency, and equity. These six rationales represent different justifications for the allocation of benefits, namely that:

- benefits should go to actors with legal rights (“legal rights” rationale);
- benefits should go to those actors achieving emission reductions (“emission reductions” rationale);

- benefits should go to low-emitting forest stewards (“stewardship” rationale);
- those actors incurring costs should be compensated (“cost compensation” rationale);
- benefits should go to effective facilitators of REDD+ implementation (“facilitation” rationale);
- benefits should go to the poorest (“pro-poor” rationale).

Hajer (1993) highlights that, in the case of environmental politics, complex policy problems are often mirrored by complex political arguments that draw on more than one discourse. Benefit sharing is no exception. We show how each rationale can be related to one or more principle of distributive equity principles (see Table 3), although in practice the choice of rationale may reflect other factors as well.

The rationales were identified through the analysis of policy documents, secondary literature and media reports, semistructured interviews, and quantitative surveys carried out at national and project levels. In particular, we examined the discourses expressing each rationale as they emerged in the benefit-sharing debate as well as the specific planned and actual REDD+ actions related to benefit sharing. Examples of how we ascribed design features of benefit-sharing mechanisms, proposed and actual, to each rationale are shown in Tables 2 and 4. As seen in the tables, multiple rationales may be in play in a single country or project, which reflects the diversity of underlying discourses about benefit sharing. Again, it is important to note differences in the use of the term “benefits”: in some rationales, “benefits” are defined as including compensation for implementation and opportunity costs, whereas others refer only to net gains or rent.

Benefit-sharing rationale I: benefits should go to actors with legal rights related to carbon emission reductions (“legal rights” rationale)

One rationale that is prevalent in the benefit-sharing debate in all countries is that benefits should be distributed to those with a legal claim or right, whether statutory or customary, to any benefits associated with carbon emission reductions. This rationale is related to theories on libertarian justice (see Table 3). This rationale is particularly strong in Tanzania and Brazil (see Table 2), which is perhaps a reflection that land and forest resource rights are more clearly defined in these countries; in most countries, rights to carbon sequestration and storage (carbon rights) have not been clarified. None of the countries studied has national legislation on carbon rights, and as a result most REDD+ projects are operating in a vacuum of uncertainty over the legal right to benefit from payments for carbon emission reductions.

In the absence of that clarity, existing land and forest tenure rules and current policies for rights to forest resources can be assumed to serve as the basis for allocating payments for

carbon emission reductions (Cotula and Mayers 2009). However, in those countries, e.g., New Zealand until 2008, and states, e.g., Amazonas and Acre in Brazil, where carbon rights are clarified legally, the rights do not reflect existing land and forest tenure because the carbon rights were vested in the state regardless of land and forest tenure (Peskett and Harkin 2007, Karsenty et al. 2012a).

Legal rights vary within a “bundle” of property rights, ranging from usufruct rights, or the right to earn income from a resource, to the right to transfer the resource to others (McKean 2000, Segal and Whinston 2013). Ownership of land or trees does not necessarily give the owner a legal right to benefit from carbon sequestration or reductions in carbon emissions. Peskett and Brodnig (2011) argue (following Streck and Sullivan 2007; see also Takacs 2009) that the term “carbon rights” has two different aspects:

1. The property right to the sequestered carbon itself, which is physically contained in land, trees, and soil, does not necessarily have to coincide with the property right to the physical resources.
2. The right to benefit from selling carbon credits is distinct from the property right to sequestered carbon. Where there is no explicit law on the right to sequestered carbon, legal rights to sell carbon credits can be associated with the right to the underlying asset, activity, or resource. If the legal status is not clear, contracts become important for clarifying rights and responsibilities (Norton Rose 2010).

Therefore, a central consideration is whether the state will claim separate rights to benefit from trading carbon credits even in contexts where land or forest is privately or communally owned. In Tanzania, most REDD+ projects are taking place on land registered as Village Forest Reserves. Because communities that own Village Forest Reserves have the right to the revenue and benefits arising from them (United Republic of Tanzania 1998), there is no legal requirement for the income from these projects to go to the central government. However, despite the relative clarity of the laws in Tanzania, national-level actors have exhibited some resistance to the decentralization and devolution of decision-making power and rights to communities, based on the view that the entire nation should benefit from forest resources and not only those living in forest areas (interviews with national stakeholders, 2012).

If the national government claims rights to the benefits from carbon emission reductions, a national benefit-sharing mechanism needs to address not only how to distribute the revenue from any carbon credits but also the creation of incentives at lower scales to encourage those responsible for deforestation and forest degradation to reduce these activities. If rights are assigned to households or communities, further

Table 4. Plans for sharing of benefits and the associated rationales [in brackets] in 10 REDD+ projects. Projects were selected for this table to reflect a range of benefit-sharing rationales.[†]

Project	Timing of benefit and for what	To whom
TFCG (Tanzania)	Upfront funds, conditional on full participation in conservation activities. The amount of funds paid is a little below what would be paid should emissions be reduced to the expected level. The amount allocated to each village is based on the area of forest reserved minus leakage [emission reductions].	REDD+ dividends will be paid to every qualifying individual (including up to three children per household, received by their mothers) [pro-poor]. Payments will be allocated to those who have land/forest ownership [legal rights].
Mpingo Conservation Development Initiative (Tanzania)	Performance-based [emission reductions]. No upfront funding is provided but the communities are benefitting from upfront support in the form of free facilitation for Forest Stewardship Council (FSC)-certified timber through participatory forest management opening up a potential revenue stream.	Payments will be allocated to those who have land/forest ownership [legal rights]. 5% of revenue from certified timber is paid to the District Council [facilitation]. The project proponent and community are negotiating the percentage arrangement to be paid to the project to cover administration costs [facilitation].
CARE-HIMA (Tanzania)	Upfront benefits in the form of conservation grants [cost compensation]; the share of funds is determined according to pro-poor [pro-poor] and environmental criteria. Future benefits will be linked to performance [emission reductions].	Payments will be allocated to those who have land/forest ownership [legal rights].
TaTEDO – Community Based REDD Mechanisms for Sustainable Forest Management in Semi-Arid Areas (Tanzania)	Upfront payments based on efforts in the implementation of management plan, the area of forest, and carbon baseline data; later payments will be performance-based [emission reductions]. Every member in the group has to adhere to certain management requirements such as the minimization of use and harvest and maintenance of land use. The 5% going to the project will be used for managing the <i>ngitili</i> (traditional forest management) groups and the 3% to the militias will be used for law enforcement and patrolling [cost compensation].	Payments will be made to Ngiliti (traditional forest management) owners (83%) [legal rights]), village government (7%), village level Ngiliti group (5%), Sungu-Sungu group (village militia) that patrols Ngilitis (3%), and district level Ngiliti Association (2%) [cost compensation].
Transamazon (Brazil)	Upfront benefits [cost compensation], performance-based benefits based on the amount of forest protected [stewardship], zero deforestation [emission reductions], compliance with community agreements, and membership in rural workers union).	Cash and in-kind benefits will be delivered to small-scale farmers, but not to large landowners or timber extractors [pro-poor].
Central Xingu REDD+ Pilot Program (Brazil)	Upfront benefits in the form of a rural environmental registry (CAR) and restoration plan (PRAD); conditional benefits in the form of technical assistance and technology transfer. The development of the CAR and the PRADs is one of the conditions for receiving further benefits.	In-kind benefits will be delivered to private landholders [legal rights], indigenous groups, and protected areas managers [stewardship].
Acre (Brazil)	Upfront benefits and conditional benefits in the form of technical support for sustainable production and cash. Benefits allocated for increasing production in deforested areas and carbon stocks in deforested areas [emission reductions].	Benefits will go to private and rural settlement properties [legal rights].
Bolsa Floresta Program (Brazil)	Conditional benefits; monthly payment of BRL 50 reais (US\$30) per household directed to the women. Families commit to zero deforestation [emission reduction], good agricultural practices, and to enrolling their children in school [pro-poor]. Annual investments in village associations, sustainable production, and social benefits such as education and health infrastructure.	Recipients of benefits are participating households, communities, and associations. Benefits are offered to all residents in protected areas selected for the program.
KFCP (Indonesia)	Upfront benefits in the form of payments to individuals and alternative livelihoods programs [pro-poor]; performance-based payments are planned based on mutually agreed targets and indicators linked to emission reductions [emission reductions]; upfront payments to individuals for work and materials provided to achieve those targets [cost compensation].	Payments and in-kind benefits go to villages, households, and individuals
CED – Payment for Ecosystem Services project in Cameroon South and East Region (Cameroon)	Performance-based payments [emission reductions]. Forest areas have been divided into “sectors,” with a maximum payment amount designated for each sector. Percentages of that amount will be allocated in areas with no clear-felling according to the following criteria: (i) 100% of the maximum amount if the land area opened for farming is less than 3 ha; (ii) 50% if the area opened is 3–4 ha; (iii) zero if the area opened is more than 4 ha [emission reductions].	Payments will be made to Community Activity Groups created by the project.

[†]Data were compiled from “site narratives,” “project checklists,” and unpublished reports prepared by the GCS component 2 country teams for Tanzania, Indonesia, Brazil, and Cameroon, as well as direct interaction and additional inputs from these teams. Additional information on projects in Brazil was taken from Duchelle et al. (2010).

attention may be required to tackle the drivers of carbon emissions, because those given the legal rights may not be responsible for high-emitting behavior.

Basing a benefit-sharing mechanism on a legal rights rationale may have the effect of further disadvantaging the poor. Poor forest users seldom possess legally recognized rights to land

Table 5. Legal status of land uses associated with carbon emissions in eight REDD+ projects, indicating potential equity problems arising from basing benefit sharing on a “legal rights” rationale. Projects were selected for this table to reflect a range of land use activities.[†]

	Main potential drivers of carbon emissions		
	Legal	Legally ambiguous	Illegal
Katingan Conservation Area (Indonesia)	Timber harvesting, oil palm and mining concessions (avoided), swidden	Seasonal hunting and fishing, collection of nontimber forest products	Small-scale logging
KCCP (Indonesia)	Large-scale oil palm	Swidden, small- and large-scale logging	Small-scale mining
Central Xingu REDD+ Pilot Program (Brazil)	Large-scale logging [‡] and small-scale cattle ranching	Swidden, extraction of nontimber forest products, mining, agriculture	Small- and large-scale logging, small- and large-scale cattle ranching, commercial fishing
Transamazon (Brazil)	Small- and large-scale ranching, small- and large-scale logging, swidden, subsistence hunting, small-scale agriculture		Commercial hunting, swidden, small-scale agriculture, small- and large-scale ranching, small- and large-scale logging
Mpingo Conservation Development Initiative (Tanzania)		Pastoralism, large-scale land acquisition for agriculture (including biofuels), agricultural burning, charcoal production, burning for hunting, honey collection, safety, visibility, and shifting agriculture	Timber harvesting
CARE-HIMA (Tanzania)	Logging, settlements, tourism	Agriculture, firewood collection, charcoal making	Logging
TaTEDO (Tanzania)	Grazing, charcoal making, firewood	Swidden	
JGI – Building REDD Readiness in the Masito Ugalla Ecosystem Pilot Area (Tanzania)		Swidden	Logging

[†] Data were compiled from “project checklists” (created based on expert interviews, secondary data, and field observation) collected by CIFOR GCS REDD+ Component 2 country teams for Brazil, Indonesia, and Tanzania.

[‡] The same land use can occur under multiple types of legality. In Central Xingu REDD+ Pilot Program, for example, some logging is legal and some illegal depending on the location and whether or not a permit has been obtained.

and/or forest products, often because of the high costs of getting legal recognition; they therefore use the forest illegally (Colchester et al. 2006). In some REDD+ projects, the large-scale land uses, e.g., large-scale timber and oil palm concessions, targeted by the project would be classified as “legal,” whereas many of the smaller-scale activities that would also be reduced as a result of the project either have no legal recognition or would be deemed “illegal” (see Table 5). In these cases, directing benefits only to those entities with legal rights would favor large-scale land users and not compensate the poor for the loss of their livelihood activities.

Benefit-sharing rationale II: benefits should go to those who reduce emissions (“emission reductions” rationale)

The effectiveness and efficiency objectives of REDD+ focus on the goal of reduced carbon emissions and the notion that

benefits should be used as an incentive to bring about a reduction in emissions. In a performance-based payment system, actors are paid for their actual performance in terms of improved forest conditions and reduced degradation in ways that can be empirically verified through higher forest carbon stocks compared with reference emission levels. This system provides a direct link between REDD+ payments and effective forest conservation activities. This rationale is related to the “merit-based” theory of “actual provision” discussed by Pascual et al. (2010), which states that the distribution of a reward should correspond to the actual level of ecosystem service provision.

One implication of this rationale is that REDD+ finance may end up being used to reward large-scale actors, the dominant emitters in many contexts, for reducing carbon emissions. This

can be controversial, partly because of the magnitude of the opportunity costs that these large-scale actors will incur and partly because of the concern that they will be rewarded for their poor environmental performance in the past. In Brazil, a large proportion of government and NGO/research respondents in the social organization survey disagreed with the statement that “REDD benefits should reward large-scale industries/companies for reducing forest emissions” (Fig. 1). In particular, many of the respondents from indigenous and traditional groups raised concerns that “criminals” would be rewarded, given that much of the deforestation is carried out by large private landowners that do not comply with the National Forest Code or do not have proper land titles. In Indonesia, on the other hand, this statement received strong support among government and private sector respondents, although only around half of the NGO/research respondents agreed with it.

Benefit-sharing rationale III: benefits should go to forest stewards (“stewardship” rationale)

A rationale that emerges frequently in policy debates, particularly in Brazil (e.g., Nepstad et al. 2007), is that REDD+ benefits should go not only to the actors reducing emissions but also to indigenous groups or other forest users that have a record of responsible forest management (see Table 2). This rationale is partly based on the “merit” principle of equity: that benefit distribution should reward a virtuous pattern of behavior. It also owes something both to the egalitarian view that benefits should be distributed equally among all providers of a service regardless of the level of service provision, and to the needs-based theory, as it advocates for the use of REDD+ benefit-sharing mechanisms to support marginalized forest dwellers.

Under a benefit-sharing mechanism based on this rationale, a community or users that have been protecting the forests for a long time would have a strong claim to benefits from REDD+. In this view, benefits from REDD+ serve to recognize both past and current efforts and to encourage the continued protection of forests. The dilemma for REDD+ is that in many of these low-emission situations, additionality cannot be proven because there are no emissions to reduce in the first place. However, it can be argued that emissions are likely to increase in the future, because a realistic baseline is higher than a historical one, and therefore continued conservation could be considered as additional.

Recognition of good forest stewardship is evident in some of the projects studied in Peru and Brazil, where benefits are being distributed to actors that are not directly involved in deforestation as a means of encouraging collaboration and creating incentives for protecting the area. This can be seen, for example, in the BAM (Brazil Nuts Concession REDD) project in Madre de Dios, Peru, where the owners of Brazil nut concessions are given incentives to protect the forest, even

though the main activities causing deforestation, agricultural clearance and illegal logging, are carried out by different actors altogether. Another example is the Bolsa Floresta Program in Brazil, whose site has undergone relatively little land use change to date, although deforestation is a long-term threat. The benefits that the program offers to families are therefore perceived not as compensation for “additional measures” to alleviate deforestation pressures but rather as a reward for those who have sustained forest permanence over the years. It is interesting to note, however, that outside of Brazil and Peru, the stewardship rationale has little presence in the design of the benefit-sharing systems at the project level (see Table 4).

Benefit-sharing rationale IV: actors incurring costs should be compensated (“cost-compensation” rationale)

One view that emerges frequently in the benefit-sharing debate is that the actors that shoulder implementation, transaction, and opportunity costs should be compensated regardless of the carbon emission reductions for which they are directly responsible. However, we found that the distinction between compensation for incurred costs and rent is made explicit in only a few of the situations where this rationale has been proposed as a basis for benefit sharing.

This rationale is related to “merit-based” theories, which suggest that distribution should be proportional to inputs (Dobson 1998). Within the merit-based theories is a tension between the view that reward should be based on performance, i.e., the “actual provision” of emission reductions, and the view that any effort or inputs made toward REDD+ implementation should be rewarded. This tension is reflected in the design of many emerging benefit-sharing arrangements. It arises not only because inputs are easier to define and measure than are emission reductions and their associated opportunity costs, but also because most REDD+ projects are in the early stages of implementation and recognize the need to give actors incentives for getting involved. Although projects are striving to move toward results-based crediting, many proponents argue that it is essential to look at the potential costs arising from REDD+ and whether the actors bearing the costs are the same ones receiving compensation or rent.

Most of the REDD+ projects studied in Tanzania (see Table 4) are combining upfront funding as compensation for early inputs with plans to shift to payments based on performance. In projects such as the Tanzania Forest Conservation Group (TFCG) and *Hifadhi ya Misititu ya Asili* (HIMA), communities receive benefits as long as they implement activities that improve carbon stock, such as the development of land use plans, participatory forest management, law enforcement, or the implementation of forest management plans. This option has low transaction costs because these activities can easily be verified.

Table 6. The “most significant” potential opportunity costs of six REDD+ projects, showing the variation in actors depending on the indicators used to define “significant.” Projects were selected for this table to reflect a range of land use activities.[†]

Project	The carbon-emitting activity that, if reduced through REDD+, would ... incur the greatest financial losses [cost compensation rationale]	... affect the greatest number of people [pro-poor rationale]	... create the most significant change in land or forest use over the largest area [emission reductions rationale]
Katingan Conservation Area (Indonesia)	Large-scale oil palm	Swidden, fishing, collection of nontimber forest products	Large-scale logging concessions, large-scale oil palm plantations, mining, swidden
Ulu Masen (Indonesia)	Large- and small-scale logging, large oil palm plantations, small-scale mining and timber plantations	Agricultural expansion, small-scale plantations, grazing, large- and small-scale mining	Large-scale logging, oil palm
Transamazon (Brazil)	Small-scale cattle ranching	Swidden	Small-scale cattle ranching
Acre (Brazil)	Large-scale cattle ranching	Swidden	Large-scale cattle ranching
Central Xingu REDD+ Pilot Program (Brazil)	Large-scale cattle ranching	Swidden, small-scale logging	Large-scale cattle ranching
CED – Nkolonyeng (Cameroon)	Small-scale logging	Swidden	Swidden

[†] Data were compiled from “opportunity cost stakeholder checklists” (created based on expert interviews, secondary data, and field observation) collected by CIFOR GCS REDD+ Component 2 country teams for Brazil, Indonesia, and Cameroon.

The rationale does have several drawbacks. For example, it does not necessarily allow for a direct link between payments and reductions in deforestation and forest degradation. Furthermore, it does not account for variability in the performance of forest managers, and their incentives are weak if paid regardless of forest outcomes (TFWG 2010). An effort-based payment system also ignores the differences in opportunity costs among communities; for example, communities that succeed in halting charcoal production or shifting cultivation will incur higher opportunity costs than those that fail (TFWG 2010). In addition, because there tend to be more valuable economic opportunities in areas where forests have higher carbon content (TFWG 2010), communities in such highland areas will incur greater opportunity costs than communities in low-carbon forests, for example, miombo in southern Tanzania and coral-rag in Zanzibar (United Republic of Tanzania 2009). This is a rare example in the cases we studied, in that attention has been given to contextual equity in the debate around benefit sharing. If such cost differences are not factored in, effort-based systems could arguably be inequitable.

Designing mechanisms for compensation of opportunity costs is at an early stage in most of the projects studied. A review of projects’ own assessments of their opportunity costs reveals considerable disparity between (i) the stakeholder groups that are predicted to incur the most significant opportunity costs depending on whether “significant cost” is defined in terms

of the greatest financial loss, (ii) the loss of livelihood for the greatest number of people, and (iii) the most significant change in area of land or forest use (Table 6). In the examples of REDD+ projects shown in Table 6, the highest levels of potential financial loss correspond to activities with the highest forest area change and carbon emission reductions. This highlights potential trade-offs between an opportunity costs approach based on profit foregone and consideration of other equity concerns associated with the number of people whose basic livelihoods may be affected.

Benefit-sharing rationale V: benefits should go to effective facilitators of implementation (“facilitation” rationale)

Also related to the “merit-based” principle of “compensation” is the rationale, running through much of the REDD+ benefit-sharing debate, that a proportion of REDD+ benefits should be shared with the actors that are not necessarily forest-based but that are essential for the implementation of REDD+. These actors may include private sector proponents, NGO project proponents, or central or local government. This rationale is more explicitly about the level of “rent” that will accrue to actors rather than compensation, although making a distinction between the two presupposes that each actor is clear about the exact costs of implementation.

The proportion of the benefits that should accrue to facilitators of implementation is subject to debate in many countries. The

debate largely concerns who should benefit from REDD+ and the legal and constitutional considerations concerning the state's right to retain revenue from privately and nationally owned goods. The challenge is to ensure that those facilitating the implementation of REDD+ receive sufficient incentives to achieve effective implementation, while at the same time guarding against them getting windfall profits, an issue discussed in the Ministry of Finance of Indonesia's Green Paper (2009). Private sector project developers in Indonesia are lobbying to influence national policy on setting benefit-sharing rules, arguing that project developers require adequate compensation to cover the implementation and transaction costs they are incurring as a result of REDD+ readiness activities. In the Tanzanian projects in particular, the level of administration fees that should accrue to the facilitating organization is a key issue in negotiations with communities. A complicating factor is that, in most of the cases, project proponents are NGOs operating at a small scale and the level of "rent" that could, or should, accrue to them has not been clarified in national policy.

This question also arises in relation to the rights of governments to retain some revenue to cover their own implementation and transaction costs. As with revenue collected from forest products, central and local governments might retain revenue for admissible costs, such as setting up systems for monitoring, reporting, and verification and for enforcement (Irawan and Tacconi 2009). The UN-REDD Programme (2010) recommends that the amount retained by government should be based on performance and directly related to the costs incurred, although we recognize that the principles of "cost recovery" and "performance-based" can conflict with each other in the actual design of the rules.

A related question in the vertical benefit-sharing debate is how to distribute REDD+ rent or taxes between levels of government, including the degree to which local governments should keep locally derived revenues. The principle of subsidiarity suggests that greater efficiency is achieved by locating powers and tasks at the lowest possible administrative level (Føllesdal 1998). In the case of REDD+, however, some activities may be best handled at the central level, e.g., to contain leakage (Irawan and Tacconi 2009).

Benefit-sharing rationale VI: benefits should go to the poor ("pro-poor" rationale)

The view that REDD+ benefits should flow to the poorest constitutes another influential rationale in the debate on REDD+ benefit sharing. This rationale is based on the concern that an exclusive focus on carbon emissions and compensation of costs could result in unfair distribution of REDD+ funds, e.g., by rewarding wealthy actors for reducing their illegal behavior, and thus serve to increase inequality and undermine the moral and political legitimacy of REDD+ (Kaimowitz 2008, Karsenty and Ongolo 2012). The Cancun Agreements

consolidated the "pro-poor" rationale as a safeguard by establishing that REDD+ should be implemented in the context of sustainable development and poverty reduction to enhance other social and environmental benefits (UNFCCC 2010). This rationale is related to "needs-based" equity theories (Table 3). Needs-based theories have a moral basis, drawing on the principles that benefits should be distributed according to need, with those with the greatest need receiving a greater reward, and that the needs of marginalized groups, such as women, indigenous people, and vulnerable communities, should be catered for. This rationale stems from a concern that benefits will not flow to poor people and that REDD+ systems could create new risks for the poor (Peskett 2011a).

The statement "REDD should mainly reward local people for emission reduction activities" elicited very strong agreement from respondents to the social organization survey across all groups in both Brazil and Indonesia (Fig. 2), even among those groups that had previously said that large-scale emitters should be rewarded for reductions. Although this opinion is likely to be rooted in support for pro-poor outcomes, it may also reflect to some extent a pragmatic concern for effectiveness, given that respondents in all groups except the private sector also strongly agreed that "without involvement of local people in their implementation, REDD projects are unlikely to be effective" (Fig. 3). A significant pragmatic element to the debate lies in the idea that if REDD+ is not equitable it will not be perceived as fair (Börner and Wunder 2008), which can undermine its effectiveness, legitimacy (Peskett 2011a, Lindhjem et al. 2010, Costenbader 2010), and sustainability, thus leading to increased conflict (Mohammed 2011) and a higher risk of nonpermanence (IIED 2009).

Pro-poor rationales are a clear concern at the project level. As Table 1 shows, many of the projects have invested in upfront, in-kind benefits in the form of livelihood alternatives, capacity building, and tenure strengthening. However, Table 4 shows that cash payments tend not to be targeted according to the pro-poor rationale but rather tend to be shared according to the cost compensation or emission reductions rationales.

DISCUSSION

The prevalence of each rationale and relative weight given to each at the national or project level vary according to several factors: the objective of REDD+ in a specific context, the nature of the REDD+ funding envisaged, the form of REDD+ activity planned, and the stakeholders involved in the design of the mechanism. In Vietnam, for example, with its extensive experience with PES schemes, the focus is on performance-based payments that can accommodate cobenefits, and hence the emission reductions and pro-poor rationales receive the most attention (see Table 2). In Tanzania, upfront payments are of interest at the project level as a means of encouraging early commitment; thus, the cost compensation rationale is

prevalent (see Table 4). The emphasis in Brazil is largely on strengthening property rights (legal rights rationale) and catering to the needs of indigenous people (stewardship rationale), whereas in Indonesia the focus is simultaneously on ensuring benefits for local people (pro-poor rationale) and on creating adequate incentive structures to keep project developers involved (facilitation rationale).

It should be recognized, however, that the prevalence of a particular rationale in a context may not necessarily indicate support for the related principle of distributive equity (Table 3). For example, even though a pro-poor approach may reflect a needs-based principle, the reason for adopting a pro-poor approach may not stem from support for this principle. Rather, certain groups may be employing that principle as part of a strategy to legitimize a particular action that supports their interests while neglecting others (Brockhaus and Angelsen 2012). It is also interesting to note that the expression of views in policy debates or organizational statements in favor of a certain rationale may not always result in actions that follow the same rationale. For example, the professed support for the pro-poor rationale for benefit sharing in Brazil (see Table 2) is in contrast to practices that have favored the reward of large-scale deforesting actors. Such practices include the amnesty in the Forest Code given to large landholders that operated illegally in the past (Schwartzman et al. 2012) and credit schemes that are available to large deforesting landholders (Assunção et al. 2013).

NEGOTIATING OBJECTIVES AND LEGITIMACY OF PROCESS

A common feature in the countries and projects studied is a lack of clarity about which is the competent agency or group of actors to make decisions on benefit-sharing mechanisms. In some cases, this lack of clarity is stalling the development of mechanisms and therefore of REDD+ implementation. In Indonesia, the REDD+ benefit-sharing regulation developed by the Ministry of Forestry has been challenged by the Ministry of Finance, which contends that the Ministry of Forestry does not have the legal authority to make fiscal decisions (Peskett 2011b). At the same time, the REDD+ Task Force is developing parallel proposals for benefit sharing in connection with the Norwegian funding for REDD+. In Tanzania, there are similar debates over which ministries have the authority to make decisions about REDD+. The Department of Environment in the Vice President's Office holds the authority to make decisions on REDD+ implementation, the implementation of REDD+ projects falls under the Ministry of Natural Resources and Tourism (United Republic of Tanzania 2010), the Ministry of Finance is responsible for monitoring and ensuring revenue collection, the Ministry of Land makes decisions about land ownership, titling, and boundaries for village forestland, where most REDD+ projects are located, while the local government authority at the district level has the mandate to approve land

use plans, which are required for establishing Village Forest Reserves.

An important first step in the design of benefit-sharing mechanisms, therefore, would be to attain legal clarity on which institutions have the authority to make decisions. However, the uncertainty of what constitutes that legitimate authority is a major obstacle at the national and subnational levels. In the theoretical debate, some stress that legal authority enhances legitimacy (e.g., Beetham 1991). Others maintain that legal authority alone does not bring legitimacy (Jentoft 2000), because legal rights are not necessarily related to wider moral or ethical rights. A system that cannot be justified on grounds of social justice will be challenged, however solid its legal foundations (Rothstein 1998). Thus the clarification of carbon rights and of institutional authority over related decisions is a necessary but not sufficient step toward achieving legitimacy.

Legitimacy is a function not only of the distributional outcomes (who gets how much) but also of the procedure of designing and implementing the benefit-sharing system. "Procedural equity" is about more than the fair implementation of a fair set of rules; rather, it extends to how those rules are set up and who is present when they are made. For example, in Bolsa Floresta, carbon rights legally belong to the state but the providers of ecosystem services can gain access to benefits (Gebara 2011). However, civil society has criticized the decision-making process surrounding the creation of the program and the clarification of carbon rights for failing to involve those affected by the decisions made, including decisions made over the design of the benefit-sharing mechanisms (Pereira 2010, May et al. 2011). Without a process that is procedurally equitable, even a fair distribution based on consensus is unlikely to be able to be implemented (Pascual et al. 2010).

Attention to procedural equity remains a challenge when multiple interest groups are involved in the REDD+ arena. Each rationale is supported by distinct interest groups, each of which has its own material interests and ideology. Procedural equity in decision making can help to overcome these power imbalances. However, social and moral norms do not necessarily have a common meaning for all (Falk Moore 1983, Knight 1992, Johnson 1997). As Giddens (1981) argues, shared norms are more relevant for dominant groups, and legitimacy is less likely to be challenged by the less powerful (Scott 2001). In addition, notions of what is legitimate can also change over time (Boulding 1990).

CONCLUSION

REDD+ is heavily loaded with a wide range of expectations on outcomes beyond carbon emission reductions, expectations that lie behind the diversity of rationales concerning who should benefit from REDD+. As seen, these rationales draw on different principles about what REDD+ should pay for and

employ different definitions of the term “benefits.” Managing these expectations on outcomes and the differences in rationales requires common understanding, at both national and project levels, of (i) the primary objectives of REDD+ benefit sharing and (ii) the degree to which REDD+ should address and/or generate cobenefits. However, our analysis suggests that, in most situations, these issues have yet to be clarified.

It is unlikely that countries will be able to formulate clear distributive principles, such as a needs-based principle or a merit-based one, for benefit sharing because doing so can be contentious, given the ethical and political judgments involved. These judgments would also need to factor in legal and constitutional aspects concerning the right of the state to retain revenue from privately and nationally owned goods, aspects that remain at issue in many countries and/or subnational contexts. Nevertheless, the goal of clearly establishing the relative importance of each rationale for distributing benefits in a certain context is a realistic one. Once the priorities assigned to the different approaches have been made explicit, for example, clearly communicating that a cost compensation rationale is of higher priority than an emission reductions rationale, complementary strategies to address any inequities associated with the preferred rationale could be developed.

The multiplicity of objectives and interest groups involved makes the legitimacy of the process of designing mechanisms critical. Ensuring legitimacy of the process can guard against small and unrepresentative interest groups exerting disproportionately strong influence over the design of REDD+ benefit sharing. Building legitimacy requires attention not only to fair distributional outcomes but also to a consensus on relevant institutions’ authority to make decisions and to procedural equity. This requires both legal clarity and consensus about which institution or group of actors has the authority to make such decisions. It also demands attention to procedural rights such as transparency, participation, and free prior and informed consent. For stakeholders to support REDD+, they must perceive benefit sharing as fair; hence, the legitimacy of decision-making institutions, consideration of context, and attention to process are critical. We suggest, therefore, that effective benefit-sharing mechanisms are not only about having clear principles and guidelines for design, because these alone cannot hope to satisfy the interests of all stakeholders; benefit sharing must also entail a legitimate process for making decisions, in which priorities can be unambiguously assigned to the rationales influencing the debate.

Responses to this article can be read online at:
<http://www.ecologyandsociety.org/issues/responses.php/5834>

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