Analysing REDD+

Challenges and choices

Editor	Arild Angelsen
Co-editors	Maria Brockhaus William D. Sunderlin Louis V. Verchot
Editorial assistant	Therese Dokken
Language editing, project management and layout	Green Ink Ltd

Printed in Indonesia
ISBN: 978-602-8693-80-6

Angelsen, A., Brockhaus, M., Sunderlin, W.D. and Verchot, L.V. (eds) 2012 Analysing REDD+: Challenges and choices. CIFOR, Bogor, Indonesia.

Photo credits:
Cover © Cyril Ruoso/Minden Pictures
Parts: 1. Habtemariam Kassa, 2. Manuel Boissière, 3. Douglas Sheil
Chapters: 1. and 10. Yayan Indriatmoko, 2. Neil Palmer/CIAT, 3. and 12. Yves Laumonier, 4. Brian Belcher, 5. Tony Cunningham, 6. and 16. Agung Prasetyo, 7. Michael Padmanaba, 8. Anne M. Larson, 9. Amy Duchelle, 11. Meyrisia Lidwina, 13. Jolien Schure, 14. César Sabogal, 15. Ryan Woo, 17. Edith Abilogo, 18. Ramadian Bachtiar

Designed by CIFOR's Multimedia Team, Information Services Group
Language editing, project management and layout by Green Ink Ltd (www.greenink.co.uk)

CIFOR
Jl. CIFOR, Situ Gede
Bogor Barat 16115
Indonesia

T +62 (251) 8622-622
F +62 (251) 8622-100
E cifor@cgiar.org

cifor.org
ForestsClimateChange.org

Center for International Forestry Research
CIFOR advances human wellbeing, environmental conservation and equity by conducting research to inform policies and practices that affect forests in developing countries. CIFOR is a CGIAR Consortium Research Center. CIFOR's headquarters are in Bogor, Indonesia and it also has offices in Asia, Africa and South America.

Chapter 8

Who should benefit and why?
Discourses on REDD+ benefit sharing

Cecilia Luttrell, Lasse Loft, Maria Fernanda Gebara and Demetrius Kweka

- Before designing effective benefit sharing mechanisms for REDD+, it is necessary to resolve the question of what REDD+ seeks to achieve. The objectives profoundly affect the design of benefit and cost sharing mechanisms.
- Benefits are not only financial. Few REDD+ projects are providing direct financial transfers to households in their early stages, thus benefit sharing requires attention to a wide range of activities.
- The legitimacy of the decision making institutions and processes is critical. Legal clarity is needed, as is consensus as to which institutions have the right to make decisions and attention to procedural rights.

8.1 Introduction

The distribution of benefits has been identified as "one of the most challenging hurdles" facing REDD+ (Costenbader 2011). Benefit sharing is important for creating positive incentives for reducing carbon emissions, but it must be seen as fair or it will threaten the legitimacy of and support for REDD+. Moreover,

benefit sharing can help to avoid the leakage associated with REDD+ and ensure permanence of emission reductions (Peskett 2011a).

Benefit sharing is not a concept that is unique to REDD+. Many natural resource sectors (e.g. mining, oil, conservation and development projects) and most governments have dealt with benefit sharing through taxation and subsidies. There is much to be learned from these experiences (see, for example, the review by Lindhjem *et al.* 2010). As has been the case in other sectors, the benefit sharing debate in REDD+ raises a number of issues, including the definition of benefits, the identification of legitimate beneficiaries, the efficient distribution of costs, the institutional structures needed for financial transfers and the processes for decision making and implementation (see Lindhjem 2010; Peskett 2011a; Vatn and Vedeld 2011).

Chapter 8 sets out proposed policies and systems for the distribution of benefits and costs at national and subnational levels across a range of countries and projects. It focuses primarily on the main discourses around the question of how benefits and costs should be distributed. We define 'discourse' as "a shared way of apprehending the world" (following Dryzek, 1997:8). Section 8.2 sets the scene for the discussion by defining key concepts and describing institutional arrangements for allocating funds. Section 8.3 lays out the main discourses on how benefits and costs should be distributed and explores the implications of the different discourses for the design of benefit sharing mechanisms. Section 8.4 discusses the importance of legitimacy in decision making processes and describes how to navigate the tradeoffs between effectiveness, efficiency and equity concerns that lie behind these discourses. The chapter concludes by summarising the tradeoffs between different discourses around benefit sharing and by underscoring the importance of legitimising the design process.

The chapter draws from CIFOR's Global Comparative Study (GCS) on REDD+ and uses information from 22 project sites in seven countries (see Appendix). Table 8.1 sets out the current status of policies and practices concerning national and subnational benefit sharing mechanisms in selected countries. Data used in this chapter were collected at the national, project and village levels in each of the project sites and were supplemented by secondary reviews of literature, informant interviews and policy analysis at the national level.

8.2 Setting the scene

8.2.1 Defining REDD+ benefits and costs

In this chapter we define benefit sharing under REDD+ as the distribution of direct and indirect net gains from the implementation of REDD+. We distinguish between two types of benefits. First, there are monetary gains

from international and national finance related to REDD+, including from the sale of forest carbon credits or donor funds linked to REDD-readiness, policy reforms and or payments based on emission reductions. Second, as REDD+ increases the sustainability of forest management, it is likely to generate benefits through the increased availability of some forest products (e.g. non-timber forest products) and by providing benefits related to non-carbon ecosystem services. Box 8.1 clarifies key terms and concepts related to REDD+ benefit sharing.

REDD+ implementation also comes with costs, which are borne by different actors and at different levels. Again, a conceptual distinction can be made between direct financial outlays related to REDD+ implementation and the costs arising from changes in how forest lands and forest resources are used under REDD+. The latter are typically referred to as opportunity costs: the income that is forgone by using forests in ways that reduce emissions. Direct costs include transaction and implementation costs. Implementation costs can include costs incurred by governments or proponents to compensate actors for opportunity costs, so care should be taken not to double count (Box 8.1; see also Box 7.1).

Another distinction can be made between: i) costs to a country; ii) costs to individual actors; and iii) budgetary costs to government agencies (see Table 8.2). Inappropriately mixing different types of costs, different actors and scales can result in misleading estimates of net benefits (see Chapter 7, including Box 7.1).

In this chapter, we use the term benefit sharing mechanism to refer to the variety of institutional means, governance structures and instruments that distribute finance and other net benefits from REDD+ programmes (following Vhugen *et al.* 2011). These may include cash transfers in PES systems, participatory forest management (PFM) and integrated conservation and development projects (ICDPs) (IUCN 2009). Other benefit sharing mechanisms are associated with policy processes, such as governance reforms, fiscal incentives and policies that address particular drivers of deforestation and degradation (Chagas *et al*. 2011).

Lindhjem *et al.* (2010) characterise benefit sharing as having two essential dimensions: *vertical benefit sharing*, which involves benefit sharing between national and local level stakeholders and *horizontal benefit sharing* between and within communities, households and other local stakeholders. An emerging question related to vertical benefit sharing concerns the appropriate balance between benefits used as direct incentives for reducing deforestation and degradation and benefits used to enhance the governance and policy context needed for successful REDD+ implementation (as argued by Gregersen *et al.* 2010; Karsenty and Ongolo 2012).

Table 8.1 Overview of REDD+ benefit sharing policies and practices in five countries

	Related legislation and national level proposals	REDD+ implementation and activities	Proposals for institutional financial arrangements
Brazil	Forest Act and REDD+ National Strategy in progress; no clear position on benefit sharing but primarily treated as a safeguard; no national carbon rights legislation has been ratified but selected states have passed legislation.	A number of state and substate projects are defining their own benefit sharing arrangements, including a few direct payments for environmental services (PES) schemes.	Public funding provided through the Amazon Fund (AF) and *Bolsa Verde*; the AF money disbursed through the National Bank for Economic and Social Development (BNDES); Forest Investment Program (FIP) resources are disbursed through the Ministry of Finance.
Indonesia	Ministry of Forestry (MoF) 2012 and 2009 regulations require REDD+ projects to obtain ministerial approval; no projects have applied for such approval to date. Ministry of Finance (2009) suggests setting national and subnational emissions reference levels; the MoF has issued some Ecosystem Restoration Concessions that could be funded through carbon credits; it is still unclear as to whether carbon is a nationally owned good which should be regulated by the state.	A number of projects (publicly and privately funded) are moving ahead of national decisions, some without the endorsement of the MoF; Ulu Masen, Aceh is an example of a provincial government project funded from international sources without passing through the central government (Peskett 2011b).	Process to draft REDD+ National Strategy in progress; a working group under the REDD+ Presidential Taskforce is designing funding instruments under the Norwegian agreement; such finance is likely to be on-budget off-treasury and so not managed through the regular government fiscal transfer system; regulations from the MoF in 2009 specify the revenue proportions to be shared by REDD+ projects according to the forest classification; the regulation has been challenged by the Ministry of Finance; the 2012 Ministry of Forestry regulation states that benefit sharing of non-tax income from forest carbon will be regulated by upcoming legislation.

Vietnam	Following consultations, the draft REDD+ National Strategy proposes that benefits be shared between local authorities, forest communities, natural resource management boards and forest protection organisations; a multistakeholder working group on benefit sharing has been established; provincial level PES has been trialled under Decision 380 and Decree 99.	Projects are moving away from an expectation of a voluntary market; UN-REDD and the NGO SNV are testing different approaches to benefit sharing, using game scenarios with communities to compare the acceptability of different options and are exploring the use of an 'R coefficient', which helps to calculate payments based both on emission reductions and social environmental impacts (UN-REDD Programme 2010).	UN-REDD Programme (2010) proposes a national fund (rather than transfers through the state budgetary system) overseen by a multistakeholder body; revenues would be distributed proportionally according to provincial performance.
Tanzania	The Tanzania National REDD+ Framework presents options for: i) handing over funds to the communities in proportion to emission reductions; ii) distributing benefits according to inputs to allow for ecological differences and to address equity concerns. The Framework proposes in-kind rather than financial benefits.	More than half of REDD+ projects are under community based forest management (CBFM) on village forest reserves where benefit sharing is likely to follow CBFM guidelines and communities will receive 100% of the revenue; on state land the benefits will be distributed between government and communities through Joint Forest Management (JFM) guidelines (not yet finalised).	The National REDD+ Framework proposes the creation of a National Trust Fund that will receive funds from buyers and distribute funds to communities/ implementers; the REDD+ Strategy favours this non-market approach, however proponents are advocating for both a trust fund and the market approach as options.
Papua New Guinea (PNG)	Design of national REDD+ programmes in progress; benefit sharing models have been delayed; no clarification as to whether carbon rights will follow customary tenure: draft regulations suggest government may regulate sale of carbon but rights to carbon stay with land holder (Covington and Baker&McKenzie 2009).	No official projects to date but some NGO and voluntary market projects are defining their own arrangements.	Trust fund or donor coordination committee not yet developed; CSOs suggest REDD+ funding body must be independent, multistakeholder; PES model proposal by expert consultation group (ECG 2011) suggests two flows (ECG 2011): continuation of voluntary market and PES under a national commitment (with early voluntary market arrangements incorporated).

Box 8.1 Key concepts for REDD+ benefit sharing

Most definitions of benefit in the REDD+ literature refer only to monetary benefits provided for emission reductions and carbon stock enhancements (Streck 2009; Lindhjem *et al.* 2010; Peskett 2011a). However, the implementation of REDD+ activities at the national and local levels can give rise to a wide range of benefits in addition to direct monetary benefits (see Table 8.2 for examples). These include:

- *Direct benefits* arising from REDD+ implementation. These include employment, livelihood improvements and direct ecosystem benefits, which include NTFPs, fuelwood, fodder etc.
- *Indirect benefits,* which comprise improved governance such as the strengthening of tenure rights and law enforcement, which may be related to the REDD+ readiness phase) and enhanced participation in decision making as well as benefits from infrastructure provision. Indirect ecosystem benefits include the protection of soil and water quality, biodiversity protection and climate stabilisation.

Direct and indirect benefits can occur as monetary or non-monetary benefits. Monetary benefits are those which can be quantified and valued in financial terms, and non-monetary benefits are those which are difficult to value in financial terms (e.g. enhanced natural assets, increased skills and knowledge).

Implementing REDD+ also carries costs. These include:

- *Opportunity costs*: the net benefits forgone by not converting forests to other land uses (Börner *et al*. 2010). Opportunity costs vary according to the drivers of deforestation in a particular region or country.
- *Transaction costs*: the costs necessary to perform a transaction involving a REDD+ payment, including the costs to external parties, such as market regulators or payment system administrators to determine that the REDD+ programme has achieved emission reductions (Pagiola and Bosquet 2009).
- *Implementation costs*: the costs "directly associated with the actions leading to reduced deforestation, and hence to reduced emissions" (Pagiola and Bosquet 2009:3). These include, for example, the costs of guarding a forest to prevent illegal logging and relocating timber harvesting activities away from natural forests. Implementation costs may, in part, involve compensating actors for their opportunity and transaction costs, thus the three different costs might overlap.

A key distinction, according to some authors, should be made between cost recovery (*compensation*) and the distribution of any surplus once costs have been recovered (*the REDD+ rent*). Others argue that a REDD+ system where full costs are accurately compensated should not, in theory, generate

surplus rent. This argument raises a conceptual dilemma for benefit sharing, since pursuing effectiveness in a global mechanism where funding is limited implies minimising REDD+ rents (Meridian Institute 2009). Thus, conceptualising REDD+ as an extractive resource that yields net benefits may well be problematic.

Omitting the value of co-benefits from forest conservation in the calculation of net opportunity costs makes them appear to be higher than they are (Pagiola and Bosquet 2009:15). Including the various non-carbon benefits suggests, perhaps surprisingly to some, that less monetary compensation is needed to make, for example, local communities better off under REDD+.

Governance enhancement might include tenure clarification and strengthening law enforcement. In practice, all countries are giving attention to both types of benefit sharing, recognising that a conducive policy environment is required to make PES or related compensation schemes work. The relative emphasis given to the two dimensions varies depending on the specific country context and drivers of deforestation. In Indonesia and Cameroon, for example, much deforestation and forest degradation occurs illegally or semi-legally and often takes place on state or government-owned property where there is weak enforcement of land rights. Thus, stronger law enforcement, the clarification of tenure rights and agricultural intensification will be required before performance-based mechanisms will be viable. Brazilian national policy is also focusing on the importance of strengthening policy and enforcement, while countries such as Vietnam are currently paying more attention to the PES approach.

Table 8.3 presents a selection of REDD+ projects and their proposed and actual benefit sharing mechanisms to date. At the time of our review, only one project was providing direct financial transfers to households. None of the current benefit sharing mechanisms in the five Indonesian projects reviewed involved cash payments. The proponents preferred to define benefits as activities, such as capacity building, alternative livelihoods enhancement and the strengthening of tenure rights, which are viewed as necessary before PES systems can be successfully introduced. This implies that the type of benefit sharing mechanism in place is likely to change as the projects move from REDD+ readiness towards payments for actual emission reductions.

8.2.2 Institutional structures for financial flows

The distribution of net benefits and costs from the implementation of REDD+ among different actors has two aspects: the monetary gains from

Table 8.2 Examples of potential REDD+ beneficiaries and the costs and benefits they may accrue

Potential REDD+ beneficiaries	Possible roles and costs incurred	Examples of benefits
Providers of REDD+ services and co-benefits (traditional communities, indigenous people, landholders, etc.)	Direct providers of carbon reductions and stocks, normally responsible for land use change and REDD+ activities on the ground	Direct benefits; in-kind benefits; income from sale of products from REDD+ activities; technology transfer; strengthening of rights; jobs; generation of non-carbon ecosystem services
Village associations and community groups	May be involved in the implementation of REDD+ activities on the ground such as managing and monitoring the distribution of benefits	Direct incentive payments; in-kind benefits; jobs and other multiplier effects
Municipal/local government and agencies	Involved in the implementation of REDD+ necessary interventions, such as definition of land tenure, approval/evaluation of activities and defining eligible actors	Jobs; local infrastructure improvements; capacity building; fiscal transfers; generation of non-carbon ecosystem services
Project developers/implementers (local or subnational)	Responsible for the design and implementation of REDD+ projects; most likely to manage funds for REDD+ actions	Jobs; capacity building; increase in assets; technical improvements
Local agencies and individuals responsible for law enforcement	Institutions and individuals in charge of law enforcement activities, such as monitoring deforestation and applying sanctions and fines	Jobs; net income; capacity building; technology transfer
Central government	Design and implementation of policies and measures (e.g. removal of subsidies, introduction of logging moratoria)	REDD+ readiness payments; co-benefits accrued from forests; taxes and royalties; multiplier effects on the economy and institutions; generation of non-carbon ecosystem services
Public	Activities and incomes foregone	Intergenerational benefits in terms of natural assets; co-benefits accrued from forests

international finance and the benefits related to improved sustainability of forest management. Thus, the term 'benefit sharing mechanisms' encompasses a variety of institutional means, governance structures and instruments needed to distribute both the finance and the net benefits from REDD+ implementation. In the case of the former the mechanism depends on the institutional arrangements in place for allocating international and national funding. In the case of the latter, it depends on the particular mechanisms chosen for REDD+ implementation, including the rules for how financial benefits will be allocated. Most of this chapter focuses on the latter aspect; however, to set the scene for that discussion, this section discusses proposals for the governance and institutional arrangements needed to allocate finance from national to subnational levels and describes their implications for benefit sharing.

The proposals can be divided into four main categories (based on Vatn and Angelsen 2009; Vatn and Vedeld 2011) (see Figure 8.1 and Table 8.1):

1. Project-based mechanisms, such as the Clean Development Mechanism (CDM) or voluntary market standards or projects, such as those in Peru and Tanzania
2. Funds operating independently outside the national administration, such as existing conservation trust funds or the proposed National Trust Fund in Tanzania (see Table 8.1)
3. Funds that rely on the capacity of the state administration and can direct finance to the state sector, but with decisions on financial beneficiaries made by independent committees. Examples include the Amazon Fund in Brazil, the National Fund for Environment (FONAM) in Peru and the Forest Protection and Development Funds in Vietnam.
4. The conditional distribution of payments through the state's fiscal transfer systems, such as that proposed by the Ministry of Finance in Indonesia (Ministry of Finance 2009). This might involve the regular government budget, a targeted fund or a decentralised approach involving decisions over allocation of funds by the local government and taxes paid to the central government, as in Vietnam (UN-REDD Programme 2010).

These proposed approaches to financial transfers have implications for benefit sharing. Project-based mechanisms involve a contract between the provider and the buyer, but are usually somewhat removed from state structures, whereas more complex national systems have a wider range of players and layers of subnational systems to accommodate (UN-REDD Programme 2010). Table 8.1 shows that, with the possible exception of Brazil, there is little clarity in any of the countries about institutional governance arrangements for REDD+ finance transfer and many countries have a number of different proposals on the table. For example, the draft Tanzanian REDD+ Strategy proposes a centralised national system with

Table 8.3 Selection of project approaches to benefit sharing[a]

Project[b]	Type of benefit sharing arrangement[c]	Details
Tanzania – TFCG-Kilosa and Lindi	Household (HH): alternative livelihoods*; capacity building*; improved agriculture*; PES	Dividends from REDD+ paid to every qualifying member of the village as determined by village by-laws; up-front funds and individual payments based on the potential average avoided emissions per year; village assemblies decide whether to use dividends on community projects
Tanzania – Mpingo	HH: PES Community: tenure security*; certification*	Acquiring land certificates; boundary clarification*; selling timber through FSC; land use and management plans. Originally the project planned to pass on profits to communities after deducting costs but this was controversial so now they are discussing a percentage arrangement.
Tanzania – CARE	Community: alternative cooking energy*; alternative livelihoods* and capacity building*; PES	Distribution of carbon revenues will use existing village savings and loan systems. The rights to carbon will be negotiated between CARE and the community through an aggregation entity.
Brazil – Transamazon	HH: PES; alternative production strategies*; land tenure regularisation*; Community: organisational strengthening	Conditional benefits for 350 families (based on the reduction of carbon emissions, associated with reduced deforestation)
Brazil – SFX	HH: land tenure regularisation*; livelihood alternatives*; capacity building	Conditional and up-front payments for private landholders (large and small), indigenous groups and protected area managers including for: i) landholders: strengthening command and control, integrated system for environmental licensing and monitoring, increasing cattle productivity, large-scale reforestation with high value species; ii) indigenous lands: sustainable income alternatives, code for management of natural resources; iii) conservation units: formation of management council and management plan, improving protection and monitoring
Brazil – Cotriguaçu	HH: sustainable forest management*; cattle and dairy production*; alternative production strategies; land tenure regularisation*; capacity building	Benefits to all relevant actors: private landholders (large and medium) and indigenous groups
Brazil – Acre SISA	HH: PES*; alternative production strategies*; sustainable forest management; land tenure regularisation*	Benefits for increasing production in deforested areas on private and rural settlement properties including i) financing certification; ii) forest valorisation and protection of high forest cover, indigenous and extractive areas, including territorial monitoring, support of multiple-use forestry, socio-cultural projects; iii) benefits for enhancing carbon stocks in deforested areas

Brazil – Bolsa Floresta	HH: PES; income diversification; capacity building* Community: public services	Conditional benefits go to participating households, communities and associations. Families commit to a zero deforestation commitment and enrol their children in school. Monthly payment of 50 reals per household (US $30)
Vietnam – SNV	HH: improved land management*; livelihood alternatives*	Early stage of design. SNV is testing benefit sharing distribution types with communal and provincial funds. Moving away from a focus on gaining voluntary market credits; working on quantifying opportunity costs
Peru – BAM	HH: PES; in-kind benefits.	Conditional benefits for those contributing to emission reductions through a pilot reforestation initiative
Peru – Alto Mayo	HH: agricultural inputs*; capacity building; * links to sustainable markets* Community: public services	Support for sustainable organic coffee production
Indonesia – KCCP	HH: capacity building*; tenure strengthening*; alternative livelihoods	Strengthening of land tenure rights through Hutan Desa (Village Forest) establishment
Indonesia – RRC	HH: employment*; capacity building; alternative livelihoods*; credit Community: village development	Ecotourism; infrastructure; health and credit
Indonesia – KFCP	HH: employment*; alternative livelihoods*; training* Community governance training	PES a likely option in the future

a Data were compiled from C2 country team, Tanzania, 2012; C2 country team, Brazil, 2012; C2 country team, Vietnam, 2012; C2 country team, Peru, 2012; C2 country team, Indonesia, 2012, as well as direct interaction and additional inputs from the C2 country research teams. Information on Brazil projects was also taken from Duchelle *et al*. (2011a)

b Please see Appendix for full project names and details

c * Marks those which are already being implemented

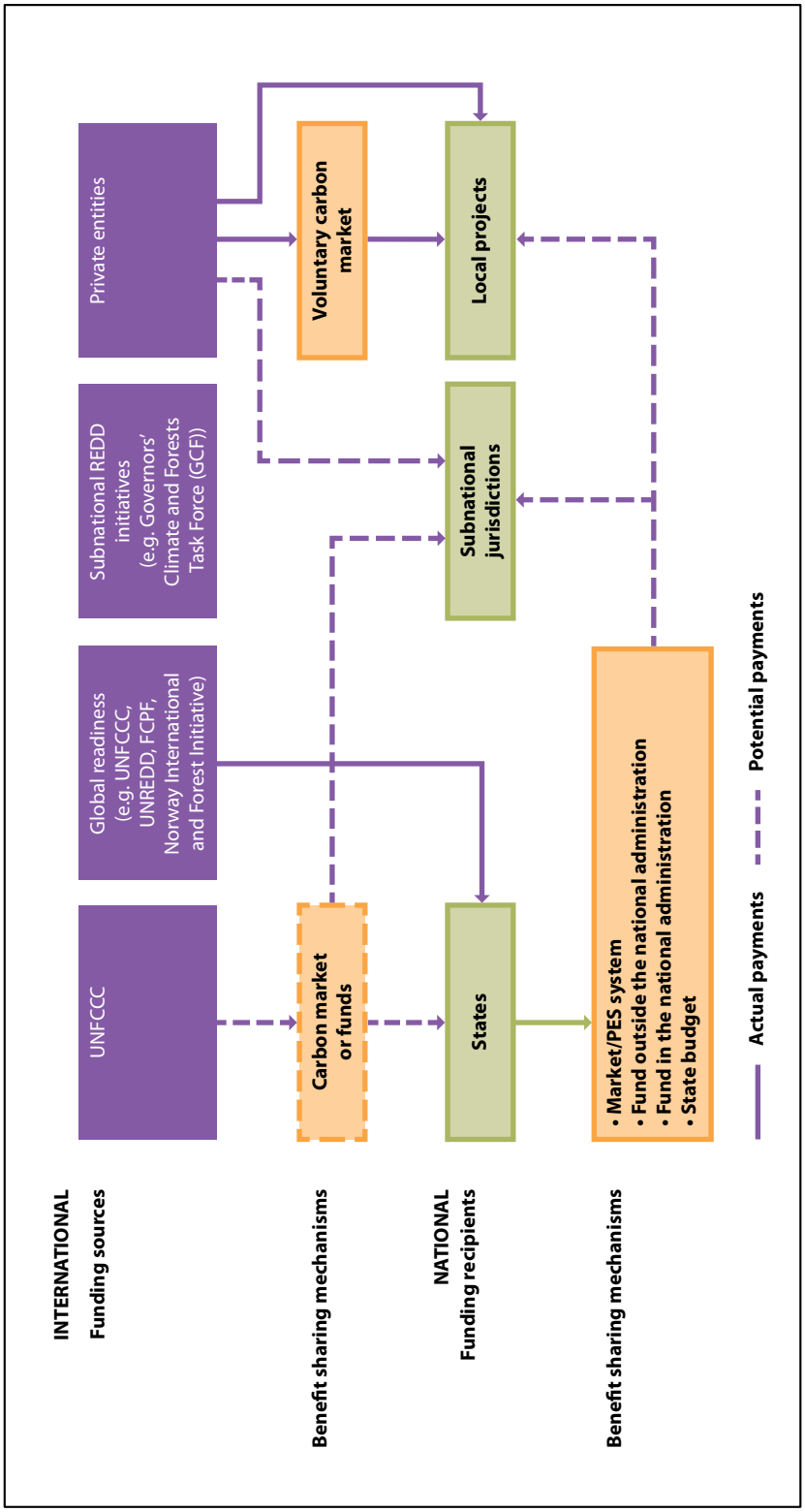

Figure 8.1 Potential structures for REDD+ financial flows to subnational levels

payment into a National Trust Fund, whereas projects (and the Readiness Preparation Proposal [R-PP]) are proposing a nested approach that allows for direct international payments to projects. In some countries, such as Indonesia, 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 formalised.

8.3 Discourses on who should benefit

A major question dominating the benefit sharing debate at both the national and project levels is who should receive the benefits associated with REDD+. This section focuses on the main discourses on this question, the tradeoffs involved in the choices arising from each discourse and the implications of the choice for the design of a benefit sharing mechanism. Different discourses have different effects on policy making, as they frame the problem and present choices in different ways (Hajer and Versteeg 2005).

A broad distinction can be made between effectiveness and efficiency on the one hand and equity (and co-benefits) on the other.

1. The *effectiveness and efficiency discourse* focuses on the goal of carbon emission reductions. It suggests that benefits should be used as an incentive and distributed to the people or communities that bring about a reduction in emissions by changing their behaviour or actions. This argument follows the logic of PES: REDD+ serves as a mechanism for paying forest users and owners to reduce emissions. Consequently, financial benefits should principally go to the people providing these services to ensure that the services are actually delivered. It also can be considered fair practice, since these actors may incur the main costs from reduced forest use.
2. *Equity-related discourses*, on the other hand, focus on the question of which actors have the right to benefit from REDD+, with less attention given to their contributions to reducing carbon emissions. This approach has emerged from a concern that a focus on effectiveness and efficiency could result in unfair incentives (e.g. rewarding wealthy actors for reducing their illegal behaviour), increasing inequality and undermining the moral and political legitimacy of REDD+. The equity discourse has four main strands, which are discussed below.

At the national level, the relative emphasis given to the various discourses varies depending on the stakeholders involved in the design of the mechanism, the nature of the REDD+ funding that is envisaged and the type of REDD+ activity concerned. For example, in Vietnam, there is concern about the

development of performance-based payments that can accommodate co-benefits. In Indonesia, there is an emphasis on putting in place adequate incentive structures to ensure that project developers remain involved and in Tanzania, there is a concern to ensure that upfront payments are possible, in order to maintain early commitment.

Table 8.4 describes proposed models for subnational funding allocations, which were developed to influence the formulation of the national REDD+ strategy in Brazil. These models were developed by the Amazon Environmental Research Institute (IPAM) (Moutinho *et al.* 2011) and a working group organised by the Ministry of Environment (MMA 2012). The table shows how the models vary according to the weight given to the different objectives of effectiveness and efficiency or equity and how this might have implications for how benefits are distributed.

In practice, most benefit sharing mechanisms will be designed to address numerous objectives, but for each one there are significant tradeoffs. These tradeoffs raise hard questions for REDD+ design, since they will require decisions that risk undermining support for REDD+ implementation.

In the following sections, we discuss the key tradeoffs involved in various equity discourses and describe how each of these tradeoffs interacts with effectiveness and efficiency discourses to influence the design of benefit sharing mechanisms.

8.3.1 Equity discourse I: Benefits should go to actors with legal rights

A dominant discourse in the benefit sharing debate is that benefits should be distributed to those with the legal claims or rights (whether statutory or customary) to those benefits. Legal rights are rights that are bestowed on a person or entity by a particular legal system, as opposed to wider moral or ethical rights, which are covered below. However, in most countries, including those occupied by many of the project sites, establishing these legal rights is not straightforward. None of the countries reviewed have national legislation concerning property rights over carbon emission reductions (see Box 8.2) and most REDD+ projects are operating in a vacuum of uncertainty over the legal status of carbon rights. Indonesia, Peru and Tanzania, in particular, have a number of REDD+ projects with benefit sharing mechanisms that were developed before their national policies on carbon rights had been clarified. Lacking that clarity, many forest actors assume that existing land and forest tenure, and current policy instruments for sharing benefits from the forests, will serve as the basis for allocating payments for carbon emission reductions (Cotula and Mayers 2009). Land tenure is important for influencing how benefits are shared in forests,

Table 8.4 Proposed models for subnational REDD+ funding allocations in Brazil (based on Moutinho *et al*. (2011) [i] and MMA (2012) [ii])

	Proposal for funding allocation	Implications
Model 1 [i; ii]	Based on subnational reference emission levels, federal states would be compensated according to three criteria: i) contribution to reducing emissions; ii) the forest stock; and iii) performance against state targets for reducing deforestation.	Performance-based benefit sharing provides the greatest effectiveness, due to high accountability over GHG reductions at the national level. Equity is addressed by considering stocks and this could help to benefit indigenous people. However, the fact that funds are allocated at the state level raises some challenges for reaching local people.
Model 2 [i; ii]	Separate funds for the contribution of specific land use categories (e.g. indigenous lands, protected areas and extractive reserves, settlements and public lands) to reducing deforestation and conserving the forest stock.	Effectiveness and efficiency may be enhanced, since the model allows for the allocation of financial resources based on the needs of the different areas. Equity is enhanced by allocating finance directly to the area concerned. In addition indigenous people should benefit from the allocation of funds to specific landholding groups.
Model 3 [ii]	The allocation of funds is based on local level emission reductions (carbon allocated units). Reference levels are allocated directly to the actors responsible for reducing deforestation and promoting forest conservation.	Effectiveness may be increased, since transaction costs are low and no new institutions are needed. However allocating reference levels directly to local people is a challenge.

because it helps determine which actors have the right to carry out activities and claim benefits from a particular area of land and its associated natural resources (Peskett 2011a). However, a key issue in the carbon rights debate is that many small-scale forest users do not possess formal rights to land and/or to forest products (see Chapter 9) and thus use the forest illegally. Targeting benefits only to those individuals or entities with formal rights may work against the poorest people, raising the question of whether or not a reduction in *de jure* illegal uses should also be compensated.

Box 8.2 Debates over carbon rights in selected REDD+ countries

Rights over carbon can belong to an individual, a group, such as a community or the state, depending on national legislation. Tracking ongoing debates on this issue in a number of countries reflects the complexity of defining the legal right to benefit from carbon emission reductions.

Cameroon

Cameroon's legal system does not distinguish between rights over trees and the elements (such as carbon) stored inside them. According to Sama and Tawah (2009), the separable right to trade and benefit from carbon should be treated like other natural resource ownership and thus depends on the type of forest in question. In Cameroon, the natural resources found in state or communal forests belong to the state, those on national land, which is administered by the state, belong to the Cameroonian nation (Karsenty and Assembe 2011), those found in council forests belong to the council and the resources in private forests are owned by individuals. Some argue that a carbon credit could be categorised as an intangible asset (Correa 2009, as cited in Dkamela 2011) and take the form of a monetary asset representing the result of an action. Ownership of carbon credits would be granted to forest actors who prove that they are behind the action. This claim would not necessarily be based on land tenure, but could also include ancestral rights, operating rights, use rights or capital investment.

Brazil

According to the federal legal opinion number AGU-AFC-1/2011, the provision of environmental services could be subject to commercial agreements with indigenous groups; the carbon credits generated in indigenous lands would belong to indigenous people under article 231 of the Federal Constitution. At the subnational level, Acre, Amazonas and Tocantins have passed climate and conservation laws, which state that carbon rights belong to the state. Under these laws, the providers of ecosystem services can gain access to financial resources, assuming they receive approval and are legally based in the area where the services are being provided (Gebara 2011). In the case of Amazonas, this right may be donated to the Amazonas Sustainable Foundation (FAS), which is responsible for managing conservation sites in the state (Art.8, Law 3135/2007).

Vietnam

The Vietnamese Constitution states that all land and forest resources belong to the state, which allocates them to organisations and individuals for "stable long-term use". Accordingly, the 2004 Forest Protection and Development Law recognises the principle that buyers may purchase forest goods and services, delivering payments to those who protect and regenerate the forests. Decision 178 (2001) specifies the ways in which households and individuals can be allocated or leased land, or contracted to manage forest and details the payments they can receive for these services. Thus, individuals and organisations may have the right to benefit from providing ecosystem services. However, according to Article 84 of the 2005 Law on Environmental Protection, carbon emission transactions with international buyers would have to be approved by the Prime Minister.

Owning land or trees does not necessarily mean the owner has a legal right to benefit from carbon sequestration or reductions in carbon emissions. Though some authors do not make this distinction, Peskett and Brodnig (2011) argue (following Strecn and O'Sullivan 2007; Takacs 2009) that the term carbon rights has two fundamentally different aspects:

1. The property right to sequestered carbon, which is physically contained in land, trees and soil, does not necessarily have to coincide with the property rights over the physical resources.
2. The property right to sequestered carbon is distinct from the right to benefit from selling carbon credits. Where there is no explicit law on the right to sequester carbon, legal rights 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).

One of the main considerations in the design of benefit sharing mechanisms is whether or not central governments will claim separate rights to benefit from trading carbon credits. This decision is rooted in the fundamental question of whether forest and associated products are viewed as nationally-owned goods and the extent to which, if this is determined to be the case, there is political consensus around the decision. In Tanzania, for example, the majority of REDD+ projects are taking place on land registered as Village Forest Reserves, which means that there is no legal requirement for the income from these projects to go to the central government. This is because the CBFM guidelines and Tanzanian Forest Act of 1998 (revised in 2002) give communities that own Village Forest Reserves the right to the revenue and benefits arising from them (United Republic of Tanzania 1998). This has implications for how these projects are viewed by the government and the wider public, since any revenues they raise will not contribute to wider national development. A latent resistance to reforms that have shifted control over land and forest away from the state to communities still exists at the national level, where some continue to perceive natural resources as nationally owned goods (interviews with national stakeholders 2012). This perception has led to recommendations that REDD+ revenues should be channelled through the National Trust Fund to enable the government to manage and distribute the funds to the communities (United Republic of Tanzania 2010).

If governments assume the ownership of carbon, the design of national benefit sharing mechanism needs to address how the benefits obtained from selling carbon would be distributed nationally. If the right to carbon were privatised, the owner of those resources would govern the benefit sharing mechanism. However in that case, further attention may be required in order to actually tackle the drivers of carbon emissions, since those with legal rights may not be responsible for high emitting behaviour.

8.3.2 Equity discourse II: Benefits should go to low-emitting forest stewards

From an equity standpoint, it can be argued that REDD+ benefits should not only go to the actors that have been causing high emissions but also to indigenous groups or other forest users that have a record of responsible forest management. For example, taking this approach, a community whose customary rights are not legally recognised, but that has been protecting the forests for a long time, would have strong claims to benefits from REDD+. The effectiveness–equity dilemma 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, some would argue that emissions are likely to increase in the future, i.e. the realistic baseline is above the historical one, and therefore payments can be considered as additional.

Recognition of good forest stewardship can be seen in some of the projects reviewed, where benefits are being distributed to actors that are not the direct drivers of deforestation, in order to encourage collaboration and create incentives for protecting the area. This can be seen, for example, in the BAM project in Madre de Dios, Peru where the owners of Brazil nut concessions are given incentives to protect the forest, although the main contributors to deforestation, agricultural clearance and illegal logging are different actors altogether. In the best case scenario, payments to communities may lead them to guard the forest against external agents of deforestation.

8.3.3 Equity discourse III: Benefits should go to those incurring costs

An important discourse in the benefit sharing debate holds that the forest actors that shoulder implementation, transaction and opportunity costs should receive REDD+ benefits. This discourse reflects equity concerns to ensure that the people who have incurred costs are compensated for them, regardless of the carbon emission reductions for which they are directly responsible.

The tension between emission-based approaches, and the need to reward effort and inputs provided for REDD+ implementation, is reflected in the design of many emerging benefit sharing arrangements (see Box 8.3). This tension not only relates to the fact that inputs are easier to define and measure than are emission reductions (see Chapter 13), but also that most REDD+ projects are in the early stages of implementation and recognise the need to give actors incentives for getting involved.

Box 8.3 REDD+ projects in Tanzania: Exploring options to overcome the tension between performance and input-based benefit sharing

A key question in the design of benefit sharing mechanisms for REDD+ projects in Tanzania concerns the basis for making payments. Two clear options are to make payments based on i) *effort and input* or on ii) *performance and output*. In the first case, rewards will be given to communities as long as they implement activities that improve forest conditions and hence carbon stock (e.g. through the development of land use plans, participatory forest management, law enforcement or the implementation of forest management plans). This method has low transaction costs, because the activities can easily be verified, requiring less empirical evidence. The approach, however, has several drawbacks. For example, there is not necessarily a direct link between payments and reductions in the deforestation rate. The approach does not account for variability in the performance of forest managers nor does it create strong incentives for good forest management since forest managers are paid regardless of forest management outcomes (TFWG 2010). However, the approach does recognise the fact that some communities might work as hard as others but have lesser outcomes, due to different circumstances.

Nevertheless, an effort-based payment system does not take into account the differences in opportunity costs among communities. The communities that succeed in halting charcoal production or shifting cultivation will forego more farming and other economic activities than those that try to halt these activities and ultimately fail (TFWG 2010). Communities with high carbon forests (in the highland areas) will incur greater opportunity costs than communities in low carbon forests (like *miombo* in Southern Tanzania and coral-rag in Zanzibar) (United Republic of Tanzania 2009). This is because there are more valuable economic opportunities in areas where forests have higher carbon content (TFWG 2010). If the cost of these opportunities and other costs, such as varying access to markets, are not factored in, or are assumed to be constant, effort-based systems can be inequitable.

In an output or performance-based payment system, communities and forest managers are paid for their actual performance in terms of improving forest conditions and reducing degradation in ways that can be empirically verified though higher forest carbon stocks, as compared to reference emission levels. This system provides a direct link between REDD+ payments and effective forest conservation activities. However, the performance-based system has higher transaction costs because of the need for carbon measurement and third party verification methods.

8.3.4 Equity discourse IV: Benefits should go to effective implementers

Finally, there is a strong discourse that a proportion of REDD+ benefits should be shared with the forest actors that are essential for the implementation of REDD+, whether private sector, NGO or central or local government (Table 8.2). However, the determination of the exact proportion of the benefits that should accrue to these actors is a key issue for debate in many countries. The challenge is to ensure that project implementers receive enough incentive to guarantee effective implementation, while at the same time guarding against them getting windfall profits (as is discussed in the Indonesia Ministry of Finance's Green Paper [Ministry of Finance, 2009]). For example, in PNG, despite clear tenure, customary landowners gain little profit from the extraction of timber, due to the terms of timber extraction between landowners, the state and contractors, whereby the price paid to landowners for timber is fixed, regardless of increases in the market price. In Indonesia, private sector project developers are lobbying to influence the content of national policy around the setting of 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 Tanzania, all REDD+ project proponents are NGOs and the level of rent that could, or should, accrue to them has not been debated at the national level. However, it is a key issue they face in negotiating with communities.

This question also applies to the rights of governments to retain some revenue to cover any implementation and transaction costs they have incurred. As with revenue gathered from any forest commodity, central and local governments might retain revenue for admissible costs, such as setting up MRV and enforcement systems (Irawan and Tacconi 2009). The UN-REDD Programme (2010) recommends that the amount retained by government should be performance-based and directly related to the costs incurred.

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 (Foellesdal 1998), but in the case of REDD+, some activities may be best handled at the central level, e.g. to contain leakage (Irawan and Tacconi 2009).

8.4 Negotiating choices and legitimacy of process

A common constraint in the countries reviewed is a lack of clarity about which is the competent agency to make decisions on benefit sharing arrangements. In some cases, this lack of clarity stalls the development of benefit sharing

mechanisms and therefore of REDD+ implementation. For example, 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. 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+ implementation. The Department of Environment in the Vice President's Office holds the authority for decision making concerning the implementation of REDD+, but the implementation of REDD+ projects falls under the Ministry of Natural Resources and Tourism (United Republic of Tanzania 2010), while the Ministry of Finance is responsible for monitoring and ensuring revenue collection. At the same time, the Ministry of Land makes decisions about land ownership, titling and boundaries for village forest land (where most REDD+ projects are located), while the local government authority at the district level has the mandate to approve the land use plans, which are required for establishing Village Forest Reserves.

On the one hand, project level initiatives have the advantage of serving as test cases, yielding innovative lessons for benefit sharing mechanisms, which can then be incorporated into national policies (as happened in the case of the SNV project in Cat Tien, Vietnam for example). On the other hand, project level autonomy runs the risk of project initiatives developing in parallel to national policies, possibly outside of the legitimate democratic space, thus failing to help to build the capacity of government structures and processes.

Overcoming these hazards requires a process that brings legitimacy to any decisions that are made. Legitimacy is not only a function of the effectiveness, efficiency and equity outcomes of the benefit sharing system, but also of the process to design and implement the system. Legitimacy can be enhanced by ensuring that decisions about benefit sharing mechanisms are taken by those who have the legal mandate to do so and by giving attention to establishing due process to ensure that acceptable and accountable decisions are made. Our review shows that such a process is not easy and that, in most countries, the mandate and responsibility of various government institutions is not necessarily clear. Overcoming this requires all government and non-government organisations that are involved in the design of benefit sharing policies and mechanisms to play a role in resolving the lack of clarity. Donor agencies should encourage this clarification to take place and should work through the mandated decision making processes and institutions. NGOs and private sector implementers can encourage this process by lobbying for the clarification of roles and responsibilities.

8.5 Conclusions and recommendations

We have shown that many of the conflicts over the vision of REDD+ appear to relate to the design of benefit sharing mechanisms and that design decisions often involve a tradeoff between the effectiveness, efficiency and equity of REDD+ mechanisms. The discourses, ideologies and definitions associated with benefit sharing concern a variety of objectives, ranging from the need to provide compensation for costs incurred, the need to ensure co-benefits, such as biodiversity, and the need to recognise legal rights and ensure fair outcomes. The decision to emphasise either effectiveness and efficiency or equity has significant implications for the design of benefit sharing mechanisms.

This multiplicity of objectives is due to the fact that REDD+ itself is highly loaded with expectations with regard to outcomes beyond carbon emission reductions. Managing these expectations requires clarity at both the national and project levels concerning: i) the primary objective of REDD+; and ii) the degree to which co-benefits should be addressed and can and/or should be paid for by REDD+. However, our analysis of the state of play of benefit sharing design at both the national and the project levels shows that these fundamental questions have yet to be resolved. Many REDD+ projects are operating in a vacuum of uncertainty over what form of benefit sharing mechanisms will be ultimately classed as legal and therefore what level and type of benefits will be available to be shared.

There is an argument to be made for urgent attention to designing benefit sharing mechanisms and thus, in the short term, it might be necessary to work within the reality of a suboptimal national policy context rather than waiting for reforms to happen. For example, because getting legal clarity over carbon rights may not be realistic in the near future, the benefit sharing mechanism might need to rely on contracts that specify legal rights and responsibilities. However, giving too much attention to minor details of the design of benefit sharing mechanisms before fundamental questions (such as the due process for making decisions about benefit sharing and what bodies have the legal right to do so) are resolved can be problematic.

We conclude that the major issue to be addressed is how to ensure the legitimacy of the process for addressing fundamental questions and making decisions about the design of benefit sharing mechanisms. This requires legal clarity and consensus about the institution with the powers to make such decisions and attention to procedural rights, such as transparency, participation and free prior and informed consent. There are few absolute rights or wrongs in the design of benefit sharing and thus the resolution of fundamental questions requires making ethical, political and practical judgements. These judgements concern questions such as who should benefit from REDD+ and legal and constitutional considerations concerning the right of the state to retain

revenue from private and nationally owned goods. We suggest, therefore, that effective benefit sharing mechanisms are not just about having clear principles for design, since these alone cannot hope to satisfy the interests of all stakeholders, but, more importantly, about the process for making decisions on design and implementation.