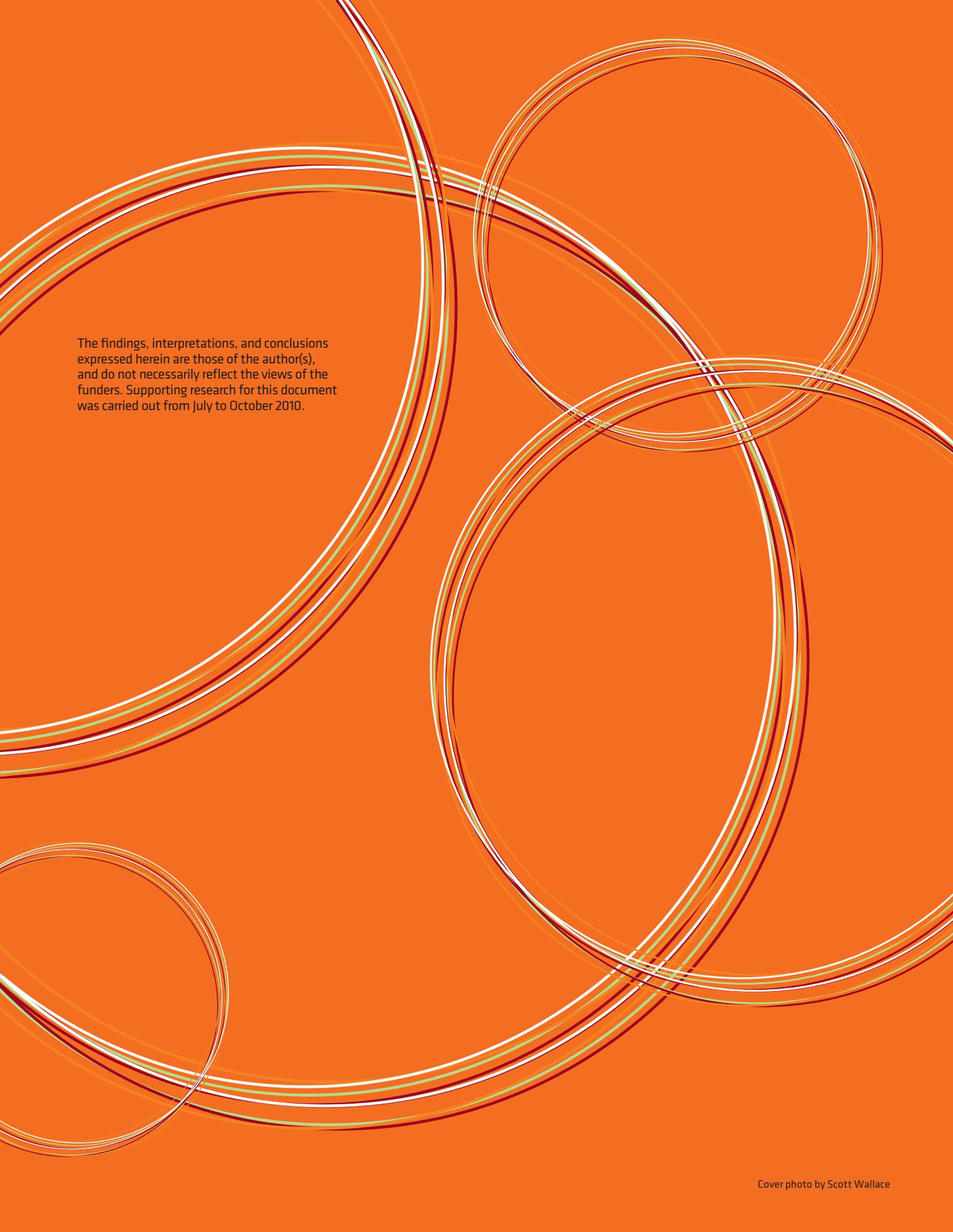
A photograph of a man with a beard and mustache, wearing a brown hat and a blue polo shirt, standing in a forest. He is looking towards the camera. To his right, the head of a brown horse is visible, looking towards the man. The background is filled with green foliage and trees. The entire image is framed by a circular border composed of multiple overlapping lines in various colors (red, orange, yellow, green, blue, purple).

CARBON RIGHTS IN REDD+

**Exploring the Implications for
Poor and Vulnerable People**

By Leo Peskett and Gernot Brodnig



The findings, interpretations, and conclusions expressed herein are those of the author(s), and do not necessarily reflect the views of the funders. Supporting research for this document was carried out from July to October 2010.

CARBON RIGHTS IN REDD+

Exploring the Implications for
Poor and Vulnerable People

By Leo Peskett and Gernot Brodnig



THE WORLD BANK

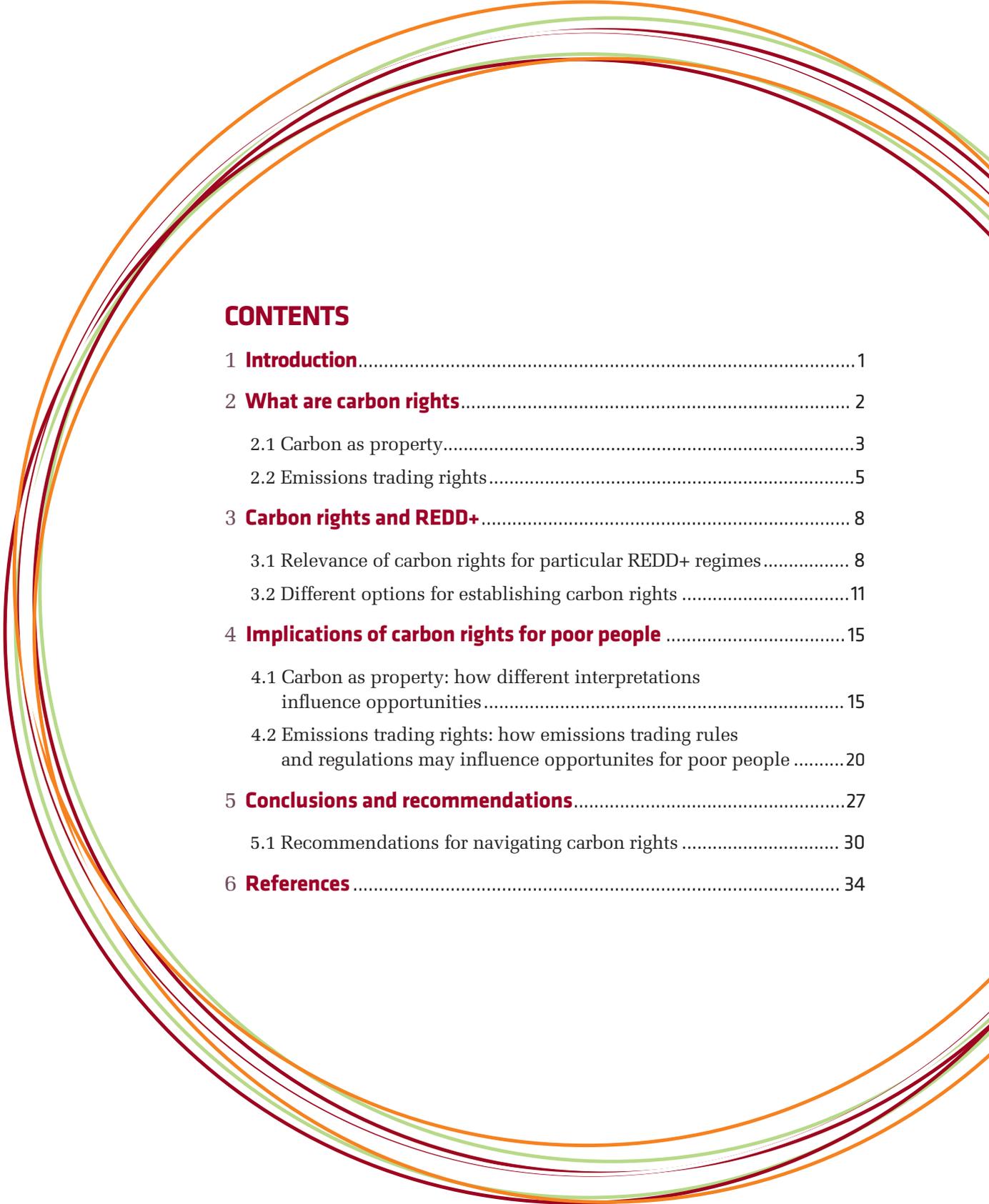
Acknowledgements

This report is part of the World Bank's analytical work on the social dimensions of REDD+, led by Gernot Brodnig, Senior Social Development Specialist, SDV. The study was written by Leo Peskett (Overseas Development Institute) and Gernot Brodnig with contributions from Robert O'Sullivan and Thiago Chagas (Climate Focus), Guillermo Navarro (CATIE), Yaw Osafo (Independent Consultant, Ghana), Mellese Damtie (Ethiopian Civil Service University) and Mattia Fosci (Independent Consultant, U.K.). During the review process, valuable contributions and comments were received from John Costenbader (IUCN), Diji Chandrasekharan, Neeta Hooda, Haddy Sey, Alexander Lotsch, Kennan Rapp, Gerald Kapp, Nilufar Ahmed, Jon Lindsay, Carole Megevand, Christian Peter, Mi Hyun Bae, Sladjana Cosic and Robin Mearns (all World Bank). We also thank Francesca Iannini and Kristy Graham (ODI), Ben Vickers and Regan Suzuki (RECOFTC), David Mwayafu and Richard Kimbowa (Uganda Coalition for Sustainable Development) for their comments and contributions solicited through a number of REDD-net events and papers focusing on this issue. Last but not least, the study benefited from insights received during a side event on carbon rights at the UNFCCC COP16 in Cancun.

This publication was made possible by a grant from the Trust Fund for Environmentally and Socially Sustainable Development (TFESSD) and additional funding from NORAD for REDD-net.

For more information, visit: www.redd-net.org or www.worldbank.org/sdcc.

This publication should be cited as: Peskett, L. and Brodnig, G. 2011. Carbon rights in REDD+: exploring the implications for poor and vulnerable people. World Bank and REDD-net.



CONTENTS

1 Introduction	1
2 What are carbon rights	2
2.1 Carbon as property.....	3
2.2 Emissions trading rights.....	5
3 Carbon rights and REDD+	8
3.1 Relevance of carbon rights for particular REDD+ regimes.....	8
3.2 Different options for establishing carbon rights	11
4 Implications of carbon rights for poor people	15
4.1 Carbon as property: how different interpretations influence opportunities.....	15
4.2 Emissions trading rights: how emissions trading rules and regulations may influence opportunities for poor people	20
5 Conclusions and recommendations	27
5.1 Recommendations for navigating carbon rights	30
6 References	34



Photo by Arne Hoel

1 Introduction

Policies to control greenhouse gas (GHG) emissions from tropical deforestation and degradation have become a major focus of the international climate change negotiations over the last five years. Much of the debate has centred on the potential for developing new international financial systems through which countries, or the actors within countries, are rewarded for reducing GHG emissions from deforestation and forest degradation compared to a reference emissions level (REDD+).¹

REDD+ can include a diverse set of interventions ranging from policies that might be implemented quickly and without too many legislative changes (e.g., lifting certain subsidies) to more complex and long-term interventions (e.g., land title reform). Whichever REDD+ policies are chosen, REDD+ will affect the rights of those using the forest and forest resources or holding permits to clear forest land for agricultural or other purposes. Where REDD+ policies limit the exercise of existing statutory or customary rights, costs are likely to be incurred. The sharing of costs associated with REDD+ policies, the due compensation for such losses and the distribution of benefits resulting from international REDD+ payments thus stand at the centre of the national REDD+ debate.

There are different possibilities for establishing REDD+ systems, which vary particularly in terms of their scale and financing. In ‘national’ approaches it is expected that governments will receive payments linked to emissions reductions across the whole forest estate compared to a national reference

scenario. Finance could either come from selling emissions reductions into global carbon markets or from public international funds. In project based approaches it is expected that those implementing the projects will receive payments linked to emissions reductions in the project area, through selling carbon credits into global carbon markets. Emissions reductions from REDD+ projects are already created and traded within voluntary carbon markets.

One of the key questions that has arisen in the context of the REDD+ debate surrounds which actors have the right to exploit the benefits of GHG emissions reductions and removals in REDD+, and the associated rights to international payments. Because carbon is stored in trees and land, in many cases the answer will entail an understanding of rights over the resources and services they provide. These concepts are often included in the widely used but normally poorly defined term ‘carbon rights.’

While these issues need to be carefully considered in all approaches to REDD+, their importance in terms of practical implementation may vary between different systems. Establishing who has rights to emissions reductions is likely to be essential in project based and market based approaches. This is because projects will need to know who manages and controls the emissions reductions generated by the project. It will also be essential in certain national approaches in which revenues from national REDD+ payments are distributed based on local level management and control of emissions reductions. In some national systems, however, establishing attribution of emissions reductions arising from national REDD+ policies is likely to be much more challenging than existing afforestation/reforestation projects, or project-based REDD+ approaches. This is because emissions reductions will arise from numerous

¹ REDD+ officially includes the following activities: emissions from deforestation and degradation, and the conservation of forest carbon stocks, sustainable management of forests and enhancement of forest carbon stocks.

areas and often from overlapping actors. The relatively abstract act of ‘not’ doing something in order to generate emissions reductions may also make it hard to determine who has rights to the emissions reductions. It may not even be necessary or desirable (e.g., in terms of the cost) to establish such a system, as benefits could be shared based on criteria other than who manages and controls forests. Ensuring that this does not lead to net losses at the local level would, however, require the negotiation of an effective and transparent system of benefit sharing between all actors involved and overcoming some major governance challenges that have existed in the forest sector for many years.

This paper focuses mainly on questions surrounding the interpretation of rights to emissions reductions in project based and market based REDD+ systems, and national systems where governments link the distribution of REDD+ finance to local level ownership of emissions reductions. We also consider some of the implications that all national REDD+ systems may raise in terms of how governments transfer responsibilities to their citizens and the incentive effects that potentially large financial flows may have on existing rights regimes.

The paper aims to address some of the confusion in understanding legal issues surrounding carbon rights. It also considers the implications for the rural poor in different contexts, given that they often have weak rights, an inability to enforce their rights, and that REDD+ legal systems could add a new layer of complexity to an already complicated legal landscape in many countries. Three main guiding questions underlie the issues that are explored:

1. What could constitute carbon rights?
2. Are carbon rights relevant in a

REDD+ context, and if so, under what circumstances?

3. What are their implications for different actors, and particularly the rural poor?

The aim is to assist those involved in REDD+ but without a legal background (including donors, developing country policy makers, international and national NGOs) to interpret some of the legal questions that REDD+ raises as country strategies are developed. Crucially, the focus on the rural poor aims to help better equip NGOs who are most often tasked with representing their interests in national REDD+ development.

Section two of the paper gives an overview of the legal interpretation of carbon rights, outlining key concepts at the international and national levels. Section three discusses the relevance of carbon rights for different REDD+ approaches. Section four then analyses the potential implications of the legal framing of carbon rights from the perspective of poor and vulnerable people. Evidence is drawn from existing literature on land, forest and carbon rights, and a review of country case studies. Section five concludes and highlights some of the most important requirements for moving towards pro-poor carbon regimes at national and local levels.

2 What are carbon rights?

Carbon can be considered as a new form of property in forest ecosystems that has potential value because of the creation of new markets and funds aimed at reducing carbon emissions or enhancing removals. This raises legal issues surrounding how rights to carbon as property, and the associated rights to transfer and trade carbon, are determined. As yet, neither

regulated nor voluntary regimes have mandated a particular legal regime for the allocation of carbon property rights (Takacs, 2009).

At present, there is no single operational definition of “carbon rights” at the international level, and very few countries have adopted definitions in their national legal systems. Therefore, carbon rights can only be defined broadly as “intangible assets created by legislative and contractual arrangements that allow the recognition of separate benefits arising from the sequestration of carbon in the biomass” (TCG UN-REDD 2009; Streck and Sullivan, 2007). Stored carbon is thus a self-contained property independent of the physical biomass, the tradable right is created by virtue of legislative and/or contractual arrangements. From this we define the term ‘carbon rights’ in this paper to contain two fundamental concepts: 1) the property rights to sequestered carbon itself (but contained in land, trees, soil, etc.); and 2) the rights to benefits that arise from the transfer of these property rights, for example through emissions trading schemes.

In order to understand carbon rights, it is therefore important to understand the nature of carbon as property (i.e., what is being owned; who may own which of the property rights in carbon; and who has rights to the benefits) and also the derivative rights associated with trading (i.e. how does the integration of individual properties into national or international REDD+ regimes result in benefits; and what are the processes and responsibilities that are associated with this).

2.1 Carbon as property²

The interpretation of carbon rights, whether it

² This section draws on Takacs (2009).

Box 1

Definitions used in this paper

REDD+ refers to the following mitigation objectives in the forest sector in developing countries being discussed in the UNFCCC negotiations: reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forest and; enhancement of forest carbon stocks.

REDD+ activities refers to any activities which are implemented to achieve any of the mitigation objectives listed above. For example, forest conservation projects, support for new policies such as payments for environmental services, or programmes such as those that reform national laws on land tenure. They can be implemented at the national, regional, project or other sub-national level.

Carbon rights: This is used as an umbrella term in this paper to include two concepts: 1) property rights to sequestered carbon (contained in land, trees, soil etc.); and 2) the rights to benefits that arise from the transfer of these rights, for example in emissions trading schemes.

Carbon credits is a generic term used in this paper to describe rights associated with emissions reductions or removals along with emissions allowances or other tradable units generated by REDD+ activities and measured in tCO₂e. These are often referred to as ‘carbon credits’, and this terminology is used in the boxes in this paper, depending on how reference is made in specific national cases.

is in national legislation or in contracts, will need to define exactly what is being owned. Regulations or contracts may distinguish between (Takacs, 2009):

1. *Sequestered carbon*: this is the commodity, carbon, itself. It is important to determine if the sequestered carbon is a property separable from the tree or biomass in which it is stored. The owner of the tree, forest, soil or land will not necessarily own the sequestered carbon.
2. *Carbon sinks*: these are the reservoirs in

which the carbon is stored. They may be regulated by property rights that regulate trees or below ground biomass.

3. *Carbon sequestration potential*: Refers to the bundle of rights allowing an entity to explore and exploit the potential that land and forests have to store carbon. These would normally include certain rights to manage land and trees in a way which reduces emissions or enhances removals of carbon.

A key issue illustrated here is that while ownership of the tree, forest, soil or land may be important in defining who has rights to explore benefits associated with carbon property, it is not the only condition. There are other factors that need to be taken into account, such as whether the carbon is separable from such property, and the importance of rights relating to the management of land and trees.

In market-based approaches to REDD+, further questions will arise surrounding ownership rights of carbon credits from REDD+ activities. Carbon credits are linked to the rights of countries (or entities regulated by countries) to emit a volume of greenhouse gases equal to the volume of emissions reduced or removed in a REDD+ scheme, measured in relation to a reference level. While carbon credits for REDD+ do not yet exist under an internationally regulated emissions trading system, they will probably have similarities in their legal nature to Clean Development Mechanism (CDM) carbon credits (CERs) that have been created under the Kyoto Protocol. The legal nature of carbon credits can influence who has rights to them. Key issues include how they are created (e.g., in regulated or voluntary markets) and the scope of legal rights they contain in terms of their origin, right of ownership, transfer and use, as well as their denominations. Their definition under

national law is very contextual and defines the treatment of these units under property law, contract law, taxation law, accounting rules, competition law, public procurement and state aid rules, and financial services and securities laws, at the domestic and international levels.

In a given context there may be variations between who is entitled to own these different properties. A key distinction is between jurisdictions where carbon is considered a public good that is not owned by anyone; where national governments own the property rights in carbon; and those where property can be privately owned:

1. *Public good*: If the carbon is considered a “public good” or “common property”, it is considered indivisible and it lacks excludability. The government or communities may act as stewards but the lack of ownership (which includes the right of exclusion) prevents the transfer of property rights. The conversion from “public good” to commodity, and the consequent determination of property rights, is a political process requiring linkages of service providers and beneficiaries, enabling legislation and contractual arrangements, and institutional services for monitoring and certification (Powell et al., 2002).
2. *Publicly-owned commodity*: In this case governments claim exclusive rights over one or more of the carbon properties. The difference with public goods is that in this case the government has ownership rights, including exclusion and alienation. This means that if the government claims exclusive rights, it may also have the power to market carbon credits. In many cases, even where governments own all forest land, they may grant usufruct rights to certain

actors. It is possible that these usufruct rights could include the right to manage carbon sequestration potential, develop carbon projects and possibly own and sell carbon credits. In other cases governments may grant some private property rights—there can sometimes be an unclear distinction between government land and private land, leading to the possibility of abandoned land which is not claimed by private actors and where it is unclear whether ownership lies with the state. This could be subject to the interest of investors, creating risks for any actors who have informal interests in the land.

3. *Private property*: If private property is permitted within a jurisdiction, private actors may be able to own one or more of the property rights in carbon. In this case the right of alienation belongs to its owner, but statutory authorization (implicit or explicit) would probably still be required. It is important to understand how secure these property rights are—in some cases governments may have rights to expropriation of sub-surface property (e.g., minerals) or they may own certain parts of the property such as the land but not the trees or the trees but not the land. Property rights need not be individual in order to allow environmental service mechanisms to proceed. Contracts with individual landowners require individual property rights, while contracts with groups of landowners may be more effectively secured with group rights (Swallow and Meinzen-Dick, 2009). In this case, groups of individual owners could be granted the same rights and liabilities with obvious advantages of scale and better enforcement

capacity. Communal property is legally recognized in some jurisdictions and may contain rights and responsibilities that differ from individual rights.

While different actors may be able to own different property rights in carbon, this does not necessarily mean that they will have rights to the benefits. Such rights could be transferred through regulations or contracts to other actors. For example, if the government owns carbon property rights, laws or contracts may determine how any financial benefits are transferred to other actors. Private actors may also be subject to regulations or contractual arrangements that govern the sharing of financial benefits resulting from the sale of carbon. This could be particularly important in terms of ensuring some of the benefits associated with forest carbon reach local communities, in cases where they do not have direct property rights in carbon. In addition to rights to benefits, there is a question of who bears risks and liability if one of the parties does not manage the carbon property in the agreed way, or if it is inadvertently damaged (e.g., through pests or fire). This may be stipulated in contracts or in regulations, along with procedures for dispute resolution.

2.2 Emissions trading rights³

Ownership of sequestered carbon as property does not convey much value in itself. It is only through the integration of individual properties into national or international emissions trading regimes that commoditize carbon that it is likely to have some value—i.e., one of the rights of the bundle of property rights—the right to trade—makes this possible. While it is likely

³ Parts of this section and section 3 draw from O’Sullivan (2010).

that value will be created through emissions trading schemes, fund based approaches for REDD+ would also assign some value to carbon emissions reductions/removals.

The rules governing carbon trading that may be established at international and national levels in REDD+ could influence these derivative rights and therefore have implications for carbon rights.

International law contains a number of principles underpinning procedural and substantive rights for non-state actors, with particular emphasis given to indigenous peoples and traditional communities. These existing obligations include, for example, the right to have access to information and to effectively participate in the achievement of sustainable development, as embodied in the Rio Declaration and later reflected in other international instruments.⁴ In countries that have ratified these treaties, these rights will exist under domestic laws, and if they participate in REDD+, they will need to ensure that domestic implementation of REDD+ is consistent with these existing obligations and any future international REDD+ legal obligations.

A future international REDD+ mechanism may also formulate specific safeguards that protect the rights of indigenous peoples and local communities. The Cancun Agreements include:

- “Actions complement or are consistent with the objectives of national forest programs and relevant international conventions and agreements;

⁴ See Principles 10 and 22 of the Rio Declaration on Environment and Development; the CBD ‘programme of work’ to ensure full and effective participation of indigenous peoples (adopted as an Annex to the CBD COP 5 Decision V/16); and the ‘Guidelines for establishing and strengthening local communities’ and indigenous people’s participation in the management of wetlands’ (adopted as an Annex to Resolution VII.8 of the San Jose Conference).

- Transparent and effective national forest governance structures, taking into account national legislation and sovereignty;
- Respect for the knowledge and rights of indigenous peoples and members of local communities, by taking into account relevant international obligations, national circumstances and laws, and noting that the United Nations General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples;
- The full and effective participation of relevant stakeholders, in particular, indigenous peoples and local communities, in actions referred to in paragraphs 70 and 72 of this decision;
- Actions are consistent with the conservation of natural forests and biological diversity, ensuring that actions referred to in paragraph 70 of this decision are not used for the conversion of natural forests, but are instead used to incentivize the protection and conservation of natural forests and their ecosystem services, and to enhance other social and environmental benefits.”

If tradable REDD+ carbon credits are created in the future under international law they may be defined and treated in a similar manner to the current Kyoto Protocol CERs, with a few REDD+ specific modifications. The current REDD+ agreement also includes a number of criteria that countries need to adhere to for REDD+. These include, for example:

- Robust and transparent national forest monitoring systems and, if appropriate, sub-national systems as part of the national monitoring system;
- Activities should be undertaken in accordance with national circumstances

and capabilities of the country and respect sovereignty; be consistent with national sustainable development needs and goals; facilitate sustainable development, reduce poverty and respond to climate change in developing country Parties;

- Mitigation actions (all of which may or may not generate carbon credits) are limited to: reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forest; and enhancement of forest carbon stocks.

While the safeguards are likely to become a de facto condition for international support for REDD+ activities, they are formulated as guidelines that “should be promoted and supported” rather than as mandatory standards. Future decisions to operationalize a REDD+ trading mechanism are likely to set out the detailed rules for participating in REDD+, and will be framed by these safeguards. As a result, a number of these safeguards could be incorporated into eligibility criteria for generating and trading REDD+ carbon credits.

Beyond this reference to eligible activities, nothing has been decided internationally in relation to the ownership of carbon property rights in REDD+. If this does occur, the Kyoto Protocol may set some precedent. All of the units created under the Kyoto Protocol are created under international law between the countries that ratified the treaty. As treaties are agreements between countries, the carbon CERs created by the Kyoto Protocol are created, owned, and held by the countries that are parties to the treaty (Wemaere et al., 2009). However, the Kyoto Protocol also clearly envisions the participation of non-state actors in the emissions trading mechanisms it created, transferring state rights

down to these actors. In the Kyoto Protocol project based mechanisms this normally happens through the government’s authorization of a company or community to participate in a (CDM or JI) project. This authorization is required under the Kyoto Protocol, and is seen as the transfer of rights of the Kyoto Protocol carbon CERs to the people developing and implementing the project. A similar approach might be expected in a future REDD+ regime that involves project level implementation.

The domestic laws of countries that are involved in carbon trading can also place conditions on how tradable carbon credits are created. For example, the European Union (EU) Emissions Trading System, establishes its own rules relating to the creation and trading of CERs. The rules established in voluntary markets, while not linked to compliance, also influence how trading occurs. These may be established in the various standards that govern voluntary market projects and transactions, and are defined in the contracts between those engaged in trading. For example, the Voluntary Carbon Standard (VCS) rules state that “all areas included within the REDD+ project boundary must have qualified as a forest... for a minimum of 10 years before the project start date.” If this criterion is not met, REDD+ carbon credits cannot be generated or traded under the VCS from this forest.

At the national level, the rights of different actors to trade forest carbon are also likely to be accompanied by rules and regulations that set boundary conditions on what activities can be carried out. These might include specific REDD+ regulations or more general laws and policies that regulate trade in ecosystem services. Section 4.2 discusses these in more detail.

3 Carbon rights and REDD+

3.1 Relevance of carbon rights for particular REDD+ regimes

Carbon rights are relevant in a REDD+ context because they can determine benefit sharing arrangements and potentially also the alignment of incentives with deforestation threats, which will have an impact on the effectiveness of REDD+ to reduce emissions. However, the relevance of carbon rights may vary between different approaches to REDD+.

Three main approaches for REDD+ implementation are usually referred to in the literature:

1. **National accounting and implementation:** In national accounting and implementation approaches, national governments would receive finance in accordance with nationally implemented REDD+ activities, and with performance assessments linked to reduction of GHG emissions under a national reference level and a national MRV system. Funding could either come from international carbon markets, where governments would trade carbon credits, or from public international funds.
2. **National accounting with sub-national or project implementation:** Governments would be awarded carbon credits based on a national reference level and MRV system, and agree to pass these on to national non-governmental actors based on sub-national or project reference levels and potentially MRV systems. It is also possible that sub-national actors could receive carbon credits directly from the international level, but the difference with project approaches is that this occurs in the context of a national reference level and MRV system.

3. **Project based implementation and accounting:** Projects have individual reference levels and MRV systems, and project implementers would trade carbon credits directly in international markets. These could either be regulated under an international agreement or be governed by voluntary market rules.

The relevance of establishing carbon property rights may be expected to differ between these approaches (Table 1). In nationally implemented non-market approaches, international payments are expected to flow to the government, which in turn would be responsible for implementing REDD+ activities such as reforming subsidies, expanding and improving protected areas. Local communities and indigenous peoples may be engaged in these efforts. Benefits that may flow to local communities or indigenous peoples could range from direct financial payments to the provision of other benefits such as health care, education, infrastructure improvements and/or employment. Establishing title to carbon at the local level may not be required for the implementation of REDD+ unless the allocation of benefits is based on these rights. Benefits and compensation would still need to reach local levels in order for REDD+ to be equitable and effective, but these could be agreed by negotiation or by interpretation of existing laws where these exist. Such an approach would of course depend on the ability of poor and vulnerable groups to negotiate with government, and the quality of implementation of benefit sharing systems and existing laws.

If a government participates in an international REDD+ market mechanism, but chooses to implement REDD+ nationally without relying on market mechanisms, REDD+ compensation or incentives would be passed on

TABLE 1: CARBON RIGHTS AND REDD+ ARCHITECTURE

Approach to REDD+	Finance	Reference level	Accounting/MRV	Relevance of carbon rights
1 National	International funds	National	National	Title to carbon at local levels not necessarily essential, but would rely on effective and equitable benefit sharing
2	Regulated market	National	National	Title to carbon at local levels not necessarily essential, but would rely on effective and equitable benefit sharing
3 Hybrid	Regulated market	National and sub-national/project	National and sub-national/project	Title to carbon relevant at local levels
4 Sub-national/Project	Regulated market	Voluntary market	Sub-national/project	Title to carbon relevant at local levels
5	Voluntary market	Sub-national/project	Sub-national/project	Title to carbon relevant at local levels

to local communities in the form of finance or non-fiscal benefits (community services). These might be shared through a range of different approaches and using various criteria, without property rights in carbon necessarily being one of the metrics used. As with the fund based approaches, local communities or individuals may still be entitled to certain benefits from the sale of carbon credits by government, depending on existing laws. While title to carbon may not need to be established, such an approach obviously raises significant issues in terms of ensuring that communities have enforceable rights to benefits and that these outweigh any costs incurred through the implementation of REDD+.

If the government puts in place a system that rewards sub-national or project REDD+ activities through nationally issued REDD+ carbon credits, then establishing property rights in carbon is important because the currency of trade (the carbon credits) needs to be established. It is

also important where direct crediting of sub-national activities or projects is authorised under an international REDD+ mechanism. If local communities or individuals are authorised to participate as an entity in carbon trading and hold carbon rights in either of these systems, they may be able to benefit directly from finance resulting from the sale of carbon. A number of countries are in the process of establishing regulation of this kind.

In both market and non-market approaches, rather than being mere recipients of benefits, forest dependent communities may be able to claim rights to these or other benefits under domestic or international laws—particularly if they are affected in any way by REDD+ activities undertaken to preserve or protect forests they depend on. In both cases local communities or indigenous peoples will need to demonstrate that they have some right to benefits either under international or domestic laws, which may include customary laws in many jurisdictions.

Specific domestic laws on carbon rights in REDD+ are not a pre-requisite for defining who holds carbon property or the rights to benefits from carbon trading. In the absence of specific domestic laws, carbon rights can be interpreted through existing law. However, significant gaps or deficiencies in local laws may increase uncertainty as to which entities hold which rights in carbon and may also risk the overall integrity and objectives of the REDD+ scheme (Kennett et al., 2005). In market based approaches in particular, this could act as a barrier to private investment because of the increased risks. Without some form of regulation

of carbon rights, there is also a risk that REDD+ strategies may be subject to fraudulent carbon sales (Box 2).

Most developing countries do not have legislation dealing with or defining tradable carbon credits from forests under local laws. Again, this means that existing national laws need to be used to understand the legal nature of tradable carbon credits for any REDD+ projects that are developed. Ethiopia, for example, does not have any national laws that specifically deal with the legal nature of a CER, but it is possible that tradable REDD+ carbon credits will be considered to fall under the definition of a “non-timber forest product” under local forestry laws (Damtie, 2010). As such they would be treated in a similar manner to other non timber forest products such as honey or forest coffee.

In the absence of a national REDD+ legal framework, principles of national law have to be applied in order to understand which entities have rights to the benefits from REDD+ and/or tradable carbon credits. The first step is to establish the entity authorised to explore the REDD+ benefits of a forest. This entity is generally recognized as the holder of enforceable rights to use and exploit the forest, such as rights to clear the land, harvest timber and/or rights to non-timber forest products and can normally be done without any national or local legislation dealing explicitly with REDD+. Next it is important to understand how these rights are recognized or evidenced, and, if tradable carbon credits are involved, how they can be transferred.

In a carbon market context, once the authorised entity has been identified, a decision needs to be taken as to whether this entity is also the appropriate one to act as the seller of the projected carbon credits. If this is the case, the primary owner of the carbon rights will

Box 2

Costa Rican REDD+ regulations—avoiding fraudulent carbon sales

Costa Rica’s readiness preparation proposal (R-PP) under the FCPF was approved in June 2010. It includes suggestions for improving institutions surrounding carbon titles and their transactions.

Any person owning carbon, whether natural or legal, is capable of participating in national and international transactions related to emissions reductions. Nevertheless, it should be noted that if the State is one of the parties, such transactions are regulated by Public Law. If both parties are private, the transaction belongs to the private sphere. In both situations, whether the transaction is national or international, there are no commercial regulations in the case of carbon that are equal to those existent for other goods (such as agricultural products). Such absence of control may promote fraudulent sales of carbon rights in an eventual REDD+ strategy.

To overcome this risk the REDD+ Strategy suggests that a National Geographic Registry of Carbon Rights and other environmental services is required. This shall exclude overlaps in property deeds and allow an understanding of how much of the improvement of stocks and how much of the reduction of emissions determined by the Monitoring Reporting and Verification (MRV) system can be claimed by the initiatives implemented. Likewise, it is necessary that the Government regulate the initiatives not subject to FONAFIFO’s administration (i.e. private-private transactions) in order to avoid the fraudulent sale of carbon rights (FCPF R-PP Costa Rica, 2010).

also act as the seller of the carbon credits. In the event that the primary owner of the carbon rights is not equipped, willing or able to take on such responsibility, it would have to transfer the rights to sell carbon benefits of the activity to an intermediary or agent who sells the carbon on behalf of the primary owner (a practice which is very common in many existing forest carbon projects). Similar considerations may be required for non-market REDD+ mechanisms where decisions need to be made on who claims benefits, the nature of the benefits (if applicable), and who is the recipient of the benefits within the community.

The assumption that rights to benefits and to tradable carbon credits belong to the entity that has a right to the forest has important implications for the design of any mechanism that rewards credits for emissions reductions. When countries take the view that REDD+ benefits and ownership of tradable carbon credits are retained by the government, based on government ownership of the forest, this needs to be analyzed and applied in the context of the constitution, forest law, land law, and international obligations. When reviewing these laws it is often possible to identify rights to access, use, manage, and benefit from forests. Where this is done local people should be able to establish legitimate claims to the benefits from the sale of tradable REDD+ carbon credits under national law if not the title to the carbon credits themselves. This may be the case in countries such as Ethiopia and Ghana (Damtie, 2010; Osafo, 2011). In other countries, such as Indonesia or Brazil, direct ownership of tradable carbon credits by local communities may in theory be possible (Chagas, 2011; Marthen, 2011). They could also be held by intermediary entities working with communities to develop REDD+ projects who could play a role in

aggregating emissions reductions into a single legal entity for easier sale.

3.2 Different options for establishing carbon rights

In the approaches to REDD+ where title of carbon rights is relevant at the local level, there are likely to be different options for the types of property rights exercised over sequestered carbon (see Figure 1). Two main forms may exist:

1. *Simple ownership over the carbon sequestered*, where carbon ownership and the rights to the sequestration potential are likely to be linked to ownership of physical resources, such as the land and trees. Depending on how certain property rights over carbon are defined, there could be a number of different options in terms of which actors have rights to sell carbon. For example, in Ghana the definition of carbon as a natural resource or as an ecosystem service, would have a number of different outcomes in terms of who owns tradable carbon credits associated with REDD+ (Box 3).

Box 3

Options for carbon ownership in Ghana (Osafo, 2010)

There are a number of approaches that the State can use in determining whom to vest the right to carbon in. First, the State could choose to define carbon as a natural resource given its naturally occurring nature; thus it would decouple carbon from its host, in this case trees, and thereby treat it as a separate commodity. In this case, constitutionally, the State would be vested with the rights to carbon. Alternatively, the State could recognise the ecosystem services provided by the trees acting as sinks as being responsible for the carbon credits generated and vest the right to the benefits in the owners of the trees. Using the latter approach, the implications on whom the benefits from the carbon will accrue to will then depend on whether the trees are naturally-occurring or planted.

2. *Usufruct rights over the land and forests that contain carbon.* Usufruct rights include rights to use or derive benefit from property that belongs to another entity, as long as the property is not damaged. They are relevant in the carbon rights context as they may govern the ability of actors who do not own land, to potentially derive benefits from the carbon stored or sequestered on that land. They can exist on public or private land.

Box 4

Interpreting carbon rights in Costa Rica: private rights to own and transfer carbon (Navarro, 2010)

Costa Rica's legal system does not explicitly address carbon property rights. However, referring to the country's civil code on property rights, it can be deduced that the carbon stored in trees, plants or biomass in general belongs to the owner of such tree, plant or biomass. Thus, the legal tenant of the land owns the tree that grows on the land and the carbon stored in that tree. The legal land tenant can therefore negotiate the right to sell or manage the tree and carbon stored in it and, in return, realize the resulting benefits (Felicani, 2010; Costenbader, 2009). The constitutional court (Resolution N° 546-90) has ruled that the asset produced by such forests and plantations, which materialises as an economic factor that adds value to a specific environmental service provided (whether by mitigation of GHG, water protection, biodiversity protection, or ecosystem protection), is an actual right derived from the ownership of the forest and, therefore, assignable by its owner. This means that the legal tenant of the land is also the owner of the carbon (FCPF, 2010).

Art. 65 of the forest law regulation explicitly states that forest owners who receive payments for environmental services should transfer their carbon rights to FONAFIFO, which signs a contract with individual land property owners responsible for managing carbon sequestration. The property owner gives the government the right to sell carbon; the government may then bundle the sequestered carbon from many forest owners into attractive packages for international transactions with other private or public agents. Property owners must show proof of identity, ownership, and payment of tax with their application, and must provide a management plan aimed at maximizing carbon sequestration.

Usufruct rights may be useful in carbon projects, because they provide an existing arrangement for granting rights to other interests in exploiting carbon benefits, if rights to sequestered carbon are granted as part of the usufruct. However, they may make management of land more difficult, particularly where a number of different parties have usufruct rights, potentially preventing the party with interests in the carbon from safeguarding their asset and causing conflict with local communities if it results in a loss of access to forest land. As a means to regulate the transfer of carbon, investors prefer clear ownership over usufruct rights for reasons of more statutory clarity (Thomson and Campbell-Watt, 2004, Baker & McKenzie and Buddle Findlay, 2008). Although usufruct rights are normally enshrined in national law, in order to enter into force they also need an agreement between the parties that sanctions the extent and the conditions under which they are transferred to the beneficiary. This agreement provides the flexibility to accommodate the specific characteristic of carbon rights that would otherwise need to be addressed through ad hoc legislation.

Under simple ownership, the owner of the land would likely be considered to have the right to manage the land to maximise carbon sequestration potential, and any benefits arising from the sale of carbon. The land, forests and carbon may still be subject to legislative planning restrictions. Box 4 illustrates how carbon property rights have been interpreted in Costa Rica and are linked to private land ownership.

Usufruct rights would allow the owner to transfer the right to exploit the carbon

sequestration potential to another entity. In this case the owner of the carbon sequestration potential would be different from the owner of the carbon sink, who might also be different from the owner of the sequestered carbon (Takacs, 2009). Four kinds of instruments have been identified to grant usufruct rights over forest carbon (Baker & McKenzie and Buddle Finlay, 2008; Takacs, 2009):

1. Conservation concessions (leases): the party interested in conservation leases a parcel of land for that purpose, becoming proprietor of that land and acquiring clear property rights over carbon that can be transferred to the investor.
2. Encumbrance: a form of mortgage that secures a landowner's obligation to transfer carbon rights as a sort of rent to the beneficiary. It may be registered against land title thus giving the beneficiary an interest that runs with the land and binds subsequent purchasers of the land to the obligations in the encumbrance. The contract may specify that the beneficiary has the right to freely transfer the benefit of the encumbrance (e.g., the tradable carbon credit) to a third party.
3. Conservation easements: the landowner establishes a formal, binding legal commitment to preserve all or part of its land. The easement is enforceable in perpetuity by another entity and binds subsequent owners. The beneficiary can be claimant or proprietor according to the contractual arrangements.
4. *Profits-à-prendre*: this kind of easement gives the right to enter a property in order to take some kind of biological resources. In the case of forest carbon, it is unclear whether the

“taking” relates to the management of land for carbon sequestration.

Concessions are probably the simpler instrument in that they transfer rights of access to, withdrawal, management of and exclusion from the forest land to the beneficiary, who therefore becomes proprietor. This has so far been one of the main approaches for obtaining rights over carbon in Indonesia (Box 5). The proprietor of the land will be allowed to use or transfer

Box 5

Carbon rights in REDD+ projects in Indonesia: usufruct rights as a means to exploit carbon sequestration potential

To sell carbon credits, a project proponent must demonstrate that it has long-term rights to the carbon. Almost the entire Indonesian forest estate is administered by the Indonesian government under statutory law, with less than 2% of the forest estate that is either designated for use by communities or indigenous people or owned by firms or individuals (Sunderlin et al., 2008). Because in Indonesia buying and selling forest lands is prohibited, in order to be granted long term carbon rights REDD+ project proponents typically use one of the following strategies:

1. Acquire forest concession rights for the project from the government, by so preventing outside actors from legally converting the forest into plantations;
2. Enter into an agreement with the landowner with existing right to the carbon to develop a carbon project and share the carbon credits produced by the project;
3. Enter into an agreement with the landusers with existing carbon rights to develop a carbon project and share the carbon credits produced by the project.
4. Support the government, which is the holder of carbon rights, without seeking any carbon rights for themselves. These activities are driven by bilateral aid organizations or NGOs, all of which partner with multiple levels of the Indonesian government in developing official demonstration activities. (Myers Madeira, 2009).

In terms of project based approaches to REDD+, the concession model has been the dominant approach (Myer-Madeira, 2009).

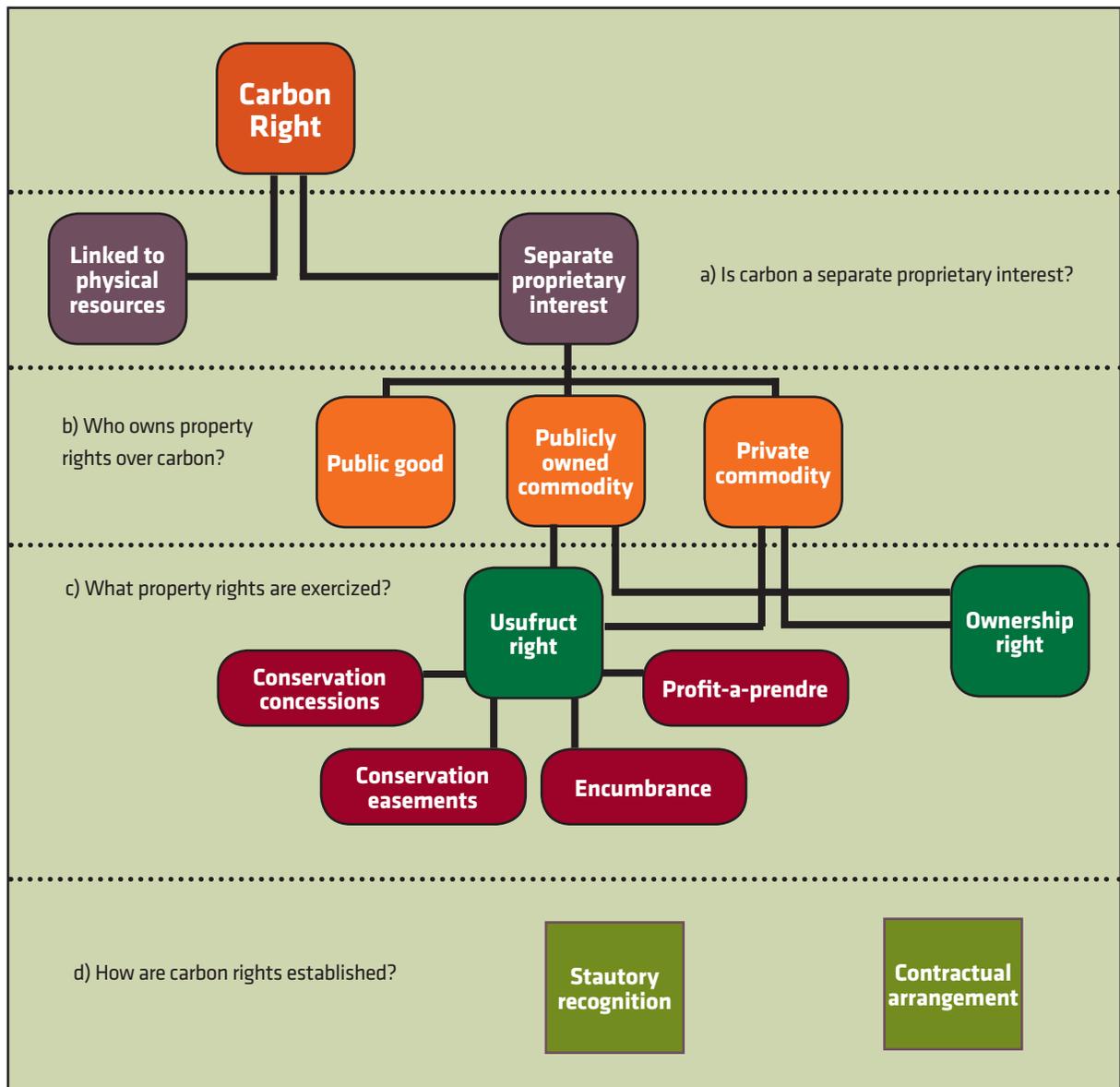


FIGURE 1: Schematic illustrating some of the different options for carbon ownership and the property rights exercised over carbon.

carbon rights if the government so allows. Encumbrances and easements provide clear and substantial property rights and liabilities because they run with the land, and are therefore clearly enforceable against future land owners. Despite its application under Australian law, the characterization of carbon rights as a *profit-à-*

prendre is deemed ambiguous (Hepburn, 2009) or indeed not useful to recognise rights to carbon sequestration because the objective of such a right is to keep the carbon on the land rather than to take it off (Baker & McKenzie and Buddle Findlay, 2008).

4 Implications of carbon rights for poor people

This section uses the above overview of how carbon rights can be determined in international and national law to analyze some of the potential implications arising for poor people. We do this by identifying some of the different pathways through which carbon rights might have implications for poor people (for a summary see Table 3).

Where possible we distinguish between the implications for indigenous peoples, women and the forest dependent poor,⁵ although given the variability and complexity of different legal systems and REDD+ options, it is difficult to do this in detail outside specific cases. Poverty is primarily considered here from an economic perspective—i.e., in terms of how carbon rights affect access to new economic opportunities (particularly income from the sale of tradable REDD+ carbon credits). However, following the World Bank (2001) poverty framework, the impacts on empowerment (i.e. ability of people to shape decisions that affect their lives) and security (i.e. impacts on exposure to risks of economic shocks, reduced social cohesion and undermining cultural traditions), are also considered where appropriate. Table 2 summarizes some of the pathways, and associated opportunities and risks for poor people.

4.1 Carbon as property: how different interpretations influence opportunities

We explore the following pathways which may

⁵ We recognise the limitations of this approach—particularly the possibility that these actor sets may not necessarily be ‘poor’ and that they overlap.

affect rights to benefits in REDD+:

- Which properties carbon ownership is linked to and how this influences the potential to access opportunities;
- how usufruct rights can guide access to carbon as property;
- how the treatment of REDD+ benefits as a public good or as devolved to communities may affect who receives benefits; and
- links between ownership of carbon and land tenure security.

In most countries, existing property and natural resource law will be the main guide to establishing ownership of carbon property rights. Because of the wide variation between countries in terms of tree and land tenure, it is difficult to generalize which actors will own carbon property. A range of different options may exist depending for example, on whether carbon ownership is linked to land or trees; whether these are naturally occurring or planted trees; or whether it is defined as a natural resource.

- **The definition of ‘carbon credits’:** Ownership of land does not necessarily translate into the ownership of natural resources on the land. If the state defines carbon credits as a natural resource, then the state will have rights to these. If this occurs without changes to the existing benefit sharing structures linked to natural resources, farmers and forest dependent people may not be able to access the economic opportunities provided by REDD+.
- **Differences between carbon rights tied to land and tied to trees.** In some cases carbon rights tied to land may be held by communities, but the rights to timber on the land held by government. This would limit the ability of communities to control risks

Box 6

Navigating rights to REDD+ benefits in Ghana (Osafa, 2010)

In the context of carbon rights in Ghana, it may be necessary to consider the differences between situations in which carbon rights are tied to land or tied to trees, and the differences between naturally occurring forests and planted trees.

If carbon rights are tied to the land, officially they should belong to the traditional authority, landowner or sharecropper in off-reserve areas. However, the government has the right to issue timber utilisation licences in such areas, causing a conflict of interest between the rights of communities (through the traditional authority) and the interests of government. This could affect the success of REDD+ interventions and the ability of communities to engage without significant risks. If carbon rights are tied to trees, carbon rights will sit with government in Forest Reserves. Without adequate benefit sharing arrangements, communities would not be able to benefit from REDD+ in such areas. This not only has equity implications for REDD+ but would also increase risks, as incentives would not be aligned to threats where these result from encroachment into forest reserves (Asare, 2010).

In terms of the different interpretations of carbon rights depending on whether they are tied to naturally occurring or planted forests, rights to commercial exploitation in natural forests are vested in the state, whereas in planted forests, rights to commercial exploitation are vested in the owner. This affects the benefit sharing arrangements. In the former case 20-25% of revenues are set aside for beneficiaries (traditional authorities and stools), whereas in the latter case 90% of revenue goes to forest owners. Even with 20-25% of revenues shared, it is possible that farmers and forest dependent communities that are governed by these authorities and Stools* will not benefit due to elite capture (Ayine, 2008).

*The word 'Stool' or 'Skin' essentially refers to the monarch or sovereign of a particular community. In the Southern part of Ghana where the Chiefs sit on stools, the term 'Stool' is used to symbolize the Chieftaincy while in the North of Ghana where the Chiefs sit on animal skin, the term 'Skin' is used. Stool lands are defined in Section 18 of the Office of the Administrator of Stool Lands Act, 1994 as ".....any land or interest in, or right over, any land controlled by a stool or skin, the head of a particular community or the captain of a company, for the benefit of the subjects of that stool or the members of that community or company".

of REDD+ failure and potentially make them vulnerable to any consequences of failure (Box 6).

- **Differences between naturally occurring forests and planted trees.** The potential benefits of REDD+ for poor people may differ between naturally occurring forests and planted trees. In many countries the bundles of rights associated with these different types of tree cover vary significantly. This has obvious implications for determining potential carbon rights holders in REDD+ versus afforestation/reforestation projects.

Understanding whether particular communities or individuals have rights to carbon therefore requires careful analysis and interpretation of the different options, and will be an important aspect of any REDD+ scheme which allows entity level carbon trading. It will also be important in national schemes because different definitions may influence who can claim benefits, which will open up debates about benefit sharing even if entity level carbon trading is not mandated.

In practice, there may be a low likelihood of communities directly owning carbon property rights in many countries because the rights associated with land and forests are often vested in the state. This is particularly the case in Africa where it is estimated that around 98% of land is under government control, in terms of how it is defined in statutes (RRI, 2009). This means that carbon property rights in REDD+ will often initially lie with national governments. Local communities could still hold rights to benefit from REDD+, either directly if the government devolves carbon credits to communities, or indirectly through other benefit sharing and compensation systems between state and non-state actors.

In many instances, laws governing usufruct rights over forest resources may influence how these benefit sharing systems are structured. In countries such as Ethiopia, rights to tradable carbon credits that are initially held by the state could be handed over to local communities like other usufruct rights (e.g., the right to exploit non-timber forest products). Specific policies, such as participatory forest management (PFM) approaches, may also play an important role (Box 7) although some studies have concluded that certain arrangements may still be considered as too inefficient (Norton Rose,

2010). In this case, forest areas are allocated to communities to administer and manage, and the rights and obligations of both government and the community group will be defined in a contract, which could include or exclude rights to trade carbon credits. This may enable greater participation of communities in emissions trading schemes. The extent to which benefits reach poorer people within communities will then be influenced by the way in which groups are established and governed (section 4.2 discusses this in more detail).

The wider issue that arises in the examples

Box 7

Carbon credits, contracts and compensation in Ethiopian REDD+ schemes (Damtie, 2010)

For the purposes of analyzing REDD+ projects in Ethiopia, the right of people to administer communal land/forest possession is particularly relevant. People can administer communal land either customarily or when given to them by the government. These lands can be used by the people for communal forestry, for grazing, cultural, and spiritual purposes. While there may be some scope for carrying out REDD+ activities on customarily administered forest, these types of communal forestry rights are held over small patches of forests and forests that are being developed on highly degraded lands by local communities. As such, their applicability to large scale REDD+ projects may be limited due to their small size.

A potentially more useful forest designation for carrying out REDD+ activities is forests that are given to local communities by the government so that the local communities administer, manage and utilize the forest products, especially the non-timber forest products. People can organize in different associations of their choice for the purpose of PFM – a process which is highly encouraged by the government. These rights of local communities over forests are highly restricted. Local communities are allowed to use the forests only according to the management plan of the government. That is, they may not be allowed to cut trees or conduct farming activities in the forests. The other restriction is if the government wants to revoke these rights, it may do this at any time. However, as practices show, the government tends not to exercise this right. The law is silent on whether or not compensation is due when peoples' rights to these forests are taken away. That said, compensation will

probably not be paid by invoking property rights, but it could be claimed on the basis of the contract which is entered between the local communities and the government.

When these forest rights are given to local communities, they are made by a contractual agreement signed between the government and the association of the local communities. If agreement is reached between the association of the local communities on the one hand and the government on the other, the local communities shall be considered rightful users of the forest land handed over to them. Their legality is recognized by the formal registration and issuance of a certificate of holding. This certificate, which is the evidence for the lawful holding of the forest land by the local communities, can be kept at the *kebele* office. There is a service charge for getting and renewing the certificate.

In the contracts, the rights and obligations of both parties (the local communities and the government) shall be stated which could expressly include or exclude carbon credits. The government can revoke the agreement at any time. However, in the contract, terms can be included which require the issuance of a written request of termination stating the reasons for termination/revocation sometime before it occurs. Local communities should be paid for the estimated improvement of the forest resource and compensated for the customary rights they are losing as the result of termination/revocation.

given above surrounds the question of the extent to which national governments could or should claim rights to the benefits from REDD+. This is one of the most prominent issues in the current carbon rights debate. The main concern

Box 8

The 'nationalization' of carbon rights in New Zealand (Cox and Peskett, 2010)

In 2002, the New Zealand Government enacted the Climate Change Response Act. This created the legal framework whereby the government would meet its obligations under the UNFCCC and the Kyoto Protocol, particularly in relation to its commitments to reduce greenhouse gas emissions. It was the government's view at the time that all of the benefits, liabilities and obligations under the Protocol would be retained by the state (Gould et al., 2008). This meant that the government retained both the credits and liabilities of carbon storage in relation to forests. This intention to retain forest carbon rights was signalled to the forestry industry in late 2002 and was included in a forest industry consultation process in late 2005.

Until mid-2007, the government's public stance was that foresters had no 'automatic right' to carbon credits. The introduction of the Emissions Trading Scheme (ETS) reversed this position, devolving the ownership of credits associated with forests established since 1990 to forest owners. In effect, the ETS 'de-nationalized' the rights to the carbon credits.

One of the impacts of the initial decision to nationalize carbon rights appears to have been a sudden increase in deforestation. The Kyoto Forestry Association (which represents forest owners) contended that forests had been planted by landowners who expected to retain the long-term right to the carbon, and that carbon credits would be part of their future business plans. The consequent retention by the government of these credits was seen as a windfall tax and could have triggered some of the increased deforestation witnessed in the pre-implementation period before 2007, as the rational economic response was to harvest the timber, rather than to retain the carbon. When the ETS legislation was eventually passed in September 2008, it resulted in a dramatic halt to the increased deforestation seen in the preceding years. In the language of economics, the carbon price had now been 'internalised' into the business decisions of the forest stewards. This corrected the 'nationalization' of the carbon rights issue and brought much needed certainty into the regulatory framework of the industry.

is that governments will be incentivized by the financial attractiveness of REDD+ to 'nationalize' carbon rights, securing REDD+ funding for themselves whilst at the same time placing greater restrictions on land use in order to meet the requirement in REDD+ to demonstrate emissions reductions. The impact of such a decision would likely be negative for both forest protection and for any non-state actors affected by REDD+ activities (Box 8).

There are no known examples of countries retaining all REDD+ benefits and carbon credits from REDD+ irrespective of whether they own the forest—an issue that would cause considerable conflict and might also give rise to claims by communities under international law. However, it has been suggested that the attraction of carbon as a new asset in forests could have the perverse incentive of slowing or reversing forest governance improvements within developing countries that have tended towards decentralization, and the recognition of the rights of local communities and indigenous peoples (Phelps et al., 2010b; Norton Rose, 2010). There are already a number of examples which indicate that REDD+ incentives may be causing such a pattern or at least where corruption is increasing because of different actors attempting to obtain carbon rights (Phelps et al., 2010a).

A related issue surrounds what the incentive effects could be of new carbon market systems on formal land titling processes. There is a common assumption that clear property rights relating to carbon are a requirement for governments and investors in REDD+. It is possible that projects could progress well in the absence of secure tenure, based on contracts between parties (Takacs, 2009), although most existing carbon standards require a high level of clarity. In any case, it is likely to be much

more directly important in project based REDD+ approaches in which carbon credits are generated and traded, as ownership of these reductions may be linked to land or tree ownership in many cases. However, in approaches to REDD+ where carbon payments are made to governments and where carbon rights are not devolved down to non-state actors, secure tenure may not be a precondition for payments, although effective benefit sharing systems would need to be established through negotiation that at least meet the opportunity costs associated with any REDD+ activities.

If clear land tenure is a pre-requisite, then in many countries the incentive of REDD+ could drive land titling efforts. The formalization of land tenure could be positive for local communities—in many REDD+ countries much of the land has not been surveyed and users do not possess written titles or deeds (for example, in Brazil it is estimated that it is unclear who owns land in 70% of non-indigenous reserves (Takacs, 2009), so titling could strengthen claims and possibly improve environmental management. This depends entirely on how land titling processes are carried out⁶ and the complexity of the initial situation. Evidence indicates that in many countries, processes can be highly political, extremely slow and may not be completed properly before activities are implemented (Sunderlin et al., 2008). This can lead to conflict, with poorer groups and individuals often losing out (Cotula and Mayers, 2009; Firmin-Sellers and Sellers, 1999), especially where there are differences between customary and statutory interpretations of rights.

⁶ For example, in Brazil the process linked to indigenous lands involves indigenous groups making a request to FUNAI (the government agency responsible for indigenous communities). FUNAI then carries out an anthropological study to determine whether the claim is acceptable.

Where land titling processes have been underway for a while, some authors have expressed concern that adding another layer of formal law linked to carbon rights could also increase complexity and undermine existing delicate processes (Takacs, 2009). There is also evidence to suggest that in many, but not all instances, as land is privatized, the rights of women may be weakened beyond an already weak base. Some recent land reform processes have included specific provisions for dealing with such issues.

In some countries customary lands may be taken for public or commercial purposes, such as government development projects or private business activities. This could also occur in REDD+ projects or programs. Some ‘benefits’ may arise for affected communities (e.g., through employment) but for many, the main benefits will be linked to compensation. Compensation requirements are stipulated in law in some countries, but they may not cover certain activities (e.g., it may differ depending on whether rights relate to ownership, use rights or tree rights) or land categories. Even where compensation is stated in law, it may only partially cover opportunity costs (e.g., of land improvements such as crops, rather than the loss of the land itself), is only offered for certain types of land (e.g., it may not cover customary land), or is sometimes not implemented at all (Colchester et al., 2006; Box 8).

Where people are illegally residing on state land, they are often classified as ‘squatters’ and in some jurisdictions they may have fewer rights than indigenous groups whose customary claims are recognized in statutory laws (e.g., in Malaysia). The danger is that in such cases, these people will not have rights to REDD+ benefits or tradable carbon credits, or be entitled to compensation linked to REDD+ projects or programs.

4.2 Emissions trading rights: how emissions trading rules and regulations may influence opportunities for poor people

At the national level, rules governing the right to trade carbon from REDD+ schemes will have an impact on which actors can access the benefits associated with carbon trading and the potential risks for non-beneficiaries. There are two main ways in which such rules could be established:

1. Through REDD+ regulations defining eligible activities and actors, the responsibilities linked to carbon trading (e.g., how forests should be managed) and potentially benefit sharing arrangements;
2. Through contracts between different parties which define their respective rights and responsibilities.

The form of these instruments could have implications for poor people.

REDD+ regulations

Only a few developing countries have so far developed specific national REDD+ regulations.⁷ The draft REDD+ regulations that do exist generally define who may participate and the types of lands and activities that are eligible. The result of specifying these issues in law is that transaction costs can be reduced and greater investment may occur because there is more legal clarity between different actors (Kennett et al., 2005).

Though they are still very much in development, the regulations being debated in Brazil and Indonesia offer some important insights as to the potential implications for poor people (Table 2):

⁷ These include, to our knowledge: Indonesia, Brazil and Argentina.

- Both sets of regulations contain specific procedural requirements, such as the need for ‘prior’ consent in the evolving Brazilian regulations, and ‘prior informed consent’ in Indonesia, although they differ in terms of how such consent is sought. Whilst there are concerns about how such consent is independently established (e.g., whether professional third party verifiers should be given such a mandate), these requirements might increase empowerment and reduce poverty by involving local and indigenous communities in decisions about REDD+ (WRI, 2005).
- The regulations also set out benefit sharing rules linked to different land categories and land uses. Both offer some scope for communities to benefit from REDD+ revenues, but questions remain about how beneficiaries are defined. In Indonesia interpretations of who has rights to benefits differ between national and provincial levels. In Brazil, the provisions have already raised some concerns from the side of environmental and social NGOs, who observed that while the proposed REDD+ Bill (Bill of law 5.586/2009) recognizes the rights of traditional communities, it cannot really guarantee that they will be the beneficiaries of REDD+ initiatives.
- The ability of indigenous peoples to benefit from REDD+ is currently unclear in both countries. According to the draft regulations, indigenous peoples can claim benefits associated with REDD+, but it may be difficult for them to access such benefits in practice. In Brazil, there are different legal interpretations as to whether indigenous peoples can be directly involved in REDD+ implementation (Box

TABLE 2: KEY PROVISIONS IN DRAFT NATIONAL REDD+ REGULATIONS IN INDONESIA AND BRAZIL.

Key provisions	Indonesia	Brazil
Procedural requirements	'prior informed consent'	'prior' consent
Project approval	Ministry of Forestry, following an assessment by the REDD Commission	Ministerial approval required. Mandatory participation of a public entity responsible for promoting and protecting the rights of indigenous peoples in Brazil whenever indigenous lands are used for hosting REDD+ initiatives.
Benefit sharing of REDD+ revenues	11 different revenue sharing arrangements linked to different categories of land. Local communities are specified as beneficiaries. Autonomy laws of the provinces (e.g., Aceh and Papua) grant them rights to 80-90% of the revenues from natural resources. It is currently unclear whether such divisions will apply in REDD+ (Takacs, 2009; Dunlop, 2009).	Public lands: '70% of resources gained need to be applied in the area of the project with sustainable development and emphasis on beneficiary residents and neighbouring beneficiaries'. Private lands: projects need to contribute to benefit-sharing arrangements with local communities when these communities have contributed to REDD+ efforts.
Dispute settlement	Unclear	Creation of a dispute settlement procedure
Indigenous peoples	Can become project developers. However, while customary rights are recognized it is not clear to what extent these extend to carbon; it is difficult for communities to apply for licences due to red tape; provincial rules such as <i>imeum mukim</i> in Aceh provides a defined legal role in forest management for customary leaders but has yet to be realised in practice (Dunlop, 2009).	Still some debate as to whether indigenous peoples would have autonomous legal capacity to negotiate and conclude carbon-related agreements and to what extent they would need to be assisted by the State for participating in REDD+ projects. In this context, it is important to note that the draft REDD+ Bill requires the mandatory participation of a public entity responsible for promoting and protecting the rights of indigenous peoples in Brazil whenever indigenous lands are used for hosting REDD+ initiatives.

10). The regulations introduce potentially progressive provisions to deal with areas occupied by traditional communities and indigenous peoples but not yet formally recognized by the federal government as such. However, the mandatory requirement for a state organization to be involved in REDD+ projects with indigenous peoples has raised concerns about whether REDD+ in Brazil is progressive in terms of empowering indigenous groups to participate in (or opt out of) REDD+.

National REDD+ regulations could also define the legal nature of carbon credits, which is likely to have an impact on which actors can claim benefits from their transfer within emissions trading schemes. For example, the case of Ghana presented earlier (Box 4) illustrates the different benefit sharing implications depending on whether carbon is treated as a natural resource or an ecosystem service—in one case rights will lie with government and in the other they are more likely to lie with local communities.

Box 9

Carbon rights and indigenous peoples in Brazil (Chagas, 2011)

Lands traditionally occupied by indigenous peoples are deemed public lands. These lands are, by virtue of constitutional rights, inalienable. Indigenous communities have exclusive usufruct of the land in which they reside, while the Federal Government retains the right to intervene in such areas for reasons of recognized national interest (e.g., sovereignty protection, national development and exploitation of mineral resources).

The exclusive land usufruct by indigenous peoples includes the right to use and exploit natural resources present in the soil, rivers and lakes (and its products and accessories) and to benefit from the proceeds of such use and/or exploitation. An expansive interpretation of these provisions would endow indigenous peoples with rights to carbon sequestered in their lands, a position defended by some legal practitioners in Brazil and thus far not challenged by the Federal Government.

Some studies concerning the rights of indigenous peoples and forestry projects have emphasized that the exclusive usufruct enjoyed by indigenous peoples can be equated to a de facto ownership of the land and its resources. While originally belonging to the state, indigenous lands are subject to a very confined use regime and their exploitation by public authorities is limited to very special circumstances prescribed in law. Hence, indigenous peoples would be the de facto owners of the forest and other natural resources found in indigenous lands, including any rights that may be derived from carbon sequestered and removed. There is however still some debate as to whether indigenous peoples would have autonomous legal capacity to negotiate and conclude carbon-related agreements and to what extent they would need to be assisted by the State for participating in REDD+ projects (Telles do Valle and Yamada, 2009; Takacs, 2009). In this context, it is important to note that the REDD bill being currently discussed in the Brazilian Congress requires the mandatory participation of a public entity responsible for promoting and protecting the rights of indigenous peoples in Brazil whenever indigenous lands are used for hosting REDD+ initiatives.

The definition of carbon credits as property or as a service could also influence levels of investment and therefore the extent to which REDD+ becomes a new economic opportunity. This is because these definitions are likely to affect whether credits are subject to taxes and other charges at the national level (e.g., in Ghana, all service industries are subject to taxes). It is possible that this could negatively affect the incentives for investors, although it has also been argued that this offers a potentially more equitable approach to the distribution of benefits as countries could re-distribute revenues specifically targeted at poor people (Costenbader, 2009).⁸

The Brazilian REDD Bill, in its current version, also defines two different types of carbon credits in an effort to distinguish between market and non-market approaches to REDD+ (Box 11). From the perspective of indigenous peoples and local communities, it is difficult to determine whether these different types of credits have different implications. However, the probable linkage between land/forest ownership and credit ownership, and the requirement to maintain activities if land changes hands, may place some restrictions on the areas and activities that can be involved in REDD+.

Tensions between statutory and customary law are likely to be major issues arising in the development and implementation of REDD+ regulations. For example, recent rulings within the Inter-American Commission on Human Rights (IACHR) and the Inter American Court have helped to reaffirm the position that indigenous and tribal peoples do not rely on domestic laws for their existence, but are

⁸ This approach has been applied in Chinese CDM projects, although the criteria for redistribution are based on relatively broad notions of sustainable development rather than explicit targeting of poor or vulnerable people.

grounded in and arise from customary laws and tenure. This implies that the property rights of indigenous peoples exist even if they do not hold titles to the ancestral territories they have historically used and occupied (FPP, 2009). The implications include:

- Investors would be subject to commercial, legal and reputational risks, and would be required to seek consent to establish projects on indigenous peoples lands.
- Indigenous and tribal peoples have the right to enter into agreements, where they so choose, as part of effectively controlling and managing their territory, to develop their own REDD+ projects.
- States may restrict indigenous and tribal people's property rights under exceptional circumstances. However, specific procedures must be followed. It will not be enough for a state to simply declare that it is a national interest to conserve forests or mitigate climate change impacts if the result of REDD, avoided deforestation or other conservation projects will affect indigenous peoples rights, territories and resources. The requirements and conditions a state must first fulfil are much more extensive.

REDD+ contracts and contracting processes

Whether REDD+ is governed by national regulations or voluntary carbon market rules, contracts will play a crucial role in defining the rights and responsibilities of participants. They are particularly important in voluntary approaches because contracts effectively create tradable REDD+ carbon credits.

There are a number of areas in which carbon and forest management contracts can have

Box 10

The Brazilian REDD+ Bill (Chagas, 2011)

Bill of law 5.586/2009, currently making its way through the Brazilian lower House, establishes a national REDD system and defines some basic rules on eligibility and approval of REDD activities in Brazil. This bill (the REDD Bill) was revised in mid 2010, providing a more comprehensive regulatory framework by addressing some of the key aspects which were left out in the original version.

The REDD Bill clarifies that REDD activities shall encompass conservation measures, sustainable management of forests and enhancement of carbon stocks (jointly REDD+) and foresees the creation of a committee to oversee and further regulate the implementation of REDD+ activities.

The REDD Bill also proposes the creation of two different types of REDD units as a way to address the dichotomy between market and non-market based funding. A general category of REDD units, known as UREDD, entitle holders to receive benefits from national and international funding other than market-based (i.e. national and international funding in the form of grants). UREDDs would be non-tradable registerable units each representing one tonne of verified emission reductions or removals from eligible REDD+ activities. A share of UREDDs could potentially qualify to generate certified REDD units ("CREDDs"), which are defined as tradable intangible rights. In contrast to UREDDs, CREDDs can be used as offsets for compliance both domestically (in the event of future state and municipal targets), as well as internationally (e.g., under foreign emissions trading programs or to assist in the achievement of a country's GHG reduction commitments under the UNFCCC). A REDD committee would be responsible for determining the quantitative and qualitative criteria for the generation of CREDDs.

Although not specified, ownership of CREDDs would likely follow the ownership of the land and forest. CREDDs could be transferred through contractual arrangements and title would be recorded via registration with a Brazilian REDD registry system. Importantly, the Bill seems to treat the rights and obligations associated with REDD+ in a similar way to real property rights by determining that the link between the REDD activity and land shall be maintained, regardless of the changes in ownership of the land. This means that a new owner of the land would become responsible for taking forward the REDD activities on the acquired land.

implications for poor people engaging in carbon forestry schemes (Peskett et al., 2010):

- Restrictions will exist on land use practices within areas where carbon sequestration activities are occurring. Examples of such restrictions include: limiting volumes of wood that can be collected, prevention of agricultural practices on forest land.
- Duration for which land use restrictions and practices need to be carried out. Land management practices often need to be maintained between 20 and 50 years. It is not always clear whether communities are aware of this requirement.
- In most cases contracts will require certificates of land holding (e.g., Ethiopia), which entail costs that poorer community members are often unable to meet.
- Procedures surrounding the revocation of contractual terms do not always favor communities involved. For example, compensation may not be offered in the event of project failure, despite potentially significant investments by communities or individuals.
- Events of default: the damages that communities need to cover in the case of default could be too much for local communities. Communities or individuals may also be responsible for any new investments required in the case of project failure (e.g., allocating alternative land areas if deforestation occurs within agreed REDD+ project boundaries).
- Price negotiation: The process of price establishment for carbon payments is an issue that affects the ability of participants to benefit economically from carbon sales. This is not necessarily a problem (and it may

be unreasonable to expect producers and buyers to negotiate directly), but if the terms of contract and price are poorly understood this could result in payments that are much lower than required by communities to manage their land in accordance with the contracts.

- Flexibility to sell or lease land may be a concern, as it could increase vulnerability by limiting the ability of people to respond to shocks.

Because of the complexities involved in establishing forest carbon projects and high transaction costs, it is unlikely that poor individuals or communities will be directly involved in selling REDD+ carbon credits. Contracts are often established with, or through, intermediaries—these could include, for example, local community associations that form the contracting organization ‘selling’ carbon credits directly to investors, or they may only perform the function of organizing groups of individual producers who have their own contracts.⁹

As with any new product, there are relatively few intermediaries available to link carbon credit producers and buyers. A lack of choice between intermediaries could increase the vulnerability of producers to the potential collapse of ‘their’ intermediary as well as to unscrupulous practices. The community forestry literature suggests that the involvement of a disinterested organization, often from civil society, to build technical and organizational capacity among producer groups and enable them to draw on a wider network of experience can reduce their

⁹ Such a situation may be observed for example in comparisons between the Plan Vivo carbon offset project and Nile Basin carbon offset projects in SW Uganda (Peskett et al., 2010).

vulnerability (McDermott and Schreckenberg, 2009; McDougall et al., 2007).

Where contracts are made between investors and intermediaries that coordinate the activities of a number of different individuals, the way in which such groups are recruited and organized becomes important in terms of equity impacts. Key issues that may affect outcomes for poorer community members include (Boyd et al., 2007; Peskett et al., 2010):

- How the process of formalization of groups aligns with the customary division of forests;
- how decision making processes are managed within groups (which could influence elite capture); and
- internal (carbon) shareholding arrangements and recruitment processes for group members (e.g., whether service charges are involved in joining groups).

To prevent the elite capture widely discussed in the community forestry literature (McDermott and Schreckenberg, 2009; Pagdee et al., 2006), REDD+ projects may need to support good governance and pro-poor activities within producer groups.

International laws and their implications at local levels

The rights and responsibilities defined in national REDD+ regulations and contracts will also be influenced by international laws. We consider two main pathways through which this could occur:

1. The presence in international agreements of procedural rights and social safeguards linked to the rights to benefits from REDD+;
2. Rules governing the ownership of tradable REDD+ carbon credits and how/whether

these are transposed into national laws.

Procedural rights and safeguards linked to the interests of indigenous peoples and local communities are contentious issues that have been prominent in the international REDD+ debate. These are discussed in detail elsewhere and are beyond the scope of this paper (CIEL, 2009; Cotula and Mayers, 2009; Meridian, 2009). However, it is important to understand how these instruments may affect rights to REDD+ benefits, the ownership of tradable carbon credits at the local level and the legal nature of tradable carbon credits.

In terms of rights to benefits from REDD+, international laws may define the rights of indigenous peoples and local communities in national and local REDD+ schemes, where countries recognize relevant human rights treaties or international norms. In practice, these rights may be relatively weak if enforcement of international law at the national level is low. While few existing international environmental laws enable non-state actors to make challenges directly through international, rather than national channels, it is possible that REDD+ could provide such an opportunity. For example, in the CDM there have been discussions surrounding the introduction of a mechanism that give rights to project developers directly at the international level, although no system has yet been developed (Chagas, 2009). If such a system was extended to REDD+ (and indigenous peoples and local communities were project developers), they may be able to benefit. It has also been suggested that some human rights treaties, if referenced in a REDD+ decision, could also provide limited opportunities for defending rights directly at the international level (CIEL, 2009).

International rules on the ownership of

tradable REDD+ carbon credits do not yet exist, but as discussed in section 2.2, rules under the Kyoto Protocol provide some insights into how they might be treated in project based REDD+ schemes. In the Kyoto Protocol project based mechanisms, rights are normally transferred down to non-state actors through the government's authorization of a company or community to participate in a (CDM or JI) project. The authorisation process requires that the Designated National Authority (DNA), which acts as the focal point for the CDM in host countries, confirms that projects meet country sustainable development criteria. Studies have highlighted some deficiencies in this process that need to be overcome in order to avoid negative social impacts, including:

- Limited capacity of DNAs to assess the quality of projects. DNAs are often limited in the extent to which they can check project documentation and/or visit project sites. Projects should comply with local laws which may or may not require social and environmental impact assessments. Even where they are required there is often limited capacity to carry out rigorous assessments.
- Poorly defined and implemented 'sustainable development criteria.' As part of the authorisation process under the CDM, DNAs need to make a judgement on whether projects meet nationally defined sustainable development criteria. These often lack detail, particularly on social impact issues such as impacts of projects on non-participants (i.e. those affected by projects but with no formal role in their implementation) (Olsen and Fenham, 2008).

It is unclear how this traditional understanding of ownership of carbon credits under the Kyoto

Protocol may fit with claims to benefits from REDD+ by non-state actors under international law. As discussed above, arguments could be made that existing international obligations in other treaties could give rise to claims to benefits under the UNFCCC. However, a future UNFCCC agreement on REDD+ could also defer decisions on benefit sharing and rights to benefits to national governments as a sovereign right or matter of national law.

Finally, the legal nature of tradable carbon credits as defined by international laws, domestic legislation in buyer countries (the US, for example¹⁰) or voluntary standards, could also have implications at the local level. The criteria that are currently under debate in the UNFCCC negotiations could be incorporated into the eligibility criteria for generating and trading REDD+ carbon credits. These include, for example, references to the need for REDD+ activities to 'facilitate sustainable development [and] reduce poverty.'¹¹ How these criteria are assessed is a matter of considerable debate and is likely to be highly variable between countries, as has been the case with the CDM (Disch, 2010). Who makes a determination of whether or not a REDD+ activity meets these safeguards

¹⁰ While these conditions do not affect the legal nature of REDD+ carbon credits in a future UNFCCC system or dictate what is a carbon credit in developing countries, the US is expected to be the largest market for REDD+ carbon credits. If a REDD+ activity is not carried out in accordance with these (and other) conditions, any carbon credit generated by that activity will not be recognized as a compliance grade carbon credit in the US system. The right to use the carbon credit to meet US law would not be granted to the carbon credit, significantly decreasing its commercial value.

¹¹ The Ad Hoc Working Group on Long-Term Cooperative Action under the UNFCCC draft decision titled "Policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries."

is still not clear, but looking again at the Kyoto Protocol for precedent, this could be the host country government (through a body like the DNA discussed above) and/or independent third party auditors. The skills of such auditors and the resources allocated to them to assess social impacts may also be important—in some projects they do not appear to have been identified even when standards are being implemented that focus on these issues (Peskest et al., 2010b).

5 Conclusions and recommendations

Efforts to develop REDD+ mechanisms over the last few years have, through the notion of carbon rights, introduced another layer of complexity to an already complicated debate about rights to land, forests and other natural resources in tropical developing countries. This paper has shown that in order to understand the various issues associated with carbon rights, it is important to be clear about the different legal concepts involved. The way in which carbon rights are interpreted is likely to vary between country contexts (e.g., common and civil law countries); with the form of existing national laws particularly relating to forests, land and other natural resources; and international laws which may influence the bundles of rights contained within tradable carbon credits or REDD+ regulations. The distinction between carbon as property and emissions trading rights; and between rights to benefit from REDD+ and rights to own and transfer REDD+ carbon credits, are key areas where more clarity could help move debates about rights and REDD+ forward.

Carbon rights are relevant in a REDD+ context because they can determine benefit sharing arrangements and which actors will face new

costs. They are also important for aligning REDD+ incentives with deforestation threats particularly in sub-national or project based approaches, which will have an impact on the effectiveness of REDD+ to reduce emissions. The relevance of carbon rights is likely to vary between different approaches to REDD+. This paper has broadly looked at issues within three different REDD+ scenarios:

1. **National accounting and implementation** where national governments would receive incentives in accordance with nationally implemented REDD+ activities, and with performance assessment linked to reduction of GHG emissions under a national reference level and a national MRV system.
2. **National accounting with sub-national or project implementation** where Governments are awarded carbon credits based on a national reference level and MRV system, and agree to pass these on to national non-governmental actors based on sub-national or project reference levels and potentially MRV systems. It is also possible that sub-national actors could be awarded carbon credits directly from the international level, but the difference with project approaches is that this occurs in the context of a national reference level and MRV system.
3. **Project based implementation and accounting** where projects have individual reference levels and MRV systems, and project implementers would trade carbon credits directly with international carbon markets and these will have been generated in relation to the project reference level.

It is only necessary to establish legal title to carbon emissions reductions and removals (tradable carbon credits) in the latter two

TABLE 3: LEGAL ISSUES SURROUNDING CARBON RIGHTS AT THE INTERNATIONAL AND NATIONAL LEVELS, AND THE POTENTIAL IMPLICATIONS ARISING FOR POOR PEOPLE

Legal issues	Pathways through which implications may arise	Opportunities
Carbon as property	<ul style="list-style-type: none"> Carbon property rights could follow rights to land, timber, soil or be separate from all of these, which will have an impact on how REDD+ activities and investments are structured. 	<ul style="list-style-type: none"> Implications in terms of which actors have rights to the benefits from carbon sequestration activities.
	<ul style="list-style-type: none"> Usufruct rights guide rights to own and trade carbon property 	<ul style="list-style-type: none"> Usufruct arrangements may already exist and enable REDD+ schemes to be developed in situations where most land is owned by the state May allow more direct community involvement in REDD+ schemes and the trading of carbon
	<ul style="list-style-type: none"> Investors often engage with community groups rather than individuals. They also rely on intermediary organisations. 	<ul style="list-style-type: none"> May help to increase access by poor people to benefits Group members could have additional benefits (e.g., catalysing other activities) Intermediaries may assist groups to get a fair deal.
	<ul style="list-style-type: none"> Countries could decide to treat REDD+ as a public good or devolve rights to local communities. 	<ul style="list-style-type: none"> Treatment as public good could be more efficient (reduces transaction costs)
	<ul style="list-style-type: none"> In many REDD+ schemes, clarity over land and forest tenure will be important 	<ul style="list-style-type: none"> In long term, clearer land tenure could improve security and environmental management
Emissions trading rules	<ul style="list-style-type: none"> Carbon rights can be defined in national regulations and/or contracts. 	<ul style="list-style-type: none"> Regulations can help reduce transaction costs and decrease risk for investors Contracts may be more flexible and quicker to establish
	<ul style="list-style-type: none"> In regulated approaches, government authorisation of non-state actors is likely to be important. Contracts may be more flexible and quicker to establish 	<ul style="list-style-type: none"> May improve oversight at the national level of all project based REDD+
	<ul style="list-style-type: none"> Definition of carbon credits in national laws may determine the scope of rights associated with their creation and sale. (e.g., treatment as non-timber forest products or natural resources) 	<ul style="list-style-type: none"> Could affect who can claim benefits—for example, in some jurisdictions holders of rights change if carbon is treated as a natural resource or an ecosystem service.
	<ul style="list-style-type: none"> Procedural rights exist in international treaties and ‘buyer’ countries which define rights to benefits. 	<ul style="list-style-type: none"> Can influence the procedures used in all REDD+ approaches Procedural rights easier to negotiate at international level

Risks	Solutions
<ul style="list-style-type: none"> Poor people are often landless meaning that in practice the barriers for direct ownership and trading of carbon credits are likely to be high, particularly for poorer community members. Issues in terms of alignment of incentives with threats and risks to communities from governments (e.g., if community has rights to land but government has rights to trees). 	<ul style="list-style-type: none"> Land tenure reform which devolves rights to land and trees to local communities
<ul style="list-style-type: none"> Existing usufruct arrangements could act as a barrier to investment and/or lead to greater restrictions on those holding usufruct rights (e.g., if these are seen to lead to degradation) Often weakly enforced In practice the barriers for direct ownership and trading of carbon credit are likely to be high, particularly for poorer community members. 	<ul style="list-style-type: none"> Ensuring usufruct rights are enforced
<ul style="list-style-type: none"> Organization and governance is important (e.g., high membership fees, gender/ethnicity prejudice etc. can be exclusive). The capacity and integrity of intermediaries (knowledge of REDD+; negotiation; governance etc.) to represent community interests is important. 	<ul style="list-style-type: none"> Provide resources to independent third party organisations. Careful analysis of group governance arrangements Targeting poorer group members (e.g., through means testing)
<ul style="list-style-type: none"> Treating as a public good could reverse decentralisation processes and result in local communities not receiving benefits distributed by governments 	<ul style="list-style-type: none"> Could possibly be balanced by international criteria on benefit sharing
<ul style="list-style-type: none"> Land titling processes are often weak in terms of recognising the rights of the poor Conflict arising from tensions between statutory and customary law 	<ul style="list-style-type: none"> Processes can be tailored to ensure inclusion of vulnerable groups (e.g., women)
<ul style="list-style-type: none"> Can include restrictions on land management options over long periods Contracting processes can be coercive and communities may lack information to make decisions 	<ul style="list-style-type: none"> Can include specific provisions for targeting poor people Can specify dispute resolution and compensation procedures Procedures for contract negotiation can be stipulated in international standards
<ul style="list-style-type: none"> Authorisation process is important, e.g., the capacity of governments to conduct social impact assessments. 	<ul style="list-style-type: none"> Provide resources to government department implementing such processes
<ul style="list-style-type: none"> May affect how credits are treated, e.g., in terms of taxes, which will affect economic opportunities through the impacts on incentives for investment. 	<ul style="list-style-type: none"> Careful analysis of how different definitions affect who can own and trade carbon credits and their treatment under existing laws
<ul style="list-style-type: none"> Procedural rights are of limited effectiveness compared to more substantive rights. Enforcement is weak and there are few international mechanisms for directly supporting non-state actors. 	<ul style="list-style-type: none"> Include procedural and substantive rights in international agreements e.g., as found in the safeguards being discussed at the moment. Development of systems to support rights of non-state actors directly at the international level

cases—how this actually occurs will depend on the national REDD+ legislation and on the interpretation of existing national laws. In the first case, it is more likely that governments would hold the title to emissions reductions/removals. However, benefit sharing systems would still need to be developed and implemented effectively in order to ensure that payments from the sale of carbon meet the opportunity costs associated with any changes in policies to achieve REDD+, and to ensure that REDD+ is equitable.

As a new form of property which is associated with potentially large financial benefits, carbon stored or sequestered in tropical forests presents considerable opportunities and risks for poor people. Opportunities are most likely to be realized where they have clear ownership rights over carbon, the right to trade, and support to access carbon markets. Alternatively they may benefit indirectly via arrangements defined in existing policies or new REDD+ regulations that specify how any financial benefits should be shared. However, the potential risks associated with carbon rights are considerable—issues may arise in relation to how carbon ‘credits’ are defined; incentives to clarify land tenure conflicting with customary systems; and the ‘re-centralization’ of forest governance if governments attempt to nationalize the ownership of carbon in order to benefit from REDD+. The rights and responsibilities associated with emissions trading may also introduce risks such as possible restrictions on land use, who is eligible to participate, compensation and dispute resolution mechanisms and weak authorization processes for REDD+ activities that do not adequately support procedural rights. .

Many of these issues are not new. In most countries similar processes have been underway

for many years linked to land and forest rights, and REDD+ will have to overcome similar challenges that have been faced in legal reform processes. The incentive of REDD+ adds another layer of complexity and pressure to speed up such processes. The key to reaching an equitable outcome will be in ensuring that the incentive effect of REDD+ on rights regimes acts to increase the security of poor people over carbon property and improve the design and implementation of the rules associated trading and benefit sharing.

5.1 Recommendations for navigating carbon rights

Requirements for ‘pro-poor’ carbon rights in national level regulations and contracts

1. Ensure carbon rights are effectively established in national regulations. Rather than allowing unclear situations to be potentially exploited at the expense of local benefits as REDD+ develops, it is likely to be increasingly important for carbon rights to be defined in national regulations (Cotula and Mayers, 2009). In order to increase the likelihood of poor people benefitting from REDD+, key principles that need to be followed in the establishment of REDD+ regulations include:
 - Links between REDD+ regulations and other national and international legal instruments that protect the rights of poor and vulnerable people;
 - Clear definition of what is meant by REDD+ benefits and revenue sharing arrangements that at a minimum cover costs for poor and vulnerable people involved in or affected by REDD+. Revenue sharing rules should cover both situations where people own and can directly trade carbon, and where they are

entitled to financial benefits from the sale of carbon by others;

- Clear definition of ‘communities’ or individual producers;
- Explicit reference to the duration of rights;
- Explicit reference to levels of compensation provided if losses are incurred and how such compensation will be provided; and
- Inclusion of provisions for dispute resolution that can be accessed by those actors involved in and affected by REDD+ activities.

2. Many REDD+ schemes may require participants to have clear legal title to land and forests. Many legal analyses support such a requirement—e.g., Kennett et al.(2005) states “The substantive definition of sequestration rights and associated responsibilities should be designed to reduce the risk of overlap and conflict with other property interests and associated land uses.” This could increase incentives to speed up and improve formal land titling processes, which could have long term benefits in terms of improved tenure security and environmental management. However, requirements for legal title may also prevent poor people from participating in REDD+ projects and programs, and could increase risks for poor people if they are not properly included in such processes. In areas where land ownership is contested, legal support will be needed to help communities defend their rights. Rural land titling programs can be designed in ways to enhance participation. Pro-poor land registration can relate to much more limited but important things than full titling. For

example, strengthening tenancy agreements can provide for relatively secure temporary access to land and create more stable incomes for the rural poor. Simplification of procedures for registration may also make it more affordable for smallholders to register their land (UNDP, 2008).

3. While in many countries there are often conflicts and overlaps between customary and statutory rights that cannot necessarily be mediated through contracts and regulations, efforts should be made to integrate customary rights in the determination of rights to benefits from REDD+ and trading carbon credits. The recognition of community rights may also reduce costs and help to preserve complex systems of tenure. Legal innovations such as the statutory recognition that does not require formal documentation of land rights (e.g., in parts of Mozambique and Tanzania) and systems for recording layered systems of rights may prove promising for REDD+ (Knox et al., 2010).
4. Parties to sequestration transactions should have considerable flexibility to determine the nature and extent of their respective rights and obligations relating to land use. However, sequestration rights and associated obligations relating to land use should ‘run with the land’, binding subsequent purchasers and allowing parties to sequestration transactions to transfer their respective interests in carbon assets (Kennett et al., 2005).
5. Significant resources will need to be allocated to strengthening institutions in a number of areas, including:
 - Enhancing access to legal systems relating to the enforcement of rights;

- Provision of information on rights to REDD+ benefits and tradable carbon credits to local communities affected by REDD+ projects or programs. This should include information relating to the points in the following section;
 - Building the technical capacities of intermediaries involved in negotiating over REDD+ benefits. It is important to consider carefully who is the contracting authority working with communities involved in REDD+—are they representative of community interests? Do they have governance structures in place which enable individual producers to represent their interests in decision making processes?; and
 - Supporting independent entities.
6. Where losses are incurred, provisions need to be included in laws or contracts for providing compensation. This will need to be accompanied by rigorous processes (and resources) for determining appropriate levels of compensation.
 7. The substantive and procedural components of the property rights regime and the broader legal framework should be designed to reduce legal uncertainty and other sources of transaction costs (Kennett et al., 2005).
 8. In national approaches to REDD+ which do not distribute finance based on rights to carbon, decisions about how distribution occurs will need to be negotiated between government and other actors. This process will need to start early and will require transparent public financial management in order to avoid financial incentives having a negative impact on rights to land and forests at local levels.
- Key steps for establishing ownership of carbon rights at the local level***
- When NGOs, communities and their legal advisors establish the ownership of carbon rights of a REDD+ project, they should clarify the following under local laws:
1. Whether or not there are any domestic laws, regulations, or policies that define REDD+ rights. This may include the legal nature and ownership of carbon credits or forest carbon credits for carbon markets.
 2. A determination needs to be made on who has what sort of rights to land and forests under domestic law. This should include analysis on the source of these rights along with the scope of the rights. The source may include the constitution, land law, and/or forest law. The scope of rights may include ownership, use, and/or access to land and forest. From this, it should be possible to determine if carbon rights fall under the bundle of rights held by local communities or indigenous peoples, and how these can be claimed and evidenced under local law. The actors within communities (e.g., formal community groups), who can benefit needs to be set out clearly, as well as how any affected non-participants may be compensated if necessary. It will also be important to establish clear and fair systems for governing the distribution of rights.
 3. What, if anything, needs to be done to protect and maintain unencumbered legal title to carbon rights. This may include buying the land, leasing the land, registering

certain rights over the land, coming to an agreement with indigenous land owners or indigenous groups that may have rights over the land or forests, or restricting the use of the land and/or forests to certain purposes for a given amount of time. It is important to establish the duration of rights in REDD+ projects or programs, and any restricts on land/forest use over the period.

4. Whether or not there are any restrictions placed on these rights (e.g., restrictions against sale, lease, or mortgages over a forest or land),¹²
5. Whether compensation is due if the rights are taken away or restricted in any way. This is particularly important if governments attempt to claim REDD+ benefits to the exclusion of local communities.
6. Establish who bears risks of failure and dispute resolution processes. Clarity is needed on whether and how any risks borne by intermediaries may be transferred to communities.

¹² In Brazil, the law regulating the concession and use of public forests explicitly prohibits the commercialization of any GHG benefits related to the management of that forest.

6 References

Background papers for this study

- Chagas, T., 2011. Forest carbon rights in Brazil. Case study background paper prepared for this study.
- Damtie, M., 2010. Forest carbon rights in Ethiopia. Case study background paper prepared for this study.
- Felliciani, F., 2010. Forest carbon rights in Mexico. Case study background paper prepared for this study.
- Marthen, A., 2011. Forest carbon rights in Indonesia. Case study background paper prepared for this study.
- Navarro, G., 2011. Forest carbon rights in Costa Rica. Case study background paper prepared for this study.
- Osafo, Y., 2011. Forest carbon rights in Ghana. Case study background paper prepared for this study.
- O'Sullivan, R., 2010. Rights to REDD+ Understanding rights to benefit and carbon credits. Background paper produced by Climate Focus for REDD-net/World Bank.

References

- Asare, R. A., 2010. REDD opportunities scoping exercise: implications of the legal and policy framework for tree and forest carbon in Ghana. Forest Trends, Washington, D.C.
- Ayine, D., 2008. Social Responsibility Agreements in Ghana's Forestry Sector. Developing Legal Tools for Citizen Empowerment Series, IIED, London.
- Baker & McKenzie and Buddle Findlay, 2008. *Mechanisms for Recognising Rights to Carbon Sequestered by Land-based Activities in New Zealand*. Report Prepared for the NZ Ministry of Agriculture and Forestry. Wellington, New Zealand: New Zealand Ministry of Agriculture and Forestry.
- Boyd, E., May, P., Chang, M., Veiga, F.C., 2007. Exploring socioeconomic impacts of forest based mitigation projects: Lessons from Brazil and Bolivia. *Environmental Science and Policy* 10(5), 419-433.
- Brown, David, Frances Seymour, and Leo Peskett, 2008. How do we achieve REDD+ co-benefits and avoid doing harm? In *Moving ahead with REDD:*

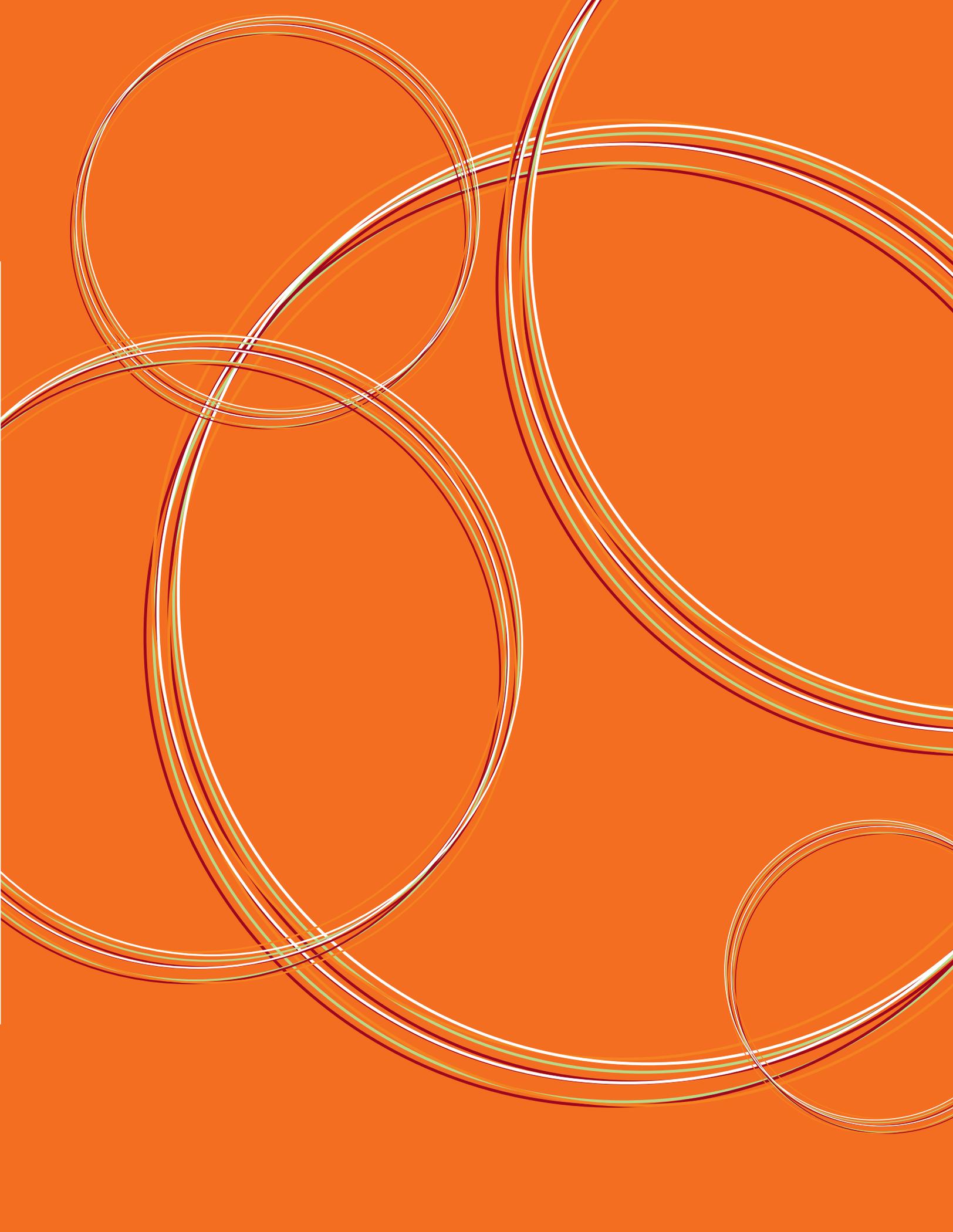
issues, options and implications, ed. A. Angelsen. Bogor, Indonesia: Centre for International Forestry Research.

- Chagas, T., 2009 'Non-state actors and REDD', background paper produced for the REDD Options Assessment Report. Available at www.redd-oar.org.
- CIEL, 2009. 'REDD Legal issues: indigenous peoples and local communities' background paper produced for the REDD Options Assessment Report. Available at www.redd-oar.org.
- Colchester, M., Jiwan, N., Sirait, M., Firdaus, A.Y., Surambo, A. and Pane, H., 2006. *Promised Land: Palm Oil and Land Acquisition in Indonesia—Implications for local communities and indigenous peoples*, Moreton-in-Marsh, Forest Peoples Programme, Perkumpulan Sawit Watch, HuMA and the World Agroforestry Centre.
- Costenbader, J., 2009. Legal frameworks for REDD: design and implementation at the national level. IUCN, Gland, Switzerland.

- Cotula, L. and Mayers, J., 2009. Tenure and REDD: start point or afterthought? IIED, London.
- Cox, G. and Peskett, L., 2010. Commodifying carbon to reduce deforestation: lessons from New Zealand. ODI Background Note.
- Disch, D., 2010. A comparative analysis of the 'development dividend' of Clean Development Mechanism projects in six host countries. *Climate and Development*, Volume 2, Number 1, 2010, pp. 50-64(15).
- Dunlop, J., 2009. REDD, Tenure and Local Communities: A Study from Aceh, Indonesia. International Development Law Organization, Rome, Italy.
- FCPF Costa Rica, 2010. *Costa Rica Readiness Preparation Proposal*. San Jose, Costa Rica: Government of Costa Rica. Available at: <http://www.forestcarbonpartnership.org/fcp/CR>.
- Firmin-Sellers, K. and Sellers, P., (1999) Expected failures and unexpected successes of land titling in Africa. *World Development* 27(7) 1115–1128.

- FPP (Forest Peoples Programme), 2009. *Views on issues relating to indigenous peoples and local communities for the development and application of methodologies*. Submission to UNFCCC Subsidiary Body for Scientific and Technological Advice (SBSTA). Morton on the Marsh U.K.: Forest Peoples Programme.
- Gould, K., Miller, M. and Wilder, M., 2008. 'Legislative approaches to forest sinks in Australia and New Zealand: working models for other jurisdictions?' in C. Streck, R. O'Sullivan, T. Janson-Smith and R. Tarasofsky (eds), *Climate Change and Forests: Emerging Policy and Market Opportunities*. London: Chatham House.
- Hepburn, S., 2009. "Carbon Rights as New Property: The benefits of statutory verification." *Sydney L. Rev.* 31: 239.
- Kennett, S. A, and A. J Kwasiak, 2005. Property Rights and the Legal Framework for Carbon Sequestration on Agricultural Land. *Ottawa L. Rev.* 37: 171.
- Knox, A, Caron, C., Goldstein, A., and Miner, J., 2010. The Interface of Land and Natural Resource Tenure and Climate Change Mitigation Strategies: Challenges and Options. Paper prepared for the Expert Meeting on Land Tenure Issues for Implementing Climate Change Mitigation Policies in the AFOLU sectors. Sponsored by the U.N. Food and Agriculture Organization (FAO), the Mitigation of Climate Change in Agriculture (MICCA) Project and the UN-REDD Programme. Rome. 15-17 November 2010.
- Mayers, J., Bila, A., Khaukha, S., Opoku, K. and Simwela, W., 2006. Forest governance and social justice: practical tactics from a learning group approach in Africa. *International Forestry Review* 8(2) 201–210.
- McDermott, M.H., 2009. Equity first or later? How U.S. community-based forestry distributes benefits. *International Forestry Review* 11(2), 207-220.
- McDermott, M.H., Schreckenber, K., 2009. Equity in community forestry—insights from North and South. *International Forestry Review* 11(2), 157-170.
- McDougall, C., Prabhu, R., Fisher, R., 2007. Discussion and conclusions, in: Fisher, R., Prabhu, R., McDougall, C., (eds). *Adaptive Collaborative Management of Community Forests in Asia. Experiences from Nepal, Indonesia and the Philippines*, pp. 206-225. CIFOR, Bogor, Indonesia.
- Meinzen-Dick, R., Di Gregorio, M. and Dohrn, S., 2008. Pro-poor land tenure and Democratic Governance. Discussion paper 3, Oslo Governance Centre, UNDP.
- Meridian, 2009. Reducing Emissions from Deforestation and Forest Degradation (REDD): An Options Assessment Report." Prepared for the Government of Norway, by Arild Angelsen, Sandra Brown, Cyril Loisel, Leo Peskett, Charlotte Streck, and Daniel Zarin. Available at: <http://www.REDD-OAR.org>.
- Milner-White, G., 2007. "The Legal Implications of Climate Change in New Zealand for the Forestry Industry", 11 *New Zealand Journal of Environmental Law* 141.
- Myers-Madeira, E., 2009. *REDD in Design Assessment of Planned First-Generation Activities in Indonesia*. RFF Discussion Paper. Washington D.C.: Resources for the Future.
- Norton Rose, 2010. *Forest carbon rights in REDD+ countries: a snapshot of Africa*. London U.K.: Norton Rose.
- Olsen, K. and Fenhann, J., 2008. Sustainable development benefits of clean development mechanism projects: A new methodology for sustainability assessment based on text analysis of the project design documents submitted for validation. *Energy Policy*, Volume 36, Issue 8, 2819-2830.
- Pagdee, A., Kim, Y., Daugherty, P.J., 2006. What makes community forest management successful: a meta-study from community forests throughout the world. *Society and Natural Resources* 19(1), 33–52.
- Phelps, J., Webb, E. L., and Agrawal, A., 2010a. REDD+: when the stakes are high. Science E-Letter response to Palmer, C. 2010. REDD+ property rights and liability. Available at: <http://www.sciencemag.org/cgi/eletters/328/5982/1105-a?ck=nck>.
- Phelps, J., Webb, E.L., Agrawal, A., 2010b. Does REDD+ Threaten to Recentralize Forest Governance? *Science* 16 April 2010: Vol. 328. no. 5976, pp. 312 – 313.

- Peskett, L., Brown, J. and Schreckenber, K., 2010a. Carbon offsets for forestry and bioenergy: researching opportunities for poor rural communities. ODI Research Report.
- Peskett, L., Luttrell, C., and Iwata, M., 2007. Can standards for voluntary carbon offsets ensure development benefits? ODI forestry briefing 14.
- Peskett, L., Schreckenber, K., and Brown, J., 2010b. Institutional approaches for carbon financing in the forest sector: Learning lessons for REDD+ from forest carbon projects in Uganda. *Environmental Science and Policy* 14/2: 216-229.
- Powell, I., A. White, and N. Landell-Mills, 2002. *Developing Markets for the Ecosystem Services of Forests*. Washington D.C.: Forest Trends.
- RRI, 2009. Tropical Forest Tenure Assessment: Trends, Challenges and Opportunities. RRI and ITTO.
- Sayer J., et al., 2008. Local Rights and Tenure for Forests; Opportunity or Threat for Conservation, Rights and Resources Initiative, Washington D.C.
- Streck, Charlotte, and Robert O'Sullivan, 2007. *Legal tools for the ENCOFOR Programme*. Austria: Joanneum Research.
- Sunderlin, W.D., Hatcher, J., and Liddle, M., 2008. From Exclusion to Ownership? Challenges and opportunities in advancing forest tenure reform, Rights and Resources Initiative 29, Washington D.C.
- Swallow, Brent, and Ruth Meinzen-Dick, 2009. Payment for Environmental Services: Interactions with Property Rights and Collective Action. In *Institutions and Sustainability*, ed. Volker Beckmann and Martina Padmanabhan, 243-265. Dordrecht: Springer Netherlands. Available at: <http://www.springerlink.com/content/hj52458182xmr768/export-citation/>.
- Takacs, D., 2009. Forest Carbon: Law and Property Rights. Conservation International, Arlington VA, U.S.
- TCG UN-REDD, 2009. *Legal and Institutional Foundations for the National Implementation of REDD Lessons from Early Experience in Developing and Developed Countries*. Poliy Brief. Geneva, Switzerland: Terrestrial Carbon Group and UN-REDD.
- Telles do Valle, R. and Yamada, E., 2009. Brasil: Titularidade Indígena sobre Créditos de Carbono gerados por Atividades Florestais em Terras Indígenas.
- Thompson, A., and Campbell-Watt, R., 2004. Carbon Rights-Development of the Legal Framework for a Trading Market. *J. Energy Nat. Resources L.* 22: 465.
- UNDP (United Nations Development Programme), 2008. *Pro-poor land tenure reform and democratic governance*. New York U.S.: United Nations Development Programme. www.undp.org/oslocentre.
- World Bank, 2001. *World Development Report 2000/2001: Attacking Poverty*. Oxford University Press, Oxford.
- WRI, 2005. World Resources 2005: The Wealth of the Poor: Managing ecosystems to fight poverty, World Resources Institute, Washington, D.C.



REDD
net



THE WORLD BANK

1818 H Street, NW
Washington, D.C. 20433 USA
Telephone: (202) 473-1000
Internet: www.worldbank.org/sdcc
Email: socialdevelopment@worldbank.org.

