

## A Report for the Secretariat of the CBD

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# Challenges for a business case for high-biodiversity REDD projects and schemes

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Version 1.2

February 2009

## Introduction

This report was commissioned by the Secretariat of the Convention on Biological Diversity (CBD) as part of its efforts to implement decision IX/5 3(b), requesting the Executive Secretary to support Parties efforts to address reducing emissions from deforestation and forest degradation in developing countries. The report explores options for market payments towards 'high biodiversity' activities within efforts for Reducing Emissions from Deforestation and Forest Degradation (REDD).

The CBD contributes to the discussion on a possible mechanisms for Reducing Emissions from Deforestation and Forest Degradation (REDD) through various decisions of the ninth meeting of the Conference of the Parties (COP 9). Decisions IX/5 on forest biodiversity and IX/16 on biodiversity and climate change emphasize the potentially positive contributions of REDD to the conservation and sustainable use of biodiversity, while also cautioning against potential risks. COP 9 invited Parties to ensure that possible actions for reducing emissions from deforestation and forest degradation:

- do not run counter to the objectives of the Convention on Biological Diversity and the implementation of the programme of work on forest biodiversity; but support the implementation of the programme of work,
- provide benefits for forest biodiversity, and, where possible, to indigenous and local communities,
- involve biodiversity experts including holders of traditional forest-related knowledge,
- and respect the rights of indigenous and local communities in accordance with national laws and applicable international obligations

Furthermore, COP 9 requested the Executive Secretary of the CBD to support Parties in their efforts towards reducing emissions from deforestation and forest degradation. To this end, the CBD Secretariat is involved in the activities of the Collaborative Partnership on Forests (CPF), the Forest Carbon Partnership Facility (FCPF), and the UN REDD Programme, amongst others.

This report is circulated in the form it was received by the CBD Secretariat, for the information of National Focal Points, and other interested individuals and organizations. The views expressed in the report are those of the authors and do not necessarily reflect those of the Secretariat or the Parties to the Convention.

The designations employed and the presentation of material in this report not imply the expression of any opinion whatsoever on the part of the Secretariat of the Convention on Biological Diversity concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

## **Challenges for a business case for high-biodiversity REDD projects and schemes**

A report prepared for the Secretariat of the Convention for Biological Diversity (SCBD)

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## Executive Summary

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Carbon finance through Reduced Emissions from Deforestation and Degradation (REDD) schemes in a forthcoming climate regime has the potential to mobilise funds for forest conservation several orders of magnitude above traditional existing conservation funding. A well-designed REDD mechanism in itself might therefore convey significant biodiversity benefits but may not be geared towards maximising these benefits. Is there a business case for promoting REDD activities and schemes with above-average or exceptional biodiversity benefits?

Within current carbon markets, voluntary markets do provide a strong commercial incentive to invest in and buy offset credits from projects with specific biodiversity and social benefits. Such credits achieve much higher prices and enjoy significantly market access in voluntary markets. This is mainly because of the reputational and CSR benefits for corporate buyers that are associated with being perceived as promoting biodiversity conservation and sustainable development. The case is similar for individual offset buyers. Forestry and forest conservation projects make up a sizeable portion of voluntary carbon markets (about 20% of all transactions), and this provides scope for real biodiversity benefits. On the other hand, current voluntary markets are of a relatively small overall size and reach only a few percent of the volume of regulatory carbon markets.

The above picture is very different for regulatory carbon markets (i.e. Kyoto markets and regional regulatory markets) where forestry credits are virtually non-existent because of very restrictive regulations regarding the CDM. The main motivation of buyers in regulatory markets is to comply with regulations, and they are therefore mainly concerned with minimising their cost of compliance, i.e. the price of credits. Achieving specific co-benefits through purchasing certain credits does not convey any clear advantages to these buyers. Despite some previously declared intentions, even governments (the ultimate buyers of regulatory carbon credits) have themselves not purchased credits with particular characteristics in any significant volume. This non-differentiated demand may change in the near future when, e.g., regulations regarding the import of CDM credits into the European Emission Trading Scheme (EU ETS) may become more restrictive; however, even certain such stipulations are unlikely to fundamentally change the business case for “project-blind” compliance strategies.

Although voluntary markets will almost certainly continue to grow and exist in parallel to future international regulatory (REDD and other) markets, incentives for pro-biodiversity REDD schemes at the necessary scale to make a global impact will need to arise from regulatory markets. There are, in principle, several main tools or mechanisms to create such a business case which could be developed at the international or national level.

The most obvious starting point would be the integration of standards in an international REDD agreement that limit eligible activities to those which convey specific biodiversity benefits. However, very specific or restrictive standards would most likely not be acceptable to potential host countries, and a lengthy debate about such standards risks delaying or even jeopardising agreement on REDD as such. Furthermore, any increase in transaction or implementation costs for REDD projects will reduce the overall scale of activities and supply of credits. Nevertheless, certain minimum standards or safeguards to

prevent negative biodiversity impacts seem feasible, and these could be coupled with certain reporting and monitoring requirements, in addition to voluntary national-level “quality standards”.

Another potentially very effective “market mechanism” would be to create preferred demand for high-biodiversity REDD credits. Demand-driven commercial advantages could be achieved either through voluntarily declared purchase preferences by developed country governments themselves, or by regulating which REDD credits can be used for compliance by industries in national or regional cap-and-trade schemes. In principle, co-funding at the level of buying governments could even enable price premiums for high-biodiversity credits which could, in turn, help enhance the supply of such credits. In addition, purchasing REDD credits from specific high-biodiversity activities or countries could be a relatively cost-efficient way for developed nations to promote their own international reputation and their standing with domestic voters. Nevertheless, the main limitation with these approaches is that they would convey additional costs to buying governments or industries which may be difficult to defend in the domestic context.

Rather than working through preferential demand, the supply of high-biodiversity credits could be increased by providing targeted international or national-level co-funding for specific REDD activities or locations. Used efficiently, such co-funding could channel core carbon finance towards activities and regions that produce above-average co-benefits. It would be important to avoid “redundancy” in the sense of not funding REDD activities in forest areas where carbon incentives alone would already lead to effective protection. In addition to monetary incentives, support in the form of capacity building, assistance in land-use planning in host countries etc. could promote high-biodiversity REDD. On a different level, international and civil society vigilance is likely to also push many host countries towards implementing or facilitating REDD activities with certain co-benefits or to avoid negative environmental and social impacts.

At the national or project level, options could exist to reward the non-carbon benefits of forest conservation through broader payment for ecosystem service (PES) schemes, e.g. for watershed protection. Bundling of, e.g., biodiversity and carbon payments or offsets could support a pro-biodiversity business case; however, additionality questions may arise if several such payments are directed at the same geographic area or activity. A number of examples already exist where PES schemes promote biodiversity protection and carbon storage in forests, where national legislation requires “biodiversity offsetting” for certain land-use activities, or where specific pro-biodiversity forest conservation activities are subsidised. Co-certification of multiple benefit projects is also rapidly gaining ground as international markets for these mature and buyer demand becomes more sophisticated.

By far the most important condition for REDD to deliver biodiversity benefits and for the private sector to invest in pertinent activities, however, will be an efficient and effective incentive framework for REDD itself. This means that there needs to be a reliable policy framework for REDD and its effective integration into international carbon markets to provide the necessary level of funding and to mobilise private-sector expertise and risk-taking ability. It also means that developed countries adopt ambitious emission targets to create strong demand for carbon credits and that they allow the use of REDD credits towards meeting these targets. Furthermore, a REDD scheme needs to be practicable,

avoiding excessive transaction costs, and it needs to provide an attractive framework for private-sector investment. In this context, incentives at the project or sub-national level will be essential to reduce investment and carbon credit delivery risks. Finally, host countries need to acquire the capacity and create the governance framework to both implement national-level REDD policies and to enable and to promote sub-national and non-governmental REDD activities. This includes reducing corruption and inefficiencies in the forestry and land-use sectors and creating the institutional capacity to create effective incentives on the ground.

The priority – for biodiversity and climate change mitigation – is to agree on and implement a workable REDD scheme internationally and within host countries in as short a timeframe as possible, with safeguards against negative biodiversity impacts, and flexibility for the optional maximization of biodiversity benefits at national or project level. Fundamentally, creating a strong business case for REDD will be the best and most certain way of creating a business case for high-biodiversity REDD.

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## 1. Background

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The idea of creating financial incentives for biodiversity conservation – or for environmental stewardship more broadly – has been around for decades. The increasing popularity of the notion to couple the environmental agenda to economic and commercial monetary incentives is based on the recognition that more conventional approaches, such as public funding and regulation, have only delivered limited results. This is particularly true for tropical and developing countries where much of the world's biodiversity is concentrated and where environmental destruction and the loss of biological richness have been most severe in recent times. The drive towards more innovative and market-based environmental protection has thus occurred in the context of an accelerating global environmental crisis, compounded by the limited capacity of classic regulatory regimes, both on the global level and within individual countries.

One manifestation of the increasing framing of the natural environment in terms derived from market economics is the term “ecosystem services” (or “environmental services”) and the idea that these should be valued in monetary terms through “payments for environmental services” (PES). Biodiversity is commonly recognised as one of several key ecosystem services, and it can furthermore be a foundation of other services, including, among others, carbon sequestration, erosion control, water purification and flow regulation, medicinal substances, and landscape beauty. In many cases, these services could not be provided without the presence of a diversity of species and ecosystems, i.e. biodiversity.

Forests are in many ways an ecosystem type that exemplifies the provision of multiple vital ecosystem services. This significance of forests has been recognised on a local, regional, and global level by the central place they occupy in a number of environmental treaties and regulations. For example, they are seen as a focal area to achieve synergies between the three Rio Conventions (Fehse, 2008a, Ebeling et al., 2008b). At least as important, in terms of their environmental valuation in economic terms, is the fact that forests are moving centre stage in evolving and emerging environmental markets for ecosystem services. The most prominent example are carbon markets and related policies which build upon the key role that forests play in global carbon cycles and their influence on planetary climate change. Carbon markets have emerged very much in the context of forest conservation and reforestation, and the concept of “carbon offsets” until today, for many is synonymous with the planting of trees or their protection.

However, forests and their destruction – contributing around 20% to current total anthropogenic greenhouse gas (GHG) emissions – not only influence global climate change. They are similarly important in their role for biodiversity protection, harbouring at least 50% of the global terrestrial richness in species, mainly in the tropics. It is therefore only logical to consider how the mitigation of global greenhouse gas emissions can, at the same time, promote protection of forest-based biodiversity. One central theme in current political and market developments is Reducing Emissions from Deforestation and Degradation (REDD). Under this label the protection of tropical forests is being introduced

and negotiated as a key component of forthcoming climate regimes, scheduled to replace the current Kyoto Protocol after 2012.

This report aims to investigate how the biodiversity conservation and climate change mitigation agendas can be linked in ways compatible with current and forthcoming markets for ecosystem services. Is there a business case for high-biodiversity REDD projects and schemes? The main analytical focus here is on carbon markets, considering that these are by far the most sophisticated markets for environmental services and also, at present, comprise the vast majority of related financial transactions. In addition, however, it is important to consider how synergies can be promoted where they exist and promoted where they have a significant potential to develop – all with a view towards establishing a business case for high-biodiversity REDD. In doing this, not only carbon markets need to be considered but similarly other ES markets and payment schemes specifically focusing on biodiversity conservation and restoration are part of the equation.

Many open questions still exist regarding the current form of a REDD agreement, including uncertainties of how such a scheme may or may not be linked to international regulatory carbon markets. Although it is possible that negotiators might opt for an entirely non-market solution for financing REDD, or for one primarily relying on a dedicated international fund, most indications are that carbon markets will play a central role because of their proven ability to mobilise private sector capital and lead to efficient investments. Furthermore, it is, as of yet, undecided whether REDD crediting (or payments) will occur at the national level in host countries or whether there is scope for direct rewards to sub-national or project-level activities. Many arguments and conclusions of this report could be applied to either of these scenarios, although most experiences with currently existing carbon markets obviously draw on project-based emission reduction activities. Whether or not a business case for high-biodiversity REDD in a national-level crediting scheme would depend to a large degree on the domestic incentive framework created by the host-country. In general, there is a real risk that any “transmission” mechanism between international markets and on-the-ground implementation would lessen incentives for private investors, especially in the context of weak or intransparent governance structures.

During the entire discussion of how to promote a commercial case for channelling investment into those REDD activities - among the total of REDD projects and schemes - that have above-average biodiversity benefits, it is essential that one fundamental principle is not overlooked: No matter how many approaches are worked out and lobbied for during the ongoing REDD negotiations, they will not promote biodiversity conservation if they risk making the overall REDD scheme significantly less efficient – or even slowing down or derailing the international agreement process. The priority – for biodiversity and climate change mitigation – is to agree on a workable REDD scheme internationally and start implementing it on the ground as soon as possible, in order to protect the rapidly vanishing richness (and carbon stocks) of tropical forests.

For this report, some of the most recent literature in the field has been reviewed and a number of market and policy experts have been interviewed in person and over the phone. These interview sources are not specifically cited throughout the text (for confidentiality reasons) but a list of interviewees can be found in the Annex. In addition, we draw on primary data from several dedicated EcoSecurities’ surveys of forestry carbon

offset buyers and EcoSecurities' insights from daily interactions with buyers on regulatory and voluntary markets.

In a first step (Chapter 2), this report lays out how current carbon markets function and what current trends suggest for their future shape. This includes both regulatory and voluntary markets, as well as several regional (non-Kyoto) markets that can currently be observed as emerging. The role of forestry in these markets is discussed in specific detail. In a second step (Chapter 3), the business case for REDD projects and schemes that promote biodiversity ("high-biodiversity REDD") is scrutinised. Several types of perceived benefits by business actors are analysed, such as reputational, price, or market access benefits, focusing on participants in voluntary and regulatory carbon markets. The next chapter (Chapter 4) elaborates and discusses several possible mechanisms for supporting the high-biodiversity REDD business case. This includes approaches on the international, national, and project level. Chapter 5 reviews some examples of currently existing tools and schemes, including pertinent standards, private and public sector funding initiatives, and individual projects. Finally, in Chapter 6, conclusions from the preceding analysis are drawn and possible strategies are suggested for promoting the biodiversity case in forthcoming REDD schemes and markets.

## 2. Forest conservation and current carbon markets

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This chapter lays out the various aspects of current and emerging regulatory and voluntary carbon markets and the role that forestry plays in them. This discussion provides some context for the remainder of the chapter, but it also helps to understand the important underlying principles along which the different carbon markets function and what this might mean for REDD. The starting point, therefore, is an introduction into the logic and functioning of regulatory carbon markets, and their counterpart, voluntary carbon markets. All of this provides the starting point to the subsequent discussion about the business case for a very specific sub-section of current and future carbon markets, high-biodiversity REDD.

### 2.1. Brief introduction to carbon markets

Before turning to forestry carbon markets in general, and REDD markets in particular, this section focuses on laying out the underlying principles, current status, and emerging trends of various carbon markets.

#### 2.1.1. *Underlying principles of carbon markets*

Carbon markets are fundamentally similar to markets for any other commodity, although they have some particular characteristics. The commodity traded on these markets is measured in tons of carbon dioxide-equivalent, **CO<sub>2</sub>e** (CO<sub>2</sub> being the main anthropogenic greenhouse gas), and they are therefore generally referred to as “carbon markets”. One of the particularities of carbon markets is the intangible nature of their main traded product, “carbon”, which is basically defined and created through rules and regulations (be they voluntary or based on laws and formal agreements). Another defining feature is the extremely important role of regulation in shaping supply, demand, and the trading framework on these markets – public regulation in the case of the main, regulatory, carbon markets and voluntary standards and commitments for voluntary markets. As in other markets, a range of demand and supply-side factors contribute to determining the size of the carbon markets and prevailing prices.

The most important factor creating a **demand** for any type of carbon credit in the regulatory markets is a mandated emission reduction target. In many countries, most notably the European Union member states, the international targets adopted by national governments under the Kyoto Protocol are passed on to domestic emitters who then either have to reduce their own emissions or complement their internal reduction measures by purchasing carbon credits from third parties.

In contrast, voluntary market demand is created by a range of factors, including corporate social responsibility (CSR), individual ethics, public relations and corporate branding, sustainability reporting and anticipation of future regulation (Hamilton et al., 2007). The latter is particularly relevant in the US where many stakeholders are expecting (or already

experiencing) the onset of regulatory emission reduction targets and want to prepare for these (“pre-compliance”).

There are two basic sources of **supply** of carbon credits. The first of these is the sale of credits from entities that have been allocated a certain amount of emission allowances (mainly Annex-I governments under Kyoto and private companies under the EU Emission Trading Scheme (EU ETS)). If such entities manage to emit less than what they have been allocated they can sell their excess allowances to other entities that have emitted more than what is covered by their allowances. The second source are credits generated from emission reduction (“offset”) projects, mainly CDM and JI projects and emission reduction projects in the voluntary carbon markets. These latter types of “offset” credits are the main focus of this report. Markets for emission allowances and for project-based credits are fundamentally different in several aspects, although it is possible to link them. For instance, CDM credits can be used for compliance under the EU ETS and the EU linking directive provides the legal basis for this practice (Ebeling et al., 2008a).

**Prices** for carbon credits are determined by the interplay of supply and demand, and they differ depending on the exact type of carbon credits (e.g. if and under which scheme they can be used for compliance purposes) and its quality.

Depending on the market context a user of a carbon credit may be interested in the specific qualities of projects or be willing to simply buy “any” credit, including from a project-blind portfolio of projects. Certain **co-benefits** may be particularly valued by a carbon credit buyer who also wants to foster sustainable development, e.g. because of marketing concerns or corporate policy commitments.

Carbon credit transactions can be on the spot or as **forward transactions**, depending on whether the agreed date of credit delivery (and usually of payment) lies in the future or whether it occurs almost immediately. In regulatory markets, forward contracts have become a common tool for carbon credit buyers to ensure that future compliance targets (e.g., in 2012) can be reliably met with known costs. In such transactions looking ahead in time, guarantees on delivery become crucial price determinants, and these, in turn, are directly linked to the risk profile of underlying offset projects.

A further distinction of carbon credit transactions is between primary and **secondary** markets. Primary markets relate to credits directly generated by specific projects. In contrast, secondary credits arise from a portfolio of projects and are usually traded on a forward basis with delivery risk insurances. Such secondary forward contracts often involve credits generated and traded by intermediaries for a number of years at higher prices than primary credits. In general, few primary sellers, i.e. project proponents, are able to give the necessary risk guarantees required by large buyers, and, partly for that reason, intermediaries play a central role in most voluntary and compliance market transactions. Intermediaries also provide financial and technical assistance to implement emission reduction activities.

### 2.1.2. *Regulatory versus voluntary carbon markets*

As mentioned above, regulatory and voluntary carbon markets differ fundamentally in their “raison d’être” and the underlying motivation of carbon credit buyers. In a nutshell, compliance buyers buy credits because they are forced to do so by law in order to comply with legal targets. In contrast, voluntary carbon buyers are driven in their decisions by voluntary commitments to reduce emissions, e.g. for CSR or PR reasons.

The basis for international **regulatory markets** for greenhouse gas emission reductions was laid in 1997 when most of the world’s nations agreed to sign the Kyoto Protocol. This agreement, in its “Annex B”, established quantified emission reduction obligations for the industrialised countries which had previously signed the United Nations Framework Convention on Climate Change (UNFCCC) (the so-called “Annex I countries” of that convention). Most developing countries are similarly Parties to the UNFCCC and the Kyoto Protocol but do not have emission reduction targets (hence they are referred to as “Non-Annex I countries”).

The Kyoto Protocol also established three “flexible mechanisms” through which emission reduction projects can be implemented in countries where it is most economically efficient to do so, while at the same time aiming to contribute to sustainable development in these countries. These mechanisms are “International Emission Trading”, which allows for the trading of emission allowances between Annex-I governments, “Joint Implementation (JI)”, which allows crediting of emission reduction projects implemented in other Annex-I countries, and the “Clean Development Mechanism (CDM)”, which allows crediting of emission reduction projects implemented in developing countries.

The Protocol did not become legally binding until 2005 (through its ratification by Russia). Recently, doubts have emerged whether some Annex-I countries will honour their Kyoto obligations, and it has also become clear that the Kyoto targets for several Eastern European countries were set high above their actual emissions, resulting in “hot air” (excess carbon credits) that risk flooding the 2008-2012 market. Despite these handicaps, the Kyoto markets appear to be working (see Table below). There has been significant investment into the CDM, with over 4,100 projects under development (as of November 2008), potentially capable of reducing emissions by up to 5.7 Gt CO<sub>2</sub>e by 2012 (although it is becoming increasingly clear that this potential will not be fully realised (UNEP, 2008).

At present, the largest active carbon market in the world is the EU Emissions Trading Scheme (EU ETS), established in 2005 as a means to help EU Member States meet their Kyoto Protocol targets. The EU ETS has experienced set-backs because of design flaws and the over-allocation of emission allowances, but seems to be maturing and leading to effective emission reductions across major emitting sectors. Recently, a domestic Japanese semi-regulatory market has been emerging, based on targets which build on semi-voluntary commitments by large energy utilities and industrial emitters, designed to help Japan meet its Kyoto targets.

**Table 1 – Volume and value of various carbon markets**

Source: Adapted from (Capoor and Ambrosi, 2008).

	Volume 2006 (MtCO <sub>2</sub> e)	Value 2006 (Million USD)	Volume 2007 (MtCO <sub>2</sub> e)	Value 2007 (Million USD)
<b>EU ETS</b>	1,044	24,436	2,061	50,097
<b>CDM/JI</b>	553	5,945	592	7,875

In parallel to the Kyoto markets a number of non-Kyoto regulatory markets are emerging. These are not directly linked to the Kyoto Protocol but to external governmental regulation for limiting GHG emissions. The non-Kyoto compliance markets include the Australian New South Wales market and emerging markets in the United States, such as the Regional Greenhouse Gas Initiative (RGGI) and the Western Climate Initiative (WCI). Of these, only the New South Wales scheme is currently operational and is very small in comparison with the EU ETS and CDM/JI markets. However, the potential for forthcoming US regional and federal markets to reach large volumes exists and already casts a shadow through an increasing number of “pre-compliance” VER purchases by US companies (PointCarbon, 2008).

Participants in **voluntary markets** – individuals, corporations and other organisations – decide to voluntarily purchase carbon credits and to use them as offsets for their own emissions. In particular, concerns about individual air travel and a growing sense of corporate social responsibility (CSR) have fuelled the growth of voluntary markets in recent years with more and more organisations trying to reduce their carbon footprint or even to become “carbon neutral”. To date, buyers have been located mainly in the USA (68%) and Europe (28%) (Hamilton et al., 2008).

A growing number of project developers are implementing projects, many of them in developing countries, to create offset credits for the voluntary markets. Long perceived as a mere niche or shadow market of the larger regulated carbon markets, the voluntary market is slowly establishing itself as a significant market in its own right. It is estimated that the value of transactions in the voluntary carbon markets reached USD 330 million in 2007, up from USD 96 million in 2006 (Hamilton et al., 2008). Although rapidly growing, it should be noted that this market remains several orders of magnitude smaller than the regulatory carbon markets. Also, though awareness on quality standards in voluntary markets is increasing, there still remains a high level of opacity regarding the quality and total volume of credits traded. Projects in the voluntary market can be developed using different standards. Currently, the most widely used standards are the Voluntary Carbon Standard (VCS)<sup>1</sup>, the Gold Standard<sup>2</sup>, and the VER+<sup>3</sup>.

Voluntary carbon trading actually goes back as far as the regulatory carbon markets, if not further. In 1988, AES Corporation (a US power company) committed US\$ 2 million to an

<sup>1</sup> For more information, visit: <http://www.v-c-s.org>

<sup>2</sup> For more information, visit: <http://www.cdmgoldstandard.org/>

<sup>3</sup> For more information, visit: <https://www.netinform.de/GW/files/pdf/VER+%20GHG%2030.pdf>

agroforestry and forest conservation project in Guatemala to offset the emissions from a new coal-fired power plant in the USA. From then until 2003, a range of other corporations, NGOs and governments engaged in similar voluntary carbon offsetting activities, investing in emission reduction projects all over the world. Only later were these voluntary carbon “markets” less salient due to the establishment and rapid growth of regulatory carbon markets, but re-entered the limelight in 2006, with many well-known corporations, as well as high-profile events such as the 2006 Fifa World Cup and 2006 Winter Olympics, announcing their “carbon neutrality”.

## 2.2. Forestry in current carbon markets

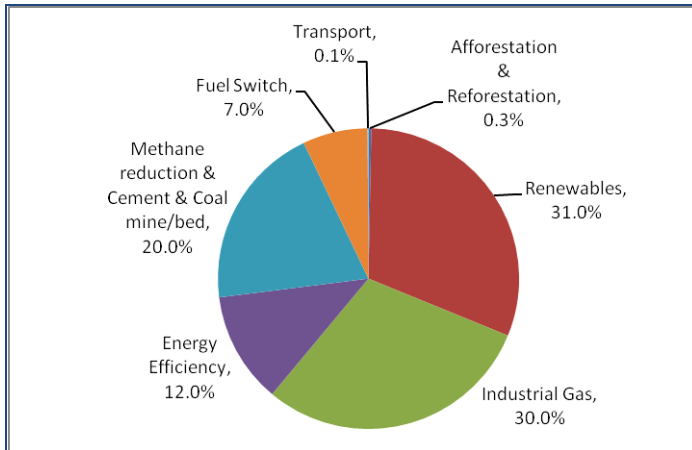
Forestry offsets have been at the heart of carbon markets since the beginning and in some ways have maintained a central role until today. The first carbon offsets in the history of carbon markets involved forest conservation (see above), forestry was at the heart of many debates about the rationale, aims, and legitimacy of Kyoto and its flexible mechanisms, together with the North-South development debate (see the “sinks” debate) (Ebeling, 2008), and forestry projects also continue to constitute the typical offset for many members of the general public and voluntary market buyers. Carbon forestry has always created great hopes because of its potential for environmental and social benefits and its symbolic nature of “repairing” some of the environmental damage inflicted to the Earth; but it has similarly stirred up fierce opposition because of its apparent distraction from industrial emissions, as well as alleged inferiority regarding “safe” and “measurable” emission reductions.

**Forestry in regulatory markets** has been subject to severe restrictions regarding eligible activities – only afforestation and reforestation (AR) are eligible under the CDM – and regarding market access – forestry CDM credits are the only sector still excluded from the EU ETS. As of November 2008, there was still only one registered AR project with 17 being at somewhat advanced development stages (i.e. validation or PDD<sup>4</sup> development stage). At present, forestry projects constitute less than 1% of the CDM pipeline.

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<sup>4</sup> Project Design Document.

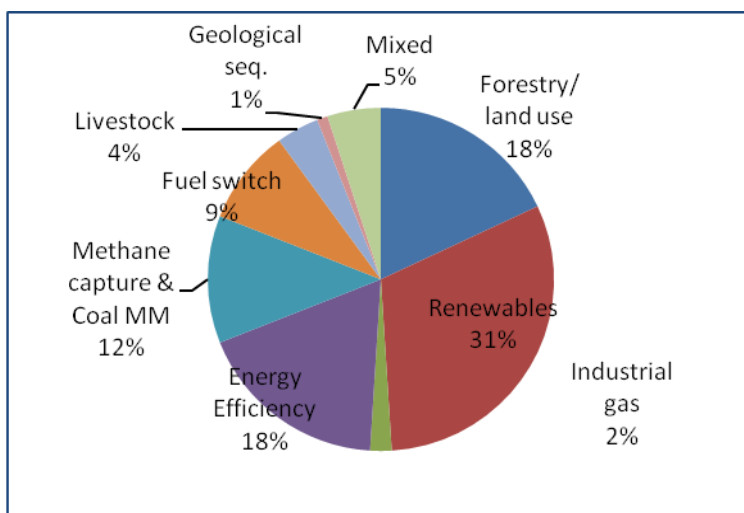




**Figure 1 – Expected CERs until 2012 (%) in each CDM project category.**

Adapted from (UNEP, 2008).

**Voluntary forestry offsets** represent one of the most prominent sectors in voluntary markets. Projects involving tree planting and forest conservation continue to be very popular and made up an estimated 36% of voluntary market transactions in 2006 (Hamilton et al., 2007). 2007 saw this market share drop to 18%, mainly due to the vigorous growth of the market in other project categories – overall traded volumes of forestry credits in fact continued to increase (Hamilton et al., 2008). Regardless, the relative share and overall number and credit volume of forestry projects is far larger in the voluntary than the CDM market. Unlike under the CDM, projects are not limited to forest planting but can include avoided deforestation and forest management activities as well. The most widely known voluntary avoided deforestation project is the Noel Kempff project in Bolivia, which started in 1997 and has been generating VERs.



**Figure 2 – Voluntary market transaction volumes by project type in 2007.**

Adapted from (Hamilton et al., 2008).

### 2.3. What is the outlook for REDD credits?

The future evolution of the carbon markets is inherently difficult to predict. A multitude of factors – such as numerical reduction targets, countries and sectors with such targets, eligible project types, economic growth rates and emission trends etc. in the case of regulatory markets and CSR developments, the public perception of the importance of climate change and the legitimacy of offsetting etc. in the case of voluntary markets – drive developments.

At the **UNFCCC** CoP13 in Bali 2007, Parties agreed on a road map that should lead to a regulatory system for Reducing Emissions from Deforestation and Degradation (REDD), including rules and modalities, to be adopted at CoP15 in 2009. In all likelihood, a REDD system would become part of the larger post-Kyoto negotiations and would not enter into force before 2013. Although fundamental choices on the functioning of such a system still need to be made, including whether it should include a carbon trading mechanism or should be fund-based (or a combination), there is a high expectation that it will lead to a UNFCCC-regulated market for avoided deforestation offset. In the meantime, the Bali road map encourages early action in the form of pilot activities that will allow input from practical experiences into the forthcoming process of defining pertinent regulations.

What this REDD framework will eventually look like will have great implications for the carbon trading potential of avoided deforestation projects.

- First, there is the question of whether an international REDD scheme will allow projects to be credited internationally. A current trend in the discussions is for national deforestation baselines to be set for developing countries, and these countries to be issued credits on the basis of their performance against this baseline. The main reasons for national baselines are that national-level leakage from activities can be accounted for and that governments are incentivised to use a range of instruments to tackle deforestation that would be unavailable in a project context. However, should the system focus entirely on national crediting, this would add a significant layer of risk to any investments into avoided deforestation projects and especially countries with poor governance might not see many project-based activities at all.
- Second, there remains uncertainty if early-action projects or activities, developed in a REDD pilot phase before 2013, would comply with the rules and modalities that will finally be adopted. There is a risk that these projects would not be rewarded any credits once a REDD is finally agreed upon, providing a distinct disincentive for early investments.

REDD projects may also feature prominently in **non-Kyoto regulatory markets**. Most importantly, as mentioned above, various sub-national initiatives in the US are rapidly moving through the design phase or just about to become active (e.g. CCAR, WCI, RGGI)<sup>5</sup>. Next to that, a series of federal draft legislative bills have been submitted, most of

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<sup>5</sup> CCAR stands for *California Climate Action Registry* ([www.climateregistry.org](http://www.climateregistry.org)), WCI for *Western Climate Initiative* ([www.westernclimateinitiative.org](http://www.westernclimateinitiative.org)), and RGGI for *Regional Greenhouse Gas Initiative* ([www.rggi.org](http://www.rggi.org)).

which would seek to establish a federal cap-and-trade system. Such efforts have received a significant boost after the recent presidential elections and could allow for the use of international project credits, including forestry and REDD. In fact, the US has never experienced the same criticism and hostility of environmental NGOs towards carbon forestry offsets as was the case in Europe, and, e.g. the Lieberman-Warner Bill explicitly recognised forestry credits as valid offsets. An example of recent supportive developments is an announcement at the State-level conference convened by the Governor of California in November 2008 to develop joint REDD approaches that could be integrated into regional climate schemes.<sup>6</sup>

The **voluntary markets** are perhaps even more volatile than regulatory markets and it is difficult to forecast whether recent high growth rates will be sustained. This will, among many other factors, be influenced by macro-economic factors: An economy in recession will allow companies, institutions and individuals less space for spending money on environmental concerns. On the other hand, climate change and emissions footprint concerns seem to have reached the mainstream of thinking in a number of developed countries, and it is likely that others will follow sooner or later.

Although “conservation carbon” remains a very attractive credit type in the eyes of many market players, forestry offset projects have been exposed to considerable criticisms in voluntary offsetting. The main issues making buyers wary and dampening price expectations relate to the risk of non-permanence of emission reductions, leakage, and carbon accounting questions. It remains to be seen how well the risk-management approaches for forestry projects suggested for example by the VCS (particularly regarding non-permanence) will be accepted by the market. However, the renewed impetus given to avoided deforestation in the UNFCCC policy process is very clearly resonating in voluntary markets, with a number of high-profile carbon deals and agreements involving conservation projects having been announced recently (e.g. the Ulu Masen project in Aceh, Indonesia).

The further development of voluntary markets matters for REDD for at least three reasons:<sup>7</sup>

- Firstly, voluntary markets can create substantial demand for conservation credits, especially those with strong co-benefits, in their own right.
- Secondly, voluntary markets act as an important bridge between purely voluntary and pre-compliance emission reduction efforts for many companies heading towards regulatory caps (e.g. energy sectors in the US or aviation companies in the EU).
- Thirdly, if no international (UNFCCC) REDD agreement can be reached or if its implementation is significantly delayed, voluntary markets are the main fall-back option for REDD efforts, apart from emerging regional and domestic programmes.

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<sup>6</sup> See <http://gov.ca.gov/press-release/11101>. The meeting included an announcement to “... jointly develop rules to ensure that forest-sector emission reductions and sequestration could pass the strict criteria outlined in California’s AB 32 Scoping Plan and potentially play a role in the Western Climate Initiative effort”.

<sup>7</sup> See (Ebeling et al., 2008a) for further context.

### 2.3.1. *Multiple and overlapping markets for REDD?*

Voluntary markets for forestry and REDD credits are here to stay. In addition, regulatory markets for REDD are taking shape on the international arena, but also in national and regional markets in the US and beyond. The result could be multiple and potentially overlapping markets for REDD projects and schemes.

Multiple markets for REDD would not pose a problem as such and could, in fact, open up opportunities for flexibility and enhanced funding options. For example, even if regulatory REDD credits are created under a forthcoming agreement, projects that would in principle be eligible for REDD credits or payments (in international or domestic schemes) could opt to access alternative markets by selling credits on voluntary markets or non-Kyoto regulatory markets. This is also relevant for pilot projects implemented prior to 2012 which continue into the phase of a regulatory REDD market. REDD host countries receiving international REDD credits could also pass on these credits to project owners, or they could deduct any voluntary market credits issued to projects from regulatory REDD credits claimed at the national level.

Possible issues, e.g. regarding the accounting for emission reductions and associated credits, could arise when REDD pilot or voluntary projects transition into a national-level REDD scheme because such early efforts (prior to the establishment of a post-2012 REDD scheme) may already have been rewarded for some or all of the emission reductions achieved. For example, a conservation project with a steep emission baseline, e.g. because of the impending baseline conversion to oil palm plantations, might have been issued with voluntary credits for all its avoided carbon emissions by the time a national REDD accounting and incentive scheme becomes operational. It would then not be reasonable or justified to continue providing credits or payments to this project. In practice, any voluntary or pilot-fund based REDD project applying to transition into any future national REDD schemes would have to be screened against such aspects of “double-counting”.

In sum, it seems likely that multiple, parallel markets for REDD will exist at least during a transitional period, and they may well become a permanent feature. During the pre-2012 period, these parallel markets could be composed of “regulatory REDD markets”, created through early crediting of projects and activities financed under pilot funds, as well as voluntary markets. During the post-2012 period, not only international regulatory REDD markets may exist but also voluntary markets and regional markets outside of the UNFCCC process allowing for REDD credits, e.g. emerging regulatory markets in North America.

### 3. Is there a business case for high-biodiversity REDD?

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This chapter discusses the business case for high-biodiversity REDD projects and schemes. It builds upon the current functioning and shape of the various regulatory and voluntary carbon markets discussed in the preceding chapter, as well as their anticipated development and evolution. It is very important to recognise that currently existing and emerging markets are of course not equivalent with potentially forthcoming regulatory markets for REDD on an international or regional level. Existing voluntary and regulatory markets and experiences gathered in them, from a commercial and policy perspective, are nevertheless the only available proxy that can be used to approach the questions of future demand patterns and business foundations for high-biodiversity REDD credits.

The first section of this chapter introduces the relevant actors that would need to see a business case for high-biodiversity REDD in order to promote this concept. This is followed by a section discussing the main perceived advantages by current and potential carbon buyers of REDD credits with exceptional associated biodiversity benefits. This includes a discussion of the differences between regulatory and voluntary markets in this regard. Following this are considerations of the costs of developing high-biodiversity REDD projects, which need to be balanced against any existing advantages. The next section is concerned with the underlying importance of identifying a business case for REDD itself as a precondition for any further biodiversity considerations. Finally, although the focus of this report is on carbon markets, there can obviously also be other commercial or economic reasons for engaging in REDD activities, or forest conservation more generally, and this aspect is briefly discussed here as well.

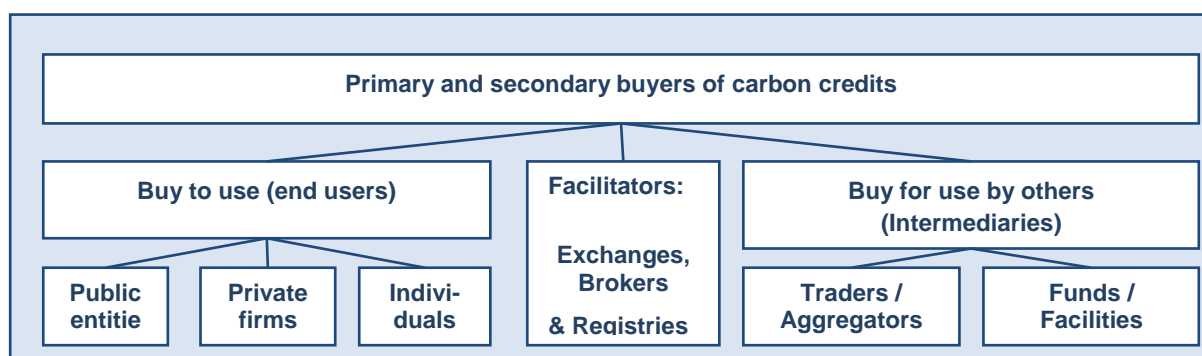
#### 3.1. A business case for whom?

While there is a clear *economic* case for promoting and supporting the environmental and social benefits of forests – including their vital role in global nutrient and carbon cycling, hydrological cycling, soil maintenance, and landscape beauty (Costanza et al., 1997) – this has not so far translated in clear *commercial or financial* incentives for private actors, or even public agencies, to value these services and benefits. There have been an increasing number of publications underlying the economic case for conservation and biodiversity protection (Balmford et al., 2002, Costanza et al., 1997, Stern, 2007, Sukhdev et al., 2008). In contrast, this report is concerned with the *business case* for pro-biodiversity conservation of forests.

Different kinds of organisations and actors may see, or not see, a commercial rationale for engaging in high-biodiversity REDD, including non-carbon market actors. In principle, the questions of an existing or potential business case investigated in this report could be applied to stakeholders such as conservation NGOs, companies engaging in forestry or agricultural production, mining and construction companies, and even individual farmers. Although some aspects of non-carbon market related reasons for engaging in REDD-like activities with high conservation benefits are discussed in Section 3.5, the main focus of this report is on a potential future REDD carbon market. We therefore focus on existing

carbon market players, which are also likely to persist in the context of future, post-2012 REDD markets.

These carbon market players are presented according to their role in the “product chain” in Figure 3. Specifically, this report has in mind generators of carbon credits (project proponents and developers), as well as the various intermediaries (brokers, traders, aggregators) – that is, the existing and potential future primary and secondary *sellers of REDD credits*. In this setting, project proponents and developers would be the primary sellers, with intermediaries being the secondary sellers of REDD credits and responding to the demands of the final buyers, i.e. the end users. The business case for sellers arises more or less directly from the needs and the business case of their customers, i.e. the carbon *buyers*. We include in our analysis both participants in regulatory as well as in voluntary carbon markets, although their business rationale may differ starkly.



**Figure 3 – Different types of buyers of carbon credits**

Risks play a crucial role in many purchase and investment decisions in any market, even more so in carbon markets, and they can sway the cost-benefit analysis of many carbon project engagements. Finally, a business case may of course arise when profits are to be made from certain REDD activities, i.e. when expected revenues are significantly higher than costs incurred. However, there may be other circumstances that create a business case, such as the need to obtain a social licence to operate, and, prominently, expected PR and stakeholder engagement benefits.

### **3.2. What are the main perceived benefits to carbon buyers?**

Different buyers value different benefits, and in the context of this study, the most important difference is between carbon buyers on the voluntary and those on the regulatory markets. This section therefore starts out with a comparison of the main factors affecting purchase decisions on voluntary *versus* regulatory markets and what this may mean for REDD. In the remainder of the section, CSR and PR advantages, price advantages and market access, and differential risk profiles of high-biodiversity REDD credits are analysed, building on primary data from EcoSecurities’ market surveys, external market intelligence reports, and EcoSecurities’ insights from daily interactions with buyers on regulatory and voluntary markets.

### 3.2.1. *Buyer preferences on regulatory versus voluntary REDD markets*

Voluntary and regulatory markets for REDD are almost certain to co-exist in the foreseeable future, simply because regulatory schemes are unlikely to cover the entire community of countries, businesses and individuals (compare Section 2.3.1). This means that opportunities on both types of markets can be sought out by project proponents of conservation-focused REDD projects. However, it will be crucial that the underlying motivations and ensuing preferences of the different types of buyers are taken into account. As laid out in Section 2.1.2, the main difference here stems from the need to either comply with legal requirements, or to work towards reaching voluntary CSR or individual goals.

Regulatory markets for REDD will be a definite requirement if activities are to be implemented on a globally significant scale given the vast difference in size of regulatory vs. voluntary markets. In this case, the main determinant for a business case for high-biodiversity REDD will predominantly be public international or domestic policy. However, voluntary markets can play an important pioneering and bridging role, they have particularly favourable demand characteristics regarding REDD co-benefits, and they will most likely continue to grow vigorously over the medium term.

Some criteria that buyers apply to carbon credits and carbon projects will differ depending on their motivation to purchase credits. In the case of regulatory markets, buyers are likely to attach greater importance to the reliable delivery of a certain volume of credits while not being overly concerned about the type of project creating them. In the case of voluntary markets, they may furthermore seek to support certain types of project activities and may be willing to pay higher prices for perceived co-benefits (see below). Despite these differences, experiences to date on both regulatory and voluntary markets show that willingness to pay for project-based credits is also strongly influenced by fundamental criteria such as underlying project risks, quality, price, and volumes traded.

Under a regulatory market outlook, whether non-carbon benefits will be acknowledged will depend on specific requirements of forthcoming regulations and the nature of carbon buyers having to comply with emission targets. For example, it is not unlikely that Annex-I government buyers may aim to ensure certain positive impacts of REDD activities they purchase credits from (see also Chapter 4). However, private sector buyers that are strictly concerned with meeting compliance targets may not pay much attention to impacts beyond what carbon standards themselves mandate, and offset developers will have little incentive to do so as long as there is no improved market access for high-biodiversity credits or as long no higher prices can be achieved. Options for governments and regulators to create such conditions are outlined in the following chapter, including purchase preferences for REDD credits that meet certain minimum criteria, or import restrictions for those that do not

On a more general note, it is not unlikely that national policy design and on-the-ground implementation of REDD schemes will bear more significance for REDD's co-benefits than legal guidelines specified on an international level. Such national regulations and implementation approaches may also greatly impact the business case for or against engaging in high-biodiversity REDD activities.

### 3.2.2. *How important are CSR and PR and other benefits?*

Benefits for companies' PR and contributions to their CSR commitments are almost by definition largely limited to voluntary offset purchases, rather than to future **regulatory REDD markets**. It is of course possible, in theory, that for example an energy provider that is covered by a domestic emission cap would choose to comply with that legislated target by using specific offset credit types, e.g. high biodiversity REDD. However, if such a company felt a need to demonstrate a particular CSR engagement, they could as well engage in a voluntary offset initiative, e.g. for some of their emissions below a regulatory cap. More often than not, companies are likely to claim that they are already "doing their bit" by reducing emissions below a regulatory emission target.

However, in a regulatory market, **governments** are the ultimate end buyers under an international climate regime, considering that, by definition, they are the only entities bound by international law. Governments obviously do not have to woo for "customers" in the same way as companies do; however, they do have to keep their voters' interests and preferences in mind if they want to be (re-) elected. At present, the electorate is not generally aware of or interested enough in their government's Kyoto compliance policy to the extent of taking an active interest in which CDM (or other future offset) credits it purchases. However, the same could be said about general consumer awareness and preferences regarding the environmental behaviour and strategy of individual companies until fairly recently.

In this way, it is not unthinkable, that governments will come under much closer scrutiny by voters and other important stakeholders and shapers of public opinion, notably NGOs and other "lobby groups" and the media. It may then become much more decisive for the "PR" of a government or even country which offsetting or greenhouse gas compliance strategy they pursue. Certainly in the case of REDD, if it retains a similarly high public profile and media interest as it has to date, governments may be watched quite closely in terms of whether they buy "good or bad" REDD credits and which projects or implementation policies they are seen to support in this way. Judging from recent media coverage and stakeholder interest, it seems likely that such scrutiny may apply to a larger extent to the social aspects of REDD activities, rather than to its biodiversity impacts. Nevertheless, the general issue of social and environmental co-benefits or negative impacts may become one of a certain importance for governments' international reputation and standing with their electorate.

In existing and, presumably, also in **future voluntary markets** the perceived co-benefits of carbon projects convey often very high PR and CSR benefits. This applies to forestry projects in particular, and price and demand patterns reflect this fact (Hamilton et al., 2008). In a way, carbon offset buyers could be seen as not being overly concerned about the carbon benefits of offset projects themselves – although they have to be concerned about this in a formal sense in terms of being able to credibly account for their carbon footprint management. In contrast, they are very interested in being able to present a positive contribution to the environment and sustainable development and are keen to use a project's "story" in their CSR reporting and marketing materials.



In the same way, it is true that if offsets are not well designed and implemented, they can turn from a PR asset to a severe reputational risk because an environmental “marketing” strategy seen as flawed is likely to be picked up quickly by NGOs and other stakeholder groups. This already happens through online campaigns such as “CDM Watch”<sup>8</sup> and “Sinks Watch”<sup>9</sup> and may continue for REDD. First campaigning websites, e.g. the website “REDD monitor” have already sprung up.<sup>10</sup>

In summary, the PR and CSR aspects of voluntary offsets and their underlying project are of paramount importance to buyers and this carries a formidable potential for high-biodiversity REDD credits and schemes. This impact of PR benefits conveyed through REDD projects with clear biodiversity benefits can drive price and market access benefits for projects with such benefits (see following two sections). On a side note – because corporate and individual buyers of voluntary offsets are mainly interested in the story behind an offset, REDD projects with charismatic mega-fauna, rare mammals, or rich in birds usually fare much better in voluntary markets than other projects that do not have such visible “biodiversity”. The presence of tigers or orang-utans in a project is almost guaranteed to arouse buyer interest, whereas rare amphibians or insects may not. Considering that the conservation benefits of the latter may be equally or even more important, this presents a certain mismatch between the business case for “real” and for “visible” biodiversity REDD.

One challenge is that the PR and CSR benefits derived from high-quality forestry offsets are mainly important to companies that are reliant on Western European and North American markets or exposed to stakeholders in these markets. The case is usually very different for other multi-national companies, e.g. those operating mainly within Asia or Latin America (Ebeling and Yasue, 2009, Klooster, 2005). As companies based in these regions with much smaller “green markets” acquire a larger share of global markets, this may impose certain limits on expanding the business case for high-quality REDD on global level. At the same time, even in large developing countries, e.g. Brazil and India, some large and visible companies are starting to work on their green image, so the future developments and impacts of global shifts in market power are still unclear. Nevertheless, the heavy emphasis in voluntary markets on ‘Western’ companies and individuals signals a significant handicap to achieving funding for activities on a global scale. This strengthens the argument for a regulatory approach, both for REDD and for biodiversity.

### 3.2.3. *Do high-biodiversity REDD carbon credits attain higher prices?*

Whether or not high-biodiversity REDD credits will be able attain higher prices once again depends to a large extent on the question of whether they are traded in voluntary or future

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<sup>8</sup> See <http://www.cdmwatch.org>.

<sup>9</sup> See <http://www.sinkswatch.org>.

<sup>10</sup> See <http://www.redd-monitor.org>. For an example of a cover story that criticises not only the Aceh-Merril Lynch deal but also FSC forest certification practices and some other key organisations see <http://www.redd-monitor.org/2008/11/20/us-on-the-slippery-slope-to-redd-offsets/>. The potential for negative PR rather than reputational gains for the involved organisations is evident.

regulatory markets. Some other factors, such as differential market access for certain types of REDD credits, could in turn influence prices even on regulatory REDD markets. Nevertheless, experiences from the CDM suggest that price is the main factor influencing purchase decisions by compliance buyers – some exceptions are discussed below – which points towards a very limited scope for price premiums for regulatory REDD credits.

EcoSecurities and other market analysts, e.g. (Hamilton et al., 2008) consistently found that **voluntary market** buyers are willing to pay higher prices for forestry and REDD projects with particular co-benefits (Ashford et al., 2008, Ebeling et al., 2008a, Neeff et al., 2007, Neeff and Ebeling, 2008). Importantly, the main aspect that is considered is not always biodiversity but can often be social co-benefits such as enhanced livelihoods for local communities. Despite the fact that REDD projects are also perceived as carrying substantial risks compared to other non-forestry offset types (see below), market participants frequently tend to attach higher importance to the quality of offsets than to their price, meaning that projects that confer a good “story”, while meeting a high quality carbon standard, can be sold at significantly higher prices. Ideally, social and environmental impacts of REDD activities should be transparently and independently evaluated and monitored, with the aim of promoting and documenting potential co-benefits.

One recent market intelligence report (NCF, 2008), documents a large range for voluntary forestry offset prices from approximately USD 2 – 6, with very low prices achieved at the Chicago Climate Exchange (CCX) and prices at the higher end being attained by REDD projects certified to the Climate Community and Biodiversity Standards (CCBS), i.e. projects with demonstrable co-benefits. There were also transactions at higher prices, and (Hamilton et al., 2008) reported much greater price ranges and even more significant price advantages for forestry projects with high co-benefits. It is also increasingly evident that buyers on European and North American markets and beyond are becoming much more educated about the variable quality and quality standards, including co-benefits, of offsets in general and forestry credits in particular.

As mentioned above, the REDD policy process is contributing to a much higher traction of REDD projects in the voluntary markets. Interestingly, political developments in North America are becoming a strong price driver for forestry VERs, e.g. last week’s announcements at the inter-State conference (see Section 2.3.1), as well as announcements about the development of a new REDD standard under the emerging Californian cap-and-trade scheme CCAR. It is also noteworthy that CCAR’s Forest Protocols, i.e. a regulatory market standard, seem to be seen as a benchmark for even voluntary forestry offset credits, at least in the US. All of this is encouraging news for potential price advantages of high-biodiversity REDD credits in pre-compliance but potentially also in compliance markets.

In contrast, as previously mentioned **regulatory carbon market** buyers have little incentive to value any offset attributes other than carbon benefits because they are not required to do so. The CDM, for example, merely requires an assessment of social and environmental impacts and steps to ensure that these are not negative (Brown et al., 2004, Boyd et al., 2007), and even the interpretation of what this means is not clearly defined. In consequence, CDM projects with environmental or social co-benefits do not generally convey any price premium, although there are some limited exceptions to this.

Co-benefits of REDD activities will not therefore translate to the same extent into a comparative advantage on regulatory markets. Compliance pressures, along with project- or carbon-credit specific delivery risks, are very likely to be the main determinant of price. The charisma of the sector and its ability to contribute to sustainable development and conservation is, however, important in order for the sector to be perceived as more than simply a source of (potentially cheap) credits.

There may be much higher pressure on governments and international regulators to impose certain non-carbon standards or safeguards on future REDD credits. This could then translate into price advantages in some way, although it would still not necessarily be beneficial to “over-comply”, i.e. to surpass the mandated standard for biodiversity and other benefits. Nevertheless, international and national mandatory standards could be an important tool for promoting a high-biodiversity business case, and this is discussed in the next chapter. In terms of what governments are willing and able to demand from project developers and buyers, there will need to be trade-off between high standards and (politically) acceptable implications on carbon prices, which translate into costs for domestic industry.

Governments acting as compliance carbon buyers may also consider their need to honour multiple international and national commitments, such as contributing to international biodiversity conservation (in addition to having to heed to voters’ interests and safeguarding their reputation). They may therefore, in some cases, be willing to pay more for high-biodiversity REDD credits than they would have to for pure compliance under a climate regime, potentially even using funds pledged for non-climate causes to co-fund these purchase strategies.

Finally, differential market access, discussed in the next section, could be a definite driver for higher prices in an indirect way. In the hypothetical case of restricted access to some markets under an international climate regime, i.e. the EU ETS market, those REDD credits that can be sold on all or most of these nested markets will have a clear commercial advantage compared to those with access to only a subset of these markets. The risk profile (market access risk) for the former is going to be lower, making them more attractive for primary buyers, as well as intermediaries, in addition obviously to the private sector end users in markets with credit import restrictions. This point is taken up in Section 4.1.2. It is impossible to foresee at this time whether any price advantage from better market access could be sustained. It is possible that price premiums could fade away eventually in a similar development as for most FSC-certified timber products where certification is frequently a *sine qua non*, but not a sufficient differentiator in green markets (Ebeling and Yasue, 2009, UNECE, 2007, Gulbrandsen, 2005).

#### 3.2.4. *Is there improved market access for high-biodiversity credits?*

Market access is likely to be the key determinant for a future business case for high-biodiversity REDD credits in a **regulatory market**. As long as there is no improved market access for these, it is unlikely that higher prices can be achieved on compliance markets except for relatively isolated cases. Until now, there has been little variation in terms of market access for different types of CDM credits, the offset type that is probably most

comparable to future regulatory REDD credits. Despite otherwise declared intentions, most governments have thus far purchased CDM credits mostly dependent on their price, and there have been only insignificant restrictions regarding CDM credits that companies can use for EU ETS compliance.

The only notable exception to this have been forestry credits, in fact, which have been banned from the EU ETS, although EU governments can use them for Kyoto compliance within certain limits. The impact of this restriction on the attractiveness of forestry CDM credits cannot be over-estimated. This restriction in access to the most important CDM market has proven to be the most important bottleneck for interest in this sector and has contributed to very low prices (although this is compounded by the fact that credits for forestry CDM are temporary and therefore create a replacement liability for the buyer) (Neeff and Ebeling, 2008).

Other than forestry, the only well-known price premium created by market access restrictions on CDM markets has been for credits from large hydro-power projects. EU ETS import regulations specify that eligible projects have to comply with criteria set forth by the World Commission on Dams (WCD), and since it is not clear how compliance with these criteria will be interpreted, credits from these projects are not traded on some exchanges and are less attractive to buyers. Other examples carrying some potential are declared procurement preferences by the Austrian and the Norwegian government for small-scale and forestry project credits, respectively, but these announcements have not been followed through. It remains unclear how the situation will play out in Japanese domestic markets considering that the government is seen to insist on some minimum quality criteria of imported credits. Denmark is an interesting case as well, given that credits used for compliance in this country need to come from projects which have independently been “approved” by the Danish Designated National Authority (DNA). This national DNA is seen to apply more demanding sustainability criteria than most host-country DNAs.

Future REDD compliance markets could of course be different from existing Kyoto and EU ETS markets in terms of measures to create enhanced or restricted market access for certain types of credits. This could have a very promising potential for promoting high-biodiversity REDD and is discussed in the next chapter. There are, indeed, first signs that some existing regulatory markets may become more selective in the future. Perhaps most importantly, there are plans by the European Commission to selectively restrict EU markets through CDM credit import regulations. According to one source, “only ‘high quality CERs’ would be allowed” and that the “detailed definitions are currently under development jointly with the US EPA” (GTZ, 2008). The latter indication of a coordinated approach between EU and US regulators could strengthen the business case for high quality offsets for regulatory markets.

On **voluntary markets**, surveys have consistently shown that many buyers in their majority are only interested in high-quality credits with demonstrable co-benefits. This is because of PR and CSR benefits mentioned above, and, in a related way, because many customers and NGOs accept only high-quality offsets as credible and legitimate. This creates a significant risk for an externally-oriented carbon management strategy including below average-quality credits.

The voluntary market in general seems set to become somewhat more commoditised, meaning that at least a certain volume of carbon credits will be used simply to comply with targets – similar to the CDM – without necessarily having to convey many co-benefits. This may be necessary to meet the volume needed for larger scale corporate offsetting, as well as providing portfolio credits to smaller buyers. For REDD projects, such a trend would obviously mean less ability to capitalise on clear co-benefits, such as especially high biodiversity conservation through a project. On the other hand, REDD projects, which can as such be expected to generally promote biodiversity, may be able to supply large volumes of credits and may thereby still be able to compete even in the more commoditised slice of evolving voluntary markets.

Despite some signs of VER commoditisation, most buyers seem to continue to look for very specific projects with clear and identifiable co-benefits, such as conservation and social benefits. This is especially true for buyers of large volumes which can in effect sponsor whole projects through their purchase decisions, as opposed to smaller buyers which may need to source offset credits from a portfolio. It is also encouraging, that the last 2 years have seen an increasing differentiation of project types and sub-types. This is mirrored in the most recent voluntary market surveys (Hamilton et al., 2008, Ashford et al., 2008) which for the first time list different categories of carbon forestry projects, e.g. mixed native reforestation, rather than simply “forestry” as one market sector. This can be seen to imply further scope for capitalising on the specific characteristics of forestry projects, such as high biodiversity benefits.

One additional consideration is that not only end users may drive market demand in the future but that large intermediaries may increasingly control supply chains. This has happened in a number of cases of other voluntarily purchased green products, such as fair-trade coffee and certified wood products (ProForest, In Press, 2008, Klooster, 2005). It may therefore become necessary and promising to target large voluntary market intermediaries and thus create a business case for them to preferentially trade high-quality REDD credits. As a forthcoming report on sustainable rainforest commodities states: “Many commodity supply chains are complex and opaque and it is virtually impossible for retailers to investigate and understand them for every product (...) End-users generally have little or no contact with producers. It is the traders and processors in the middle of chain that are best placed to create demand for certified product and help producers to understand and meet this demand” (ProForest, In Press, 2008).

### *3.2.5. Are risks of high-biodiversity REDD credits and projects lower?*

Risks are an integral component of every commercial and investment decision. With regards to carbon credits, buyers have to be mainly concerned with “delivery risk”, i.e. the possibility or likelihood that expected offsets from a project are not generated by the expected time or in the expected volume. This risk can be influenced by factors affecting the implementation of the project, but there also exists a risk at every stage of the carbon project approval cycle that a given project may not pass, e.g., an audit, or that less emission reductions are recognised by the standard authority, resulting in fewer issued credits. All of these risks are factored into the price of a credit that buyers are willing to pay.

Although EcoSecurities' buyer surveys found that REDD projects, and particularly those with high social and biodiversity co-benefits, are perceived as more attractive than many other offset categories, forestry and REDD projects were also perceived as particularly risky (Neeff et al., 2007, Ebeling et al., 2008a). This relates to the reliability of carbon benefits generated on the one hand.<sup>11</sup> Even more important may be the reputational risk of using offsets from a controversial sector, keeping in mind persistent NGO and media scrutiny of forestry offsets in particular (Ebeling, 2008). Opinions regarding the legitimacy and credibility of using forestry offsets generally seem to remain polarised.

Are any of these risks likely to be lower for high-biodiversity REDD credits, compared to "normal" REDD offsets? It was discussed above that reputational gains from using high-quality REDD credits can be very substantial in voluntary markets, justifying higher prices and improved market access. This conversely translates into much lower reputational risks inferred by high-biodiversity (and pro-community) REDD credits. The appropriate co-certification, e.g. through CCBA or FSC standards, can solidify this advantage. One could also argue for potentially decreased biotic risks and higher resilience to climate change impacts in biodiverse projects, although this is much more applicable to reforestation than REDD, which could translate into direct commercial benefits if they decrease non-permanence risks, leading to lower carbon discounts, e.g. in the VCS.

### **3.3. Costs of developing high-biodiversity REDD projects**

In order to make high-biodiversity REDD commercially attractive, attainable benefits do not simply need to be higher than those for other offset types or REDD activities without above-average biodiversity attributes. As in any business venture, benefits also need to be significantly greater than the costs of engaging in such projects and creating carbon credits from them in order to create a profit. Any increased costs will have to be balanced by higher expected benefits, e.g. premium prices, improved market access, PR benefits, or a better risk profile, as discussed in the preceding sections.

The main costs of developing a carbon project can be divided into carbon market transaction costs, as opposed to upfront and operating costs of the underlying project, as well as opportunity costs (and costs of capital). Most of these may be slightly or significantly different for REDD projects or schemes with high conservation benefits – usually higher. In order to maintain a convincing business case for these activities, additional transaction and other costs have to remain in proportion to achievable price or market benefits and result in clear net benefits to project proponents or host countries.

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<sup>11</sup> Carbon accounting, i.e. measurement and monitoring of emissions and carbon stock changes, along with risks of leakage and non-permanence, generally is seen to be more challenging for forestry than for other project types. This is seen as a challenge and potential problem – although simple solutions such as conservative accounting and risk buffers exist. On the other hand, this drawback seems to be at least outweighed by the attractiveness of potential co-benefits to buyers. REDD projects may be particularly challenging to accurately account for in carbon benefit terms; however, due to the larger volume of emission savings, conservative accounting should be particularly feasible and, combined with the particular co-benefits for conservation, this could help REDD as opposed to other carbon forestry project types.

Before project developers can register a project under a carbon standard, such as the VCS or the CDM, and receive credits they need to cover certain **transaction costs** during each step of the project cycle. These transaction costs are likely to be higher for REDD projects that need to measure and demonstrate particular biodiversity co-benefits. Because most of these costs are fix and do not depend on project size or tons of CO<sub>2</sub> reduced, large projects will be put at an advantage. Large projects may also coincide with higher biodiversity benefits – e.g. when rare species need large habitats forest core areas to survive – however, some projects on smaller areas could also carry especially high conservation benefits and could struggle to overcome additional transaction costs. High quality REDD projects may incur even somewhat higher transaction costs during their operational phase if the chosen standard (or an international regulation) requires ongoing detailed monitoring of biodiversity impacts. Similarly, transaction costs for project preparation could be higher.

Upfront and ongoing **implementation costs** for a carbon project, be it REDD or another sector, can be divided into upfront costs and costs incurred during the actual operation of a project.<sup>12</sup> High-biodiversity REDD projects may incur somewhat higher operational costs because of the often demanding conservation management for threatened or vulnerable species, or because the ecosystems and habitat types involved may be rather unusual, requiring very specific management approaches.

Deforestation usually occurs mainly for commercial and financial reasons, i.e. alternative land uses such as agriculture, palm oil production or logging are usually more profitable in the short term than maintaining forests (Turner et al., 2003, Millennium Ecosystem Assessment, 2005, Chomitz et al., 2007). If a REDD activity attempts to slow deforestation, **opportunity costs** arise in the form of lost revenues from other activities. It is important to realise that such opportunities can vary greatly by local context (compare Chomitz et al., 2005, de Koning et al., 2005) and also over time, e.g. through changes in prices for agricultural commodities or land pressures through migration. Potential compensation payments to land users may need to be continuously adjusted to match, or slightly exceed, opportunity costs in order to provide effective incentives for forest conservation. Similarly, higher opportunity costs will incur higher costs of enforcing regulations and forest protection because of higher incentives for non-compliance with rules and regulations (Ebeling and Yasue, 2009).

Conservation hotspots are defined partly by having high land-use conversion rates (Myers et al., 2000) and tackling deforestation drivers in these areas is consequently likely to entail particularly high opportunity costs – and therefore also higher compensation, implementation and enforcement costs (Ebeling and Yasue, 2008). It is therefore plausible to assume generally higher opportunity costs for high-biodiversity REDD projects because they will often aim to protect particularly threatened habitats and remainders of ecosystems with high past and ongoing deforestation rates. Economically rationally acting

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<sup>12</sup> Whereas some of these costs are related to carbon market transaction costs the majority of costs will generally be operational costs of the underlying project activity, i.e. the protection or enhanced management of a forest under REDD. For REDD projects, operational costs are likely to be much higher than planning and initial management costs because the ongoing protection of the forest, its management, and potential compensation for opportunity costs can be costly.

carbon market actors trying to minimise costs would therefore be tempted to focus on areas with low opportunity costs – and potentially lower conservation value – unless higher costs are balanced by higher expected benefits, e.g. through higher prices or co-funding (see below).

### 3.4. What is the business case for REDD itself?

In order to create a business case for high-biodiversity REDD activities it is obviously crucial that there is a business case for engaging in REDD at all. Although this aspect is not the focus of this report, it is nevertheless of great importance when developing strategies to promote the biodiversity conservation agenda through REDD. This is because certain requirements and regulations intended to advance high biodiversity goals through REDD could end up undermining the effectiveness of and the business case (and political, economic case) for REDD as a whole, which, certainly, would be the worst possible outcome for biodiversity. On the other hand, it is important to realise, therefore, that strategies and schemes to ensure and support a business case for REDD investments by private actors as such could be the most effective way to promote the biodiversity agenda through REDD.

One of the main negotiation items regarding the shape of a future REDD scheme is the question of whether emission reductions through REDD should be rewarded through **crediting at the national or project level** (sub-national level) – or both. The most frequently cited advantage of national-level crediting or payments is that it would account for any in-country leakage between different projects or forest areas (UNFCCC, 2005, Santilli et al., 2005) (Aukland et al., 2003). In addition, national accounting and crediting may also lead to emission reductions on a larger scale and at lower cost due to economies of scale in project implementation and lower per-unit transaction costs.

On the other hand, there may be serious difficulties in monitoring and indeed governing forests throughout an entire country and doubts about the effectiveness and efficiency of government-mediated, centrally administered REDD schemes have been raised. Most importantly, however, in order to attract real interest from private-sector investors and carbon market participants, a project-based approach or at least project-based component of REDD would be a basic requirement. This is because of the high perceived delivery risk of engaging with potential host governments, including sovereign risk (e.g. that a government could not be legally forced to deliver or compensate for credits). This situation is compounded by the perceived extremely poor performance of most developing country governments to manage their natural and forest resources. A project-based approach would also establish much more direct and transparent ways of influencing REDD activities and ensuring their success from the point of view of private-sector stakeholders and could mobilise significant financing from private investors much more easily (Fehse, 2008b, Ebeling et al., 2008a).

Another crucial factor for engaging the private sector in REDD effectively and quickly would be to create reliable **early-crediting** rules for pre-2012 REDD activities. This is crucial for creating incentives early enough and to gather the necessary experiences for scaling up REDD post-2012. Otherwise, many forests may be lost and their carbon



emitted by the time an international agreement enters into force and can be implemented, and the broader REDD process may become stalemated. An early-crediting framework should be designed in a way that does not punish early movers. Experiences from pilot-CDM projects, specifically the Activities Implemented Jointly (AIJ), clearly show the detrimental effects of inconsistent and changing policy incentives and frameworks which can greatly undermine investor confidence and hamper the effectiveness of the overall scheme.

### 3.5. A non-carbon business case for forest conservation?

As mentioned above, there may be commercial reasons for engaging in conservation and high-biodiversity “REDD” activities that exist independently of any carbon finance considerations. These are not the main focus of this report but can become relevant in certain cases when they may support a business case for certain REDD activities that could not be supported by carbon market incentives alone.

Companies and individuals have supported and sponsored high-profile conservation projects for decades. On the corporate side, **project sponsoring** has become increasingly popular as companies have felt an increasing need to demonstrate good corporate citizenship and have supported social and environmental “good causes” as part of their CSR strategies and for PR reasons.<sup>13</sup> There are, in fact, increasingly “hard” factors that push and convince companies to engage in such support schemes, such as access to capital and investor confidence that can be increased through good CSR policies because of more resilient brand value and consumer support. This is in addition to “softer” factors such as effective PR and enhanced employee motivation, among other aspects.

In addition, companies with very significant – or very visible – impacts on the natural environment, especially firms active in natural resource exploitation, feel increasing pressure to mitigate the impacts of their operations, or, in fact, to offset them (Bishop et al., 2008b). The most relevant of these efforts may be **biodiversity offsets**, which are increasingly becoming a *de facto* requirement for, e.g., mining companies to obtain a social (or legal) licence to operate (see Chapters 4 and 5). Such efforts and payments could potentially be coupled to – or “bundled” with – carbon offsets in the context of forest conservation and REDD projects. Questions of additionality arise where legal or other requirements exist to implement mitigation activities such as biodiversity offsets. Nevertheless, there are certainly cases where conservation activities on the same plot of land or in adjacent areas could be financed through multiple sources such as carbon and biodiversity finance schemes or markets.

Biodiversity offsets could offer opportunities to support REDD in low-carbon forest ecosystems which can be of exceptional conservation value yet be of little interest to purely carbon-credit focused investors. Biodiversity offsets may need to be implemented

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<sup>13</sup> See, for example, the long-standing partnership between the beverage producer Krombacher and WWF to conserve rainforests through a fixed “donation” per bottle of beer sold through which about 1,300 ha of rainforest have been protected (see <http://www.wwf.de/regionen/kongo-becken/krombacher-regenwald-projekt-2008/>).

close to the location where the damaging impacts have occurred, and they may need to involve similar ecosystems or forest types, making carbon a secondary consideration (ten Kate et al., 2004).

Finally, high-biodiversity conservation projects, including REDD projects can sometimes capitalise on income opportunities from other ecosystem services. This includes the whole suite of services, such as water provision and purification, but also derived income streams, such as eco-tourism. This is important here because for many REDD projects, in contrast to most other carbon offset project types, **non-carbon revenues** are unlikely to be substantial. For example, even if forests are managed sustainably for timber production – a possible REDD activity – revenues are likely to be much lower than those from conventional, destructive logging because harvestable timber volumes are lower, at least in the short term.<sup>14</sup> High-biodiversity REDD projects may have a much greater potential to generate significant income from eco-tourism, but also from the production of non-timber forest products (NTFPs).

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<sup>14</sup> In the long run, sustainably managed forests are likely to provide a more reliable income stream because timber stocks are allowed to regenerate; however, it is questionable whether this will provide sufficient incentives to governments and forest owners given the frequent focus on near-term revenues.

## 4. Requirements for a REDD biodiversity business case

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A business case for implementing high-biodiversity REDD projects and buying the carbon credits they produce, at present, seems to exist mainly in voluntary markets. However, voluntary markets alone are clearly insufficient for achieving significant conservation and climate benefits on a global scale. Regulatory markets, which currently are several orders of magnitude larger than voluntary markets, will almost certainly remain the only instrument with a hope of mobilising the volume of funds needed for biodiversity conservation globally.

This chapter will therefore mainly focus on regulatory approaches towards promoting a commercial case for REDD schemes with specific non-carbon attributes. This is not to say that non-mandated private sector activities are insignificant or should not play a role in REDD. To the contrary, there are clearly many circumstances where voluntary “over-compliance” may make sense for business. In addition, commercially motivated pro-biodiversity engagements not primarily related to carbon emission regulations may be combined with REDD projects in effective ways. Finally, governments acting as carbon buyers can partially be driven by “non-commercial” considerations in their compliance purchase strategies.

The main question is therefore: How could regulatory approaches be designed so that they create a convincing business case for high-biodiversity REDD while, at the same time, encouraging voluntary as well as non-carbon related initiatives by private actors which contribute to biodiversity conservation. This chapter provides an overview of a number of possible approaches at the international, national, and project level to support this goal. Chapter 5 then gives some concrete examples of existing initiatives that could provide lessons in going forward.

### 4.1. International mechanism

On the international level, various supporting mechanisms are conceivable, ranging from regulatory mechanisms to strictly voluntary contributions. The demand for REDD (whether implemented through a market or fund-based mechanism) will mostly originate from developed countries, as will most large-scale financing mechanisms for forest biodiversity conservation. This makes incentives at the international level the most promising driving force for creating a business case for high-biodiversity REDD on the national and project levels. Such incentives could arise from mandatory or voluntary biodiversity standards, measures to create superior market access for high-biodiversity credits, mobilising co-funding for purchasing or creating such credits, and, possibly, by regulating the eligibility of forest carbon increases under REDD.

#### 4.1.1. *Biodiversity standards in an international REDD policy framework*

The most obvious, and potentially most powerful, mechanism for supporting high-biodiversity REDD at the international level would be to focus climate change mitigation

funding through REDD exclusively on high-biodiversity value areas and activities through embedding pertinent criteria into REDD eligibility rules. However, this is unlikely to be a feasible option in reaching an international agreement. Firstly, it would greatly complicate the UNFCCC negotiation process because a definition on what constitutes high-biodiversity forests would first need to be agreed on, in itself a difficult process. Secondly, countries would arguably first want to assess how much of these forests they have (under a variety of possible definitions) before a deal could be agreed on. Thirdly, eligibility restrictions would not fit with the currently favoured approach of national crediting, which would reward the country as a whole for REDD achievements and where emission reductions would not necessarily be attributable to concrete “project areas”, or where this would not factor into financial rewards. Finally, any increase in transaction or implementation costs, which would, almost per definition, result from having to meet additional non-carbon requirements, would reduce the overall supply of REDD credits as such and reduce the scale of implemented activities.

In the interest of reaching a deal at all in the short time window that is left until Copenhagen, Parties would be wise to aim at keeping the REDD framework simple. It might be possible to insert soft criteria such as minimal safeguards towards avoiding any negative environmental and social impacts of REDD activities. Such safeguards, i.e. a no-harm or precautionary principle mandating neutral impacts as an absolute minimum, seem indeed necessary in order to address real and perceived risks and in order to facilitate a broad REDD consensus among stakeholders. Informal policy discussions suggest that many REDD host countries would be open to integrating certain pro-biodiversity and pro-poor safeguards into their REDD policies. In contrast, future REDD host countries are unlikely to accept any international “prescriptions” over what kind of activities to pursue or how to implement domestic policies in the land-use sectors. They are likely to regard this as an infringement on their national sovereignty, just as proposals to include specific criteria for the contribution of CDM projects towards sustainable development, along with a definition of “sustainable development”, met with strong opposition from developing countries (Boyd et al., 2007). Political sensitivities surrounding sovereignty over natural resources and the history of paternalistic relationships regarding forest governance and development policies will need to be respected to reach agreement on any safeguards or minimum standards.

Rather than insisting on formal biodiversity criteria in an international agreement the inclusion of monitoring and reporting structures or guidelines regarding biodiversity and social impacts may be more acceptable. Along with already high oversight by international civil society, such “soft” monitoring requirements could arguably create considerable international and domestic pressure for REDD host countries and project developers. Compared to the status quo of forest governance in most developing countries, almost any international REDD scheme is likely to entail positive biodiversity and social impacts. There is, furthermore, a role for voluntary co-certification by countries and project proponents seeking to alleviate international concerns and securing support for their REDD programmes and activities. Donor countries providing co-funding for REDD could also insist on certain “conditionalities” in bilateral programmes and purchase agreements.

#### 4.1.2. *Creating superior market access for high-biodiversity REDD credits*

If a carbon market mechanism is selected as the financing mechanism for REDD then buying countries could create effective incentives for high-biodiversity REDD by establishing “import” quota and restrictions. Individual buying countries, or blocks of countries, e.g. the EU, could opt for reserving a percentage of REDD imports for high-biodiversity credits. They could, furthermore pass on or create such stipulations to their industries covered by domestic cap-and-trade schemes, similar to current and forthcoming import regulations for CDM credits under the CDM. This would create a powerful signal to “producing” countries that have a choice regarding where to implement REDD activities and how to design and implement REDD policies.

The criteria for defining high biodiversity value could either be decided on unilaterally by the buying country, in a bilateral agreement between selling and buying governments, or they could be part of an internationally recognised (non-UNFCCC) standard. Currently no such standard exists, and project-level standards such as the CCBS could serve as a model. As mentioned in Chapter 3, whether or not such restrictions would be politically acceptable in buying (industrialised) countries would partly depend on the additional costs created for national government budgets or influential industries covered by a scheme. Dedicated co-funding for purchasing high-biodiversity credits at a premium, e.g. from existing conservation funding commitments, could help overcome such obstacles.

#### 4.1.3. *International co-funding for high-biodiversity REDD*

Carbon markets, in themselves, value carbon and not biodiversity and are “designed” to focus on the lowest cost options for generating emission reductions. Without any “strings attached” they will thus favour areas with low land-use opportunity costs or low implementation costs for REDD activities. Such areas do not necessarily have to be of inferior biodiversity value; however, they are likely to often exclude biodiversity hotspots with their particularly high land-use pressures.

Carbon finance could be more effectively channelled towards areas that are of higher conservation priority by either restricting eligible areas for REDD activities (see above), or by providing supplementary international or national funding for REDD activities specifically aiming to enhance non-carbon benefits. For example, targeted conservation or development co-financing may be able to tip the balance in favour of pro-biodiversity (or pro-poor) REDD activities if these then become more lucrative than activities with only “average” biodiversity benefits (Ebeling and Yasue, 2008, Wünscher et al., 2008). In some way, several of the already pledged “readiness” and pilot funds implicitly aim to promote certain types of REDD interventions with particular biodiversity and social benefits by providing more or less targeted start-up financing. A total of several hundred million Euros has been pledged to support REDD in the wake of the Bali climate conference (Bellassen et al., 2008).

In dispersing any REDD co-funding for areas with high biodiversity benefits, available funds could, in theory, be employed most efficiently by selecting cases or areas which, in all likelihood, would not already be attractive for REDD investment in themselves. For

example, many high-conservation value forests may also have very high carbon densities and be attractive REDD areas for this reason alone. Subsidising activities in such areas would not result in any additional biodiversity benefits to the “business-as-usual” scenario (Wünscher et al., 2008). However, selecting and targeting REDD areas and levels of co-funding in such a sophisticated way is unlikely to be feasible. Not only would the scientific basis for this need to be established more clearly (keeping in mind the wide range of approaches to measuring biodiversity value); more importantly, political and economic realities and practical constraints would make such a technical selection of REDD intervention areas in a country or region extremely challenging. In general, however, any kind of “guaranteed” or very likely co-funding for REDD activities that fulfil certain criteria would enhance the business case for engaging in these.

Should a fund be chosen as the financing mechanism for REDD under the UNFCCC then the financial incentive for forest conservation could be linked to verifiable carbon emission reductions in the same way as under a carbon trading approach. This would have many advantages in terms of providing clear performance-related incentives. However, some favour approaches with rewards being de-coupled from the direct carbon quantification. In this case it would be conceivable to earmark part of the funding for high-biodiversity REDD activities. Criteria for this would still have to be defined, and some of the same problems exist with incorporating these into a Copenhagen climate deal as for a market mechanism. It may be possible, however, to include soft criteria that can then be further defined at a later stage.

Non-UNFCCC funding could also be channelled towards improving the business case for conserving high-biodiversity forests. Such funds could, for example, originate from auctioning emissions allowances under cap-and-trade schemes or more traditional international funding for development assistance, e.g. through bilateral or multilateral channels such as the World Bank. Again, criteria for defining high biodiversity value itself as well as for eligible activities for funding could be defined by individual governments, in bilateral agreements with donor and recipient nations, or through internationally recognised standards.

#### 4.1.4. *Should reforestation be eligible under REDD?*

One important open question on the international REDD negotiation arena could also bear implications for the biodiversity business case through REDD activities: the question of whether forest carbon stock *increases* (including restoration, reforestation and afforestation) would count towards REDD carbon accounting. This basically refers to the distinction between *gross* and *net* accounting (measuring only deforestation *versus* measuring the net result of forest decreases and increases in a country or project area). Countries with recent trends of net forest gains, e.g. India and Costa Rica, would gain little from a REDD scheme purely focused on reduced deforestation. The recent COP decision in Bali does leave scope for including carbon sequestration through forests in a future REDD mechanism; however, this is by no means a decided matter (UNFCCC, 2007).<sup>15</sup>

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<sup>15</sup> The COP Decision, under Point 11, “Notes (...) the role of (...) enhancement of forest carbon stocks [emphasis added] in developing countries”.

Among other issues, it opens up the debate about a co-existence of REDD crediting schemes and reforestation under the CDM.

There are concerns by some environmental organisations that providing rewards for re- and afforestation could lead to perverse incentives where forests continue to be cut down in a country while industrial-scale plantations balance out the carbon equation elsewhere in the same country. For some, the mere idea of rewarding forest plantations in a REDD scheme seems fundamentally flawed. On the other hand, “plantations” arguably need to be part of any comprehensive REDD strategy in order to secure a sufficient supply of timber, pulp and paper, etc. without degrading or destroying natural forests. More than 50% of all wood products in the world still come from natural forests (FAO, 2006). Ideally, such planted forests would resemble natural permanent forests, with a wide mix of native species, which could then be sustainably harvested.

At the same time, it is hard to see how carbon finance in itself could create the aforementioned perverse incentives. This is because carbon finance, at least at current and foreseeable carbon prices, can only provide a minor part of the funds necessary to create plantations. Carbon markets, through REDD, will hopefully be able to cover most the costs of forest conservation; however, creating productive plantations needs to rely on a clear non-carbon business case such as producing commercial timber, pulp, or fuelwood. It needs to be discussed further whether any specific requirements are needed to ensure that a net loss in natural forests in a country cannot be “masked by non-native reforestation, or even afforestation, elsewhere in the country – and certainly not *in situ* – through gross accounting, no matter if carbon finance facilitated any such developments or not.

Whether or not including forest cover increases in a REDD scheme would dilute incentives for the conservation of natural forest is a valid question. In some ways, the case could be similar as providing additional funding for high-biodiversity forests which would, in fact, have been conserved under REDD for their carbon value alone. Reforestation that would take place even in the absence of REDD could therefore take away funding from natural forest conservation, even if it does not create any perverse incentives to destroy the latter. At the same time, much reforestation in the sense of forest restoration is needed for ecological reasons and can indeed provide many biodiversity benefits if implemented well, including the creation of wildlife corridors and restoring viable forest habitat sizes (Ebeling et al., In Press, Fehse, 2008a) – in these cases, REDD funding could directly support a pro-biodiversity business case.

Other safeguards may need to be put in place to restrict, or counter, any carbon-finance related business case for the conversion of valuable grasslands, savannahs, wetlands, or other important ecosystems through afforestation (as opposed to reforestation). Another, not directly related issue are concerns about “inter-ecosystem leakage” (Miles and Kapos, 2008), when reduced deforestation may translate into a displacement of conversion pressure into other, non-forest ecosystems. It is, however, difficult to see how any non-forest land-use changes could be effectively monitored and attributed to REDD incentives, and the greater biodiversity risk may be to greatly increase transaction costs or make conservation efforts in-eligible through pertinent restrictions and requirements.

#### 4.1.1. *Creating regulatory markets for biodiversity itself*

An alternative approach to create incentives to investors into biodiversity conservation would be to do this through a CBD-regulated policy framework. This could be set up similar to the Kyoto Protocol and its flexibility mechanisms, with Parties taking on targets towards the reduction or compensation of their international biodiversity footprint. Conservation activities in developing countries could then produce 'Certified Biodiversity Offsets'. Such a policy framework would create a specific demand for biodiversity assets and thereby create a value for the biodiversity aspect of forests and other ecosystems. This value that could be added to their carbon value under REDD but would completely de-couple the business case for biodiversity from REDD by creating a funding mechanism that would also consider low-carbon ecosystems. An initiative towards developing a first outline of what such a framework might look like is being pursued by a number of stakeholders, including, the Dutch and UK governments, the CBD Secretariat and other UN organisations, NGOs and private sector organisations (Bishop et al., 2008a).

Another interesting approach worthy of further discussion would be to attach biodiversity standards and mitigation and offsetting requirements to certain types of agricultural activities and commodities. Biodiversity standards, also adding to a commercial case for high-biodiversity REDD activities, could be attached to conventional commodity imports, for example requiring biofuel palm oil imports to be tied to biodiversity offsets for any deforestation caused through their production. Similarly, the release of loans for, e.g. agricultural or mining ventures that pose a deforestation risk from private, public, or international institutions could be tied to biodiversity impact and offsetting requirements. The latter is already starting to happen and some multinational companies are finding it more difficult to get access to funding from equity investors or lenders if biodiversity risks are not addressed or quantified. The commercial case here could, however, become much stronger if regulatory requirements existed.

## 4.2. **National-level mechanisms**

It is still undecided whether REDD crediting (or payments) will occur at the national level or whether sub-national or project-level activities could be rewarded directly. In a national-level crediting scheme, whether or not a business case for high-biodiversity REDD could exist would depend to a large degree on the domestic incentive framework created by the host-country. A number of schemes to create domestic REDD incentives under national crediting have been suggested. These could fall broadly within the categories of domestic carbon crediting schemes, non-credit based payment for environmental services (PES) schemes, other monetary incentives, and supportive forestry and land-use regulations more broadly (Ebeling et al., 2008a). In general, any "transmission" mechanism between international markets and on-the-ground implementation is likely to lessen incentives for private investors, including those interested in pro-biodiversity REDD activities. However, other arguments, such as preventing leakage, support national-level crediting.

REDD incentives provided at the national level would allow host countries themselves to steer investments towards high-biodiversity REDD or other preferred activities. Most of the



national-level mechanisms described here will only work well if appropriate governance of structures and capacity exists (Gulbrandsen, 2004, Ebeling and Yasue, 2009). This includes effective law enforcement capacities, judicial structures to resolve land-tenure and other disputes, and low corruption, in short: good governance in the entire land-use sector. Some or most of the below suggested approaches may therefore only work in a minority of potential REDD host countries under current conditions. This highlights the paramount importance of promoting good governance, effectively tackling corruption, and increasing implementation and enforcement capacities in tropical developing countries – in the forestry and agricultural sectors and beyond.

#### 4.2.1. *Differential carbon-credit taxes*

Most selling country (REDD host country) governments are likely to claim some of the REDD financing for state coffers. They may impose commissions, royalties or taxes on REDD credit sales. This could offer opportunities to provide incentives to high-biodiversity REDD activities by lowering their respective tax rate and increasing taxes for low-biodiversity activities. An example of a country applying such differential taxation is China, which in the CDM charges a much higher levy on HFC credits than on those from renewable energy projects.

Another regulatory approach could be to simply regulate eligible REDD activities or areas in a given host country through national legislation, or to require compliance with certain national standards. This regulatory approach towards creating a business case for investing into high-biodiversity REDD activities would mirror that suggested above for international mechanisms in Section 4.1.1.

#### 4.2.2. *National level co-funding*

A range of co-funding approaches to foster high-biodiversity REDD on the national level could operate in similar ways as those on the international level. Funding to tip the balance in favour of high-biodiversity REDD activities could, again, come from general public funding sources, from domestic “green” taxes, or from a portion of tax receipts raised from carbon credit sales, among other options. REDD could also provide the financial means to make existing or new national-level conservation funds operational and more effective.

Some tropical countries have already set up their own incentive schemes for forest conservation. For example, Costa Rica developed a dedicated fund in the 1990s (called FONAFIFO) that was funded through an earmarked fuel tax to offer payments to forest owners for the maintenance of their forests. It also sold carbon offsets to Norway in 1997. The intention was to also incorporate the specific values of non-carbon ecosystem services into the payments, but this has so far not been developed (except for the general policy aim to reward landscape beauty and biodiversity)<sup>16</sup>. Another example of such a

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<sup>16</sup> See [http://www.fonafifo.com/paginas\\_english/invest\\_forest/i\\_ib\\_que\\_es\\_csa.htm](http://www.fonafifo.com/paginas_english/invest_forest/i_ib_que_es_csa.htm).

fund is the CONAFOR fund in Mexico<sup>17</sup>. Many countries have in fact set up funds for the management of nature ('Environment Funds'), for example Brazil, Ecuador and Colombia.

Unfortunately, most of such national-level funds do not have the necessary resources to provide effective incentives for conservation. Many countries simply do not have the means for endowing such funds with sufficient resources, or they lack the political will and economic rationale to do so. For the latter countries that could, in principle, mobilise sufficient fund (e.g. Brazil or Indonesia), the REDD framework (or potentially a future CBD-regulated policy framework) could provide the incentive to start channelling national funds towards forest conservation. Biodiversity criteria could then form part of the spending criteria of such funds.

Other examples of national-level financial or fiscal instruments to improve the business case of high-biodiversity forest conservation could be income tax breaks for profits from REDD investments or state-backed soft loans to REDD investors, among others. Biodiversity criteria could be applied to the use of any such instruments. As with dedicating resources to national funds the use of such instruments is likely to be driven by the incentives provided by international REDD funding mechanisms.

Governments could also invest in the national and international promotion of non-timber products from their forests that are harvested in a sustainable manner. Developing such industries has the potential to provide significant funding towards maintaining forest resources as well as providing jobs. Specific high-biodiversity certification of products originating from high-biodiversity forests (similar to certification of organic produce or sustainable forest management, e.g. the FSC) could provide extra funding towards their long-term maintenance and put high-biodiversity forest activities at a commercial advantage.

#### 4.2.3. *Nationally regulated biodiversity compensation and PES schemes*

Many developing countries already require by law some form of mitigation or compensation of negative environmental impacts of certain activities, e.g. large infrastructure projects. However, most such requirements lack any effective definition of criteria as to how much of certain compensating activities would be required to "offset" a given impact, or what the quality of the compensating activity should be. The REDD policy framework could provide an incentive to properly set such criteria and to use existing environmental compensation schemes as a tool to channel financing towards the conservation of high-biodiversity forests. (See Chapter 5 for examples).

National-level mitigation banking schemes offer a potential for much more efficient and effective compensation for negative biodiversity impacts compared to individual site-per-site offsets. Such schemes could be used as a national-level implementation component for REDD, i.e. to reduce deforestation and degradation while specifically promoting pro-biodiversity activities.

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<sup>17</sup> See <http://www.conafor.gob.mx>.

REDD payments could also offer an opportunity to create or revamp national-level or sub-national PES schemes. A number of PES schemes have been established in different parts of the world and on national or sub-national levels, seeking to reward stewards of ecosystems for the services these render. Such services include carbon and biodiversity conservation, provision of water in quality, quantity and in regular distribution patterns, and scenic beauty (Scherr et al., 2004).<sup>18</sup>

### 4.3. Project-level mechanisms

Demand for high biodiversity value at the REDD project level will be mainly driven by the policy framework at the international level, as well as the national level in case of national-level crediting. The main question at the project level is how to provide this biodiversity value to potential buyers and how to access the various financial mechanisms that have been outlined above. We will concentrate here on two aspects of this, namely access to high-biodiversity REDD buyers in a market mechanism and participation in payment schemes for ecosystem services.

#### 4.3.1. *Co-certification and access to buyers of high-biodiversity REDD credits*

REDD credit buyers with a preference for high-biodiversity REDD activities will want assurances that the project really offers the biodiversity benefits it promises. The principal way of offering these assurances is through additional certification against a standard. Several kinds of standards exist that capture in one form or other the biodiversity value of forestry activities, e.g. CCBA, HCVF or FSC (see Chapter 5).

Additional certification may be a costly approach and in some situations it may not be necessary to go down this route. For example, for straightforward conservation of primary forests that offer habitat to one or more “charismatic” species (e.g. tigers or jaguars) providing evidence that these species are there and are maintained may be sufficient to convince a buyer of the project’s biodiversity value. Market access then becomes mainly a

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<sup>18</sup> Biodiversity-oriented payment schemes can take on many forms, but the most discussed ones in developing countries are biodiversity offsetting and royalties from bio-prospecting. The former has been mentioned already above and have by far the greatest potential for national regulation. In the latter, pharmaceutical companies pay for the collection of biological sample and for initial processing that is conducted to research their medicinal properties potential. This mechanism received a great deal of attention in the 1990s, but has since lost some of its promise as a funding mechanism for conservation due to the large scale required for deals (at the country rather than the project level) and concerns about benefit sharing of the biodiversity value.

Water-related payment schemes, in which downstream users compensate upstream managers of watersheds, have great potential and many have been already set up in developing countries. But often they are hampered by the lack of organisation, willingness and spending power of downstream users. There are also many instances, however, where the beneficiaries of hydrological ecosystem services are companies, e.g. hydropower plants, breweries and more or less wealthy entities, such as cities. For these, a nationally-regulated payment scheme for services might be set up. For example, in Colombia a decentralised system has been set up in which autonomous corporations manage a region’s natural resources and environment. These corporations are funded through a levy on hydropower revenues.

For a nationally-regulated compensation scheme for scenic beauty, levies on tourism or eco-tourism in general would be conceivable. Also, entrance fees to national parks and other areas of outstanding beauty or interest for ecotourism could contribute to the better management of such areas.

matter of capacity to market the project's "story". Current voluntary market buyers highly value such project characteristics (see Section 3.2).

A recent trend on voluntary markets seems to be that some buyers choose to directly invest into creating specific co-benefits at the project level without pursuing certification of these. Given that many high-quality projects, among them many in the forestry sector, can attract about twice the average voluntary offset price, the "extra" income could be directly invested into ensuring co-benefits, as opposed to ensuring co-benefits through sometimes complicated standard certification. This approach allows buyers to avoid paying price premiums for co-certified carbon credits and to use the price differential for direct co-investment into the project activities.

#### 4.3.2. *Participation in PES schemes and "bundling"*

Apart from participating in nationally-regulated PES schemes, or where these do not exist, projects may also seek to obtain funding from setting up their own PES schemes, or to team up with neighbouring forest areas. For example, a downstream user of hydrological services might be identified with the capacity and willingness to contribute towards the conservation or sustainable management of the upstream forested area. Or a "private reserve" might be established, setting up ecotourism facilities and raising entrance fees. Projects might also seek to work with voluntary initiatives implemented by international corporations with high impacts on nature to offset their impacts, such as the mining and oil and gas industries (Bishop et al., 2008b).

In terms of markets for non-carbon ecosystem services that could be combined with REDD to provide "bundled" income streams, biodiversity offsets and water-related payments seem to be considered as the most feasible near-term opportunities. Biodiversity offsets and watershed payments, among other PES approaches, offer much scope for valuing the non-carbon aspects of forests and other ecosystems. Interestingly, low-carbon forest ecosystems may gain from this in particular because non-carbon PES revenues could contribute to a business case for conserving them in combination with REDD. Regarding biodiversity offsets, one contributing aspect could be that biodiversity offsets may need to be implemented close to the location where the damaging impacts have occurred (e.g. for social and livelihood reasons), and they may need to involve similar ecosystems or forest types ("like-for-like" offsetting), making carbon a secondary or non-relevant consideration (Bishop et al., 2008b). One definite caveat of such bundling approaches, however, might be additionality questions in terms of creating legitimate carbon offset credits when there are already regulations in place that demand forest conservation or reforestation in the context of a biodiversity offset or mitigation scheme (Fehse, 2008a).

Although many project-level PES initiatives have been set up in the last decade or so, their potential to make a difference at a global scale seems to remain very limited. There is a strong case that national or international regulation of such schemes and derived markets is needed to achieve the significant scaling-up needed to address the biodiversity and climate change crises.

## 5. Currently existing tools and schemes

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A number of initiatives exist on the international, national, and project level that can serve as models or as inspiration for the approaches suggested in the preceding chapter. Rather than providing an exhaustive list of existing schemes and project examples, the following overview seeks to highlight a few to illustrate possible approaches for promoting a business case for high-biodiversity REDD.

### 5.1. Certification of co-benefits of carbon forestry

The aim of certification of co-benefits of (carbon) forestry activities is to assure certain project qualities to buyers, i.e. to match providers and buyers of certain environmental or social benefits. Prominent examples of standards that could be employed to trigger investment into high-biodiversity REDD activities are the “Climate, Community and Biodiversity” (CCB) standard, the forest management standard developed by the Forest Stewardship Council (FSC), as well as the “High Conservation Value Forest” (HCVF) framework.

The **CCB** standards<sup>19</sup>, have been developed by the CCB Association and are the result of a partnership between a range of corporations, research organisations and NGOs (including Conservation International, The Nature Conservancy, Weyerhaeuser, Intel and CATIE). The CCB standard is particularly focused on the positive social and environmental co-benefits of forestry and other land use projects and sets minimum criteria to provide assurances of the project’s positive contribution to climate, local communities and biodiversity protection, rather than generating carbon credits. It is therefore increasingly seen as an ideal co-certification used in conjunction with high-quality carbon standards, such as the Voluntary Carbon Standard (VCS).

For **FSC** certification, third-party organisations (NGOs or private companies) audit forest management practices according to rigorous standards. These standards include protecting old growth forests, threatened species, and important habitat types, restricting harvest volumes, complying with national or international regulations, and ensuring compliance with safety guidelines; and creating employment for local people. Chain-of-Custody (CoC) certification and an associated label then trace the certified products from forests to end customers through the production chain. Consumers can reward good management practices through preferential purchase or by paying a premium for certified products (Ebeling and Yasue, 2009, Cauley et al., 2002, Gullison, 2003).

**HCV** provides a framework for identifying, managing and monitoring high conservation value areas (areas of outstanding biological, social and cultural significance or critical importance at the national, regional and global scale). The process does not necessarily mean that HCV areas are ‘set aside’ for conservation. However, appropriate HCV management systems need to be in place and may range from complete protection to extractive uses such as selective logging or harvesting of natural products, so long as

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<sup>19</sup> <http://www.climate-standards.org/>

these are sustainably managed and monitored to the agreed standard. The HCV framework could be used at two levels in the REDD context – for risk management at the project level and for planning and prioritisation at the regional or national level. Within individual forest management areas, the HCV approach requires that critical areas and values are identified and appropriately managed, and that HCVs are not damaged by forest management operations. HCV provides a systematic framework for identifying where maximum co-benefits will be delivered, and could be used for prioritising funds and projects to these areas.

Examples of a REDD project that has been certified against the CCB standard are the Avoided Deforestation in the Coffee Forest in El Salvador, the Monte Pascoal – Pau Brasil Ecological Corridor, the REDD project in the Ulu Masen Ecosystem (Aceh, Indonesia), and the Juma Sustainable Development Reserve Project in the State of Amazonas (Brazil). The Juma Reserve Project is one of the 34 conservation units under the sphere of action of FAS (Amazonas Sustainable Foundation). The Juma Sustainable Development Reserve comprises almost 600,000 hectares and, until the end of the first period of certification, in 2016, the project is expected to avert the emission of 3.6 million tons of CO<sub>2</sub>. The Reserve was established in 2006 aiming at reducing deforestation, protecting forests with high value of biodiversity as well as enhancing the life quality of the 322 families of traditional populations which presently live inside the limits of the Reserve.<sup>20</sup>

## 5.2. Conservation mitigation schemes and funds

Financing mechanisms on the project or national level that are designed to mitigate negative development impacts for biodiversity, wetlands, water quality or other natural ecosystem attributes could, in principle, be combined with carbon-oriented REDD payments in order to make high-biodiversity REDD interventions more financially attractive.

The **Malua BioBank** scheme involves the protection and restoration of 34,000 hectares of high conservation value rainforest in Sabah (Malaysia), including threatened Orangutan habitat. Investors can buy credits listed by the exchange TZ1, which has recently launched a biodiversity registry for the Malua conservation banking scheme. Each credit covers 100 m<sup>2</sup> metres of forest, and, so far, 21,500 credits have been sold at US\$10 each (Fogarty, 2008). The Malua scheme could provide an example for the potential coupling of REDD carbon and biodiversity credits. Interestingly, TZ1, the official registry for Malua Conservation Bank, is also one of currently four VCS registries. It would therefore not be far-fetched to bundle VCS carbon credits from forest conservation or even non-forestry emission reduction activities elsewhere with biodiversity “credits” from Sabah.

The Business Biodiversity Offset Program (**BBOP**) involves businesses that are responsible for damaging natural habitats through their operations, e.g. mining. The programme was initiated by Forest Trends and aims to develop a standardised approach

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<sup>20</sup> See [www.climate-standards.org](http://www.climate-standards.org).

for offsetting negative biodiversity impacts by corporations. Through a series of seven pilot projects, BBOP aims at quantifying and eventually offsetting negative biodiversity impacts through conservation activities at the landscape-level. These pilot projects will later form the basis for a more standardised approach with the aim of promoting the idea of biodiversity offsets becoming a standard business practice.<sup>21</sup>

Mining companies in particular are seen as practically having to start offsetting their biodiversity impacts in order to gain a social or legal licence to operate, to get access to bank loans, and for their general reputation and customer relations. As mentioned above, bundling of REDD with biodiversity offsets (or wetland credits etc.) is possible in theory, it raises questions of additionality if a project has already sold biodiversity offset credits or is implemented because of a requirement for wetland conservation offsets, for example, to then claim carbon credits for the same measure. In addition, bundling is often too complex because the mechanisms and regulatory frameworks and standards are frequently too different as they were not designed with bundling in mind. Instead, they have usually been developed to comply with specific national legislations, rather than to generate conservation finance and, as a result involve often very different “buyers” or contributors with different motivations.

Although biodiversity offsets currently are often promoted as voluntary initiatives by responsible corporations, they are, in many circumstances, rapidly moving towards regulatory requirement. For example, mining activities in almost all Australian States are covered by some sort of offsetting legislation. In addition to other prominent regulatory schemes, such as the US Wetland Mitigation and Conservation Banking schemes, most countries have at least some level formal mitigation requirements, often following on from mandatory environmental impact assessments for certain business activities. Germany has put in place a particularly sophisticated scheme to mitigate negative environmental impacts of a wide range of business interventions, such as road construction, real estate developments, certain farming activities, etc. The German system involves a detailed set of conversion factors to take into account the severity of environmental impacts and the ecosystem type (and its rarity) affected. Furthermore, the scheme allocates mitigation and offset measures across different regions on the state and municipality level and involves local governments in the administration and targeting of compensatory funds.

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<sup>21</sup> See [www.forest-trends.org/biodiversityoffsetprogram](http://www.forest-trends.org/biodiversityoffsetprogram).

## 6. Outlook – Is there a business case for “high-biodiversity REDD”?

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This report aimed to answer the question of whether there is a business case for high-biodiversity REDD projects and schemes and how such a business case could be created or promoted. Throughout the analysis, it becomes clear that significant potential exists to link the biodiversity conservation and climate change mitigation agendas with current and forthcoming REDD markets and schemes. However, the current business case seems often limited to niche markets and voluntary initiatives, whereas future REDD policy and its implications are hard to foresee at present. Nevertheless, a range of approaches could be developed to create a business case for high-biodiversity REDD activities on the national or international level, and to promote and enhance existing incentives for private sector actors.

Lessons from current voluntary and regulatory carbon markets show that a business case for high-biodiversity (or pro-poor) carbon offset activities depends strongly on the motivations of buyers that purchase offset credits. A strong business case for high-biodiversity REDD activities exists currently in voluntary carbon markets because of clear price advantages and improved market access, mainly due to the superior marketing, PR, and CSR benefits they confer to corporate buyers. As one market expert put it, “price doesn’t matter [on voluntary markets] – what matters is quality and the story behind the project”. For voluntary carbon markets, therefore, the question is not whether high-biodiversity REDD credits would be at an advantage in voluntary markets compared to “average” REDD credits but rather, how this market advantage can drive investor and project developer decisions at a large enough scale to have a real impact for worldwide conservation.

There will clearly always be some market participants that choose to “over-comply” with a regulatory requirement. Voluntary “extra” efforts could, for example, pay off even on regulatory REDD markets in terms of PR benefits for an organisation that is already covered by mandatory emission targets. It would, furthermore, not be accurate to suggest that voluntary carbon markets or non-compliance offsetting incentives in themselves will not play a significant role in the future. To the contrary, voluntary markets are likely to continue to fulfil important roles in pioneering emission reduction approaches, complementing compliance driven initiatives, and promoting very specific types of REDD activities that would be difficult to implement through regulatory markets alone. In terms of a compatibility of regulatory and voluntary REDD markets in the future, the main question is therefore how regulatory approaches could be designed in ways that create a convincing business case for high-biodiversity REDD while, at the same time, encouraging voluntary as well as non-carbon related conservation initiatives by private actors. Ideally, voluntary market approaches now should be encouraged further by providing an outlook of compatibility with forthcoming REDD regulations or early-crediting programmes.

In order to achieve the necessary up-scaling and to mobilise the financial volumes needed to promote biodiversity conservation through REDD on a global level, regulatory market approaches will be an absolute necessity. Unfortunately, experiences from current



regulatory markets suggest that almost no incentive exists for carbon buyers to pay more for or preferentially purchase carbon credits – and by implication, REDD credits – that exhibit particular characteristics that are not reflected in their carbon value. By their very nature, compliance markets force market participants, i.e. offset buyers, to comply with regulation, and as long as this regulation does not cover non-carbon related aspects, there is hardly any incentive to be concerned about those from a buyer's perspective.

Given that voluntary approaches will not deliver the necessary scale of incentives for high-biodiversity REDD activities, the most obvious starting point for promoting such incentives through regulation is the international level. Many of these approaches could be replicated in a modified form on the national level, although much depends on the eventual form of an international REDD scheme and whether this scheme will provide REDD crediting or payment incentives at the project or national level. In addition, good governance and implementation capacity in host countries is vital, and the governance situation in most potential REDD host countries will have to improve substantially if high-biodiversity REDD – and, more importantly, REDD as such – is to stand a realistic chance.

In principle, biodiversity standards that restrict eligible REDD activities to those areas that provide a defined minimum level of biodiversity benefits could be an effective steering mechanism on the international (and national) level. However, experiences from past and ongoing negotiations suggest that specific and formalised standards may not be acceptable to host countries. Beyond the inclusion of certain pro-biodiversity (and social) safeguards and minimum soft standards, it seems therefore sensible to pursue approaches that would create market-driven incentives for implementing REDD activities with high conservation value.

One promising approach – domestic political challenges aside – would be to create such demand at the level of the final users of REDD credits, i.e. developed (buying) countries. Importantly, this could also be extended to any of their domestic industries covered by cap-and-trade regimes, such as the energy sector in the current EU ETS scheme. Buying countries could establish purchase quota for high-biodiversity REDD credits and define qualifying criteria bilaterally or through an international (voluntary) protocol. Buying governments could, in addition, create dedicated co-funding to purchase high-biodiversity credits at a premium, e.g. by using some of the funds pledged for global biodiversity conservation towards this end. Governments in industrialised countries will, furthermore, also have non-monetary incentives to maintain and further their reputation – or PR – on an international level and with their domestic constituencies and could do this very well by demonstrating “responsible purchase behaviour”. It would not bode well with voters if western democratic governments were seen to implicitly support REDD policies in selling countries with questionable social or conservation impacts.

On the side of selling countries, incentives for implementing high-biodiversity REDD activities could similarly be created by providing non-market co-funding for pertinent activities to tip the balance in favour of pro-biodiversity areas and interventions. Furthermore, although hard standards will likely not be acceptable, the inclusion of mandatory monitoring and reporting requirements in an international agreement may be feasible. Together with already high international and civil society vigilance, even mere monitoring of biodiversity and social impacts of REDD could create tangible incentives to host governments and project developers. How the combination of such international

pressures and reputational incentives, domestic stakeholder concerns – e.g. those of indigenous communities, small-scale farmers, logging industries, and palm oil producers – , and governance capacity, among other factors, will play out would remain to be seen.

It needs to be kept in mind that most or all of the above approaches would, unfortunately, face significant political challenges on the international and national level. For example, preferential purchase approaches and, even more so, paying premium prices for compliance credits has been a difficult sell already in virtually all of the current Annex-I countries. At the end of the day, until now, most governments have eventually resorted to low-cost compliance options and have primarily or exclusively purchased “cost-effective” credits from large-scale projects, rather than focusing on small-scale activities or projects with particular co-benefits.

Underlying all considerations of how to promote a case of channelling investment into those REDD activities that have above-average biodiversity benefits needs to be one fundamental principle: No matter which approaches are promoted and lobbied for during the ongoing international negotiations, they will not promote biodiversity conservation if they risk making the overall REDD scheme significantly less efficient, or if they risk to slow down or even derail the entire process. The priority – for biodiversity and climate change mitigation – is to agree on and implement a workable REDD scheme internationally and on the ground in as short a timeframe as possible. Fundamentally, creating a strong business case for REDD will be the best and most certain way of creating a business case for high-biodiversity REDD.

For REDD to be effective and promote biodiversity simply through slowing deforestation and degradation, there needs to be sufficient and reliable demand from carbon buyers – industrialised countries and their domestic industries – for carbon credits, including forestry credits. This entails ambitious reduction targets, the possibility to use external credits to meet a portion of these targets, and the inclusion of forestry and REDD credits into the former. As long as too many general restrictions are created for REDD – e.g. regarding eligible activities, fungibility of credits, import restrictions into important markets such as the EU ETS – there is a real risk that there may be no business case for REDD as such. Finally, the private sector may be very hesitant to engage in any REDD activities if the only international crediting or reward system operates at the level of national governments. Given considerable governance risks, intransparencies, sovereign risk, and a poor track record in forest resource management, few investors may be willing to rely on a transmission mechanism between international rewards and activities on the ground. Direct sub-national or project crediting through an international mechanism, ideally in a hybrid approach together with national-level crediting (Ebeling et al., 2008a, CATIE et al., 2007), could greatly boost the confidence of private sector investors, project developers, NGOs, and private landholders.

It is also true that REDD and carbon markets will not be the panacea for sustainable forest management and biodiversity conservation. There are many uncertainties and risks attached to the relatively immature and highly policy-dependent carbon markets, especially those that will only fully materialise in a somewhat uncertain future. Also, there will always be a certain mismatch between carbon markets and biodiversity conservation because carbon markets care about carbon and are designed for efficient climate change mitigation. Ideally, an independent valuation for biodiversity itself (whether in forests or not

and whether rich in carbon or not) should be sought. Apart from creating dedicated biodiversity markets, conventional direct funding for conservation remains a tool that can be effective if it is implemented in improved and performance-oriented ways. REDD could provide an important political impetus for creating and significantly expanding such schemes.

Still, rapidly evolving and maturing carbon markets that include payments for forest conservation provide an extraordinary opportunity to promote the biodiversity agenda – in themselves and, even more so, when coupled with dedicated mechanisms to provide financial incentives for high-biodiversity REDD.

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## Interviewees

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Stuart Anstee, Principal Advisor, Environment, Rio Tinto

Lisa Ashford, Head of Commercialisation Europe, EcoSecurities

Miles Austin, Head of European Regulatory Affairs, EcoSecurities

Aimee Barnes, Senior Manager, US Regulatory Affairs, EcoSecurities

Joshua Bishop, Senior Adviser for Economics and Environment, World Conservation Union (IUCN)

Joanna Durbin, Director, Climate, Community & Biodiversity Alliance (CCBA)

James Griffith, Managing Director, Sustainable Forest Products Industry, World Business Council for Sustainable Development (WBCSD)

Steve Gutmann, Senior Commercialisation Manager, EcoSecurities

Kathrin Hamilton, Head of Carbon Programs, Ecosystem Marketplace

Celia Harvey, Vice President, Global Change and Ecosystem Services, Conservation International (CI)

Dick Kempka, Vice President of Sales, Equator Environmental

Rex Kempke, Senior Commercialisation Manager, EcoSecurities

Toshihide Kubo, Country Director Japan, EcoSecurities

Jack MacDonald, Head of Carbon Investment, EcoSecurities

Thomas Marcello, Analyst, New Carbon Finance

Ruth Nussbaum, Director, ProForest

Helen Robinson, Chief Executive, TZ1 Registry

Henk Simons, Senior Advisor Biodiversity at IUCN Netherlands

Christopher Stewart, Associate Director, ProForest

Kerry ten Kate, Director of Business and Biodiversity Offsets Program (BBOP), Forest Trends

Stefan van der Esch, Policy Advisor, Government of the Netherlands

Reinhard Wolf, Climate Protection Programme of German Technical Cooperation (GTZ)

German energy utility company (undisclosed)

Japanese energy utility company (undisclosed)

US insurance company (undisclosed)

## Glossary

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**Additionality** is the requirement by which, under the Kyoto Protocol and sound voluntary market standards, carbon credits will be awarded only to project activities where emissions reductions are "additional to those that otherwise would occur", i.e. additional reductions compared to the "baseline scenario".

**Afforestation and Reforestation (A/R) Projects** under the CDM include the planting or assisted regeneration of forest on land that has not been forested for a period of at least 50 years (afforestation) or since 1990 (reforestation) through planting, seeding and/or the promotion of natural seed sources.

**Allocation** of emissions permits or allowances among greenhouse gas emitters to establish an emission trading market. The allocation of emission permits / allowances can be done through grandfathering (based on past emissions) or the auctioning of permits.

**Annex-I Countries** are the 36 countries and economies in transition listed in Annex I of the UNFCCC. Belarus and Turkey are listed in Annex I but not Annex B; and Croatia, Liechtenstein, Monaco and Slovenia are listed in Annex B but not Annex I. In practice, however, Annex I of the UNFCCC and Annex B of the Kyoto Protocol are often used interchangeably.

**Assigned Amount (AA) and Assigned Amount Units (AAUs)** is the total assigned amount of greenhouse gas that each Annex B country is allowed to emit during the first commitment period (see explanation below) of the Kyoto Protocol. An Assigned Amount Unit (AAU) is a tradable unit of 1 t CO<sub>2</sub>e.

**Baseline Scenario** represents forecasted emissions against which actual emissions are measured. This is often referred to as the "baseline scenario", i.e. expected emissions if the emission reduction activities were not implemented. In the case of REDD, the main options are historical baselines (average emissions during a past period), modelled baselines (spatially explicit - e.g., land use models – or not spatially explicit – e.g., econometric models), and negotiated baselines.

**Bundling** is the combination of several small-scale project activities to form a single project activity or portfolio under the CDM in order to decrease transaction costs per unit of emission reductions.

**Business-As-Usual (BAU) Scenario** refers to the "baseline scenario" against which emission reductions are measured and carbon credits are issued.

**Cap and Trade** system is an emissions trading system, where total emissions are limited or "capped". The Kyoto Protocol is a cap and trade system in the sense that emissions from Annex-B countries are capped and excess permits can be traded. In a strict sense, cap and trade systems will not include mechanisms such as the CDM, which will allow for more permits to enter the system, i.e. beyond the cap. The latter is, however, possible for compliance under the Kyoto Protocol as one of its "flexible mechanisms".

**Caps** are legally binding limits to emissions from a country, sector, or organisation.

**Carbon Dioxide Equivalent (CO<sub>2</sub>e)** is a measurement unit used to standardise the global warming potential (GWP) of greenhouse gases. Carbon dioxide is the reference gas against which other greenhouse gases (e.g. methane) are measured.



**Certification** process is the phase of a CDM or JI project when permits are issued on the basis of calculated emissions reductions, verified by an accredited third party.

**Certified Emission Reductions (CERs)** are carbon credits generated through the CDM.

**Clean Development Mechanism (CDM)** is a mechanism for project-based emission reduction activities in developing countries. Certificates are generated through the CDM from projects that lead to certifiable emissions reductions that would otherwise not occur.

**Commitment Period** is the five-year Kyoto Protocol Commitment Period is scheduled to run from calendar year 2008 to calendar year-end 2012 ("First Commitment Period").

**Compliance** is the achievement by a Party of its quantified emission limitation and reduction commitments under the Kyoto Protocol.

**Designated National Authority (DNA)** is an appointed authority necessary for the implementation of CDM projects. The DNA issues the Letter of Approval (LoA) needed for registration of a project. A project will need both a host country approval as well as investor country approval.

**Designated Operational Entity (DOE)** is a domestic legal entity or an international organization accredited and designated by the CDM Executive Board. The DOE validates and requests registration of a proposed CDM projects activity and verifies emission reductions of a registered CDM project activity.

**Early Crediting** can be applied to CDM projects implemented between 2000 and 2008 to achieve compliance in the first commitment period.

**Emission Reduction Purchase Agreement (ERPA)** is a binding purchase agreement signed between buyers and sellers of carbon credits.

**Emissions Trading** allows for the transfer of AAUs (national allowances) across international borders or emission allowances between companies covered by a Cap and Trade scheme. However, it is also a general term often used for the three Kyoto mechanisms: JI, CDM and emissions trading.

**European Union Allowances (EUA)** the tradable allowance unit under the EU ETS.

**European Union Emissions Trading Scheme (EU ETS)** is the Trading Scheme within the European Union. The first compliance phase is from 2005 to 2007, while the second compliance phase covers the period from 2008 to 2012, equivalent to the First Kyoto Commitment Period.

**Ex ante crediting** is the issuance of credits in expectation of future emission reductions (not eligible under Kyoto).

**Ex post crediting** is the issuance of credits after independent verification of emission reductions.

**Flexible mechanisms** (or "Kyoto mechanisms") under the Kyoto Protocol are Emission Trading between Annex-B countries and the use of credits from JI and CDM projects for compliance.

**Forest management** refers to the management (or sustainable management, as opposed to destructive logging) of existing forests, in the context of a carbon project usually in order to enhance carbon stocks in the forest. This is different from afforestation and reforestation, although it equally represents a sink activity. Forest Management is not eligible under the CDM but is eligible under the JI.

**Fungibility** allows for the possibility to exchange, or use interchangeably, different types of reduction credits achieved under different mechanism (e.g. CERs for AAUs).

**Greenhouse gases (GHGs)** are trace gases that control energy flows in the Earth's atmosphere by absorbing infra-red radiation. Some GHGs occur naturally in the atmosphere (e.g. H<sub>2</sub>O), while others result from human activities or occur at greater concentrations because of human activities. There are six GHGs covered under the Kyoto Protocol - carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF<sub>6</sub>). CO<sub>2</sub> is the most important GHG released by human activities.

**Host Country** is the country where a JI or CDM (or REDD) project is physically located. A project has to be approved by host country to receive CERs or ERUs.

**Hot Air** are excess emission allowances that have been allocated but do not reflect realistic baseline emissions because of an economic collapse or declined production for reasons not directly related to efforts to curb emissions (e.g. in Eastern European Countries around 1990).

**International Transaction Log (ITL)** is a planned centralized database of all tradable credits under the Kyoto Protocol to track their trading and prevent double counting. It also verifies all international transactions and their compliance with Kyoto regulations.

**Issuance** refers to the instruction by the CDM Executive Board to the CDM registry administrator to issue a specified quantity of carbon credits for a project activity into the pending account of the Executive Board in the CDM registry.

**Joint Implementation Mechanism (JI)** is a mechanism for project-based crediting in Annex-I countries (as opposed to projects located in non-Annex I countries as in the CDM).

**Kyoto Protocol** was signed at COP-3 to the UNFCCC in Kyoto, Japan, December 1997. It specifies emission obligations for the Annex-B countries and defines the three so-called Kyoto mechanisms (or "flexible mechanisms"): JI, CDM and emissions trading. It entered into force in 2005. The Kyoto Protocol is a Protocol to the UNFCCC (the framework convention).

**Leakage** is an increase in emissions outside a project area due to project activities, e.g. the displacement of logging due to forest conservation activities.

**Linking Directive** of the European Union Emissions Trading Scheme (EU ETS) provides provisions relating to project approval processes and authorisation to participate in the flexible mechanisms. They also contain additional provisions relating to the establishment of the national emissions inventory.

**Monitoring** refers to the collection and archiving of all relevant data necessary for determining the baseline and project-based measuring of anthropogenic emissions by sources (or sinks) of greenhouse gases (GHG) within the project boundary (and leakage of emissions).

**National Allocation Plan (NAP)** allocates emission allowances at the national level to individual entities, e.g. companies, under European Union Emission Trading Scheme (EU ETS).

**Non-Annex I** countries (or Non-Annex B countries) are developing countries, signatories to the UNFCC but have no emission reduction targets.

**Project Crediting** involves the issuing of credits to an emissions reduction project, e.g. a CDM project.

**Project Idea Note (PIN)** is a short project description (about 6 pages) that provides basic information about the project such as type, size and location of the project; estimation of the anticipated total amount of Greenhouse Gas (GHG) reductions compared to the “business-as-usual” scenario, etc.

**Reference Scenarios (Baselines)** establish a hypothetical emission level against which actual emissions are measured. In the case of REDD, the main options are historical baselines (average emissions during a past period), modelled baselines (spatially explicit - e.g., land use models – or not spatially explicit – e.g., econometric models), and negotiated baselines.

**Registration** is the formal acceptance by the Executive Board of a validated project activity as a project activity. Registration is the prerequisite for the verification, certification and issuance of credits related to that project activity.

**Sinks** refer to the removal of greenhouse gases (GHGs) from the atmosphere through land management and forestry activities. These may be subtracted from a country's allowable level of emissions or credited under CDM and JI (with certain restrictions).

**United Nations Framework Convention on Climate Change (UNFCCC)** was established in 1992 at the Rio Earth Summit. It is the overall framework guiding the international climate negotiations. Its main objective is "stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic (man-made) interference with the climate system". The Kyoto Protocol is a Protocol to the UNFCCC.

**Validation** refers to the process of independent evaluation of a CDM project and its Project Design Document (PDD) by an accredited Independent Entity according to approved methodologies and regulations by the UNFCCC.

**Verification** refers to the process in which a recognised independent third party must confirm that claimed emissions reductions have occurred. This is a precondition for the issuance of carbon credits (e.g. for CDM projects) by the UNFCCC.

**Voluntary Markets** are markets outside regulatory carbon markets and do not involve international agreements. They are driven by voluntary commitments from organisations (e.g., energy companies, airlines) and individuals.