Towards Building a Governance Framework for REDD+ Financing

Consultation Workshop

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Sources, Flows and Management/Governance of REDD+ Financing: A Literature Review

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Literature Review

1. Introduction

This literature review has been prepared to inform the discussion among key stakeholders participating at the workshop of the Philippine-Swiss REDD+ Initiative in Panama on Oct 2, 2011 on currently existing sources and flows of finance for REDD+ as well as their underlying management systems, which in the paper is referred to as 'governance of finance'. This report aims to provide a starting point for discussions around key attributes, or principles that can be useful for governing REDD+ financing.

Currently, most funding for REDD+ is for what is considered "phases 1" and "phase 2" of REDD+ (see Table 1). International funding is through multilateral channels and bilateral assistance, and many forested developing countries are also supporting REDD+ "readiness" activities through their own domestic finance. It is recognized that public sector financing alone cannot provide the amount of resources needed for all three phases of REDD+ financing.

Table 1: Sources of funding for REDD+ phases

Phases	Activities	Current principal funding sources	Eligibility
Phase 1	Development of national REDD+ strategies or action plans, policies and measures, and capacity-building.	Public funds largely channeled through multilateral funds (e.g. the Forest Carbon Partnership Facility (FCPF)and UN-REDD) and bilateral assistance.	FCPF and UN-REDD have specific requirements for funding. Bilateral funding based on agreements between donor and host government.
Phase 2	Implementation of national policies and measures and national REDD+ strategies. Could involve further capacity-building, technology development and transfer and results-based demonstration activities.	Public funds through bilateral agreements and some multilateral funding and some private finance.	Depending on funding source, determined by governing body (e.g. Forest Investment Program eligibility criteria), bilateral agreement, or private contracts.
Phase 3	Implementation of results-based actions that should be fully measured reported and verified.	Public funds through multilateral (e.g. FCPF carbon Fund) and bilateral agreements. Direct private investments and voluntary carbon markets.	Performance-based payments based on country program (e.g. Amazon Fund), bilateral agreement (Indonesia-Norway fund), predetermined rules (voluntary market, e.g. VCS) or governing body (FCPF).

Sources: Phases and activities based on Cancun Agreements

2. Financing Gap

2.1 Estimated costs of REDD+ and limits of cost estimations

The majority of cost estimates for REDD+ financing use **opportunity cost analysis**, which estimates the forgone revenue from alternative land-uses. However, these estimates have been questioned since they do not consider transaction and implementation costs, nor the inherent values of forests, from a policy maker perspective. According to Simula (2010) there are several global and regional estimates of opportunity costs of emission reductions from deforestation (see example in Box 1 and Table 2 below). Only a few estimates exist for such costs of forest degradation.

Box 1. REDD+ Costs – The Eliasch Review

Some models developed by underlying studies for the Eliasch Review (2008) estimated that the global economic cost of the climate change impacts of deforestation will rise to around US$ 1 trillion a year by 2100. The total cost of forest loss for the global economy could be as high as US$ 12 trillion in net present value terms. These costs are additional to climate change damage caused by emissions from other sectors.

The Eliasch Review (2008) estimates that the finance required to halve emissions from the forest sector by 2030 could be around US$ 17-33 billion per year if included in global carbon trading. These results were based on various estimates from the literature and from work commissioned by the Review.

Table 2: Examples of Opportunity Cost Estimates

	Scale				Source	Notes
	Global	Groupings	National	per tCO_2e		
Deforestation (10% abatement)	€0.3–€1.2 billion per year			€1.00–€2.00	Kindermann, et al. (2008)**	
Deforestation (8.4%–17.7% abatement; varies per region)				$1.40	Sohngen and Beach (2006)***	
Deforestation (49% abatement)				$1.60	Kindermann, Obersteiner et al. (2006)***	
Deforestation (50% abatement) by 2020	€15–€25 billion per year				European Commission (EC 2008)**	
Deforestation (50% abatement) by 2030	$17–$33 billion per year				Eliasch (2008)	Opportunity costs + rent: All credits sold at the price where supply and demand for credits are equalized despite the majority of credits being cheaper than this to supply. Rent constituted $9 billion and $18 billion, respectively, of the total amounts.

Source: REDD OAR, 2009, Annex 2[i]

The Informal Working Group on Interim Finance for REDD (IWG-IFR 2009) estimates that by 2015 approximately US$ 20 billion would be required to reduce deforestation by 25% and an additional US$ 4 billion for reducing emissions from forest degradation. This was based on the analysis of opportunity costs resulting in a global average interim incentive payment of US$ 5.40/tCO_2. According to this report, in most countries this payment would cover a substantial portion of current deforestation. Even in Indonesia where opportunity costs are usually high, about 30% of the total reduction potential from avoided deforestation is at an opportunity cost below US$ 5.40/tCO_2.

However, the IWG-IFR discussion document (2009) and the opportunity cost manual published in 2011 by the World Bank Institute[ii] recognize that using only the opportunity cost to estimate the cost of REDD+ can be problematic. This is also reported in a number of other papers (Climate Focus (2010)[iii]; Coren M. *et al* (forthcoming 2011)[iv]) Some of the reasons why opportunity costs often do not correspond to the real costs of implementing REDD+ are reported to include:

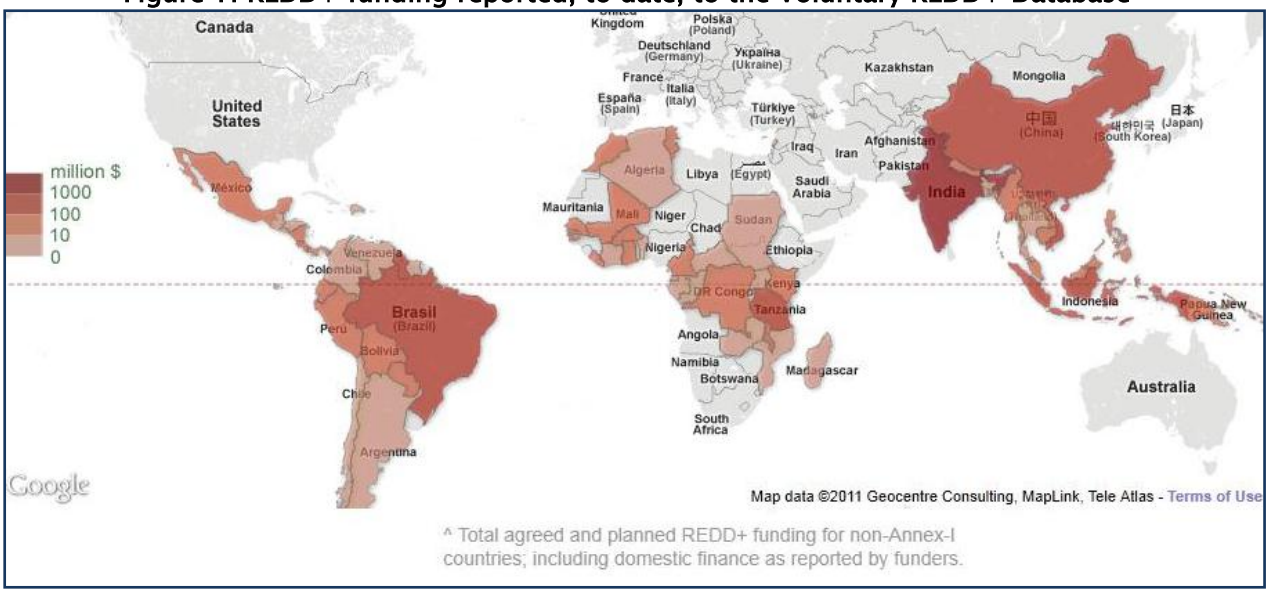
- Failure to adequately account for the implementation and transaction costs (Climate Focus, 2010; Coren *et al* (forthcoming 2011)). In some afforestation and reforestation projects transaction costs represent from 0.5 to 20% of total project investment (BioCF, 2011).[v]
- Average or marginal private opportunity cost does not necessarily reflect the incentive required to the country to reach the emission reductions target (IWG-IFR, 2009).
- Problems with estimating opportunity cost of land based on the discounted values of the agricultural products when the forest is cleared for the subsistence and not for the production of agricultural commodities for the market (RRI, 2010).[vi]
- Opportunity costs vary according to the country, depending on its size, ability to reduce emissions, local conditions, and level of readiness (World Bank Institute, 2011).
- Failure to take into account the inherent value of the standing forest, including the ecosystem services it provides (clean water, for example), biodiversity, and medicinal values, among others.

2.2 Current and estimated/potential future flows from financial sources

Since 2009 developed countries have pledged around $4.5 billion to support interim REDD+ activities from 2010-2012 in developing countries, including capacity building, planning, and implementation (Figure 1, which combines both donor and domestic finance as reported by countries to the Voluntary REDD+ Database[1]).

[1] http://www.reddplusdatabase.org/

Figure 1: REDD+ funding reported, to date, to the Voluntary REDD+ Database



Source: Voluntary REDD+ database[vii]

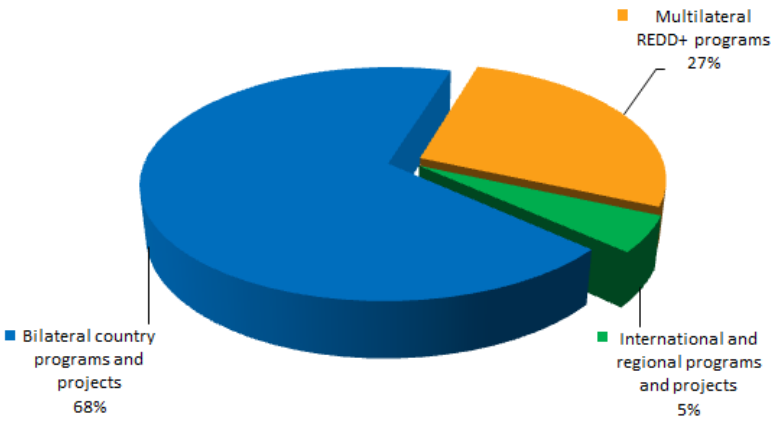
Table 3: Overview of REDD+ financing[viii]

	US$ billion (as reported by funders)	US$ billion (as reported by recipients)
Country to country funding	3.48	0.62
Country to institution funding	3.41	0.01
Institution to institution funding	0.01	0.01
Institution to country funding	1.21	0.3

Source: Voluntary REDD+ database

According to Simula (2010) most donors invest the majority of their REDD+ funding through bilateral country programs and projects. Multilateral funds at the moment correspond to approximately one quarter of the total REDD+ financing.

Figure 2: Financing by source from 2008 onwards

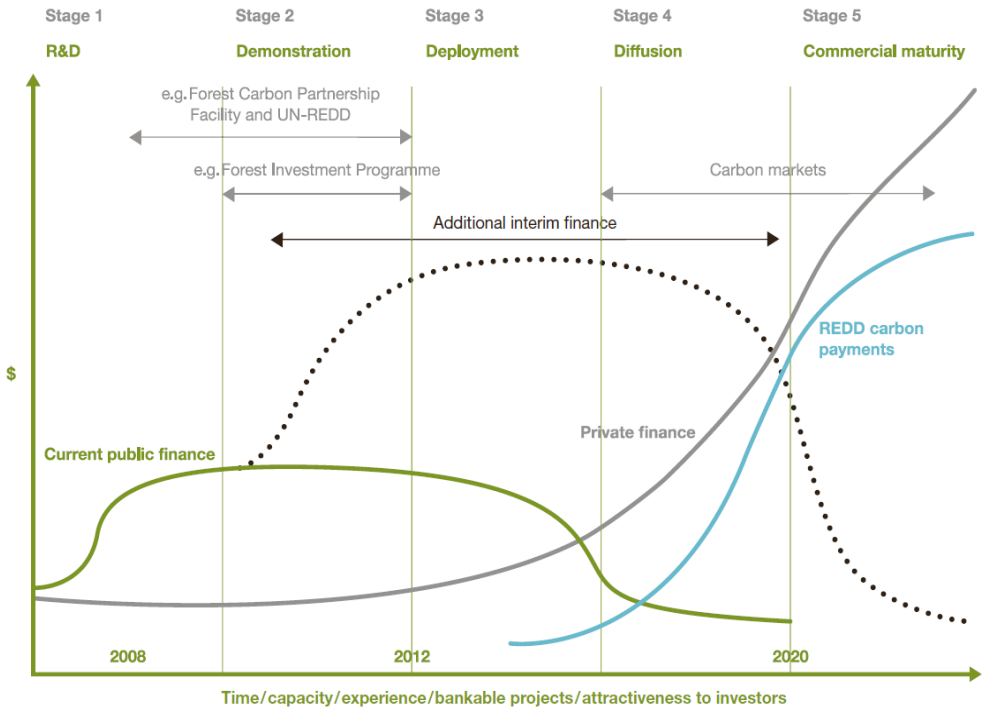


Source: Simula, 2010

2.3 Gap analysis

Significant financing gaps already exist in several countries for REDD+ readiness financing. Simula's analysis of 9 FCPF R-PPs shows that as of October 2010, about US$ 27 million was still needed to complement readiness finance in these countries. Current pledges are likely to be enough to cover the gap in readiness financing. However in the medium to long-run public sector investments alone will not be enough to cover the financial gap (see Figure 3 below). According to Simula (2010) the global medium-term gap for REDD+ financing, measured against the current public sector volume is estimated to be over US$ 20 billion per year and will likely increase in the long-run. This estimate is based on projected costs for REDD+ and on the amount of financing that has already been pledged by donor countries. The private sector will need to play a major role in the long-term deployment phase but has yet to emerge a major source of finance for REDD+ (PWC, CF, IUCN, WI, 2010).[ix]

Figure 3: Gaps in funding and the role of the private sector



Source: Forum for the Future (2009), Forest Investment Review[x]

Another strategy to estimate the size of the financial gap is to make a direct assessment of the demand for REDD+ investments. In 2009, donor and recipient countries were invited by the Intergovernmental Taskforce of the REDD+ Partnership to participate on a survey on REDD+ financing and activities where recipient countries were asked to estimate their additional financial needs to implement REDD+.[xi] Table 4 below provides some examples of country estimates for the various phases.

Table 4: Country estimates of additional financing needs for REDD+ (Phases 1-3)

Country	Low Carbon Plan and REDD+ Strategy	Implementation	Demonstration	Performance-based payments	Financing period
Brazil	US$ 1 million/ year	US$ 7,500 million	---	---	2010-2015
Central African Republic	US$ 20 million	US$ 20 million	---	---	2010-2013
Chad	US$ 20 million	US$ 20 million	US$ 9 million	US$ 9 million	2010-2012
DR of Congo	US$ 12 million	US$ 700 million	US$ 50 million	US$ 3,000 million	2010-2015
Ecuador	US$ 5 million	---	---	---	2010-2012
Gabon	US$ 4 million	US$ 3.5 million	US$ 100 million	US$ 250 million	2010-2020

Country	Low Carbon Plan and REDD+ Strategy	Implementation	Demonstration	Performance-based payments	Financing period
Indonesia	---	US$ 10 million	US$ 5 million	---	2010-2012
Mexico	US$ 20 -30 million	US$ 20 – 30 million	US$ 50 – 80 million	US$ 20 – 40 million	2010-2015
Mozambique	US$ 0.3 million	US$ 5 million	US$ 0.2 million	US$ 3 million	2010-2012
Nigeria	US$ 7 million	US$ 5 million	US$ 2 million	US$ 2 million	2010-2012
PNG	---	US$ 40 – 50 million	---	US$ 3,700 million	2010-2030
Uganda	US$ 65.1 – 123.5 million	US$ 3.6 – 60 million	---	---	2010-2015

Source: Simula, 2010, available at: http://reddpluspartnership.org/25159-09eb378a8444ec149e8ab32e2f5671b11.pdf

Estimates from different countries of their finance needs throughout the three phases vary considerably. Countries used different approaches for their estimations; many of them were largely subjective. There is a great need to further guide countries in their estimations and to provide some technical training in this field (Simula, 2010).

Despite differences in cost estimates and financial needs projections it is clear that there is a significant gap in pledged funding and the level of finance needed to achieve the expected amount of emission reductions and co-benefits from REDD+. The funding gap in public finance is big and is likely to grow with rising pressure on forest land.

3. Mobilization of International Funds for REDD+

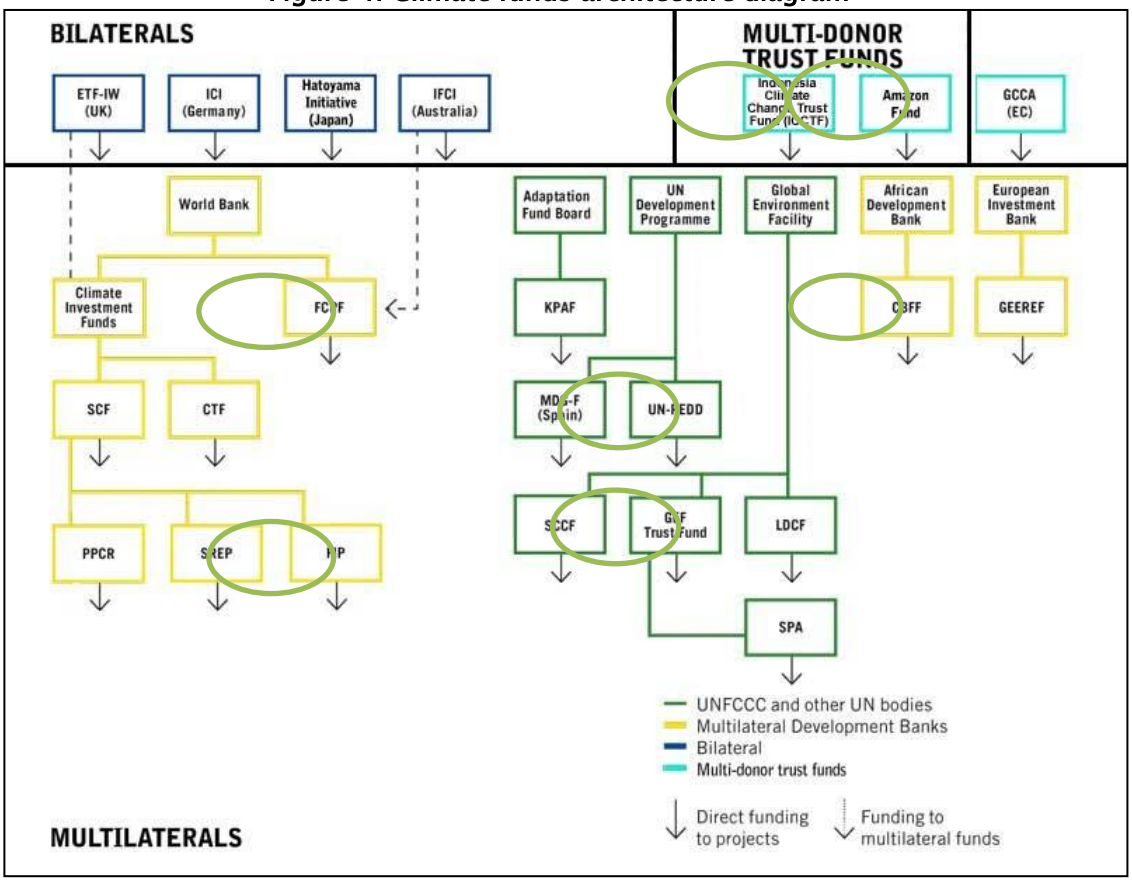
REDD+ is currently financed primarily through bilateral country programs and projects (Simula, 2010). Multilateral funds are the second largest source of financing for REDD+. The private sector is expected by many to play a key role in the later stages of REDD+ implementation. However, its participation in REDD+ financing to date has not been significant and is mainly via voluntary market mechanisms. REDD+ countries have also invested their own resources in getting ready for REDD, but in many cases it is hard to track how much money was spent from domestic resources on REDD+ specific initiatives. Reporting by developing countries on REDD+ self-financing is not as robust as that from donor countries.

Most of the current financing support directed to REDD+ is focused on readiness and demonstration activities. These activities have been funded by domestic funds, bilateral assistance, and multilateral funds. The majority has been ODA, although small amounts of carbon project development by the private sector has contributed to readiness and some "demonstration" projects.

As of September 2011, the REDD+ Partnership identified 73 developing countries that are planning or implementing REDD+ activities with support from 16 different multilateral, bilateral and non-governmental initiatives.[xii] Decisions and allocations of interim financing for REDD+ have been ad hoc, fragmented and donor-driven (Davis and Daviet, 2010). The various

international initiatives funding REDD+ have different objectives and rules of operation. In some cases, multiple funds and donors interact with the same recipient country that must navigate the various governance structures of these funds. Figure 4 below is a representation of the complex climate funds architecture and highlights some of the entities that fund REDD+ activities. Some funds like the Global Environmental Facility (GEF) Trust Fund have REDD+ as one of the mitigation activities funded, while other funds like the Forest Carbon Partnership Facility (FCPF) exclusively fund REDD+ initiatives.

Figure 4: Climate funds architecture diagram*



Source: http://www.climatefundsupdate.org/listing/architecture

Note: *funds that have a REDD+ component are highlighted with a green circle. The diagram also does not cover all bilateral REDD+ funding

4. Multilateral Sources of Finance

4.1 Brief description of sources and current levels of funding + disbursements

Various multilateral funds have emerged since the Bali Action Plan in 2007. See Table 5 below for a description of some of these funds. Multilateral initiatives so far have mainly invested in capacity building, governance reform, national strategy development, and implementation of policies and measures to get countries ready for REDD+.

Table 5: Multilateral REDD+ Funds

Fund	Description	Geographic focus	Pledged (US$ million	Funded (US$ million)	Disbursed (US$ million)	Requirement for additional funding
FCPF Readiness Fund	World Bank trust fund launched in 2007 for REDD capacity building. The FCPF readiness program is currently supporting 37 developing countries to build REDD strategies, MRV systems, and national baselines. Includes knowledge sharing among members.	14 countries in Africa, 15 in Latin America, and 8 in Asia Pacific	217.6	202.2	10.34	Has already reached capitalization target.
FCPF Carbon Fund	Partner to the Readiness Fund. Declared operational in 2011. Will provide performance-based payments for verified emission reductions from REDD. Only countries that have achieved progress toward REDD readiness will be eligible.	Only countries from FCPF Readiness Fund currently eligible	174.4	118.4	0	Almost fully capitalized ($200M is goal); keen to attract private sector investments
UN-REDD	Collaboration between the Forest and Agriculture Organization (FAO), the UN Development Programme (UNDP) and the UN Environment Program (UNEP) to support the development of national REDD readiness.	Bolivia DRC Ecuador Indonesia Panama PNG Tanzania Vietnam Zambia	151	98.2	51.36	Open to additional funding. 2011 -2015 strategy has as objective to add 20 countries to the program.
Forest Investment Program (FIP)	World Bank Climate Investment Fund operational since July 2009. Supports “phase 2” of REDD activities and designed to provide scaled-up financing for forest sector reforms identified through national REDD strategies.	Brazil Burkina Faso DRC Ghana Indonesia Mexico Laos Peru	578	262	7	Still open for new funds with some limitations.

Fund	Description	Geographic focus	Pledged (US$ million	Funded (US$ million)	Disbursed (US$ million)	Requirement for additional funding
Global Environmental Facility (GEF) – Climate Change Focal Area	Financial mechanism for the UNFCCC, CDB, and UNCCD. Supports projects that benefit the global environment and promote sustainable livelihoods. Various activities including the development of small scale REDD+ projects and capacity building.	Global	246.23	Unknown	Unknown	GEF 5 funding pledges agreed.
Congo Basin Forest Fund	Created to complement existing activities; support transformative and innovative proposals that develop the capacity of the people and institutions of the Congo Basin and enable them to manage their own forests; help local communities find livelihoods consistent with the conservation of forests; reduce deforestation	Central African (COMIFAC) nations	165	165	11.72	Very low over the next 4 years. Currently facing challenges to disburse funds.
Green Climate Fund	Agreed under the Copenhagen Accord and Cancun Agreements; still under negotiation. To funds mitigation (likely to include REDD+). To be governed by "balanced representation". The World Bank is to act as initial trustee. Not yet operational.	All developing countries	tbd	tbd	tbd	Will be open to funding once declared operational. Size and timing of the fund have yet to be agreed.

Source: PWC, CF, IUCN, WI (2011)

Even though donor countries have made significant pledges to these funds, very little has been disbursed so far (see Table 6 below). Of the US$ 200 million pledged for the FCPF Readiness Fund only US$ 86.19 million has been committed and US$ 9.8 million spent in fiscal year 2009 and 2010 (IDEAcarbon, 2011). According to this same research, of the total US$ 94 million that was deposited in the UN-REDD programme, US$ 26.7 million was transferred to the accounts of the country offices of the FAO, UNDP, and UNEP as February 2011. It is not clear how much of that money has been actually disbursed.[xiii]

Table 6: Multilateral funds incoming and outgoing funding (in US$ million as of 20 Sep. 2011)

Multilateral Fund	Incoming Funding (2008-2012)		Outgoing funding (2008-2012)	
	Reported by the fund	Reported by others	Reported by the Fund	Reported by others
FCPF	0	325.18	85.76	31.32
FIP	0	300.7	542	80
UN-REDD	0	144.95	75.45	17

Source: Voluntary REDD+ Database: http://www.reddplusdatabase.org/entities/315/arrangements

4.2 Management/governance of these funds

Each multilateral fund has its own governance structure and is directly managed or hosted by a multilateral organization. Decisions concerning the allocation and delivery of finance are largely retained at the multilateral level (Davis and Daviet, 2010).

According to Davis and Daviet (2010) each multilateral fund pursues its own objectives for REDD+ and operates in accordance with its own standards, procedures, safeguards and rules. Even though the Parties to the UNFCCC have not yet agreed on how REDD+ financing should be governed, various institutional arrangements are now emerging from multilateral institutions to govern a portion of REDD+ financing in this interim period.

Funding allocation and disbursement decisions

Decision-making in recently created multilateral climate change funds, including for REDD+, has largely been through a new type of governance structure that enable more equitable representation of donor and recipient countries. In particular, governance of the World Bank climate-related trust funds, including the Participants Committee of the FCPF and the FIP Sub-Committee is formed by an equal number of donor countries and participant countries with equal voting power. The governance bodies of both these funding instruments takes into account input from independent technical experts that form "advisory panels" on specific topics that help the body make funding allocation and disbursement decisions.

The policy board of the UN-REDD gives full membership and voting rights to representatives from 3 donor countries, 3 recipient countries and 3 participating UN-agencies, as well as one representative from civil society and one indigenous peoples' representative. Decisions in this entity are based on consensus (Davis and Daviet, 2010). However, the UN-REDD

structure may be unique among climate-related multilateral financing mechanisms. Some other funds give observer status to civil society and indigenous peoples (such as the Adaptation Fund and Pilot Program on Climate Resilience) but not voting rights. The FCPF also allows observers, but voting rights is limited to sovereign participants and organizations that have made financial contributions.

Application of "safeguards" by multilateral financing mechanisms

The disbursement of REDD+ funds from multilateral organizations follow the operational policies and procedures of each organization. These include both social and environmental safeguards and guidance (see Table 7 below for details).

Table 7: Safeguards applied by selected multilateral organizations

Initiative	Safeguards
FCPF	According to the FCPF's charter, the World Bank's safeguards apply. However, the FCPF Readiness Fund has developed the SESA as an alternative application of World Bank safeguards. The SESA approach aims to integrate key social and environmental considerations for REDD+ at the earliest stage of decision making through informed stakeholder participation. This, in turn, is expected to promote compliance with safeguard policies once implementation begins. If, on an exceptional basis, the FCPF decides to finance the implementation of policies and projects, the standard application of safeguard policies will apply.
FIP	According to the FIP design document, each investment will follow the policies and procedures of the multilateral development bank that acts as delivery partner, although it also requires consultations with indigenous peoples and local communities.
UN-REDD	They are currently developing a comprehensive social and environmental framework (UN-REDD Programme Social and Environmental Principles Framework", which will include a minimum standard risk assessment and mitigation framework as well as guidance on how to maximize social and environmental benefits of REDD+.

Source: Davis, C. and Daviet, F., 2010[xiv]

The multilateral institutions share some commonalities in their approaches to REDD+ safeguards especially in terms of the scope of issues addressed. But there are also differences in the level of detail of the requirements, process, and outcomes of application, evaluation and monitoring (Moss and Nussbaum, 2011).[xv] As Moss and Nussbaum highlight, the process of developing effective REDD+ safeguards is ongoing – it's yet to be determined what will be the best way to ensure that common environmental and social considerations are taken into account effectively in different national and sub-national programs. Their report presents some lessons learnt from multilateral institutions that have started to implement REDD+ safeguards:

- To achieve global positive outcomes there must be a commonality in the principles that the safeguards aim to achieve;

- Safeguards should go beyond the "do no harm" approach and foster positive benefits;
- REDD+ safeguards should be applied throughout the three phases;
- There needs to be effective coordination among multilateral and bilateral safeguards initiatives to avoid a "race to the bottom" between recipient countries and reduce the transaction costs REDD+ countries would incur implementing multiple REDD+ safeguard policies.

Initiatives are underway that may improve consistent approaches across different multilateral organizations. For instance, participants to the FCPF Readiness Fund have spent some time determining how other delivery partners than the World Bank could be used without negatively affecting governance elements such as compliance with environmental and social safeguards. This has resulted in IDB and UNDP successfully being approved to at act as "delivery partners" for particular countries. FAO and ADB are also likely to apply to act in this capacity. To achieve this, the FCPF developed a 'Common Approach' as a way to benchmark the different standards used by different partners, and included the possibility of gap filling measures where equivalence was not achieved. Key principles of the Common Approach include requiring a delivery partner to:

- Comply with FCPF Guidance on The Social and Environmental Safeguards Assessment and Environmental (SESA) and Social Management Framework (ESMF); Stakeholder Engagement; Disclosure of Information; and Grievance and Redress Mechanisms at the National Level; and

- Achieve "substantial equivalence" which means equivalence to the "material elements" of the World Bank's environmental and social safeguard policies and procedures applicable to the FCPF Readiness Fund, including information disclosure and dispute resolution and redress.

Other Issues

A number of additional issues are also important to consider in the context of comparing the management and governance of multilateral REDD+ finance. These include (i) models for disbursing funding (who is the implementing agency within a country); (ii) financial and fiduciary responsibility standards (followed by the entities holding and managing the funds); (iii) management costs and operational efficiency (overhead of the different multilateral funds and how efficient they are at disbursing funds); (iv) overlap between the funds (geographic and thematic). A detailed review of these issues was unfortunately beyond the scope of this literature review.

5 Bilateral sources of finance

5.1 Brief description of sources and current levels of pledges/flows

Currently, bilateral sources of finance are the largest part of REDD+ financial pledges and flows with over 70% of REDD+ financing from bilateral sources (Simula, 2010). This figure is in line with the estimates prepared for the UK government that found approximately 67% of committed REDD+ funding has so far passed through bilateral mechanisms (PWC, CF, IUCN, WI, 2011). Table 8 offers a few examples of estimated outgoing funding per donor country; these figures are not comparable, as they cover different time periods (i.e. different ranges of fiscal years) for each donor. They are simply what has been voluntarily reported by countries to the REDD+ Partnership database to date.

Table 8: Donor country REDD+ outgoing funding as report to REDD+ Partnership database to date

Donor Country	Outgoing funding	
	Reported by donor country	Reported by others
Australia	223.26	64.58
France	314.7	0.68
Germany	384.25	20.79
Japan	3604	18.8
Norway	921.9	475.49
United Kingdom	191	0
United States	210.2	2.25

Source: Voluntary REDD+ Database[xvi]

Bilateral sources are harder to track than multilateral funds as most donor countries do not use public systems to monitor financial flows. The Voluntary REDD+ Database established by the REDD+ Partnership, however, is starting to provide this information, although reporting is not completely standardized. As reported by donors, an estimated US$ 3.8 billion has been invested in bilateral, country to country, funding for REDD+. In recent years, some of the main donors, such as Norway,[xvii] have invested in improving the monitoring and reporting of their financial contribution to REDD+.

There is not much data available on how much bilateral finance has been disbursed. For the few countries that have made this information available, the range of disbursement is wide, from as little as 11% of the total pledged in the case of Sweden to as much as 55% for Canada and 44% for Japan (PWC, CF, IUCN, WI, 2011). Tracking disbursements nevertheless continues to be challenging and the information presented is often outdated.

5.2 Management/governance of these funds

Bilateral financing, whether in the form of grants, concessional loans, or performance-based payments, can be delivered to REDD+ countries via national budgets (discretionary or earmarked for a specific activity), dedicated trust public or private funds, or direct investments (e.g. projects and other on-the-ground initiatives) (Streck, et. al. 2010).

Funding allocation and disbursement decisions

Allocation decisions are largely based on donor country's policies and objectives, and each has indicated specific priorities. See Table 10 for a detailed description of donor activities in multilateral and bilateral initiatives.

Table 9: Country donors' activities through multilateral and bilateral programmes

Donor	Multilateral activities	Bilateral activities	Targeted phases
Norway	FCPF, FIP, UN-REDD, and GEF	Amazon Fund, Congo Basin Forest Fund, and Indonesia	1, 2 and 3
Australia	FCPF, FIP, GEF	Demonstration projects, MRV, policy and legal reform in Indonesia, PNG, Kenya and Cambodia.	1 and 2
Canada	FCPF and GEF	Some bilateral activities including MRV and institutional capacity building in Mexico and Congo Basin Nations.	1
Denmark	FIP, FCPF, UN-REDD and GEF	Assist countries in preparing REDD+ documents and joint forest management in Africa, Bolivia, Nepal and Cambodia.	1
Finland	FCPF and GEF	Some bilateral activities including promotion of regional knowledge sharing in the Andean region and Africa.	1
France	FCPF and GEF	Wide ranges of activities including SFM, remote sensing and development of national strategies in the Amazon, Indonesian and Congolese forests.	1
Germany	FCPF and GEF	Wide range of activities including technical forestry assistance and institutional capacity building in Amazon, Indonesian and Congolese forests regions.	1
Japan	FCPF, FIP and GEF	Capacity building in MRV and technology exchange in various countries.	1
Spain	FCPF and GEF	Some bilateral activities including forest conservation in national parks and biosphere reserves.	1
Sweden	GEF	Some bilateral activities including forest governance, REDD readiness and land use planning	1
Switzerland	FCPF	Some bilateral activities including technical forestry projects and regional knowledge exchange	1
United States	FCPF, FIP, and GEF	Bilateral activities included wide range of readiness activities throughout the world, including in all major forest basins in Asia, Latin America and Africa.	1 and 2

Source: PWC, CF, IUCN, WI (2011). Funding for Forests. UK Government support for REDD+. May, 2011.

Application of "safeguards" by bilateral donors

With regard to safeguards, each country has its own policies and guidelines, making it challenging for recipient countries to comply with the various standards. The table below provides a description of some of the environmental and social safeguards implemented by the main REDD+ donor countries.

Table 10: Donor countries environmental and social safeguards[xviii]

Donor country	Environmental and social safeguards
Australia	In Australia, national environmental assessment legislation applies to development co-operation activities. The Environmental Assessment Guidelines for Australia's Aid Program key principles are a clear commitment for all projects to be consistent with the principles of ecologically sustainable development; environmental considerations to be a core element in planning and design of all aid activities; and in the absence of enforceable standards in a recipient country, Australian standards apply.
France	France applies an environmental assessment process at an early stage in development co-operation projects and at a level appropriate to the type of project, the significance of the environmental effects and the sociocultural and biophysical sensitivity of the environment. Impact significance is assessed through a series of test questions that determine the need to conduct a detailed assessment study. The study is financed by the French Development Fund, or by other donors in co-funded projects, with the participation of qualified local consultants in recipient countries.
Germany	According to the requirements of the Federal Ministry for economic Co-Operation and Development every development assistance project to go through an environmental assessment procedure that is integrated into the project cycle. Environmental assessment is considered to be an on-going process throughout the planning, appraisal and implementation stages of development assistance projects. The environmental assessment procedure currently used is in close conformity with the OECD/DAC Good Practices for Environmental Impact Assessment of Development Projects.
Norway	According to the "Strategy for Environment in Development Cooperation" published by Norad in 1997, the administration shall strengthen the environmental focus in bilateral and multilateral projects, develop administrative procedures to ensure that guidelines in the strategy are observed, develop methods and procedures to integrate the role of women in the planning and implementation of environmental projects, ensure that EIA are carried out before making a decision on financing, evaluate the results of a project compared with development and project objectives (quality assurance).
United Kingdom	DFID officials are required to ensure that all foreign assistance projects funded by the UK government are environmentally acceptable and where appropriate promote capacity building in environmental management. All proposals for new projects must be submitted to an initial environmental screening, and environmental factors should be taken into account thought the phases of the project cycle. Primary responsibility for compliance rests on project developers. Environmental standards set by developing countries are regarded as a minimum for DFID funded initiatives. Where there is no local legislation DFID and the recipient country should decide what standard to apply. All DFID funded initiatives must take into account the international treaties that the UK is party. If environmental or social concerns are likely to be dealt with inadequately DFID should reject then project. DFID considers institutional building and capacity strengthening may be part of project's environmental conditions.
United States	The National Environmental Policy Act (NEPA) from 1970 requires all agencies of the US, including USAID, to integrate environmental factors into their decision-making processes. Executive Order "Environmental Effects Abroad of Major Federal Actions" from 1979 directs all Federal agencies taking major Federal actions having significant effects on the environment outside the United States to establish environmental impact statements, studies or reviews.

6 Domestic sources of public finance

6.1 Brief description of sources

Data for how much funding is being spent by developing countries for REDD+ actions in their own countries is difficult to come by. There is currently no reporting requirement, and although a voluntary mechanism exists through the REDD+ Partnership, very few countries have contributed information. The few that have are included Table 11 below.

Table 11: National governments financing for REDD+

Country	Financing to date (by 2010)	Interim financing (by 2012)	Post 2012 financing	Details	Funding or implementing partners
Brazil	Average US$ 500 million/ year (includes international cooperation on forest policy)			Monitoring, conservation units, law enforcement, SFM, local capacity building, national forest inventory, forest information system, enforcement of public forests law, national and local plans to reduce deforestation, land tenure.	Germany, EU, FAO, US Forest Service, GEF.
Mexico	US$ 460 million	US$ 920 million	Not yet determined	Demonstration activities, the national forest inventory, the ProÁrbol and other national programs like SINANP and others from the agriculture sector, that include subsidies, management arrangements, institutional collaboration, consultation and participation, baseline estimation and reference scenario. Measurement, monitoring and verification.	SEMARNAT, SAGARPA, INEGI,INE, CONABIO, COLPOS, ECOSUR, PRONATURA, CCMSS, WWF México, AMBIO, RED MOCAF, SAO Oaxaca, CI México, British Embassy, The World Bank, FCPF, USAID.
Indonesia	US$ 1,500 million (2009)	US$ 1,440 million	US$ 820 million (2013-2014)	Production forest management, conservation forest management, protection forest management, rehabilitation of degraded land and forest, community development, strengthening forest boundaries, establishment of forest management units.	
DR of Congo	Not assessed	Not assessed	Not assessed	Human and logistic support, underlying policies and measures.	

6.2 Management/governance of these funds

How domestic funds are managed will be locally specific, so it is difficult to generalize about the governance and management of developing countries' budgets. Each will depend on the specific nature of the funds, which Ministry the funds flow through, and for what purpose they are spent upon.

REDD+ countries have described in their R-PPs an overall institutional structure that will manage the preparation process and the allocation of resources in the readiness phase. See box 2 below for the example of the Democratic Republic of Congo (DRC) governance structure for REDD+ readiness funding.

Box 2: Governance structure for REDD Readiness funding in DRC

The Democratic Republic of Congo (DRC) secured over US$ 11 million from the FCPF and UN-REDD programs for funding its Readiness plan. Other partners have expressed their intention to further contribute to the process, including the Congo Basin Forest Fund (CBFF) managed by the African Development Bank. Since it was launched in January of 2009, DRC's REDD Readiness activities have advanced considerably. In 2009, three new national structures were created to manage the REDD+ process:

i) the National REDD Committee, in charge of defining the REDD+ strategy;

ii) the Interministerial Committee, in charge of mainstreaming REDD+ considerations into the overall national development plans;

iii) the National Coordination body, in charge of implementing REDD+ Readiness activities.

DRC's R-PP established the key objective to secure substantial early funding. The country acknowledges the need to ensure credibility as a condition for further international funding for REDD+ in DRC. This includes improving governance in the forest sector. The document also emphasizes the need of multi-stakeholder participation in REDD+ implementation at various levels for its success. A full Consultation Plan is included in the R-PP, laying out the consultation processes to be followed to ensure multi-stakeholder participation in the design of the National REDD+ Strategy.[xix]

In its R-PP DRC also recognizes that it will be crucial to develop a "robust, fair, transparent and accountable monitoring, assessment, reporting and verification (MRV) system for the various dimensions in order to achieve an equitable, effective and efficient REDD." The dimensions of MRV were grouped in four main areas: governance, economic, environment and socio-cultural. The R-PP states that various studies need to be developed to identify the priorities, gaps and implementation mechanisms for creating specific safeguards for these areas and a mechanism to MRV them throughout the implementation of REDD+.

In 2008, the Eliasch Review emphasized the importance of strong governance and effective REDD+ mechanism for the distribution of finance to reduce forest loss. Some of the key areas for reform include clarifying and securing land tenure, and strengthening the institutional capacity of national, regional and local institutions. To help promote transparency, countries may choose to manage carbon revenues through a special fund and should report on the policies and measures they have put in place to reduce deforestation (Eliasch, 2008). Since most REDD+ finance is likely to be performance-based the ability of a country to attract REDD+ finance in advance of verified performance will also depend on the credit rating and investing climate of the respective country (Streck, et. al., 2010).[xx]

Greater devolution of spending power to REDD+ countries is thought to enhance national ownership of strategies and actions, improving the prospect of effective implementation (Davis and Daviet, 2010). Nevertheless in order to do that, national institutions must have adequate capacity to ensure transparent financial management, adherence to social and environmental safeguards, and the delivery of the expected results. Developing countries are currently working on reforms to increase the responsiveness of local institutions but **interim financing mechanisms continue to vest significant power in implementing agencies that have their own governance structures and safeguards.**

7 Carbon Markets

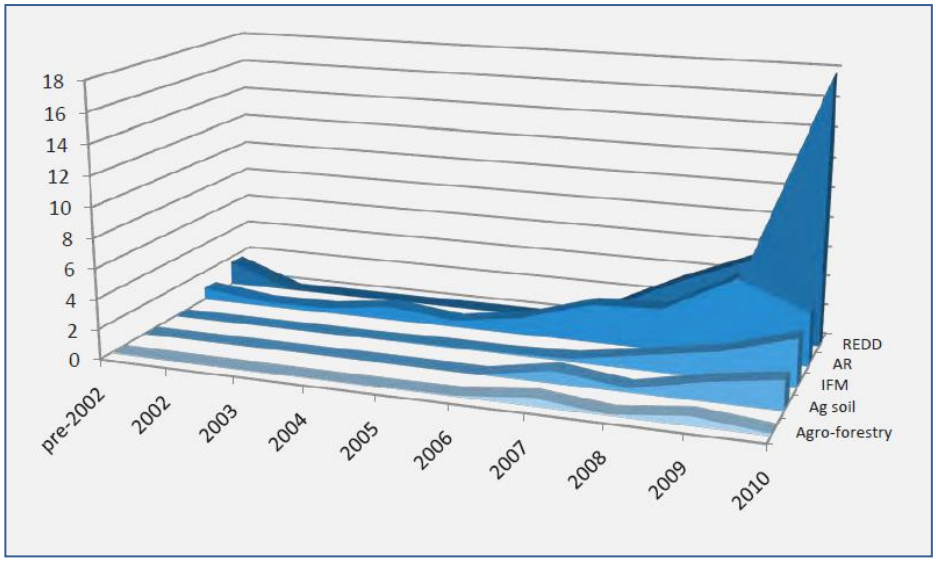
7.1 Brief description of sources/flows + potential

There is no compliance market for REDD+ credits or projects. At the moment the largest segment for forestry offsets is the voluntary carbon market. The voluntary markets correspond only to a small fraction of the total global carbon markets – in 2010 this was about 0.02% of volume and less than 0.01% in terms of value.

According to the newest 'State of the Forest Carbon Markets 2011' report (Ecosystem Marketplace 2011) REDD+ dominated the primary voluntary market in 2010 with an approximate volume of 20 $MtCO_2e$ or 70% of the total forest carbon market of 30 $MtCO_2e$. The total market value of REDD+ credits was estimated at US$ 95 million with average prices for REDD+ credits estimated at US$ 4.9. This is up from the low of $2.3 in 2008 and $2.7 in 2009. REDD+ credits are reported to be lower than credits from AR project ($7.2 in 2010) and IFM ($6.0 in 2010).

The market for REDD is become increasingly attractive as the rules become more clear and financial resources for the development of projects are made available. In 2010, the Verified Carbon Standard (VCS) approved for use its first methodologies for developing REDD projects. The prospect of emerging protocols prompted voluntary buyers to inject investments valued in this survey at $76 million into REDD projects through forward sales (Ecosystem Marketplace, 2011).

Figure 5: Historical Transaction Volume, Forestry and Other Land Use Type



Source: State of the Voluntary Carbon Markets 2011, Ecosystem Marketplace

About 80% of all REDD credits transacted in the voluntary market in 2010 came from forests in Latin America. This corresponds to 50% of all forestry credits transacted in that period (Ecosystem Marketplace, 2011).

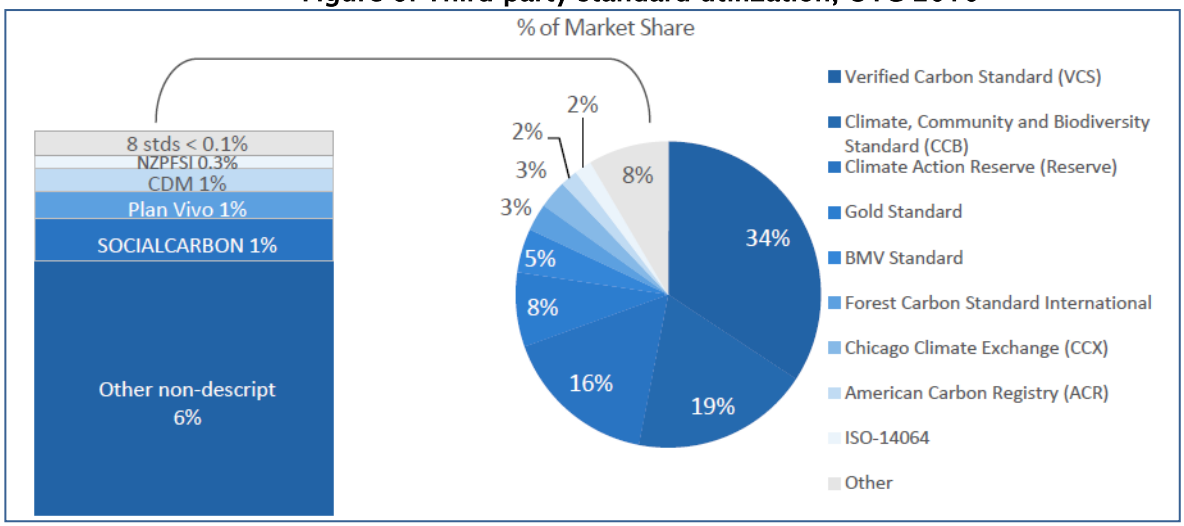
7.2 Management & Allocation/ Governance of project based REDD+ financing

There is no standard approach for REDD+ project financing. Every project that is brought to market has a unique financial arrangement reflecting the jurisdiction where it is located, the parties involved in the project on the ground, its ownership structure, overall risk profile, and benefit distribution arrangement. Both investors in REDD+ projects, and buyers of carbon credits, take investment and purchase decisions based on the assessment of the risk and reward structure of the transaction. Transaction structures may include payment on delivery (a buyer pays for credits when they are delivered), advance purchases (a buyer pays for credits prior to their delivery), equity (part ownership of the legal vehicle behind the project) and/or debt (loans).

Certification of carbon projects

Almost all forest carbon projects in the voluntary market use some type of voluntary standards to ensure a standardized quantification of the emission reductions. The most commonly used standard for that purpose in the voluntary market is the Verified Carbon Standard (VCS). The VCS provides guidance for project developers for quantifying and generating real, measurable and additional GHG emission reductions and credits from voluntary projects.[xxi]

Figure 6: Third party standard utilization, OTC 2010



Source: Ecosystem Marketplace, State of the Voluntary Carbon Markets, 2011

The VCS is currently project based but it also developing a jurisdictional and Nested REDD initiative to develop guidelines for creating accounting frameworks that will allow for crediting projects, policies and programs across national and sub-national jurisdictions. This initiative was motivated by the growing consensus that REDD+ requires robust accounting at the national scale.[xxii]

Some projects go beyond the quantification standards and invest in other voluntary certifications and standards to demonstrate that the project and/or initiative lead to multiple social, institutional, economic, and environmental co-benefits. These additional voluntary standards to ensure the quality of voluntary projects can also be done at the project and jurisdictional levels:

- Project level: the most common amongst these standards is the Climate Community and Biodiversity Alliance standard. The CCB standard evaluates land based carbon mitigation projects in the early stages of development, fostering integration of best practices and multiple benefit approaches throughout the project. The CCB criteria will ensure that environmental and social monitoring plans are in place; no invasive plant or tree species are used; local stakeholder are appropriately involved in the design of the project; and there are no unresolved land tenure issues (CCBA, 2008).[xxiii]
- Jurisdictional level: the REDD+ Social and Environmental Standard aims to build support for government led REDD+ programs with substantial co-benefits including improving local livelihoods and biodiversity protection. This initiative, similar to the CCB standard but at the jurisdictional level, consists of principles, criteria and indicators to support high social and environmental performance and provides a framework for the MRV of these indicators.

Risk Management

Risks related to REDD+ projects can be broadly divided into three categories: project risk, host country risks, and international regulatory risk.

Project risks are often addressed in the contractual arrangement between project participants. A number of project related risks and political risks may be managed by or allocated to the various parties to a contract. Other risks – such as permanence – may be managed by the carbon standard applied to the project. The Verified Carbon Standard (VCS) utilizes a buffer whereby permanence risks are assessed through a standard framework; the higher the permanence risks, the greater the number of credits the project must set-aside and allocation to a VCS managed buffer account.

Risk management of carbon market projects can involve a number of elements. The first step is often to conduct due diligence to ensure only projects with real potential and integrity enter the pipeline. Investors compare potential projects against carbon and social standards (such as VCS and CCBA) to determine the real potential of the project. The due diligence process typically includes a review of relevant national legislation along with the country's long term view on REDD (i.e. MRV strategy) to assess political risk and how projects may be treated under future national programs.

Social and environmental safeguards can also be useful to reduce performance and delivery risk. Explicit and enduring support from local stakeholders (including governments, communities and NGOs) through active participation and benefit sharing can translate directly into improved project performance and reduce the risk that project activities are improperly designed, fail, or face social or political opposition.

Social, environmental, and other obligations can be included in the project finance documents that may contain obligations to: conduct assessments on environmental and social impacts and risks; implement risk mitigation strategies; establish and manage a communication and grievance mechanism; monitor and report on social and environmental issues. For the financier, this may translate into increased funding costs but, as previously mentioned, this can reduce risks and increase the likelihood of long term project success.[xxiv]

Host country risks, such as risk of expropriation, political stability, forced resettlements, eligibility to participate in a REDD+ mechanism are the main reasons for investors preferring direct arrangements with projects instead of Government involvement. Political risk insurance for REDD+ projects is still at a very early stage, indeed the first such product was announced by the US based Overseas Private Investment Corporation in June 2011. As an alternative national government guarantees of compensation against such risks could provide a mechanism for project actors looking to manage political risk.

The main risk management tool with regards to the international REDD+ regulatory risk is certification of carbon projects, using internationally recognized standards. Conformity with underlying concepts of carbon projects, such as addionality, permanence, leakage,

fungibility of credits as well as social and environmental integrity are considered to be best addressed through the application of project certification as described above.

8 Private Foreign and Domestic Direct Investment

8.1 Brief description of sources/flows

The foreign and domestic private sector is already investing substantial volumes in activities taking place on forest land and issuance of large-scale concessions can be a major income source for Governments in forest rich countries. Foreign direct investments don't follow a 'developed country/ developing country' division. Instead, south-south foreign direct investment is dominating timber industry developments in many countries (e.g. Malaysian companies are the largest capital investors in the timber and palm oil industry in PNG, Vietnamese companies are investing in timber processing in Cambodia and Laos, and China acquired large scale concessions throughout South East Asia).

Forest Sector

Recent data quantifying private investment in the forest sector is hard to obtain. The UNFF commissioned a paper that was completed in January 2006 titled *Brief Study on Funding and Finance for Forestry and Forest-Based Sector*.[xxv] While the paper is now a few years out of date, it provides a useful summary of the status of funding into the forest sector at the time REDD+ was first starting to gain attention under the UNFCCC. The paper found the following:

- *Financing requirements for sustainable forestry management*: Estimated by the ITTO to be US$ 11 billion per year in the tropics.

- *Private direct investment (global):* Global private investment into the forest sector has been traditionally dominated by investment in developed countries (mainly USA, Europe, and Japan), though developing country participation is growing (24% 1995 0 2004 increasing to 27% in 2004). Global direct investment reached almost US$ 8,000 billion in 1999 and US$ 8,200 billion in 2003. Direct investment in the forest sector was estimated at around 1% of this, which is in excess of US$ 60 billion per year (est. in 2002).

- *Foreign direct investment in sustainable forest management (agriculture, forestry, hunting and fishing):* This reached US$1.8 billion in 2001-2003, representing round 3.5% of total foreign direct investment in the primary sector worldwide. The amount directed towards the forest sector was not known, but estimated to be less than 50% of this. Most of this foreign direct investment into the primary sector was concentrated in developing countries, representing 11.6% of their total foreign direct investment compared to 0.2% for developed countries. However, it was noted that these numbers likely do not capture investment into timberlands due to how these transactions are often structured.

- *Foreign direct investment in the forest industry (wood and wood products manufacturing):* This reached US$ 2.3 billion in 2001 – 2003, which represents 4.5% of foreign direct investment in the secondary sector worldwide. Most of the investment in this sector (94%) was concentrated in developed countries (representing 1.9% of their total foreign direct investment) compared to developing countries (0.4% of their total). Pulp and paper is capital intensive and as a result approximately 70% of foreign direct investment in the forest industry is tied to this.

- *Total foreign direct investment in the forest sector (forests, industries and trade):* This was estimated at approximately US$ 5 billion per year. This is approximately 5 times the amount of official development assistance provided for sustainable forest management/forests (US$1.1 billion in 2004).

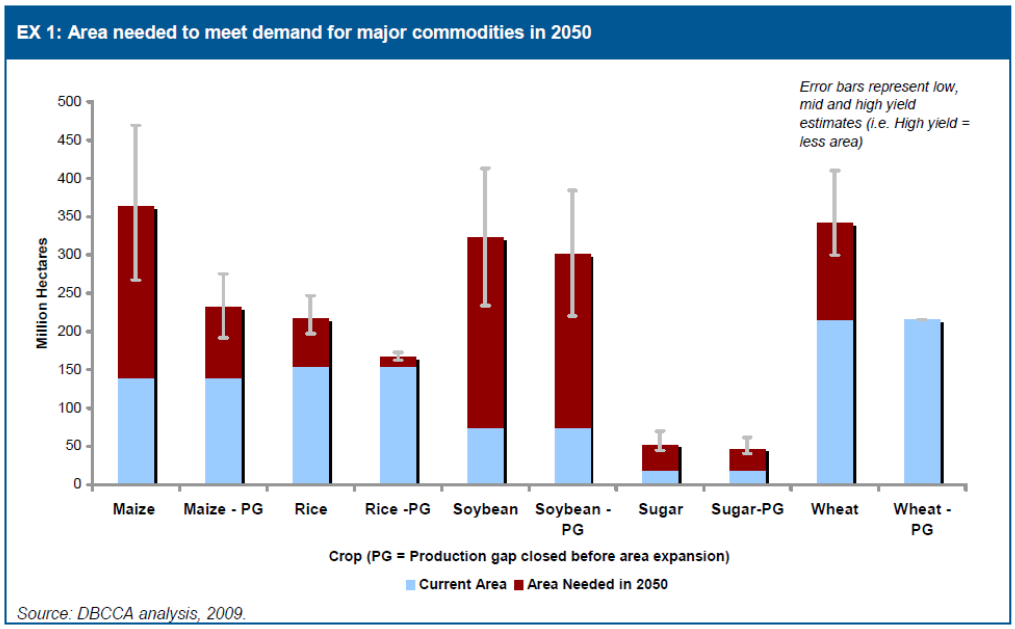
A more recent paper from 2011 titled *The International Finance Corporation and Forest Loss: A Cross-National Analysis*[xxvi] analyzed the impact that IFC loans (to the private sector) has on forests. The paper found that low and middle income countries that receive an IFC loan tend to have higher rates of deforestation than low and middle income countries that do not receive such a loan. The paper also found that World Bank structural adjustment and investment lending are associated with higher rates of forest loss. However, it should be noted that the authors used FAO data from 2005[xxvii]as the primary source of information for estimating deforestation and carbon stocks. Although they state they took data quality into account, the FAO data is known to be particularly unreliable for many countries – particularly lower income countries.

This aside, the paper contains some useful information on IFC lending. In 2010 the IFC made $12,627,000,000 worth of loans to companies for projects in low and middle income countries (direct and syndicated loans). Approximately 4% (US$ 536,000,000) funded projects in the agricultural and forestry sectors, 8% (US$ 1,053,000,000) in the mining sector, and 12% (US$1,578,000,000) funded infrastructure projects. This roughly reflects IFC's overall portfolio (agriculture and forestry (6%); mining (9%); infrastructure (16%)).
In an unrelated paper the IFC itself reports it has invested approximately US$ 3 billion in the forest sector since 1950, US$1 billion of which occurred in the 5 years leading up to 2010.[xxviii]

Agriculture

Agricultural products are largely recognized as main drivers of tropical deforestation. On their Readiness Preparation Proposals (R-PP) to the FCPF[xxix] 16 out of 20 developing countries list agriculture as the primary driver of deforestation and forest degradation.[xxx]
Production of agricultural commodities will also need to increase significantly to meet projected demand. See figure 12[xxxi] for a summary of estimates of additional ha's of land needed for a number of commodities.

Figure 7: Area needed to meet demand for major commodities in 2050



Some analysis of investment in the agriculture sector is found in the paper commissioned by the UK titled *Carbon market and climate finance for climate-smart agriculture in developing countries.*[xxxii] This paper reports that the FAO estimates developing countries' annual investment needs for agriculture are about US$83 billion between 2005/6 through 2050.[xxxiii] Cumulatively, this represents US$9.2 trillion of investment by mid-century to meet long-term outlook for global agricultural demand, which can be broken down as follows:[xxxiv]

- US$ 3.6 trillion (40%) would be used to increase (nearly double) output and raise productivity.
- US$ 5.5 trillion (60%) to replace existing capital stock or added and depreciated

Primary agriculture accounts for US$5.2 trillion of the total, while the remaining US$4.0 trillion is used in downstream activities (processing, transportation, storage, etc.). Mechanization is the single largest investment within primary agriculture (25%) followed by expansion and improvement of irrigation (~20%).

Responsible Investments

The United Nations-backed **Principles for Responsible Investment Initiative** (PRI)[xxxv] is a network of international investors working together to put six Principles for Responsible Investment into practice. The Principles were devised by the investment community. They reflect the view that environmental, social and corporate governance (ESG) issues can affect the performance of investment portfolios and therefore must be given appropriate consideration by investors if they are to fulfill their fiduciary (or equivalent) duty. The Principles provide a voluntary framework by which all investors can incorporate ESG issues

into their decision-making and ownership practices and so better align their objectives with those of society at large.

At the time of writing PRI, signatories have $25,000bn in assets under management[xxxvi] Increased investor interest in Farmland has thrown up challenges of marketplace transparency and investor accountability, as well as concerns over the environmental and social impact of increased investment flows. The PRI has established a **Farmland Working Group** to address these concerns and to support investors in integrating environmental, social and governance considerations in their farmland investments. The working group has created and developed the **Principles for Responsible Investment in Farmland** ("The Farmland Principles")(see Box 3 below). The Farmland Principles are designed to guide institutional investors who wish to invest in farmland in a responsible manner. Signatories to The Farmland Principles hold US$1.3 trillion in assets.[xxxvii]

Box 3: Farmland Principles of responsible investment

- ***Principle one:*** Promoting environmental sustainability
- ***Principle two:*** Respecting labour and human rights
- ***Principle three:*** Respecting existing land and resource rights
- ***Principle four:*** Upholding high business and ethical standards
- ***Principle five:*** Reporting on activities and progress towards implementing the
- ***Principle six:*** Public reporting on activities and progress towards implementing the Principles and promoting the Principles

8.2 Management/governance of funds

Land based investments have so far mainly led to continued deforestation, partly with multiplication effects due to uncontrolled expansion of activities beyond allocated concession area. In addition, income from concessions are not typically used to fund forest protection. Forest loss due to (i) uncontrolled and/or excessive issuance of concessions; (ii) uncontrolled expansion beyond concession areas; and (iii) foregone benefits of not reinvesting in forests by Government are three main areas which provide opportunities for Government to incentivize and steer sustainable investments.

The section below provides examples of voluntary standards and initiatives taken by the private sector that aim at redirecting investments to more resource-efficient produce and reduce pressure on forest land, mainly through:

- Increasing productivity
- Improving land use planning and community involvement
- Introducing sustainable production techniques
- Prohibiting deforestation

There are a number of **production standards** targeting niche markets for sustainable agriculture and timber products. Most of the standards require national guidelines, resulting in potential variations in environmental effectiveness between countries. See Table 12 below for some examples.

Table 12: Voluntary private sector standards

Standard	Sector/Commodity	Focus	Reference
Round Table on Sustainable Palm Oil	Palm Oil	Sustainable palm oil	http://www.rspo.org
Rainforest Alliance (see box below)	Agriculture, forestry, tourism	Sustainable production & climate benefits	http://www.rainforest-alliance.org
Fair Trade	Coffee, cocoa, bananas, cotton, gold, tea, sugar, rice etc.	Social, in support of environmentally sound agricultural practices	http://www.fairtrade.net
International carbon footprint standard, ISO 14067 – to be launched end of 2011	To be decided	To be decided	http://www.iso.org
Forest Stewardship Council	Forestry	Forest management and chain of custody	http://www.fsc.org

In addition, there are individual private sector initiatives. For example, in 2006 the Brazilian Vegetable Oil Industry Association (ABIOVE) and the Brazilian Grain Exporters Association (ANEC) pledged not to trade soy from newly deforested areas in the Amazon. This initiative was a response from agricultural giants such as Cargill, Archer Daniels Midland Co., Bunge Ltd., Dreyfus and Amaggi and the pressure from advocacy groups such as Greenpeace. The Soy Moratorium has contributed to reduce land conversion within the Amazon region. Results of verification using satellite-based mapping and monitoring were officially announced at the Ministry of the Environment in Brasília in April 2009, and showed that of a total of 630 selected areas in which some deforestation had taken place since July 2006, soy was being grown in only twelve.

Box 4: In February 2011, the Rainforest Alliance and the Sustainable Agriculture Network (SAN) unveiled the new Climate Module: Criteria for the Mitigation of and Adaptation to Climate Change that aims to make farmers more aware of the impacts of climate change and to promote the adoption of good agricultural practices that reduce GHG emissions, increase carbon sequestration and enhance the capacity of farms to adapt to climate change. The new criteria reinforce the sustainable practices that are already required of Rainforest Alliance Certified farms and highlight those activities that have demonstrated the greatest climate change mitigation and adaptation benefits. The SAN worked to draft criteria that are rigorous, accessible and easy to implement for farmers in tropical countries, and that will result in substantial long-term climate benefits. Certified products in the US and Europe include bananas, coffee, tea, chocolate and juices.

Efforts to increase productivity

Studies by the Brazilian Agricultural Research Corporation (EMBRAPA) indicate that the restoration of degraded lands could allow for 100 million head of cattle to be raised on 40 million ha of pasture, a 42 percent increase in the herd size compared to 2007, and a 35 percent reduction in land use compared to 2006. However, the lack of investment in Brazil in the restoration of degraded pastures and the lack of incentives for small-scale production are major barriers for the implementation of more sustainable cattle-ranching practices.[xxxviii]

Large, coordinated efforts involving multiple parties, focused around a specific value chain may be more likely to leverage significant and scaled-up investment. Based on this assumption, projects that guide large scale public and private investments toward specific regions and areas of high agricultural potential are currently being developed. Two pilot growth corridor investments that have undergone multiple feasibility studies and investment plans since 2010 – the Beira Agricultural Growth Corridor in Mozambique and the Southern Agricultural Corridor of Tanzania – include smallholders in their target group and are calling for several billion dollars of private and public investment, involving many large transnational corporations, small and medium businesses, multilateral institutions, NGOs/universities and government agencies.[xxxix]

References:

[i] Meridian Institute. 2011. "Modalities for REDD+ Reference Levels: Technical and Procedural Issues." Prepared for the Government of Norway, by Arild Angelsen, Doug Boucher, Sandra Brown, Valérie Merckx, Charlotte Streck, and Daniel Zarin. Available at: http://www.REDD-OAR.org. Last accessed on September 20th, 2011. Annex 2.

[ii] World Bank Institute (2011). Estimating the Opportunity Costs of REDD+: A training manual. World Bank, March, 2011. For more information see: http://wbi.worldbank.org/wbi/learning-product/estimating-opportunity-costs-redd, last accessed on Sept 17, 2011.

[iii] Climate Focus *Estimated REDD Credit Supply into International Carbon Markets by 2035*, report prepared for DFID, April 2010 (available at www.climatefocus.com).

[iv] Coren M., Streck C., and Myers Madeira E., "Estimated Supply of RED credits 2011 – 2035", *Climate Policy* (forthcoming 2011)

[v]BioCF, 2011. The BioCarbon Fund Experience: Insights from Afforestation and Reforestation Clean Development Mechanism Projects. Summary. Carbon Finance at the World Bank. Available at:

http://wbcarbonfinance.org/docs/57853_ExecSumm_Final.pdf, last accessed on September 22nd, 2011.

[vi] RRI (2010). Do opportunity costs indicate the real compensation needs for successful REDD+? Rights and resources Institute, Washington DC, June 2010. Available at: http://www.rightsandresources.org/publication_details.php?publicationID=1555 last accessed on September 20th, 2011.

[vii] For more information see: http://www.reddplusdatabase.org/arrangements/graph?according_to=recipient, last accessed on September 20th, 2011.

[viii]World Resources Institute (WRI) also provides an updated summary of fast track finance pledges per donor country for various climate mitigation activities, including REDD+. For more information see:

http://www.wri.org/publication/summary-of-developed-country-fast-start-climate-finance-pledges

[ix]Source: PWC, CF, IUCN, WI (2011). Funding for Forests. UK Government support for REDD+. May, 2011.

[x] Forum for the Future, 2009. Forest Investment Review: Protecting the world's forest is crucial for the fight against climate change. Available at: http://www.forumforthefuture.org/sites/default/files/project/downloads/forest-investment-review-executive-summary.pdf, last accessed on September 22, 2011.

[xi] For more information see: http://www.theredddesk.org/sites/default/files/resources/pdf/2010/pop.pdf, last accessed on September 20th, 2011.

[xii]For more information see:

http://reddplusdatabase.org/entities/filter_by_type/countries?according_to=funder&filter=recipients&page=4 last accessed on September 22, 2011.

[xiii] IDEAcarbon, 2011. Assessing the financial flows for REDD+: the pledge-implementation gap. Research Note, June 201. Available at: http://www.forestcarbonportal.com/sites/default/files/IDEAcarbon%20Research%20Note%20June%202011%20-%20Assessing%20the%20Financial%20Flows%20for%20REDD.pdf last accessed on September 20th, 2011.

[xiv]Available at: http://pdf.wri.org/working_papers/investing_in_results.pdf, last accessed on Sept 17, 2011.

[xv]Moss, N. and Nussbaum, R. 2011. A Review of Three REDD+ Safeguards Initiatives. FCPF and UN-REDD. June 2011. Available at: http://www.theredddesk.org/sites/default/files/resources/pdf/2011/a_review_of_three_redd_safeguard_initiatives-1.pdf, last accessed on September 21, 2011.

[xvi]http://www.reddplusdatabase.org/entities/filter_by_type/countries?utf8=%E2%9C%93&search

[xvii] For more information see: http://www.norad.no/en/tools-and-publications/publications/publication-page?key=333472, last accessed on September 22, 2011.

[xviii]The Canadian International Development Agency compiled a series of information about safeguards from other development country foreign aid agencies. Available at: http://www.acdi-cida.gc.ca/acdi-cida/acdi-cida.nsf/en/REN-218131217-PEH, last accessed on September 21, 2011.

[xix] DRC RPP, 2010 – Available on: http://www.forestcarbonpartnership.org/fcp/sites/forestcarbonpartnership.org/files/Documents/PDF/Mar2010/RDC_R-PP_version_2_March_2010_English.pdf, last accessed on September 21, 2011.

[xx] Streck, C., Porrua, M. E., Bracer, C., and Coren, M. 2010. Options for Managing Financial Flows from REDD+. Climate Focus, Washington DC, 2010. Available at: http://www.climatefocus.com/documents/options_for_managing_financial_flows_from_redd, last accessed on September 21, 2011.

[xxi] For more information see: http://www.v-c-s.org/how-it-works/vcs-program, last accessed on September 22, 2011.

[xxii] For more information see: http://www.v-c-s.org/node/296, last accessed on September 22, 2011.

[xxiii] CCBA (Climate, Community and Biodiversity Alliance). 2008. *Climate, community and biodiversity project design standards*. Second edition. CCBA, Arlington, VA, 50 Available at: www.climate-standards.org. Last accessed on September 22, 2011.

[xxiv] Reducing Emissions from Deforestation and Degradation (REDD) a Casebook of on the Ground Experience (May 27,2010)

[xxv]Tomaselli, I., *Brief Study on Funding and Finance for Forestry and Forest-Based Sector,* United Nations Forum on Forests, January 2006, Curitiba, Brazil. (Tomaselli 2006)

[xxvi]Shandra J., Shircliff E., London B. "The International Finance Corporation And Forest Loss: A Cross-National Analysis" *American Sociological Association*, (2011) Volume XVII, Number 2, Pages 328-352

[xxvii]Food and Agriculture Organization of the United Nations. 2005. *Global Forest resources Assessment 2005: Progress Towards Sustainable Forest Management*. Rome: United Nations

[xxviii] International Finance Corporation, *Sustainable Forestry: An IFC Commitment Enhancing Economic Growth*

in Emerging Markets (2010)

[xxix]As part of the readiness for REDD process 37 countries have been selected to be part of the Forest Carbon Partnership Facility (FCPF). For more information please see:

http://www.forestcarbonpartnership.org/fcp/, last accessed on September 22, 2011.

[xxx] Kissinger, G. 2011. Linking forests and food production in the REDD+ context. CCAFS Working Paper no. 1. CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS). Copenhagen, Denmark. Available online at: www.ccafs.cgiar.org, last accessed on September 22, 2011

[xxxi]DB Climate Change Advisors, *Investing in Agriculture: Far-Reaching Challenge, Significant Opportunity; An Asset Management Perspective* (2009)

[xxxii] Climate Focus, IISA, UNIQUE Forestry Consultants, *Carbon market and climate finance for climate-smart agriculture in developing countries,* Prepared for Agriculture & Carbon Market Assessment, DFID Climate Change, Agriculture and Food Security Policy Research Program (2011)

[xxxiii] US$210 billion gross if accounting for replacement costs of depreciating capital goods; all estimates in constant 2009 dollars.

[xxxiv]Schmidhuber J., Bruinsma J., and Boedeker G., *Capital Requirements for Agriculture In Developing Countries to 2050*, Expert Meeting on How to Feed the World in 2050, (2009) Food and Agriculture Organization of the United Nations Economic and Social Development Department

[xxxv] http://www.unpri.org/principles/

[xxxvi]http://www.ft.com/intl/cms/s/0/6337da28-c8c1-11e0-a2c8-00144feabdc0.html#axzz1X4UtENvS

[xxxvii]http://www.moneymanagement.com.au/news/investors-launch-principles-for-responsible-invest

[xxxviii] Forest Footprint Disclosure initiative: http://www.forestdisclosure.com/page.asp?p=4722, last accessed on September 29, 2011.

[xxxix] http://www.yara.com/sustainability/africa_program/partnerships/index.aspx, last accessed on September 29, 2011.