EVALUATING THE ROLE OF FINANCIAL INSTITUTIONS IN MONETIZING FOREST ECOSYSTEM VALUES:

EXISTING ARRANGEMENTS AND THE VIABILITY OF NEW ARRANGEMENTS

by

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Abstract

Forests contain a multitude of values, many of which are incorporated within the existing economic system, allowing us to create an economic value for forests. These values compete with alternative land uses to ascertain which is the most economically efficient. The continued process of forest land use conversion indicates that existing monetized forest values are insufficient to prevent global deforestation.

Recognition of the importance of previously un-monetized forest values, such as forest carbon for climate regulation and species habitation for global biodiversity levels, has stimulated efforts to incorporate these values within the existing economic system. Previous efforts to 'ring fence' these assets by regulatory means has met with limited success. The creation of market based incentive systems to monetize these forest values has gained increasing support over the years as policy makers seek to build on earlier successes.

Adaptations within and creation of new institutions has been required in order to establish these market based incentive systems. Ensuring that the correct institutional arrangements exist is vital for their institutional effectiveness. This is of particular importance with regards existing institutions as concerns abound about their governance, transparency and accountability arrangements.

This thesis focuses on large scale publicly owned international banks and identifies various weaknesses in existing institutional arrangement and seeks to ascertain whether they have the adaptive capacity to address these shortfalls. The thesis also studies the creation of an entirely new institution, the International Forest Bank, as a viable alternative to adaptation processes. Despite the many shortfalls in existing institutional arrangements an International Forestry Bank was found to be too aspirational and of too great a scale. The research concludes that research into the creation of a smaller more regional International Forestry Bank would be warranted.

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Preface

The dissertation was done in collaboration with Drs. Gary Bull, Robert Kozak and Harry Nelson. I conducted, under their supervision, the design, data collection and writing of this thesis.

This research was approved by the University of British Columbia Behavioural Research Ethics Board. The UBC BREB certificate of approval number is H11-03308.

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List of Abbreviations

CDB	Convention on Biological Diversity
CDCF	Community Development Carbon Fund
CDM	Clean Development Mechanism
CEPF	Critical Ecosystems Partnership Fund
СІ	Conservation International
CID	Carbon Initiative for Development
CO2	Carbon Dioxide
COP 16	Conferences of the Parties 16 th Meeting
COP 17	Conferences of the Parties 17 th Meeting
CPF	Carbon Partnership Facility
DC	Developed Country
DCF	Danish Carbon Fund
EIB	European Investment Bank
ЕКС	Environmental Kutznet Curve
EUA	European Unit of Account
EUR	Currency of the Eurozone
FAO	Food and Agriculture Organization
FCPF	Forest Carbon Partnership Facility
GCF	Green Climate Fund
GEF	Global Environment Facility
GFE	Global Food Equation
GISP	Global Invasive Species Programme
GTI	Global Tiger Initiative
IBRD	International Bank of Reconstruction and Development
ICE	Inter-Continental Commodities Exchange
ICF	Italian Carbon Fund

International Centre for the Settlement of Investment Disputes					
International Development Association					
International Finance Corporation					
International Finance Corporation					
International Financial Institution					
Inter-Governmental Panel on Climate Change					
International Union for Conservation of Nature					
Joint Implementation					
Less Developed Country					
Market Based Incentive					
Multilateral Investment Guarantee Agency					
Monitoring, Verification and Reporting					
North American Free Trade Association					
Netherlands Clean Development Facility					
Netherlands European Carbon Facility					
Non-Governmental Organization					
Prototype Carbon Fund					
Partnership for Market Readiness					
Spanish Carbon Fund					
Save Our Species					
Socially Responsible Investment					
Umbrella Carbon Fund					
Government of the United Kingdom					
United Nations Framework Convention on Climate Change					
United Nations Forum on Forests					
United Nations Reduced Emissions from Deforestation and Degradation					
Voluntary Carbon Market					
Voluntary Emissions Scheme					

Glossary

Accountability: The dissemination of liabilities and responsibilities with an organization. Can also refer to the processes by which liabilities are enforced when accountability failures occur. Responsibilities and liabilities are generated between different stakeholder groups within and outside an organization (Mulgan 2000).

Democratic deficit: A democratic deficit occurs when ostensibly democratic organizations or institutions in fact fall short of fulfilling what are believed to be the principles of democracy (Levinson 2007).

Effectiveness: Intentional process of ascertaining the level of achievement of an institution's mission and its educational goals and objectives (Matveev 2008).

Efficiency: An economic concept conceptualized by Vilfredo Pareto. Given an initial allocation of resources and market participants, the optimal Pareto efficient point of production will be achieved when no further marginal gains can be attained by one individual at the expense of any other(s). Alternative production levels are deemed to be economically inefficient. Economic efficiency does not consider the overall welfare of society or equality within it (Barr 2004).

Equity: The concept or idea of fairness in economics, particularly as to taxation or welfare economics. More specifically it may refer to equal life chances regardless of identity, to provide all citizens with a basic and equal minimum of income/goods/services or to increase funds and commitment for redistribution (Bird 2009).

Financial products: A financial instrument designed to facilitate the saving, investment and risk preferences of economic agents (Corporations Act, Australia, 2002).

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Governance: The processes, customs and policies with an institution that direct the way it is run. Governance also considers the interaction between institutional stakeholders such as employees, employers, shareholders, debt holders, lenders, communities, governments and non-government organizations (Becht 2002).

Institutional arrangements: institutional arrangements are regarded as the complex of laws, customs, markets, norms and associated organizations that channel our energy toward social goals (Gleeson & Piper 2002).

Legitimacy: Derived from the implicit and explicit consent of all affected stakeholders (Locke 1690), legitimacy is "a value whereby something or someone is recognized and accepted as right and proper". In political science, legitimacy usually is understood as the popular acceptance and recognition, by the public, of the authority of a governing régime, whereby authority has political power through consent and mutual understandings, not coercion (O'Neil 2010).

Mechanisms: The arrangement of economic activities designed to encourage economic agents to participate in markets in predefined ways.

Transparency: A set of information, privacy and business policies aimed to improve decision making processes and openness between institutions and its stakeholders (Wikipedia 2011). The degree of openness in conveying information is seen as a device signaling the trustworthiness of an actor in negotiations (Ball 2009).

Viability: The capability of an institution to be sustained within its environment despite a wide range of external pressures and internal tensions short of force majeure (Perri 2003).

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Dedication

To Her Majesty, Queen Elizabeth II, in commemoration of her Diamond Jubilee.

Chapter One: Introduction

Forests play a vital role in addressing global concerns over biodiversity and climate change. Greater understanding of the role that forests play in climate regulation (IPCC 2007) and the realization that biodiversity loss is far more extensive than previously thought (UNEP, Millennium Ecosystems Survey 2005) has led to a greater appreciation of the importance of forests. In recognition of this, the UN has designated 2011 the International Year of Forests while 2010/20 is to be considered the Decade on Biodiversity. With an estimated 18-20% of all global greenhouse gas emissions emanating from forest sources (Van de Werf et al. 2009, Grainger et al. 2009, Stern 2008, UN-REDD) and 80% of all terrestrial biodiversity found within forest habitats (UN-Forests), forest values are now being debated at the highest political level.

Forests contain a multitude of values, not all of which are monetized and recognized within our existing economic system. Failure to identify all these values will lead to sub-optimal comparisons with competing economic modes of production and land uses, thus reducing the economic viability of forests and leading to their continued degradation and removal (Von Thunen 1826, Mendelsohn 2003).

The forest values of carbon, whether in terms of storage or sequestration, and biodiversity, are underpriced within the marketplace because of their global public good characteristics (Kaul 1999, Nordhaus 2005). The nature of public goods, typified by their non–rivalry and non-excludability in consumption, create market failures (Samuelson 1954). Global public goods create market failures globally, socially and temporally (Kaul 1999).

Increasingly, efforts to address biodiversity and forest loss are centered on rectifying these market failures resulting from global public goods. Although controversial (Pearce & Moran 1994), the use of market based incentive systems to price previously under/un-priced economic goods is becoming

widespread, in direct contradiction of previous models that suggest mandated public control over resources either through legal constraint or direct public ownership.

Early analysis of market failures initially led to conclusions that supported the imposition of environmental taxes to correct market failures resulting from un-priced externalities (Pigou 1947, Samuelson 1954). However, tax based market based incentive systems themselves have proven to be problematic because when prices are fixed, quantity is still variable. This limits the effect that taxes have on the amount of product generated, which defeats the purpose of the taxes. Alternative market based systems, that impose quantity constraint with price variability, were subsequently proposed (Dales 1968). The US government applied this theoretical work, tentatively at first, within the 1977 Clean Air Act by introducing the notion of 'offsets' for the control of airborne pollutants (Burtraw and Szambelan 2009). The 1990 Clean Air Act (Title IV) further expanded market mechanisms by introducing a fixed cap on total pollutant emission levels and the free allocation of permits to existing polluters. This allowed for the establishment of more formal markets in Nitrogen Oxide (NOX) and Sulfur Oxide (SOX) pollutants. Regional responses were also established for environmental pollution control such as the Regional Clean Air Incentives Market (RECLAIM) in the US state of California in 1994. The successful application of cap and trade systems for the control of pollutants at the Federal and State level, led to their wider application in both scale and scope. The European authorities established the European Union Emissions Trading System (EU ETS) as part of efforts to reduce Carbon Dioxide emissions. The EU ETS is the world's largest cap and trade market with annual turnover of \$100bn in 2009 (Point Carbon 2010).

In addition to the lack of successful market mechanisms, market failures resulting from governmental and financial weaknesses hinder forest carbon and biodiversity market development. There is extensive literature identifying the following market failures:

- Investment risks are raised by uncertain regulatory environments and accentuated by fears that perverse regulatory incentives may arise once irreversible capital investments have been made (Panteghini et al. 2003);
- A lack of clearly defined property rights restricts investment and raises capital cost (Pearse 1990);
- The long term nature of forest carbon and biodiversity projects increases debt financing costs due to their reliance on more expensive longer term financing (Stern 2006);
- The lack of internally generated investment funds available to incumbent forestry sector firms, due to low internal rates of return (Nilsson 2010), increases the reliance on debt finance; and
- High transaction costs inhibit market development (Stern 2006, Woerdman 2001).

Potential remedies to such market failures have also been identified, and they include:

- reducing risk;
- clearly defining property rights;
- separating carbon rights from land rights; and
- increasing the scale of market development.

Such remedies can only be achieved with the participation of financial institutions. Financial institutions play a pivotal role in the establishment of the market norms and infrastructures required to facilitate market based transactions while also creating market demand and supply as an independent market participant. Financial institutions provide both grant based and loan based finance for capacity building development and technical assistance provision so as to develop the supply of forest carbon and biodiversity financial products to the marketplace. In the past, financial institutions have sponsored international forums to clarify and generate broad based agreements on the product specifics of forest carbon and biodiversity financial products in order that they comply with the needs of the investor community. Financial institutions also provide the opportunity to reduce perceived investment risks by reducing transaction costs, via the exploitation of economies of scale, and signaling to the market place that specific forest carbon and biodiversity financial products can be produced and demanded.

The mere participation of financial institutions is however not sufficient to rectify existing market failures. Because markets with persistent and fundamental market failures do not establish themselves, regulatory and institutional environments need to be constructed to facilitate their development. Constructing the correct market regulations, institutions and norms is essential to ensure the effective functioning of the market mechanism, as weak institutional frameworks can severely undermine policy objectives and lead to perverse outcomes (Norton 2001, Hafner-Burton et al. 2008).

Among financial institutions, Multilateral Development Banks (MDB) can be found at the center of efforts to create and invest in carbon and biodiversity markets. The key MDB engaged in the forest carbon and biodiversity sectors, with resources in excess of \$4bn, are the World Bank, the European Bank for Reconstruction and Development (EBRD), the Green Climate Fund (GCF) and the Asian Development Bank (ADB).

Through expert advice, technical assistance, trustee services, grant dispersal, offset purchases and loan financing, the financial contributions and influence of MDB are vast. However, their ability to perform effectively depends on their legitimacy, and this has been questioned by the academic literature (Chowla 2007). For example, their legitimacy, and therefore effectiveness when participating in initiatives at the global political level, is reduced by a 'democratic deficit' (Woods 2001, Einhorn 2006, Chowla 2007). A 'democratic deficit' ensues from an unequal distribution of power within an institution (Nye 2001, Woods 2001), often resulting from the time period when the institution was created and preserved in its original articles of agreement (Koremenos et al. 2001, Meltzer 2005). The distribution of power may be such to ensure the rights of a certain group within the organization, such as developed countries, whose financial contributions make up the capital base of an MDB, or a hegemon within an

organization, such as the United States within the World Bank (Woods 2003). Alternative systems, such as 'one country one vote' are also not based on democratic principles (Nye 2001). Reluctance, on the part of unrepresented parties, to accept the responsibilities and financial commitments that increased participation demands may stall changes in the distribution of power.

In addition to legitimacy, the effectiveness of MDB is affected by certain institutional characteristics, namely governance, transparency and accountability. Governance structures within existing institutions have been questioned, such as the appointment of key personnel, a process more reminiscent of the post war geopolitical environment (Head 2005). The elimination of this political interference is seen as a key requirement for institutional adaptation (Kilby 2006), as is the removal of legal immunity for staff (Bretton Woods Project). Concerns regarding institutional transparency (Norton 2001, Ball 2009) and accountability (Raffer 2004, Lloyd 2008, Norton 2001) are also raised in the literature.

Principal-Agent theory allows us to observe disconnects between those that 'own' institutions and those that 'run' institutions. If institutional mission objectives diverge between these two groups perceptions of illegitimacy may arise. Effective governance, transparency and accountability practices can help maintain the alignment of principal and agents objectives making principal-agent theory a useful tool in assessing institutional legitimacy.

In view of issues with the legitimacy, governance, transparency and accountability of MDB, the question follows whether an entirely new institution will be required to deal with current global issues, or whether the existing institutions will be able to adapt to address internal and external shortfalls. Evidence of institutional adaptability (Stiglitz 1999, Williamson 2000) is countered by concerns of mission creep (Einhorn 2001, Woods 2003), institutional rigidity (Einhorn 2006, Williamson 2000) and reduced institutional effectiveness resulting from the imposition of multiple mandates (Stiglitz 1999). A bias of institutional adaptation over institutional creation is expressed on efficiency grounds (Kaul 1999). Institutional creation is however justified in extreme cases of institutional inertia (Kaul 1999) or

institutional resistance (Annisette 2004). Institutional creation may also be justified when tectonic geopolitical changes make existing structures illegitimate and ineffective (Shrivastava 2005). No international institutional creation will occur however if there is a lack of political will and/or international co-operation efforts (Nordhaus 2005, Dimitrov 2005). Principal-Agent theory can provide insights on whether adaptation or creation policies should be pursued (Walsh 1995, Berman et al. 1999, Fischer 1995, Pollack 1997, Elgie 2002, Gutner 2005). Analysis focuses on changing Principal composition and objectives and how Agents interpret and react to these changes. This offers some insight into the adaptability of institutions and how the process of adaptation is promoted or resisted (Nielson 2003).

The purpose of this study is to:

- evaluate the financial institutional arrangements that could deal with forest ecosystem values;
- conduct a web based elite survey to corroborate institutional deficiencies, as identified in the existing literature; and
- assess the viability of establishing a new International Forestry Bank.

For the sake of brevity this study uses the ADB to represent the Inter-American Development Bank and the African Development Bank. In addition, this study covers the UK Green Investment Bank (UK GIB), which though not an MDB per se, is a major financial institution involved in investments in the carbon and biodiversity markets. This study will also evaluate the adaptive capacities of the five institutions and assess whether a new institutional arrangement needs to be considered, such as an International Forestry Bank (IFB).

Chapter 2 provides a literary review of forest carbon and biodiversity markets. Chapter 3 outlines the scope and methods used in this thesis. Chapter 4 outlines the institutional arrangements of key public sector institutions and their responses to market failures. Chapter 5 discusses survey results while

chapter 6 proffers research conclusions. Chapter 7 suggests areas of future research and methodological

improvements that may enhance research outcomes.

Chapter Two: Literature Review

2.1 The role of markets

Markets play a key role in decision-making. Neoclassical economic theory suggests that the Pareto optimal provision of goods is best left to the free market, operating under conditions of perfect competition (Mathur 1991). Adam Smith's metaphorical 'invisible hand' directs economic production via the price mechanism (Smith 1776).

2.2 The failure of market mechanisms

Market conditions are rarely perfect, however, and further complicated by the existence of externalities (Pigou 1920). An externality is a cost or benefit conferred on economic agents that is not transmitted via the price mechanism (Mishan 1971). Positive externalities increase economic agents' utility functions while negative externalities reduce them. Pigou concluded that the imposition of a cost on production, that represented the market cost of a negative externality via a tax, would rectify this market failure and lead to socially optimal Pareto outcomes. This provides the theoretical underpinnings of all environmental taxes.

In his 1954 paper 'The Pure Theory of Public Expenditure', P.A. Samuelson identified a special form of externalities known as public goods which are defined by their non-rivalry and non-excludability in consumption. Goods can display degrees of non-rivalry and non-excludability. An inability to correctly identify and value the implicit costs or benefits inherent in public goods creates market failures, leading to their under or oversupply (Pigou 1920, Samuelson 1954, Kaul et al 1999). The public provision or subsidization/taxation of public goods is therefore deemed justified to remedy these market failures (Samuelson 1954). Some public goods have been identified as global public goods, where conferred benefits exhibit nonrivalry and non-excludability at the global level (Kaul et al 1999). Pure global public goods must convey benefits to all regardless of income, nationality, race, gender, geographic region or any other differentiating feature. For goods to be truly global they must also consider these temporal factors or the inter- and intra-generational aspects of goods (Sandler 1998). The degree to which goods display these spatial, social and temporal characteristics will vary. Hence global-ness, much like public-ness in the economic sense, is observed across a continuum as opposed to being absolute (Shaffer 2004).

The carbon storage and sequestration functions of forests exhibit a high degree of global public good characteristics (Kaul 1999, Stiglitz 1999a). The majority of contemporary scientific literature at this point in time concludes that higher concentrations of heat trapping "greenhouse gases" in the atmosphere, the most predominate of which is carbon dioxide¹, leads to higher average global temperatures (Stern 2006, IPCC 2007). Carbon emissions in one part of the world dissipate and lead to increases in atmospheric carbon concentrations across the globe. Conversely, reforestation in one locality leads to reductions in global carbon dioxide levels, reducing the effects of global climate change to the benefit of all mankind.

Similarly, biodiversity held within forest habitats demonstrates characteristics of a global public good. It represents a biological inheritance for all mankind (Ambramovitz 1991), the use of which can advance our knowledge and understanding of life itself. Further study offers the prospect of future gains in material wealth and medical understanding (Pearce et al. 1992). Greater knowledge of ecosystems and their interlinked nature can improve our understanding of sustainable developmental practices.

¹ Carbon Dioxide is one of many heat trapping greenhouse gasses. GHG emissions and concentrations are usually expresses in terms of carbon dioxide equivalence. One ton of methane is estimated to be 23 times more potent than the carbon dioxide equivalent. Industrially created HFC-23 is seen as around 11,700 times more potent than carbon dioxide. For a full list of current carbon dioxide equivalence ratios please refer to Intergovernmental Panel on Climate Change (IPCC), Fourth Assessment Report (AR4), Working Group 1 (WG1), Chapter 2, *Changes in Atmospheric Constituents and in Radiative Forcing*, Table 2.14, page 212. <u>IPCC AR4</u>

However, issues of equity do exist in the distribution of benefits from forest carbon and biodiversity. The first issue is the temporal distribution of benefits. Both forest carbon and biodiversity exhibit a stock dynamic characteristic (Nordhaus 2005), whereby they accumulate or depreciate over extended periods of time. Currently the stock of biodiversity appears to be depreciating over time (Ambramovitz 1991, UNEP MEA 2005), while the stock of atmospheric carbon dioxide is accumulating (Keeling et el 1985, IPCC 2007). The rate of change can have lagged effects oftentimes with inter-generational consequences (Kolstad 1994). Stock dynamics, with long lasting and potentially irreversible consequences, may not currently be fully understood (Nordhaus 2005, Stern 2006, Stern 2008). Society's ability to address stock dynamic issues is further complicated by an inability to implement consistent inter-temporal and inter-generational discount rates (Stern 2006, Nordhaus 2007, Weitzman 2007).

The second issue is the spatial and social distribution of benefits. Reductions in climate change risks, through increased carbon storage and sequestration functions, would benefit those most at risk from climate change. These include low lying island states and coastal populations, which are especially vulnerable to rising sea levels. Poor nations and the poor within rich nations, due to their less adaptive capabilities, will also suffer disproportionally due to climate change. Communities in higher latitudes will experience more rapid climate change as temperatures rise faster than elsewhere, thus affecting their economic, social and cultural systems (IPCC 2007). Ironically, rich industrialized northern nations may experience fewer 'net' economic effects as a result of global climate change (Reilly 1994).

The third issue of equity is that of cultural affinity and usage. The preservation of tropical forest environments, habitat and species, with cultural significance to indigenous peoples, may benefit these local communities more than the wider global community on a per capita basis (Smith et al 2003, Pearse et al. 1994). Conversely, the use of genetic material within forests, for industrial and/or pharmaceutical uses, via international patent laws and access to capital and knowledge skills to identify, replicate and

distribute inherent benefits, may disproportionately benefit developed nations compared to the developing nations where the genetic material resides (Moreira et al. 2005)

Despite these equity issues, both forest carbon and biodiversity values clearly demonstrate many characteristics of global public goods (Kaul 1999). A plethora of organizations have been established to address forest carbon and biodiversity values at the international level, such as the UN IFCCC, UN CDB, IUCN and UN REDD programme. Existing international organizations, such as the World Bank and <u>WWF</u>, also examine forest carbon and biodiversity from a global perspective.

2.3 Financial market failures

In addition to market failures emanating from their global public goods nature, market failures resulting from governmental, regulatory and financial weaknesses hinder the development of the forest carbon and biodiversity markets (Stern 2006).

First, investment risks are heightened by political impasses and uncertain regulatory environments. An ill-defined post Kyoto regulatory environment, including a lack of political consensus on what qualifies as a legitimate carbon offset, is deterring the development of carbon markets as a whole, especially the Clean Development Mechanism (CDM) and afforestation/reforestation projects. Political risks are further compounded as private firms do not know what future regulatory regimes may exist. Existing regimes may be altered once initial irreversible long term capital investments have been made and cannot be undone (Panteghini et al. 2003). These risks are amplified in markets where there is a significant time lag between capital investment and income generation. Perverse incentives exist that encourage governments to cheat on policy announcements once capital outlays have been made and are not retractable. The perceived risks of this eventuality are further increased when there is a history of such policy adjustments (Blyth et al. 2007).

Second, a lack of clearly defined property rights restricts private sector involvement in many parts of the world, particularly those locales rich in stored forest carbon and biodiversity assets. Less developed nations tend to be typified as having weak institutional infrastructures to enforce property rights, greatly increasing investment risks (Laurance 1999). Companies may have blanket investment restrictions in some jurisdictions because of perceived reputational risks due to corruption (Sarkar 2001), as more socially responsible investment (SRI) criteria are applied to bank lending and corporate investment decisions, or capital appropriation concerns (The Economist 2011).

Third, the inability to purchase carbon rights separately from land rights further restricts the development of forest carbon and biodiversity projects. Even when investors are willing to purchase the land rights together with the carbon rights, they may be prevented from doing so. This is the case in less developed countries where foreign ownership of land is often constrained (Conklin 1997). Even in developed countries, land may be nationalized and held in trust by the state for the people. For example, 95% of the land in British Columbia, Canada, is administered in this fashion (McManus 2001). Private sector exclusion on this scale can lead to corruption and under–utilization of assets (Palmer 2001, Koyunen 2008, Giest et al. 2002). Principal-Agent dilemmas arise as expected future benefits will partly flow back to the state and not the tenant (Eisenhardt 1989). Non-ownership of land reduces the incentive to make long term capital investments in land improvements. With forest carbon standards looking to ensure carbon permanence of between 20 to 100 years, accumulative multiyear under investment can give rise to significant sub-optimal outcomes (Korthuis 2009, Hurteau 2009, PlanVivo).

Fourth, market failure occurs because the long term nature of forest carbon and biodiversity projects increases debt financing costs. This is due to their reliance on more expensive longer term financing (Stern 2006). At the same time, the long term time horizons and capital intensive nature of forest carbon projects make it particularly important to establish a long term price signal for carbon, which is essential for the success of any market based incentive system (Edwards 2010). However, the absence

of a well-defined long term regulatory environment is preventing this. The Intercontinental Electronic Exchange (ICE) provides transparent price and volume data for European Union Allowances (EUAs)². As Fig 2.1 shows, market transactions and outstanding market positions are concentrated within the two year period, December 2011 and December 2013. Market liquidity and transactions beyond this period are greatly reduced. Total outstanding positions between 2016 and 2020 inclusive are 1730 contracts³, representing below 2 million tonnes of carbon dioxide equivalence or, in financial terms, a nominal 14,442,000 EURs⁴. The depth and strength of this pricing signal is not enough to entice long term investment plans required for forest carbon projects (Harberl 2010, Zoellick 2006). The inability to input a credible and reliable carbon price into an investment spreadsheet limits comparative investment analysis (Edwards 2010). Such an inability may preclude forest carbon projects altogether.

Figure 2.1 Open interest and daily EUA flows

Daily Volumes for ICE ECX EUA Futures (Monthly) 25-Oct-11

Month	Open Hig		Satt	Chg	Vol	EFP	EFS	Block	Open Int*	Prev Day Vol
	open ng	Fign Low	ow sell ci							(24-Oct-2011)
Oct11	10.42 10.4	2 10.2	5 10.36	-0.13	428	31	0	0	5,085	46
Nov11			10.39	-0.13	0	0	0	0	198	0
Dec11	10.5 10.5	8 10.28	3 10.41	-0.13	7,839	1,208	0	0	176,206	6,392
Mar12			10.5	-0.14	0	0	0	0	1,169	50
Jun12			10.62	-0.14	0	0	0	0	85	0
Sep12			10.75	-0.14	0	0	0	0	60	0
Dec12	10.97 11.0	4 10.79	10.89	-0.13	4,725	1,514	0	0	306,694	3,070
Mar13			11.08	-0.13	0	0	0	0	6,866	0
Jun13			11.35	-0.13	0	0	0	0	375	0
Dec13	11.72 11.7	3 11.5	5 11.63	-0.13	1,748	840	0	0	118,878	863
Dec14	12.44 12.4	4 12.28	12.32	-0.13	113	0	0	0	30,142	22
Dec15			13.23	-0.13	0	0	0	0	5,606	0
Dec16			14.13	-0.13	0	0	0	0	1,100	0
Dec17			15.03	-0.13	0	0	0	0	300	0
Dec18			15.94	-0.12	0	0	0	0	300	0
Dec19			16.86	-0.13	0	0	0	0	20	0
Dec20			17.8	-0.13	0	0	0	0	10	0
Total:					14,853	3,593	0	0	653,094	10,443

Source: ICE 2011

² 1 ICE EUA future represents 1,000 EUAs. 1 EUA represents 1 tonne of carbon dioxide equivalence. 1 ICE EUR future therefore, represents 1,000 tonnes of carbon dioxide equivalence. For more information on product details please refer to www.theice.com/productguide/ProductDetails.shtml?specId=197

³ Product specifications can be found at www.theice.com/productguide/ProductDetails.shtml?specId=197

⁴ Quantity is generated by multiplying the closing indicative price by the number of outstanding contracts in the relevant years of 2016,2017,2018,2019 & 2020 and multiplying by 1000. All prices and values are in nominal terms.

Fifth, market failure occurs because low rates of return in the traditional forestry sector (Nilsson 2010) hamper the allocation of capital towards forest carbon and biodiversity projects. International forestry companies, with expertise in the forestry space, have been slow to divert resources into these new sectors, Forest land banks may be under-utilized, as companies with limited investment resources fail to take advantage of their forest carbon and biodiversity values (Nilsson 2010).

Sixth, and finally, nascent markets such as the forest carbon and biodiversity markets are typified by high transaction costs (Woerdman 2001), resulting from the high initial outlay costs associated with providing a product to the market place for the first time. Constructing initial trading agreement, with lawyer costs and consultancy fees, can be time consuming and expensive in the first instance (Jaraite et al. 2010). Over time, these costs would be reduced as agreement templates become standardized within an industry (Woerdman 2001) but in the meantime they can inhibit the development of a market.

2.4 Institutional responses

Despite well documented literature on the relationship between global public goods and market failures, biodiversity loss, forest related Carbon Dioxide losses and deforestation continue unabated. Climate change, resulting in large part from the reduction of forest carbon sinks (IPCC 2007), has been described as 'the greatest and most wide-ranging market failure ever seen' (Stern 2006).

Market failure on such a grand scale warrants public sector intervention in the marketplace (Stiglitz 1989). Such institutional responses are increasingly focused around market based approaches to rectify forest carbon and biodiversity market failures. Initiatives are taking place at all levels of government and scale. A twofold approach is being undertaken to establish markets: the creation of legal and institutional infrastructures required for markets to function, and the application of public finance to overcome investment barriers.

2.4.1 Forest carbon markets

Institutional responses have been more advanced for forest carbon markets, with more concrete efforts in this area. These include the Kyoto Protocol (1997) and various national level programs. Along with these efforts, various mechanisms have been developed, such as:

- monitoring, verification and reporting (MVR) processes;
- Standards such as the Voluntary Carbon Standards;
- Kyoto's Joint Implementation⁵ (JI);
- the Clean Development Mechanism⁶ (CDM);
- the EU ETS; and
- UN REDD+.

Significant advances have been made in monitoring, verification and reporting (MVR) processes. Meanwhile, the inclusion and recent promotion of afforestation and reforestation projects under the CDM and JI have highlighted forestry's growing importance (COP 17 Durban⁷). Forestry projects are still currently penalized within the EU ETS, however. The submission of forestry originated offsets is severely restricted, limiting investment flows into this sector. With forestry a relatively large component of economic activity in less developed countries, these restrictions appear regressive in nature (World Bank Website⁸).

The UN REDD+ has used significant international funds to improve the MVR capabilities of less developed tropical nations. Capacity building efforts have been made to ensure that appropriate legal

⁵ www.unfccc.int/methods_and_science/lulucf/items/1084.php

⁶ www.cdm.unfccc.int/methodologies/ARmethodologies/index.html

⁷ www.cop17-cmp7durban.com/

⁸ www.wbcarbonfinance.org/Router.cfm?Page=Funds&ItemID=24670

and market infrastructures exist, allowing markets to operate in an effective and efficient manner via the REDD+ readiness initiative. The programme aims to create forest carbon credits so that they can be sold to international investors in both the public and private sector. UN REDD+ efforts are however purely advisory, and their multiple social objectives render projects more complex and costly.

Forest carbon markets have come a long way from the time when stakeholders questioned the validity of carbon offsets altogether (Thomas et al 2009). From being neglected as a viable policy response to excessive carbon dioxide emissions (Laurance 2007), forest carbon solutions have begun to be included as part of the overall policy mix (Pacala and Sacolow 2004), and carbon offsets have become more widely accepted on economic efficiency grounds (The McKinsey Quarterly 2007). Where biodiversity is concerned, the story is different.

2.4.2 Biodiversity markets

Despite the significant hurdles in pricing biodiversity, resulting from moral (O'Neill 1997) and quantifying constraints (Constanza et al. 1987) biodiversity tends to be bundled with forest carbon as a co-benefit. The UN REDD+ programme, for example, encourages embedding biodiversity values within forest carbon projects. Significant co-benefits in the production of forest carbon and biodiversity values have been identified (Harvey et al. 2010, Busch et al. 2010). Although co-benefits are not attainable in all instances (Laurence 2008), it is believed that where they do exist significant cost savings can be made increasing the underlying profitability or viability of projects (UNEP Website⁹). Bundling carbon and biodiversity values together, into one single product, seeks to overcome the difficulty of separating the multitude of values in forest carbon projects. Once markets are established for REDD+ products it is hoped that comparing the observed price differences between plain vanilla forest carbon projects and forest carbon projects with enhanced biodiversity values will allow the calculation and proxy pricing of separate carbon and biodiversity values.

⁹ www.unep.org/Documents.Multilingual/Default.asp?DocumentID=553&ArticleID=6011&l=en

Although the co-benefits approach appears promising, actual demand for international biodiversity offsets is currently limited, especially in less developed countries where REDD+ projects originate. By comparison, the potential size of forestry carbon markets in the near term is vast, meaning that dual provision of biodiversity and forestry carbon values would lead to a massive oversupply of biodiversity offsets. This would in turn induce significant price falls which might also harm the credibility of nascent biodiversity markets.

Another inherent problem with biodiversity markets is the high degree of price variation between mitigation projects. Where biodiversity markets do exist they tend to be regional or national in nature. Habitat and species loss is calculated at the local level and not the aggregate. Local regulations ensure that biodiversity offsets are permitted only when they replace specific habitat and species that have been displaced or extirpated (NSW BioBanking Assessment Tool¹⁰). Because regulations differ from jurisdiction to jurisdiction, large price variations occur.

Pricing issues are further compounded by the lack of fungibility of accredited offsets in the biodiversity marketplace. Fungibility, a key characteristic of large scale financial markets (Ladekarl 2002), would allow a more efficient allocation of resources to protect biodiversity at the global level. For a given level of biodiversity, therefore, cheaper mitigation projects would be pursued before more expensive projects. (Recognizing the importance of this, the architects of the international carbon markets ensured the fungibility of carbon offsets.)

Efforts to establish international biodiversity schemes have focused on 'key' or 'leading indicator' species as opposed to the scientific measurement of biodiversity in specific pre-defined areas of the biosphere. An example of a leading indicator scheme is the Global Tiger Initiative¹¹, which is supported by the World Bank and the UN Global Environmental Facility¹². In such a scheme, the health of a key

¹⁰ www.environment.nsw.gov.au/biobanking/tools.htm

¹¹ www.globaltigerinitiative.org/

¹² www.undp.org/gef/

species at the top of the food chain, in terms of population numbers and genetic diversity, is taken as indicative of the health of the food chain as a whole (Niemi et al 1997, Lambeck 1999). However, the interrelated web-like structure of ecosystems presents major problems for the theory (Lindenmayer et al. 2002).

Chapter Three: Scope and Methods

The scope of this paper will be limited to the analysis of large public sector financial institutions, engaged in the forest carbon and biodiversity sectors, with resources in excess of \$4bn, so as to ensure that scale and ownership comparisons are appropriate to any envisioned International Forestry Bank. The institutional arrangements of the World Bank, the Asian Development Bank, the European Bank of Reconstruction and Development, the United Kingdom Green Investment Bank and the Green Climate Fund are assessed. Limiting analysis to these five institutions is also required so that time and resource constraints are not breached.

These large public sector financial institutions do not solely engage in the traditional private sector banking role of clearing saving and loan markets but have a substantial influence on the overall architecture of markets. Traditionally developmental banks have attempted to create environments that are conducive to overall economic growth and poverty alleviation. There is a heavy emphasis on the development of market institutions as much as capital accumulation (North 1991). With forest carbon and biodiversity markets failing to establish private sector markets unaided, this role is of particular importance.

An analysis of the World Bank was undertaken as it is the largest, both by capital deployed and geographical presence, of the MDB. It's participation in forest carbon and biodiversity markets is second to none. The World Bank, established in 1944, also represents the first phase of modern day international developmental theory. It's long history allows us to analyse institutional arrangements and their adaptability over time.

The institutional arrangements of the ADB will be used to represent the three cold-war inspired regional development banks (the Inter-American Development Bank, the African Development Bank and the ADB). Although these institutions have undergone dissimilar adaptation paths, their Articles of

Agreement, which were created under parallel circumstances and ideologies present at institutional conception, still exert influence over current institutional arrangements. The ADB was chosen to represent the second phase of financial development institution primarily due to being at the forefront of efforts to develop and expand forest carbon and biodiversity values. A secondary consideration was the expectation that survey participation levels were expected to be higher from individuals at the ADB due to the pre-existence of personal contacts.

The EBRD was chosen to represent the third phase of financial developmental institution. Its post-cold war establishment reveals significant changes in the institutional arrangements of financial development institutions, while its large capital base makes it an important player in forest carbon and biodiversity markets.

The UK GIB was chosen to represent recent developments in public/private institutional arrangements. Its mandated focus on market based and profit driven investment decisions separates it from the traditional MDB formats. The UK GIB's much narrower stakeholder base offers insight into the effects of inefficiencies created by democratic deficits and the costs associated with creating co-operative arrangements between large and diverse stakeholder groups. The more private nature of the UK GIB, with its more traditional private sector banking response of allocating investment funds for profit as opposed to using significant resources in the establishment of market architecture, allows us to see an alternative model for market development. The success of the UK GIB will therefore be dependent in part on the pre-existence of established markets.

The GCF was chosen as it is the most recent large scale international development institution based upon traditional international co-operative arrangements. The GCF institutional arrangements and design process embodies current thinking regarding modern institutional structure at the co-operative international level. The UN backed GCF allows for analysis of a broad stakeholder based institution

operating at the global level and is envisioned to be a major financial institution in the forest carbon and biodiversity sector going forward.

Private sector institutions were excluded from analysis, even if they attained the \$4bn capital requirement, as the paper seeks to look at public/private sector solutions to forest carbon and biodiversity market development. Furthermore, private sector practices such as Socially Responsible Investment (SRI) are also excluded from the analysis as the thesis wishes to focus on public sector responses.

Limitations however exist. Although extensive literature is available on the World Bank, ADB and EBRD, the availability of research regarding the UK GIB and GCF is scarce as these institutions are new. Gaining access to ecosystem market professionals is difficult given their geographic dispersal and limited free time.

As part of the assessment of whether an IFB is needed, a survey was conducted. The survey was conducted via the internet using a web based format provided by SurveyMonkey.com. A web based survey has the advantages of being low cost and less time consuming than other survey methods (Soloman 2001, Dahlberg 2007). As the survey population was distributed over a large geographical area, direct interviews were considered to be prohibitively expensive while a mail survey would take too much time. A web based survey also has the advantage of reducing data entry errors (Medin et al. 1999) while empirical research shows that response rates tend to be higher with online surveys (Crawford 2001) due to their ease of use (Soloman 2001).

The survey was an elite survey targeting a population of carbon and biodiversity professionals. Representatives were sought from academia, banking, developmental organizations, NGOs and policy makers. Snowball sampling was used to increase population penetration and help increase the response rate (Kitchenham et al. 2002). Anonymity was ensured throughout the survey to protect the rights of surveyees and also to increase the response rate (Jeavons 1998). The only identifying feature was the IP

address of the computer used to conduct and return the survey. Without formal identification of surveyees, the risk of survey abuse and manipulation through multiple responses would arise (Soloman 2001; Andrews 2003; Cho et al. 1990). To counter this risk IP addresses were checked to ensure there was no duplicity.

The snowballing method also looks to reduce risks associated with email spam filters (Porter 2003). Using known sources to recommend participation in the survey will likely bypass email filtering systems that seek to reject unknown and unfamiliar email addresses.

Risks associated with coverage bias generated through the exclusion of populations without access to the internet and/or e-mail (Kay & Johnson 1999) was expected to be limited as the survey did not seek to be a general population survey. Internet access within the population group was expected to be high. Internet competence and familiarity were also expected to be high within the sample population, reducing coverage bias risks associated with the lack of experience or comfort with web based surveys (Dillman, Tortora & Bowker 2001).

Research has shown that follow up e-mails can increase response rates (Cook 2000, Kittleson 1997). Due to the anonymity of this survey, this response enhancing approach was not available. The ease of web survey design and distribution may have resulted in survey fatigue and lower response rates (Soloman 2001) as individuals are increasingly asked to participate in web based surveys. To counter these effects a plain and simple web design was constructed (Soloman 2001). By limiting the time it takes to conduct the survey to 7-8 minutes, and informing the surveyee of this, it is hoped that there was an increase in rate of response and completion.

No payments, monetary or otherwise, were given to induce or reward survey participation. The survey was designed in English only. The resulting language coverage bias was expected to be low within the sample population. The web survey carried the UBC logo in an attempt to increase the credibility of the research and increase participation and completion rates. UBC Ethics board approval was obtained for
the survey. Contact links to the ethics board were provided to participants so that any concerns could be voiced and dealt with in the correct manner. Participant consent was also sought before the survey was conducted and a cover page outlining participant's rights and risks was provided.

The survey mostly employed closed ended questions while open ended questions provided the opportunity to further comment on the survey subject. A 5 point Likert scale was used to assess participants' agreement or disagreement with statements. Choices of "Strongly Agree", "Agree", "Unsure", "Disagree" and "Strongly Disagree" were provided. A further choice to convey a participant's unfamiliarity with a statement's subject matter was also provided. The neutral "Unsure" option was inserted to reduce the risks associated with forcing participants to agree or disagree with any statements. The 5 point scale was used to balance the desires of survey design simplicity and the needs of gathering adequate information.

The survey was conducted over a specific time period of 1 month which was later extended to 3 months, between 1st January 2012 and 31st March 2012. This extension resulted from a lack of responses in the first period. Initial contacts were generated from pre-existing contacts within the forest carbon and biodiversity community. Initial e-mail invitations were sent simultaneously. The snowballing method was then used to increase response rates from this initial sample population. As there was no pre-existing contact within the law-making community, direct survey invitations were sent to members of the UK Parliament. The process by which Members of Parliament were selected was based on current standing members that had participated in the recent design of the UK GIB and also those members that served on the recent public audit of the Commonwealth Development Corporation.

At the end of the survey period the web-based survey was closed to further participation and the results were extracted from the website. The results were then analyzed and provided in an unadulterated form with this paper.

A tabled summary of institution arrangements (table4.1) was produced highlighting existing governance, transparency and accountability deficiencies within institutions. The identify of existence institutional deficiencies was based on an extensive literature review with particular emphasis on works produced by Transparency International, One World Trust and UK government reports. Categorizing institutional deficiencies was determined personally and does not deviate from perceptions within the academic literature.

Chapter Four: Institutional Arrangements and Initiatives

The literature review reveals that the large public multilateral development banks are at the epicentre of attempts to create forest carbon and biodiversity markets. With their large financial resources and vast pools of human capital these institutions exert significant influence on market design and adopted practices. This influence will tend to contain the values of both principals and agents within the institution. The first part of this chapter attempts to study the institutional arrangements of the chosen institutions in order to reveal the processes by which principal and agents influence can be exerted and assess their institutional validity in global public goods markets such as forest carbon and biodiversity . A detailed list of current institutional initiatives is also provided for each institution in order to highlight their on-going importance.

Institutional arrangements are the policies, systems and processes that organizations use to legislate, plan and manage their activities efficiently and to effectively coordinate with others in order to fulfill their mandate ("Institutional Arrangements"). Institutional arrangements significantly influence the effectiveness of institutions in achieving pre-determined mandates.

While it is acknowledged that institutional arrangements can take many forms, key institutional characteristics have been identified that help assess institutional effectiveness, such as governance, accountability and transparency (Kaffer 2004, Global Accountability Report 2008, Carrasco et al. 2009). These three characteristics influence the effectiveness of institutions not just in terms of direct economic efficiency but also through their ability to instill the legitimacy of an institution:

• Governance structures outline the processes, customs and policies within an institution that direct the way it is run. Governance also considers the interaction between institutional stakeholders such

as employees, employers, shareholders, debt holders, lenders, communities, governments and nongovernment organizations (Becht 2002).

- Accountability concerns the dissemination of liabilities and responsibilities with an organization.
 Accountability also refers to the processes by which liabilities are enforced when accountability failures occur. Responsibilities and liabilities are generated between different stakeholder groups within and outside an organization (Mulgan 2000).
- Transparency is the set of information, privacy and business policies aimed to improve decision
 making processes and openness between institutions and its stakeholders (Wikipedia 2011). The
 degree of openness in conveying information is seen as a device signaling the trustworthiness of an
 actor in negotiations (Ball 2009). Access to information held by public bodies is deemed to being a
 fundamental human right, as defined by Article 19 of the UN universal declaration of human rights
 (UN Website). Transparency can also entail the prevalence of corruption within an organization and
 its effects on the wider community (TI Website).

Governance, accountability and transparency practices affect perceptions of institutional legitimacy. This in turn challenges the societal acceptance of institutional decisions (Zurn 2004), limiting their ability to be effective institutionally and within the marketplace. Addressing these legitimacy concerns is hoped to enhance institutional effectiveness and the attainment of pre-determined institutional objectives.

Assessing the governance, accountability and transparency arrangements of IFIs can provide us with insight into their effectiveness, being the intentional process of ascertaining the level of achievement of an institution's mission and its educational goals and objectives (Matveev 2008). Changing governance, accountability and transparency environments will provide an indication of adaptive processes within an organization as well as highlighting modes of organizations that are perceived to be more effective.

4.1 World Bank

The World Bank Group, commonly known as the World Bank, comprises 5 separate and distinct institutions which are details in Figure 3.1. The World Bank was the first large scale MDB created in 1945 with the original mandate to provide loans for the reconstruction of war torn economies in Western Europe. Overtime time the Bank has undergone significant adaptation and institutional objectives. The Introduction of Marshall Aid for Europe 1948 displaced the World Bank from its primary area of operation and in order to maintain institutional relevance, the World Bank began lending outside of the developed world creating a new mandate of development, via economic growth, in the developing world, subsequently modified to include poverty reduction under the stewardship of Robert McNamara, 1968-1981.





4.1.1 Governance

The World Bank has a Board of Governors which consists of a representative from each of the 187 member states within the World Bank. The Board of Governors convenes once a year. It delegates

operational responsibility to the Executive Board of Directors, consisting of 25¹³ permanent executive directors. The five largest capital contributing states (The United States, The United Kingdom, Germany, France and Japan) each provide their own executive director, as do Saudi Arabia, The Russian Federation and The People's Republic of China. The remaining states are grouped into constituencies of multiple members ("World Bank Website, Voting ") which provide one executive director each ("About Us -Organization"), (BIC, Woods 2001). Executive directors are normally representatives from a government's Ministry of Finance or equivalent (Annisette 2002).

National voting power is calculated via a methodology devised during the creation of the World Bank and embedded in the original articles of agreement ("Boards of Executive Directors - Voting Powers"). This is based on relative economic size and capital contribution. The 1979 General Capital Increase attempted to increase the voting rights of smaller shareholders (Griffith-Jones 2002). The methodology has been criticized for being too technical and representing a world order and Bank role that no longer exists (Woods 2001). Changes in relative national economic strength over time, if not accompanied by increased capital contributions, fail to be reflected in the distribution of voting rights, uncoupling the original linkage between economic and voting power (Einhorn 2006). Voting rights are still heavily dependent on capital contribution (Annisette 2002, Griffith-Jones 2002). The United States alone controls 16% of voting shares ("World Bank Website, Voting") giving it veto power on the most important of issues that require a qualified majority to pass, such as amendments to the Articles of Agreement (Griffith-Jones 2002). The original Articles stipulated that a qualified majority required 80% of all votes. This was changed to 85% in 1989 to preserve the US government's veto power in the institution (Griffith-Jones 2002).

The effectiveness of executive directors also varies. Executive directors representing multiple state constituencies have the unenviable task of representing the views and wishes of many nation states. A

¹³ Increased to 25 from 24 board members from 1st November 2010 Source www.web.worldbank.org/WBSITE/EXTERNAL/EXTABOUTUS/ORGANIZATION/BODEXT/0,,contentMDK:22420682~p agePK:64020054~piPK:64020408~theSitePK:278036,00.html

further complication is that nations within constituencies may be at varying stages of economic development. The effectiveness of constituency executive directors is further eroded as the position is rotated among group members for short periods of time. Some constituencies lack the financial resources required for basic administrative costs as well as incurring disproportionate monitoring costs resulting from a higher than average incidence of World Bank projects operating within their jurisdictions, such as the Sub-Saharan constituency (Griffith-Jones 2002).

The Executive Board works on a consensus basis where few decisions go to a formal vote (Griffith-Jones 2002, Woods 2001). Any projects that cannot overcome Executive Board concerns at the planning stage tend not to be presented and are not pursued. Executive directors representing single constituencies, being well resourced and benefiting from longer employment tenure (resulting from reduced constituency rotation), are able to exert a greater degree of influence at this planning stage, further undermining the institutional position of less developed nations.

Less developed nations, particularly the Heavily Indebted Poor Countries (<u>HIPC</u>), who are often the recipients of World Bank services, feel that they are under-represented within the institution giving rise to notions of a "democratic deficit" (Chowla 2007, UK Gvt IDC 2011,Stutzer 2006, Woods 2003). Such lack of representation reduces the institutional legitimacy of the World Bank (Head 2004) which in turn reduces institutional effectiveness (Ahmed 2006). Legitimacy and effectiveness are seen as "mutually reinforcing attributes" and "not competing objectives" (Ahmed 2006). Legitimacy concerns are giving rise to institutional disengagement. For example, South American nations have sped up repayment schedules to relieve themselves of World Bank liabilities and have established a Bank of the South (Banco del Sur) as an alternative conduit of finance. Nations affected by the Asian Financial Crisis 1997/8 have adopted foreign exchange policies that encourage the accumulation of foreign capital so as to avoid dealing with the World Bank and its sister organization, the International Monetary Fund, in any future crisis.

To address representational concerns, the World Bank "must give greater voice and vote to developing and transition countries" (Morais 2004). Changes in the distribution of voting rights, either through subsidized share purchases or the distribution of free shares, can help rebalance voting power between developed and less developed nations. Participation in future General Capital Injections could be restricted to nations whose relative economic power has increased over time, ensuring that the share and voting dominance currently enjoyed by G7 nations is reduced and becomes more representative of current economic strengths. This would have to be accompanied by a corresponding willingness by maturing nations to make financial contributions to IFI.

Adjustments to the voting system can also enhance participation. Based on separated economic and Westphalian (one-country, one-vote) principles for decision making, installing double majority requirements would address the under-representation concerns of less developed countries while acknowledging the importance of capital subscribing nations (Chowla et al. 2007). Double majority requirements would increase the need for consensus building within the policy construction process, leading to a more stable and effective institutional environment (Chowla et al. 2007).

4.1.2 Accountability

Assessing accountability at IFI can be difficult because the transnational nature of international financial institutions limits their full accountability (Woods 2001). The distance between principal (the electorate in member states) and agent (the World Bank executive board) makes effective control of the agent by principal enormously difficult (Gutner 2005).

Establishing effective measures and mechanisms to increase accountability within an institution would ensure that the interests of the principals and agents align (Gutner 2005, Pollack 1997). These measures however come with financial and efficiency costs. Greater oversight of an institution can lengthen decision making processes and, at the extreme, procedural abuse may create decisional stalemate.

National governments could complement their yearly interaction, via the Board of Governors, with the executive board by instigating independent parliamentary oversight into World Bank operations. The UK Government's International Development Committee recently published its findings regarding World Bank operations, making further financial contributions contingent on the World Bank addressing issues the UK Government felt were inadequately addressed (UK Gvt 2011).

The World Bank as an institution and its employees, when representing the World Bank, are immune to prosecution. The lack of punitive repercussions, resulting from professional misconduct or ill advice at the operational and policy making level, will shield organizational weaknesses and prevent necessary institutional adaptations from being effected in a timely manner (Woods 2003, Raffer 2004). This is particularly relevant when policies are pursued for political reasons regardless of their negative impact on recipient countries (Annisette 2002), a dilemma highlighted during the Asian Financial crisis 1997/98 when World Bank and IMF advisors insisted on broad economic, legal and political reforms epitomizing western liberal neo-classical thought, later dubbed the Washington Consensus (Williamson 2000, Einhorn 2001).

Over time, the role and activities of the World Bank have expanded in a process known as policy proliferation or mission creep (Woods 2003, Kapur 2001, Einhorn 2001, Stiglitz 1999). Contemporary developmental theory stresses the importance of the overall institutional environment, such as the rule of law, enforcement and clarity of property rights and levels of corruption, when considering the effectiveness of developmental investment. The World Bank therefore no longer limits its role to purely financial aspects but participates in capacity building effects to make all capital usage within an economy more efficient (Stiglitz 1999). With World Bank advice and loan conditions impinging more and more "into the tradition realm of national politics, the more consent from and accountability to the governed is required" (Woods 2003).

The World Bank is restricted, by its original articles of agreement ("About Us - IBRD Articles of Agreement III"), to dialogue only with "treasury, central bank, stabilization fund or other similar fiscal agency" ("About Us - IBRD Articles of Agreement III") within a country. Accountability concerns have been voiced as this method may exclude wider civil society and disenfranchised members of society, such as indigenous populations (Woods 2001, Norton 2001).

To address internal accountability shortfalls identified by the independent Morse committee investigations into the Sardar Sarovar Dam project (Udall 1999), the World Bank established the Inspection Panel in 1993 ("Inspection Panel"). The Inspection Panel investigates complaints presented by communities affected by World Bank financed projects. It is an independent body, albeit one that is funded and housed within the World Bank, which assesses whether the World Bank has complied with its own internal operational and procedural rules ("Inspection Panel", Woods 2003). In addition the Operations Evaluations Group (OEG) evaluates the performance of Bank financed projects (Stiglitz 1999). The recent UK Government International Development Committee report concludes that direct reporting by the OEG to the executive board "provides the right balance of independence and engagement with the bank" (UK Government 2011).

4.1.3 Transparency

Enhanced transparency and accountability efforts are seen to be mutually reinforcing (Nye 2001, Woods 2001, Ball 2009). Assessing an organization's degree of transparency, according to the One World Trust, is a measurement of an "organization's capabilities to support the consistent public disclosure of information and responses to information requests" (One World Trust, Global Accountability Report 2008). The disclosure of information is considered by some to be the "oxygen of democracy" itself (Global Transparency Initiative Website) and a legitimacy enhancing "device signaling the trustworthiness" of an organization (Finel 1999). Transparency International (TI) however regards transparency more in terms of the level of corruption an institution engages in. It annually publishes a

Corruption Perceptions Index ("Corruption Perceptions Index 2010") which allows for national analysis and international comparison.

Greater access to and the dissemination of information allows for more efficient and better informed decision making (Ball 2009). Reducing the asymmetry of information, via wider informational dissemination and sharing, reduces the likelihood that agents are able to control information flows for their own benefit and the divergence institutional objectives (Stiglitz 1999). The public disclosure of previous policy failures expedites the process of learning by doing (Arrow 1962, Norton 2000). The desire to distribute World Bank information to stakeholders culminated in the establishment of a broader Access to Information (AI) policy in July 2010 ("News & Broadcast - World Bank Broadens Public Access to Information"). Information can be accessed via the World Bank Website (www.worldbank.org) and open data initiative platform ("Data World Bank"). An online information request form can be submitted for other documents. Restrictions can be applied if the World Bank believes the information is commercially sensitive or disclosure is not in the public interest. The World Bank has been encouraging greater disclosure of agreements made between the World Bank and national governments but restrictions still exist in many cases (Woods 2001). Those that feel the denial of access has been improper have the right of appeal via the independent Information Appeals Panel ("News & Broadcast -World Bank Broadens Public Access to Information"). All these additional measures however come at a cost (Woods 2001, Woods 2003, Ball 2009) which is ultimately paid for by borrowing countries via loan repayments (Woods 2001).

Further increases in transparency have been advocated. Greater transparency in the election process of the World Bank President has been demanded by a broad range of stakeholders, including shareholders (UK Government, (International Development Committee)). Creating an open, transparent and merit based selection process, that does not select the head of an international financial institution on the basis of his/her nationality, was advocated at the G20 Toronto meeting in June 2010 (G-20 Summit

Declaration, article 30). Publishing the voting records of Board members should also be encouraged (Woods 2003). The assumption that secrecy needs to be ensured to allow for open and frank debates between governments is losing credibility as more and more institutions successfully balance greater transparency with candid dialogue, such as the Bank of England and the United States Federal Reserve Federal Open Market Committee (Woods 2003).

4.1.4 Carbon funds

To facilitate an array of activities the World Bank has established various funds to concentrate on specific investment areas based on industrial and geographic criteria (see Figure 4.2).



Figure 4.2 Summary of World Bank carbon funds

Source: Data collated from World Bank Website 2011

The Prototype Carbon Fund (PCF) was the first carbon fund established by the World Bank in 2000. The fund, administered by the World Bank, comprises seventeen companies and six governments contributing to a total fund of \$219.8m by 2007 (World Bank Website Carbon). During this period carbon markets as a whole were in their infancy. Pioneering the development of carbon projects, via loan finance and technical assistance, helped establish carbon markets while simultaneously attaining considerable efficiency gains through the process of learning by doing (Arrow 1962), significantly reducing investment risks associated with carbon projects.

The Community Development Carbon Fund (CDCF) was established in 2003 with a capital base of \$128.6m. The CDCF has broad objectives that include community development, poverty alleviation and environmental protection alongside realising carbon values ("World Bank Website CDCF "). CDCF activities address market failures resulting from the inability of poor communities and countries to attract finance due to country risk and investment risk (World Bank Website Carbon).

The Umbrella Carbon Facility (UCF) pools resources from World Bank and non-World Bank administered funds for the purchase of credits from large scale carbon projects. The first tranche of finance purchased \$1.1bn¹⁴ of carbon credits from two HFC-23 large scale carbon projects in China. The ability to mobilize capital at such a large scale ensures the reduction of transaction costs and the attainment of economies of scale. The pre-purchase of or commitment to purchase credits also reduces debt finance restrictions resulting from the long lag times between investment outlays and income flows associated with forest carbon projects (Chenost 2009).

The World Bank and some European nations have established various carbon funds to help them comply with their carbon commitments under the EU ETS. The Carbon Fund for Europe (<u>CFE</u>) is administered jointly with the European Investment Bank (<u>EIB</u>). The World Bank offers technical expertise in carbon

¹⁴ EUR800 million was committed. Converted at an exchange rate of 1.3830 8th November 2011, www.bloomberg.com

markets to the EIB while the fund purchases carbon offsets stimulating market development in private sector Clean Development Mechanism (<u>CDM</u>) and Joint Implementation (<u>JI</u>) compliant projects.

Individual EU nation states have also established carbon funds with the World Bank. The Netherlands CDM facility (NCDMF), Netherlands European Carbon Facility (NECF), Italian Carbon Fund (ICF), Spanish Carbon Fund (SCF) and Danish Carbon Fund (DCF) all look to source carbon offsets to ensure national EU ETS compliance. The sourcing of carbon offsets varies between funds. The NCDMF concentrates on CDM compliance projects in the developed world while the NECF purchases JI credits from East European economies in transition.

The Carbon Partnership Facility (<u>CPF</u>) was established in 2010 to provide finance for large scale long term carbon projects. Overcoming market failures, in the long term financing of carbon projects, is an essential requirement for the delivery of a low carbon future (Stern 2006). Cooperating with governments and private sector actors to share carbon finance experiences and predetermine carbon requirements is hoped to reduce costs associated to long term carbon finance by reducing transaction costs, increasing information flows and market transparency.

The Partnership for Market Readiness (PMR) was established in 2010 with pledges of \$70m from developed countries. The World Bank acts as secretariat. The PMR uses grants to help developing nations establish opportunities in carbon markets. Capacity building efforts helping to design and implement new market based instruments is provided as well as technical assistance (World Bank Website Carbon). Establishing the necessary infrastructure for markets to function effectively is a key requirement in establishing and scaling up carbon markets (*Task Force on LULUCF* p101).

The Carbon Initiative for Development (<u>CID</u>) has been established to invest funds in less developed countries. The high risk associated with investment in less developed countries is curtailing inward carbon capital flows. Currently less than 1% of CDM projects are based in less developed countries (Overseas Development Institute). In an attempt to rectify this market failure the CID will invest in

capacity building, loan finance for the establishment of offset projects and also the purchase of credits once projects are established.

Funds specialising in forestry values have also been established. The BioCarbon Fund was established in 2004 with an initial capital of \$53.8m which was further extended in 2007 by \$36.6m. The multiple mandated BioCarbon Fund looks to conserve biodiversity, alleviate poverty while ensuring forest carbon storage and sequestration (World Bank Website Carbon). The fund seeks to prove the effectiveness and market viability of forest based carbon projects, reducing investment risks in the sector. Various projects are supported from Afforestation and Reforestation CDM and JI projects to REDD projects.

The BioCarbon Fund provides technical assistance as well as direct finance. It supports capacity building activities, particularly in African based projects (Jindal et al 2008) where the World Bank is the largest single investor in terms of number of projects and funds committed (Jindal 2006). Whether through a better understanding of local conditions, closer personal relationships with domestic policy makers or the leverage of other World Bank functions, notably lending facilities, significant country and governance risks can in part be reduced by World Bank project participation. The success of the previous two BioCarbon Funds is expected to generate a third investment tranche of funds to build on the success of afforestation/reforestation pilot projects and REDD+ investments. BioCarbon Fund T3 is currently being negotiated as a result of efforts at the Conference of Parties 17, Durban.

The Forest Carbon Partnership Facility (FCPF) focuses on REDD+ projects. The FCPF is dual mandated to support REDD+ readiness efforts and the operation of a traditional carbon fund. With only one REDD+ certified project entering the marketplace, the Wildlife Works Kasigau Corridor REDD+ project (Kasigau), the primary focus up to this point has been REDD+ readiness efforts. The World Bank acts as Trustee to

the Readiness Fund¹⁵ and the Carbon Fund¹⁶, while also providing secretariat services and technical assistance to REDD+ participating countries.

4.1.5 Biodiversity

Biodiversity activities at the World Bank are not restricted solely to co-development projects with carbon. In the absence of any global biodiversity offsets market, World Bank efforts have been focused on establishing partnerships between governments, civil society, NGO, foundations and the private sector. Finance has been grant based versus loan based. The World Bank's advisory capacities are utilized to facilitate capacity building through experience sharing and technical assistance.

Figure 5.3 illustrates the various biodiversity initiatives that the World Bank is involved in. Due to the relative under development of biodiversity markets compared with carbon markets the number of initiatives and capital allocated to the biodiversity sector is significantly lower than that of the carbon sector. Under development of biodiversity markets may be the result of a lack of political urgency and a greater degree of pricing complexity when compared with carbon markets. World Banks participation in these geographically diverse initiatives significantly influences the design of international biodiversity schemes. Much like with carbon markets, it is important that the World Bank creates market structures that the vast majority of international economic agents wish to participate.

¹⁵ Pledges of \$232m received from Developed Countries in 2008. Source FCPF Website

¹⁶ Pledges of \$215m received from Developed Countries in 2008. Source FCPF Website



Source: Data collated from World Bank Website 2011

The Global Tiger Initiative (GTI) was established in 2008 as a collaborative effort between the World Bank, 13 Tiger range countries, the UN GEF, the Smithsonian Institution and the 42 NGO that constitute the International Tiger Coalition. The GTI aims to double Tiger populations in participating countries to at least 7,000 by 2022. MBI systems are being introduced in preference to perceived unenforceable public resource ownership and regulation. Ecotourism, Payment for Environmental Services, REDD+ establishment, community development and community conservation programmes, based on conservation targets and opportunity cost ("The Global Tiger Recovery Programme"), are all being supported by World Bank funds and initiatives. The World Bank provides secretariat services for the GTI which is housed at the World Bank in Washington, DC. The World Bank provides financial grants, technical assistance, research resources and capacity building in the establishment of new financial mechanism. The Save Our Species (<u>SOS</u>) initiative was established in 2010 as a partnership between the World Bank, IUCN and the GEF. The IUCN provides secretariat services to the fund while the World Bank provides grant capital. SOS aims to facilitate private sector participation in conservation efforts by providing conservation and financial expertise to help identify conservation priorities and opportunities (SOS-Website).

The Critical Ecosystems Partnership Fund (<u>CEPF</u>) was established in 2000 as a \$125m fund designed to distribute grants to preserve "the most biologically significant and threatened areas of the world" (World Bank Website). Thirty five biological hotspots have been identified by CI to focus conservation efforts ("Biodiversity Hotspots - Key Findings") while research by Norman Myers has identified 25 such global biodiversity hotspots (Myers et al 2000). Membership consists of the World Bank, Conservation International (<u>CI</u>), the GEF, The Government of Japan and the MacArthur Foundation. Grant dispersal encourages civil society participation by stressing benefit sharing values within conservation projects.

The Global Invasive Species Programme (<u>GISP</u>) was established in 1997 with aims to "conserve biodiversity and sustain human livelihoods by minimising the spread and impact of invasive alien species" (World Bank Website). The World Bank provides financial grants to the GISP to support its work in assessing the risks posed by invasive alien species to biodiversity, especially with reference to global climate change.

The World Bank/WWF Forest Alliance was established in 1998 with aims to reduce global forest loss and degradation by working with governments, civil society and the private sector. The Forest Alliance promotes conservation efforts and best practice in forest management. The World Bank provides a wealth of information and advice, from across its organization, to Forest Alliance partners.

The World Bank's participation in biodiversity markets is partnership based with a focus on supportive efforts via direct grants and technical assistance. Its forest carbon market participation focuses more on loan finance and the direct purchasing of credits rather than grant support. World Bank financial

commitments and participation in forestry carbon markets are of a much greater scale than its biodiversity activities.

4.1.6 World Bank critiques

Despite the significant financial and organizational commitments the World Bank has made to forest carbon and biodiversity values, extensive criticism has been voiced regarding these and other activities by it. In the area of carbon markets the sheer scale of its participation, with nearly \$3 trillion of funds allocated, gives it the power to influence the design and structure of international carbon markets. The World Bank will naturally seek to establish markets imbued with its own values derived from its own world views. Significant risks arise if the values of the World Bank no longer correspond to the dynamic values of the global community it was established to represent. In this situation no matter how large the capital allocation the World Bank committed, carbon markets would fail to adequately develop as other economic agents would refuse participation.

Meanwhile, the World Bank's lending practices, aimed at fulfilling the legitimate mandates of economic growth and poverty alleviation¹⁷, target infrastructure and agricultural projects (Stiglitz 1999). The World Bank considers agricultural investments to be the most efficient means to achieve economic growth and poverty alleviation (UK Government 2011). Internal World Bank research shows that both infrastructure and agricultural investment lead to greater levels of deforestation (Chomitz et al 1996).

Environmental damage resulting from World Bank lending practices is well documented (Nielson and Tierney 2003, Gutner 2005). Large scale investment projects, such as hydro dams, have created ecological disasters (Collier 1991). Although internal improvements have been made regarding

¹⁷ **The World Bank's mandate.** The World Bank promotes long-term economic development and poverty reduction by providing technical and financial support to help countries reform particular sectors or implement specific projects—for example, building schools and health centers, providing water and electricity, fighting disease, and protecting the environment. World Bank assistance is generally long term and is funded both by member country contributions and through bond issuance. World Bank staff are often specialists in particular issues, sectors, or techniques. IMF Website. www.imf.org/external/np/exr/facts/imfwb.htm

environmental assessments of projects, the feeling that processes in place are inadequate and an institutional bias towards economic growth at the expense of the environment remains persist (Annisette 2004).

While efforts are enacted to stimulate low carbon energy production and forest carbon storage initiatives, the World Bank continues to provide funds for investment in fossil fuels (Sierra 2011a). An internal World Bank reports concludes that fossil fuel usage has negative human health effects as well as affecting climate regulation highlighting this dichotomy (Lvovsky et al 2000). These investments are justified by the World Bank as LDCs currently have no obligations to reduce CO2 emissions. Fossil fuel usage is oftentimes the least cost feedstock for energy production. Alternative energy sources may not be available due to capital or technological constraints. Denying LDCs the right to grow their economies, in whatever way they see fit, can also be seen as regressive in nature.

The ability to successfully fulfil the requirements of multiple mandates is severely curtailed when objectives are in such direct conflict. Explicit mandates are also being introduced, such as gender equality and indigenous rights, which further complicates investment criteria (Stiglitz 1999). Projects in one locale, that fulfil all the necessary investment criteria, may look rather perverse when considered from an alternative perspective.

World Bank requirements, that only allow Bank to Government loans and assistance, may lead to the restriction of dialogue between non-governmental groups and wider civil society. Such exclusion may create a bias for large scale projects that are proposed at national government level and at the expense of a multitude of smaller programmes. Accusations abound of elite support resulting from close government relationships and top down policy making (Einhorn 2006, Abbott et al. 2011).

World Bank involvement in the newly created Green Climate Fund (GCF) has also been criticized. The UNFCCC COP 16 in Cancun (2010) established the GCF. Designing the GCF will be the responsibility of the transitional committee which submitted its proposal in November 2011. Approval of the GCF was

granted at the UNFCCC COP 17 Durban meeting December 2011. Although the composition of the Transitional Committee favours LDCs, with 25 of the 40 members coming from LDCs, the inclusion of the World Bank as interim trustee is seen as a counterbalance (Bird et al 2011). Furthermore, despite the World Bank having no direct role in the institutional design process, it is feared that the secondment of World Bank staff to provide expertise to the Transitional Committee will create covert influence on the design process (Bird et al. 2011). Conflict of interests also arise given the World Bank operates the resource competing Climate Investment Funds. The commingling of trustees' assets, which is currently allowed, exacerbates these conflicts of interest and gives rise to compliance concerns (Bird 2011). It is also interesting to note that the World Bank "Executive Board does not have the balanced representation that is called for by the UN FCCC" and yet it entrusts the World Bank with GCF Finances (Sierra 2011a).

Concern within LDCs surrounds the potential imposition of conditionality clauses as a prerequisite to fund dispersal if World Bank employees participate, directly or indirectly, in the institutional design of the GCF. LDCs believe that conditionality exerts external influence over sovereign nations. Climate funds should be distributed according to climate mitigation and adaptation needs and therefore, should be provided free of conditions that demand institutional or legal changes desired by neo-liberal institutions such as the World Bank, to ensure LDC participation (Sierra 2011b).

4.2 Asian Development Bank

The Asian Development Bank (ADB) was established in 1966 with the mandate to "promote investment in the (Asia-pacific) region of both public and private capital for development purposes" (Article 2(i)) ("ADB Operations Manual Bank Policies") while simultaneously fighting poverty. With over 2800 employees from 59 countries the ADB uses a mix of "loans, grants, policy dialogue, technical assistance and equity investments" to achieve developmental objectives. Approved financing in 2010 was over

\$17.5b. The ADB has 26 country offices throughout the region and representative offices in Tokyo, Frankfurt and Washington, DC (ADB Website).

4.2.1 Governance

The Governance structure of the ADB is very similar to that of the World Bank. The Board of Governors, where all institutional power resides ("Board of Governors") comprises one representative from each member state¹⁸, normally the Finance Minister. The Board of Governors convenes once a year and elects the 12-member Board of Directors to which it delegates day-to-day operational control to the Board of Directors ("Board of Governors"). Donor and non-donor countries equally provide 6 members to the board (Ming Wan 1996). Eight members are supplied by nations within the Asia-Pacific Region while 4 are elected from non-regional membership. In addition the Board of Governors elects the President of the ADB who is also the Chair of the Board of Directors. Traditionally this position has been held by a Japanese national with links to the Japanese Ministry of Finance and is the source of some controversy (Kilby 2006, ("Biography: Haruhiko Kuroda")) 80% of voting shares are distributed according to capital subscription with the remaining 20% distributed evenly between member states (Ming Wan 1996). Nonborrowing countries maintain 55% of voting shares while borrowing countries account for the remaining 45% of voting shares (One World, Global Accounting Report 2007). Some assert that the largest voting members, The United States of America and Japan, exert hegemonic influence within the organization (Kilby 2006), however, veto power cannot be exercised by any single member, limiting potential hegemonic influence. Article 36 of the ADB's Articles of Agreement promotes political non-interference by stipulating that lending activities must be subject solely to economic considerations and exempt from the political affairs of any member state (Mitchell 2006).

¹⁸ As of December 2011 67 members

4.2.2 Accountability

With a similar governance structure and articles of agreement to the World Bank, the ADB is beset by parallel accountability concerns wrought by the dislocation of principals (enfranchised citizens) and agents (ADB staff), albeit on a lesser scale (Gutner 2005, Pollack 1997). In an effort to ensure the alignment of principal/agent interests the ADB introduced the Inspection Function in 1995. The Inspection Function provided a forum for stakeholders to comment on ABD public sector operations ensuring that they comply with pre-determined internal policies and procedures. The Inspection Function was replaced in 2003 by the Accountability Mechanism. The Accountability Mechanism, by including private sector projects, has a broader scope than the Inspection Function. Projects are split between a consultation phase and a compliance review phase. The consultation phase encourages multi-stakeholder participation and the "satisfactory solution to problems caused by ADB-assisted projects" (" Accountability Mechanism: Overview"). The compliance review phase assesses whether operational policies and procedures have been complied with on ADB-assisted projects, particularly regarding issues that "directly, materially and adversely affect local people" ("Accountability Mechanism: Overview"). The Accountability Mechanism is widely disseminated and translated into 14 languages to help external stakeholders process complaints and understand the complaints procedure (One World, Global Accountability Report 2007).

The ADB has also identified mission creep within its organization ("Streamlining Country Partnership Strategies"). Compliance with new global initiatives, for example gender rights and indigenous people's rights, and establishing operations within non-traditional sectors, such as biodiversity and carbon markets, has extended the scope of institutional accountability. The Accountability Mechanism needs to ensure that these additional values are incorporated into any independent reviews when assessing whether they comply with internal policy.

Article 50 of the Articles of Agreement guarantees the ADB institutional immunity from judicial proceedings. Similar privileges are extended to the organizations assets (article 51), archives (article 52) and communications (article 54). Judicial immunity is also extended to ADB personnel (article 55) when acting on behalf and in their capacities as bank employees (Mitchell 2006). Critiques of this form of unaccountability follow similar lines as posed to the World Bank (Woods 2003, Raffer 2004, Annisette 2002). The right balance needs to be struck between protecting the institution's (and its staff's) rights in challenging political and legal environments and shielding and perpetuating institutional and individual incompetence.

4.2.3 Transparency

The ADB states that Transparency is "critical to the effectiveness, sustainability and accountability of ADB operations" and is required to ensure the "trust and support of member governments" ("ADB Website communications policy). The creation of the Public Communications Policy of the Asian Development Bank in 2005 established the framework for the internal and external disclosure of bank information to facilitate this process ("ADB Website communications policy). TI has praised the ADB for meeting all good practice principles, especially the clear definition of a narrow set of conditions that prevent the disclosure of information (One World, Global Accountability Report 2007). The Global Transparency Initiative similarly praised the Public Communications Policy (PCP) when it was first adopted in 2005, describing it as the most progressive disclosure policy among all the IFI. Global Transparency Initiative noted however that the 5-yearly PCP review in 2010 recommended almost no new measures enhancing institutional transparency (Mendle 2010). The establishment of the independent appeals system helps to facilitate challenges to any information denial decisions. All ADB staff receives training regarding bank information disclosure policy and use of the in-house Disclosure

the ADB website which is translated into 12 languages online ("ADB Transparency: how to access information from the ADB").

The ADB addresses corruption issues via the independent Office of Anti-Corruption and Integrity (OAI). The OAI investigates allegations of bribery or professional misconduct involving ADB staff or ADB financed projects, and publishes a list of ADB disbarred companies and individuals while also providing links to sanctioned lists of other MDB.

The Independent Evaluation Department, established in 2004, actively disseminates information regarding the assessment of ADB financed projects. It reports directly to the Board of Directors, so that organizational autonomy is maintained while organizational conflicts of interest are reduced. The high degree of transparency in this area stimulates the process of learning by doing by ensuring that past mistakes and successes become public knowledge.

Recently attention with the ADB has begun to focus on forest carbon and biodiversity issues stemming from the realisation that 13 of the 34 identified global biological hotspots (Myers et al 2000), 5 of the 17 'megadiverse' countries and 60% of the Worlds species are located in the Asia-Pacific region (ADB Website¹⁹). Furthermore, significant economic growth within the region is escalating annual carbon emission via land use changes and increased industrial activity. The ADB has established funds and facilities to tackle these issues.

4.2.4 Carbon funds

The Carbon Market Initiative (<u>CMI</u>) was established in 2006 with three initial platforms. The Asia-Pacific Carbon Fund (<u>APCF</u>), the Technical Support Facility (TSF) and the Credit Marketing Facility (CMF). The CMI was later extended to include the Future Carbon Fund (FCF), which was designed to reduce market failures resulting from the lack of a clear long term price signal in post-Kyoto 2012 carbon credits. It is

¹⁹ www.adb.org/Environment/biodiversity.asp

hoped that all four platforms can work alongside traditional project loan finance to ensure the delivery of carbon offset products to aid member countries in their carbon compliance and non-compliance needs.

The APCF seeks to provide finance to reduce market failures resulting from the large upfront costs associated with forest carbon projects (Chenost 2009). APCF relies on co-financing structures with existing ADB project investments pre-purchasing between 25% and 50% of the expected carbon offsets produced from a project within the Kyoto compliant period. Total fund size is \$152 million (ABD-CMI).

The TSF is a grant based fund that seeks to aid the establishment of carbon projects at the early stages of development. Technical assistance is provided in project preparation and implementation. Capacity building efforts are seen to overcome prohibitively high initial investment costs and stimulate learning by doing opportunities (Arrow 1962).

The CMF advises on the sale of the remaining offsets not purchased by the APCF. Limited access to transparent carbon exchanges, exacerbated by the exclusion of forest sourced carbon offsets with the first (2005/08) and second (2008/13) phases of the EU ETS, significantly raises search costs for both offset providers and investors. The CMF marketing network can significantly aid distribution efforts, especially those sourced on small projects with little linkage to the international investment community. The ability to package offsets generated from smaller projects together can also further increase their marketability.

The FCF was established in 2009 with an initial capital of \$115m (ADB-CMI). Its primary role is the purchase of post-2012 carbon offsets. Similar to the APCF the FCF looks to overcome market barriers resulting from large upfront capital costs associated with carbon projects (Chenost 2009). The FCF also seeks to reduce market barriers resulting from the political uncertainty surrounding the post-Kyoto carbon emissions environment.

The ADB's Climate Change Fund (<u>CCF</u>) was established 2008 to make financial contributions to forest carbon and where possible biodiversity projects via technical assistance and grant dispersal at the early stages of project development. CCF finance focuses on Forestry projects within the REDD+ scheme. To date \$5m has been distributed to REDD+ projects within the region.

4.2.5 Biodiversity

The ADB participates in biodiversity projects via partnerships and direct financing. National and regional environmental issues are addressed. Cooperative arrangements are developed between national governments and international organizations within both the public and private sectors.

The Coral Triangle Initiative (CTI) is a six nation cooperative organization established to protect one of the most biologically diverse marine and coastal areas on the global. The ADB, alongside national governments (United States of America and Australia), other international organizations (The World Bank, GEF, UNDP and FAO) and international non-governmental organizations (Conservation International, The Nature Conservancy and World Wide Fund for Nature) has so far raised \$300m to enhance regional governmental resources ("CTI").

The importance of biological corridors, that ensure biological connectivity and genetic diversity, is recognized with the ADBs support of the Greater Mekong Sub-region (GMS) Biodiversity Corridors Initiative (BCI). The ADB provides technical assistance grants to GMS member states so as to ensure economic development progresses in a sustainable manner ("GMS"). Facilitating access to sustainable finance is also provided.

The Heart of Borneo Initiative (HoB) is a multi-partner initiative intent on realising the forest carbon and biodiversity values of the Borneo tropical rainforest. Technical assistance and capacity building grants have been provided to the governments of Malaysia, Indonesia and Brunei as they collectively attempt to evaluate the climatic and biological impacts of agro-forestry, logging, land use changes, mining extraction and the illegal wildlife trade. Particular attention is focused on REDD+ schemes due to their significant co-benefits of production (Harvey et al. 2010, Busch et al. 2011,). Participation in the HoB projects is hoped to provide the ADB and other multilateral development institutions with valuable experience in delivering forest carbon and biodiversity values to the marketplace ("HOBI").

4.2.6 Asian Development Bank critiques

Critiques of the ADB are very similar to that of the World Bank. The governance, accountability and transparency arrangements are very similar. The head of the ADB tends to be a Japanese national revealing the exertion of power by the regional hegemon within the institution. This Japanese, and Japanese Ministry of Finance, influence is of particular importance given the risk of other regional powers such as China and India, whose interests and objectives may be mutually exclusive to that of Japan. This can be seen clearly in regards the pricing of fossil fuel carbon emission with China and India's reliance on coal and oil juxtaposed with Japan's 'cleaner' nuclear energy production. Various internal procedures have been established to improve internal accountability but the ability of the ADB and its staff to exercise jurisdictional immunity when conducting business on behalf of the institution still limits external accountability. Improvements have however been made with regards the distribution of information to various external stakeholders in keeping with the nature of the institutions public ownership.

4.3 The European Bank for Reconstruction and Development

The EBRD was established in 1990 (becoming operational in 1991) as a direct consequence of the disintegration of the Soviet Union. Unlike other MDB, the EBRD has a clear political mandate that seeks to support private sector efforts in establishing market based economies in Central and Eastern Europe. Lending operations are also restricted to nations that are "committed to and applying the principles of multi-party democracy [and] pluralism" (EBRD Website).

The EBRD is headquartered in London, UK, and currently has operations in 29 countries. In 2009 the EBRD had nearly 1500 staff working in 58 of its member countries. The current membership is 63 countries²⁰. EBRD activities include loan and equity finance, leasing facilities, trade finance, guarantees and specialist advice in regional, industrial, environmental and legal issues. The original geographical remit has been extended in recent years to include financing operations in Central Asia which is the result of a quicker than expected transition to market based democracies by some Central European nations.

4.3.1 Governance

Similar to other MDB, the main body of power within the EBRD is the Board of Governors. Each member country appoints one governor to the Board, generally the Finance Minister. The Board of Governors meets annually, elects the EBRD President on a four year term and delegates most other powers to a Board of Directors. The Board of Directors consists of 23 seats²¹. Some states appoint their own directors directly while other nations are grouped together and collectively appoint directors (Strand 2003, Roper et al 2003) creating democratic deficit concerns (Ben-Artzi 2005, Carrasco et al. 2009).

Voting power within the Board of Directors is dependent on national shareholdings, calculated from national capital subscriptions. The largest shareholder in the EBRD is the USA with 10% of the voting shares and over EUR2.1 Billion subscribed. Further G7 representation is made by the United Kingdom, France, Germany, Italy and Japan with 8.5% shareholdings each. Non state shareholdings are held by the European Investment bank and the European Union ("EBRD Our History").

The voting power of non-borrowing countries by far outweighs that of borrowing nations (Carrasco et al. 2009), raising legitimacy concerns. Non-borrowing countries dominate the Board of Directors and in turn establish the lending conditions that they themselves will not be subject to (Carrasco et al. 2009). The

²⁰ New members Tunisia and Jordan join December 2011 www.ebrd.com/pages/about/who/shareholders.shtml

²¹ For a full list of current appointees please go to www.ebrd.com/pages/about/who/structure/directors.shtml

EBRD charter also ensures that the majority of voting shares must be held by members of the European Union, ensuring that the EBRD remains fundamentally a "European" Bank (Roper at al 2003).

4.3.2 Accountability

Like the other MDB, the EBRD suffers a democratic accountability deficit due to the dislocation of principals and agents (Gutner 2005, Pollack 1997). The "grouping" of multiple nations into singularly represented bodies on the Board of Directors further erodes democratic accountability (One World Trust, Global Accountability Report 2008).

Article 51 of the EBRD's charter ensures institutional and personal immunity for the bank and its employees, reducing institutional accountability (Woods 2003, Raffer 2004, Annisette 2002). In an attempt to counter accountability shortfalls, the EBRD established the Office of the Chief Compliance Officer (EBRD Compliance). In 2006 two Codes of Conduct were published to regulate the professional conduct of bank employees and directors. Employees are encouraged to report acts of professional misconduct while offering protection to whistleblowers. Staff seminars are provided outlining the importance of professional conduct and integrity within the institution (Carrasco et al. 2009), while the communications department train staff on stakeholder engagement (One World Trust, Global Accountability Report, 2008).

External stakeholders can utilize the Project Complaints Mechanism to process complaints and concerns on any EBRD financed projects. The Project Complaints Mechanism widens the scope of dialogue, introduces integrated problem solving initiatives, increases accessibility and replaces the previous Independent Recourse mechanism ("EBRD PCM"). The Project Complaints Mechanism is project specific and does not facilitate complaints against overall bank policy or governance practices (One World Trust, Global Accountability Report, 2008), such as the process by which the EBRD President is elected.

4.3.3 Transparency

The main conduit of transparency within the EBRD is the Public Information Policy (PIP). The EBRD aims to respond to information requests within 20 days. Any request denials have to be accompanied by an adequate justification. Although the EBRD predefines what information can and cannot be disseminated, particularly with regards to commercially sensitive private sector information, the Global Transparency Initiative and One World Trust both claim that the definition is excessively broad, such that almost all information could be restricted if the EBRD wished it so.

The publication of Country Strategies, accompanied by an open invitation for public consultation, seeks to "promote better awareness and understanding of its strategies, policies and operations" ("PIP"). Project Summary Documents are also publically released 30 days prior project discussion by the Board of Directors (Carrasco et al. 2009).

The EBRD provides a great deal of information to external stakeholders via the NGO Relations Department. The aim of this office is to aid in the dissemination of and access to information, but does not provide any financial assistance to civil society groups to facilitate greater stakeholder involvement which is of particularly import when considering the concerns of poor, disenfranchised sectors of society with limited access to financial resources.

As an institution the EBRD prides itself on its environmental credentials which it claims are at the core of the institutions activities. Transparency is enhanced by the publication of the Environmental and Social Policy document which has been translated into 13 languages. Environmental and Social Impact Assessments are produced for sensitive projects and translated into local languages where necessary. All documents are available online, at the EBRD headquarters and the relevant local country office (EBRD disclosure of Environmental and Social Information) addressing accessibility concerns.

Anti-corruption efforts are enhanced by the publication of an ineligible entities list for companies and individuals that have failed to comply with EBRD's Enforcement Policy and Procedures ("Revised Enforcement Policy and Procedures") Disbarment can result from engaging in prohibited practices ("Prohibited Practices") being subject to a third party finding or being subject to disbarment by a mutual enforcement institution ("Agreement for Mutual Enforcement of Debarment Procedures"), such as the World Bank. The EBRD was the first MDB to enforce the disbarment of a company resulting from the findings of another mutual enforcement institution (Rossini 2007).

4.3.4 Carbon funds

The Multilateral Carbon Credit Fund (MCCF) was established in 2006 in partnership with the European Investment Bank (EIB) ("MCCF"). The 208.5m EUR fund purchases "carbon credits from emission reduction projects financed by EIB or EBRD to meet their mandatory or voluntary greenhouse gas (GHG) emission reduction targets" ("MCCF: Factsheet"). The MCCF seeks to take advantage of opportunities existing in transition economies resulting from the legacy of high carbon, high energy intensity industrial sectors. The installation of low carbon technologies, resulting from carbon finance, should lead to significant reductions in GHG intensities and overall emissions.

The MCCF also promotes dialogue between nation states to facilitate the trading of carbon offsets sourced from EIB or EBRD financed projects as well as Assigned Amount Units (AAU) ("CDM Rulebook"). Due to significant economic dislocation, caused by the socioeconomic breakdown of communism in the early 1990s, AAU transactions are particularly relevant to economies in transition. With 1990 set as the base year for emission levels under the Kyoto Protocol, transition economies find themselves with AAU surpluses resulting from lower levels of economic activity.

The Netherlands EBRD Carbon Fund was established in 2003. Between 2004/06 the EBRD purchased EUR 32m on behalf of the Government of the Netherlands. Carbon credits were purchased from projects under the JI mechanism of the Kyoto Protocol. Forest carbon projects are allowed within the JI

mechanism under article 3.3 of the Kyoto protocol but have not been as popular as other types of project.

4.3.5 Biodiversity

The EBRD does not directly finance biodiversity projects but implements strict environmental criteria on all investments. Sustainable investment is "at the core" of the EBRD reflecting the Banks founding principles ("EBRD-Sustainability"). The EBRD claims to be the "only IFI with such a determined approach to the environment" ("EBRD-History"). Many investments are transnational in nature and best international practices are employed to evaluate environmental criteria. Internal guidelines exist to guide evaluation such as the environment and social policy ("ESP"). Collaborative efforts have created the 'sourcebook on EU environmental law' to aid the EBRD and other EU institutions in ensuring environmental laws are understood and adhered to.

4.3.6 EBRD critiques

The EBRD, like the World Bank and ADB, has governance issues surrounding the political appointment of key personnel and the exertion of hegemonic influence. The political mandate of the EBRD may be overt but may not be in the interests of all nations. The idea that Liberal Democracies, with varying degrees of free market economies, is the best form of government is ethnocentric to say the least. Many nations are looking towards the recent successes of state centric political and economic systems in China as a potential alternative to social and economic advancement. Accountability is compromised by the political immunity of the EBRD and its staff. Transparency has been improved but remains an issue as the institution walks a fine line between its public sector and private sector commercial transparency responsibilities.

4.4 The United Kingdom Green Investment Bank

The UK Green Investment Bank (UK GIB) was established in 2010 after an extensive 12 month multiparty review by the Green Investment Bank Commission (UK GIB Commission). An initial capitalization of GBP3bn has been allocated to the institution with the aim of "accelerating private sector involvement in the green economy" ("Green Investment Bank BIS"). The UK GIB hopes to address and overcome market failures affecting green investments, allowing the UK Government to attain its commitments to transition the UK to a low carbon green economy ("Next steps for the Green Investment Bank, News, BIS"). The main investment focus of the UK GIB will be in the energy sector. Investment opportunities will be sought in both renewable energy production and efficiency projects.

Currently the UK GIB is in its incubation period whereby the institution is seeking corporate offices ("UK GIB Location") and specialist staff to operate the bank. State aid approval, from the European parliament, is expected by 2013 ("Green Investment Bank BIS"). It is expected that the UK GIB will become operational in 2012. Debt issuance powers are hoped to be granted to the UK GIB in 2015/16 once the UK Government fiscal deficit is brought under control.

The UK GIB product suite is envisaged to include equity co-investment, pari passu senior debt issuance, subordinate debt issuance, up front financing commitments and first loss debt purchases (UK Government 2010). It is still being decided whether the UK GIB should underwrite a carbon price support scheme on behalf of HM Treasury (Green Investment Bank Commission 2010, Climate Change Capital 2011). The UK government is adamant that the UK GIB becomes a for profit institution as opposed to a grant based agency. It is not clear yet as to what rate of return is to be expected on capital. A social rate of return ensuring "capital accumulation" while attaining pre-determined green/social criteria is most likely to be adopted (Green Investment Bank Commission 2010).

4.4.1 Governance

The governance structure of the UK GIB is still under discussion, but the UK Government has disclosed desirable institutional structures to help guide the design process. The UK Government will provide a clearly defined charter to guide the banks mission and operating principles (UK Government). While the UK Government will initially be the sole shareholder, the UK GIB is to be operated independent from government, reducing the likelihood of political interference, state aid and allowing for the full or partial privatization of bank assets in the future. The UK GIB will operate in accordance with best practice private sector corporate governance guidelines.

The UK GIB Policy Group will consist of various UK government departments and be headed by the Department of Business Innovation and Skills (BIS). The Policy Group will agree on the UK GIB's overall strategic priorities, in concert with the Corporate Board and Executive Management, while creating a forum to co-ordinate departmental policy and objectives.

The UK GIB Corporate Board will create the bank's overall strategy and business plan, monitor its performance, appoint key managerial positions, establish board governance practices, propose candidates for potential future board vacancies and ensure the soundness of business operations. The Corporate Board will also be responsible for CEO appointment, remuneration and evaluation.

The Executive Management will be responsible for the day-to-day running of the UK GIB. It will design investment criteria, long and short term investment strategies and investment decisions all in accordance with the UK GIB's mission and operating principles. Annual performance reports will be submitted to the BIS and the GIB Policy Group.

4.4.2 Accountability

The UK GIB is expected to have a small, specialist employment base that operates and invest within the United Kingdom. The closeness with which the Executive Management will be working with directly

elected officials, within the Policy group, reduces democratic accountability concerns proposed by principal-agent theorists (Gutner 2005, Pollack 1997). The appointment of key staff is expected to be an important conduit in disseminating government desired values within the institution which will not only help construct the desired corporate ethos but also ensure the alignment of principal-agent objectives (Walsh 1995). Neither the institution nor its employees will be exempt from judicial process making it/them fully accountable to UK law and professional codes of conduct.

The UK GIB, like any other private financial institution, will be subject to regulation by the Financial Services Authority. The global financial crisis clearly demonstrates shortfalls in the sole reliance of this form of regulatory provision. Further accountability measures, such as the establishment of an externally constituted Independent Advisory Committee, should be considered to enhance accountability provision. An independent Advisory Committee would also reduce the risks of uncensored excessive collaboration between the UK GIB and Government departments. Given the initial public nature of this private institution, an Independent Advisory Committee could ensure that the adoption of best practice accountability and transparency commitments are observed (Green Investment Bank Commission, 2010, Bundock et al. 2011).

4.4.3 Transparency

The private nature of the UK GIB exempts the institution from the Freedom of Information Act that other public entities are subject to. Exemption may even extend to the publication of projections at the European level within the Official Journal of the European Union (UK GIB Commission). Securing corporate governance best practice will be vital to ensure the UK GIB transparency commitments are met.

An annual report will be published detailing the banks financial position and green/social impact. A separate shareholders report, issued at a predetermined frequency, will be published providing a greater detail of the banks financial position (such as "financial results, capital allocation, risk allocation
and operating expenses" (UK Government), relationship with partner organizations and its green/social impact. The UK Government has made significant advances in the implementation of governance, accountability and transparency measures through its ownership and reviews of the Commonwealth Development Corporation (UK Government 2011). Knowledge derived from these experiences can be effectively incorporated into the design process of the UK GIB.

Currently there is no recourse mechanism established to challenge the legitimacy, efficiency and effects of future UK GIB financed projects other than externally via the UK legal and political systems. The UK GIB institutional structure and investment criteria are likewise not subject to direct challenge. Information disclosure guidelines are likely to follow private sector norms. Significant information restrictions, resulting from the commercial sensitivity of data, will likely further reduce public information access.

The GIB Corporate Board will oversee the compliance to ethical and legal standards. Acts of corporate corruption will be subject to the full force of the UK legal system. As the UK GIB is not currently operational, external evaluations on transparency, by such institutions as the Global Transparency Initiative, One World Trust and Transparency International have not been published. Although the level of transparency at the UK GIB is not a foregone conclusion, it must be acknowledged that private sector firms tend to have lower levels of transparency than their public sector equivalents (Lloyd et al. 2008).

4.4.4 Carbon funds and biodiversity

The United Kingdom Green Investment Bank (UK GIB) was establish as a vehicle to "overcome risk aversion, high transaction costs and the resulting lack of capital" ("Green Investment Bank") in the low carbon sector of the economy. An initial capital base of £3bn was committed by the UK government. During the initial incubation period the UK GIB will seek state aid approval from the EU, an operational location and operational staff. To date no market investments have been made. Although forest carbon

projects and biodiversity criteria are not excluded in any potential investment portfolio, a bias towards renewable energy projects is expected. Investments will also be restricted to the domestic UK economy.

4.4.5 UK Green Investment Bank critiques

The UK GIB addresses many of the governance issues found wanting in larger MDBs. This is the result of adopting institutional arrangements modelled on private sector designs. A narrower stakeholder base and closer relationship between principal and agents reinforces this process. Private sector internal accountability practises may aid economic efficiency but limited external accountability. Commercial sensitivity likewise limits external transparency.

4.5 The Green Climate Fund

The Green Climate Fund (GCF) Transitional Committee submitted its recommendations to the UNFCCC COP at the 17th COP in Durban, South Africa, at the end of 2011. To date, only a draft copy of the expected Articles of Agreement (*GCF, Draft Decision -/CP.17*)has been released by the UNFCCC. The fund aims to "support projects, programmes, policies and other activities in developing country Parties²²," to "combat climate change" (article 1). The fund will provide financing for pari passu private sector projects as well as grant based and concession lending schemes (Article 54). Both climate adaptation and mitigation projects will be eligible for investment (Article37).

4.5.1 Governance

The GCF is ultimately accountable to the UNFCCC (Article 4). A Board will be established to govern and supervise the GCF (Article 3) in line with the wishes of the UNFCCC (Article 6). The Board will comprise of 24 members, 12 from developed countries (DCs) and 12 from less developed countries (LDCs) (Article 9). Board members will be appointed by regional groups or constituencies. The composition of DCs constituencies has not yet been published. LDCs will submit 3 board members each from the Asia-

²² Parties refers to states in the parlance of the UNFCCC

Pacific, Africa and Latin America and the Caribbean regions. Single members will also be provided by constituencies comprising of the Small Island Developing States, Least Developed Country parties and any LDCs not already included in the above constituencies (*GCF, Draft Decision -/CP.17*). Board appointments will be based on 3 year tenures. Concurrent election is permissible but subject to constituent approval. It is expected that Board members will have the necessary expertise in developmental or climate issues. The gender composition of the Board will also be considered. Two Co-Chairs will be elected, one each from the DC and LDC blocks, and their tenure will be for 1 year. The Board will adopt decisions based on consensus. Procedures for non-consensus decision making have not yet been announced. The board will also make arrangements for the inclusion of non-voting active observers in the form of 2 representatives from civil society and another 2 from the private sector. Representatives will be equally sponsored by the DC and LDC blocks (Article 17).

The Board will appoint an independent secretariat to execute the day to day operational running of the GCF (Article 19). The secretariat will be managed by a Board appointed Executive Director, who will in turn appoint staff members with the required skills sets. Employment criteria will be mostly merit based while also considering geographical and gender balances (Article 21). The location of the Secretariat's head office is still to be decided. The UNFCCC has called for interested Parties to submit their interest to host the GCF by 15 April 2012 ("Launching of the GCF").

An independent Trustee will also be appointed to manage the financial assets of the fund. The Trustee will produce financial accounts, in line with national and board requirements, and hold GCF funds in separate accounts. Comingling of assets is permitted, for administrative and investment efficiency, provided separate records are kept to identify GCF assets. The trustee will report directly to the Board. Currently the World Bank is serving as an interim trustee.

4.5.2 Accountability

The GCF suffers an accountability deficit due to the dislocation of principals and agents like many other multilateral international organizations (Gutner 2005, Pollack 1997). Great effort has been made, especially in the allocation of Board seats, to construct a more representative institution. Greater equity in the distribution of power has been sought between LDCs and DCs. No provision has been made for the graduation of an LDC to DC status, an eventuality that may find an LDC bloc country following a DC country agenda thus undermining the existing balance of power such a static view of power will need to be addressed else the GCF will suffer an erosion of legitimacy over time.

The GCF will establish an independent Evaluation Unit to assess GCF activities and performance (Article59) which will be independent from the Secretariat and report directly to the Board (Article 60). The environmental and social effects of all GCF financed programmes and projects will also be assessed (Article 65). Identifying shortfalls and lessons learnt will be a key function of the Evaluation Unit. The UNFCCC COP may also "commission the independent assessment of the overall performance of the Fund, including the Board performance" (Article 62).

The GCF and its employees, when operating in their capacities as officers of the GCF, will "enjoy such privileges and immunities as are necessary for the independent exercise of their official functions in connection with the Fund" (Article 8). To ensure that the provision of legal immunity is not abused and institutional integrity is maintained, the Board will establish an independent Integrity Unit to investigate allegations of corruption and fraud (Article 68). An independent redress mechanism will also be established to address complaints pertaining to the operation of the GCF and GCF financed projects and programmes (Article 69). Mechanisms will be established at the project design, development and implementation level to encourage and facilitate the inclusion of external stakeholders such as the private sector, civil society organizations, vulnerable groups, women and indigenous people (Article 71).

4.5.3 Transparency

The GCF Board is in the process of developing an information policy (Article 67). The fund hopes to "operate in a transparent and accountable manner" but will be limited by "efficiency and effectiveness" considerations (Article 3). The danger therefore arises that if the process of information disclosure becomes prohibitively expensive, institutional transparency will be reduced (Woods 2001, Woods 2003, Ball 2009).

The selection of the GCF Executive Director which will be merit based and conducted in an open and transparent manner, in line with the Toronto G20 declaration²³ (Article 20) which is an improvement compared with the practices at other IFI. The dilution of merit based employment rules, due to gender and geographical considerations, at the staff level is of concern. Pre-determined employment ratios, based on nationality or gender, do not create meritocratic environments.

The inclusion of external observers from the private sector and civil society will greatly add to the transparency of GCF decisions and the decision making process. As a multilateral political institution we still need to be mindful of undue direct and indirect political interference.

4.5.4 Carbon funds and biodiversity

Currently the GCF is not operational and no carbon funds or biodiversity initiatives have been established. Expectations are however for the GCF to play a significant role in forest carbon and biodiversity markets as part of its efforts to mitigate and facilitate adaptation to climate change.

4.5.5 Green Climate Fund critiques

A number of improvements have been made to the institutional arrangements of the GCF when compared to the more established MDBs. Weaknesses still exist however resulting from the judicial immunity granted to the GCF and its staff when conducting business on behalf of the institution.

²³ Article 30 www.g20.org/documents/g20_declaration_en.pdf

4.6 An overview of institutional arrangements

Table 6.1 provides a summary of external perceptions regarding the current governance, accountability and transparency practices within our sample group of IFI. Governance participation illustrates the degree of participation for all stakeholder interests while governance immunity refers to the extra legal status of some institutions and their employees. Institutional accountability is separated between internal accountability, institutional anti-corruption programs, and external accountability, consideration towards the broad stakeholder base an institution affects. Institutional transparency considers the means and effectiveness of information dispersal to stakeholder interests for the sampled institutions.

Within the table an 'X' denotes the need for further institutional arrangement changes such that institutional shortfalls can be remedied. A 'TICK' denotes an acknowledgement that current institutional arrangements are adequately address concerns in a particular area. The summary shows that with regards accountability all institutions in the study are perceived to have introduced sufficient measures to address internal accountability concerns. This not only shows the innate adaptive capacities of institutions but also a template of the necessary institutional arrangements required to address these concerns. Unfortunately, all the selected institutions, apart from the GCF, are failing to adequately address issues pertaining to their accountability to external stakeholders that their operations and practices affect.

The governance practices at older institutions such as the World Bank, ADB and EBRD leave much to be desired. Failure to adapt to the concerns of all internal and external stakeholders and providing institutional and employee immunity from prosecution is preventing these institutions from achieving their full potential. The two newest institutional creations, the UK GIB and GCF, do adopt governance enhancing measures to resolve these issues.

All institutions in the public sector appear to have adapted to a better transparency environment apart from the UK GIB which follows private sector practices towards the protection of commercially sensitive information. The improvements in informational transparency show the adaptive capacities inherent in the selected institutions.

Table 4.1 Summary	v of institutional	arrangements
		a

		Governance	Governance	Accountability	Accountability	Transparency
		Participation	Immunity	Internal	External	Information
Old	World Bank	Х	Х	✓	Х	✓
	ADB	х	х	\checkmark	Х	\checkmark
	EBRD	х	х	\checkmark	Х	\checkmark
New	UK GIB	✓	\checkmark	✓	Х	Х
	GCF	\checkmark	х	\checkmark	\checkmark	\checkmark

Source: GAR 2007, GAR 2008, BIS Website, UN FCCC Website

Chapter Five: Results and Discussion

The web-based survey garnered 42 responses. Survey returns were made by a mixture of academics, developmental officers and environmental banking professionals. Unfortunately survey participation requests made to lawmakers in the UK did not garner any returns. Gaining access to lawmaker's views would have greatly enhanced the insight of the survey as these individuals have recent experience in establishing such institutional arrangements.

Table 5.1 shows the number of participants and their distribution between professional groups. Seven responses were from individuals who were either unassociated with or it was indeterminable which predetermined group they should be associated with. Other respondents identified themselves as bankers or participants in international financial markets. For the purposes of clarity I assigned these individuals to the sub group environmental banker/broker. There is a clear weighting towards environmental bankers/brokers and developmental financial officers in the survey population.

What is your occupation?	
Academic	4
Lawmaker	0
Environmental Banker/Broker	17
Developmental Finance Officer	10
Other	7
Ansv	wered Question 38
Skip	ped 3

Table 5.1 Survey population occupation	Survey population oc	cupation
----------------------------------------	----------------------	----------

Figure 5.2 appears to indicate that respondents feel that market based incentive systems can be used to promote forest carbon values and that the co-opting of private sector capital investment is a key ingredient in ensuring the success of this process, possibly explaining the willingness of international

organizations to support and promote REDD+ projects around the world. In line with the literature however, some respondents questioned the ability of markets to function effectively and to provide outcomes superior to that of regulatory systems especially in light of the western financial crisis of 2008.

The controversy surrounding the effectiveness of market based incentive systems seems more pronounced when considered regarding the scaling up forest biodiversity values. The ability to successfully monetize biodiversity values is still questioned and appears to remain as controversial as the literature suggests. Establishing an international biodiversity offsetting market, similar to that of forest carbon, however, received positive responses. These responses appear contradictory. The success of any forest biodiversity scheme would be dependent on clear price signals guiding market participant's supply and demand decisions. If the price mechanism was unable to function, then any market based international biodiversity offsetting scheme would not be able to function either. Such a discontinuity suggests that greater efforts must be made in the field of biodiversity pricing, whether by direct or proxy means, before international biodiversity offset schemes are put in place. A more international based biodiversity market would also ensure that limited capital and resources is employed to protect the most amount of biodiversity and not allocated according to regulatory considerations and constraints.

Table 5.2 Biodiversity and forest carbon markets

Biodiversity and forest carbon markets:										
Please indicate your agreement or disagreeme	Please indicate your agreement or disagreement with the following statements									
	Srongly Disagree	Disagree	Indifferent	Agree	Strongly Agree	Unfamiliar with topic	Response Count			
Market based incentive systems can effectively promote forest carbon values.	3.2% (1)	6.5% <mark>(</mark> 2)	6.5% (2)	41.9% (13)	41.9% (13)	0% (0)	31			
With public sector resources limited, it is essential to attract private sector capital into forest carbon markets to ensure their success.	3.2% (1)	6.5% (2)	6.5% (2)	29.0% (9)	54.8% (17)	0.0% (0)	31			
Biodiversity values cannot be monetized.	9.7% (3)	38.7% (12)	19.4% (6)	25.8% (8)	6.5% (2)	0% (0)	31			
An international biodiversity scheme, similar to that established for carbon, would aid efforts to attain international biodiversity targets as set by the United Nations Convention on Biological Diversity.	9.7% (3)	3.2% (1)	12.9% (4)	54.8% (17)	16.1% (5)	3.2% (1)	31			
	Answered Skipped	question question	31 10							

Table 5.3 shows that all the suggested financial products were seen as broadly effective in scaling up forest carbon investment and market development. The financial products included within the survey were extracted from research on climate finance by Stern (2006) and the UK Government (2010). Forest carbon investment funds and public-private co-investment funds were seen as the most effective. The retail distribution of carbon funds and the creation of a carbon price support guarantee scheme gained the greatest variance of effective and un-effective responses. This may be due to concerns regarding the expected higher per unit delivery costs associated with retail investment funds and the unknown costs associated with price support schemes. The introduction of any financial products that reduce financial risks or costs to private sector agents is likely to yield positive market effects.

Surveyees responses to open ended questions stressed that the development of forest carbon and biodiversity markets is being hindered by perceived excessive investment risks, in line with the conclusions from the Stern Report (2007). Ultimately, reducing these risks should be the main focus of any new forest focused financial institution and the suite of financial products it supplies. Survey results also allow us to assess which form of bank should be used to leverage forest carbon and biodiversity values; a profit motivated private sector orientated bank like the UK GIB or a more public sector. The survey results appear inconclusive as all products seem to be effective to some degree with no clear preference.

Table 5.3 Financial products

Financial Products:										
From the list of financial products below, please indicate their degree of effectiveness										
in promoting forest carbon values										
	Ineffective	Neither Effective or Ineffective	Effective	Highl y Effective	Unfamiliar with topic	Response count				
Green Bonds	7.1% (2)	14.3% (4)	50.0% (14)	17.9% (5)	10.7% (3)	28				
Public sector equity investments	7.1% (2)	17.9% (5)	60.7% (17)	7.1% (2)	7.1% (2)	28				
Public-Private co-investment strategies	3.4% (1)	10.3% (3)	55.2% (16)	27.6% (8)	3.4% (1)	29				
Forest Carbon investment funds	3.4% (1)	13.8% (4)	41.4% (12)	34.5% (10)	6.9% (2)	29				
Retail Distributed carbon investment funds	14.3% (4)	17.9 (5)	46.4% (13)	14.3% (4)	7.1% (2)	28				
Public sector first loss debt tranche bonds	3.6% (1)	32.1% (9)	35.7% (10)	10.7% (3)	17.5% (5)	28				
Fund of Fund investment	10.3% (3)	13.8% (4)	51.7% (15)	6.9% (2)	17.2% (5)	29				
Carbon price support guarantee	10.7% (3)	21.4% (6)	35.7% (10)	21.4% (6)	10.7% (3)	28				
				Answered Skipped	question question	29 2				

Table 5.4 highlights that respondents agree that identified deficiencies in existing institutional arrangements, such as a lack of democratic accountability, financial accountability, transparency and governance, exist. Agreement was apparent within all participating groups, even those respondents that work or had worked within MDBs, which is very much in line with the existing literature. Respondents agreed that greater participation in MDBs by less developed countries would be required to increase

institutional legitimacy. Engagement therefore with less developed countries may be an essential internal policy in any public-private financial institution operating in the forest carbon sector.

Private sector practices were not strongly identified as offering a panacea with regards to governance practices. Further study in this area would benefit from breaking down private sector offerings into each sub-group, such as transparency, accountability and governance, as opposed to one all-encompassing governance category. More precise insight may be provide as the private sector may offer modes of best practice with regards to corporate transparency and governance but have weak accountability arrangements resulting from the narrower perceived stakeholder base of private sector actors.

Legitimacy: Please indicate your agreement or disagreement with the following statements								
	Srongly	Disagree	Indifferent	Agree	Strongly	Unfamiliar	Response	
	Disagree				Agree	with topic	Count	
Existing Multilateral Development								
Banks suffer from a	0.0% (0)	10.3% (3)	17.2% (5)	55.2% (16)	10.3% (3)	6.9% (2)	29	
democratic deficit.								
Greater participation from								
developing nations is required to	0.0% (0)	0.0% (0)	17.2% (5)	41.4% (12)	41.4% (12)	0.0% (0)	29	
increase MDB institutional ligitimacy.								
Private sector governance practices								
offer a viable template for new	6.9% (2)	10.3% (3)	24.1% (7)	44.8% (13)	13.8 (4)	0.0% (0)	29	
institutional arrangements.								
Governance issues affect the								
effectiveness of Multilateral	0.0% (0)	0.0% (0)	174.2% (5)	62.1% (18)	20.7% (6)	0.0% (0)	29	
Development Banks.								
Transparency issues affect the								
effectiveness of Multilateral	3.4% (1)	3.4% (1)	3.4% (1)	51.7% (15)	34.5% (10)	3.4% (1)	29	
Development Banks.								
Accountability issues affect the								
effectiveness of Multilateral	3.4% (1)	3.4% (1)	3.4% (1)	44.8% (13)	44.8% (13)	0.0% (0)	29	
Development Banks.								
					Answered	questions	29	
Skipped questions 13								

Table 5.4 Institutional legitimacy

Table 5.5 shows surveyees responses to closed questions regarding perceptions of institutional effectiveness. Respondents associated existing international financial institutions as having negative impacts on forest values in the past while continued financial support for extractive industries undermined their current forest carbon and biodiversity credentials. The wealth of human and financial capital at IFI's disposal did not identify them as being the best institutional vehicle to promote forest values. Institutional adaptability was seen as existing which may improve performance in the future. Catalyzing private sector funds was seen as an effected method to promote forest values.

Table 5.5 Institutional effectiveness

iffectivess: Please indicate your agreement or disagreement with the following statement									
	Srongly Disagree	Disagree	Indifferent	Agree	Strongly Agree	Unfamiliar with topic	Response Count		
Multilateral Development Banks (MDBs) mandated focus on economic growth and poverty alleviation have, on balance, led to increased deforestration.	3.6% (1)	10.7% (3)	17.9% (5)	35.7% (7)	25.0% (7)	7.1% (2)	28		
MDBs investments in extractive industries severely undermine their forest carbon and biodiversity credentials.	3.6% (1)	14.3% (4)	14.3% (4)	53.6% (15)	14.3% (4)	0.0% (0)	28		
The wealth of experience and capital in existing MDB makes them by far the best vehicles to promote forest carbon and biodiversity markets.	3.6% (1)	25.0% (7)	25.0% (7)	39.3% (11)	7.1% (2)	0.0% (0)	28		
There is sufficient adaptive capacity in existing institutions to meet the demands of forest carbon and biodiversity values.	3.6% (1)	25.0% (7)	14.3% (4)	50% (14)	3.6% (1)	3.6% (1)	28		
Yet another international financial institution in the forestry space will hinder global efforts to upscale forestry values.	0.0% (0)	50.0% (14)	17.9% (5)	21.4% (6)	3.6% (1)	7.1% (2)	28		
A profit motivated publically capitalized bank can help catalyze private sector investment in forestry assets.	3.6% (1)	7.1% (2)	10.7% (3)	53.6% (15)	25.0% (7)	0.0% (0)	28		
					Answered Skipped	question question	28 13		

Table 5.6 show that respondents generally supported the notion that there was scope for the establishment of a forest focused IFI but offered only tentative agreement that it would not hinder existing efforts in this field (table 5.5). Clear institutional headwinds were identified with the creation of a new institution, regardless of its institutional arrangements. The weak international economic environment coupled with a perceived lack of international cooperation would severely hinder the creation of any forest focused international financial institution. The lack of political clout within the forestry sector would also limit the successful lobbying for the creation of a forest focused institution. Although the creation of an international forestry bank was identified as being worthy of pursuit, many open responses claimed that a UN style all inclusive broad stakeholder-based institution was too aspirational. It would be more effective, given the current global economic and political environment, to pursue a smaller more regionally based institution. Financial backing from key nations, such as the USA, EU, China and Japan, was seen as being essential in driving the financial viability of the institution.

A smaller group of nations that comprised of a 'coalition of the willing' could provide the initial capital funding for a public-private institution. This arrangement could be based on any matrix of geographical, historical or political association. The narrower stake-holder base could produce a more focused institution. Any perceived success could be built upon and attract more governmental participants, creating a broader stake-holder base over time. The demonstration of success in these new markets might be more important than establishing an all-encompassing broad stakeholder based institution. A smaller more focused institution may be able to achieve better initial financial results. Success here would attract more investment into the sector and better scale up its development.

Table 5.6 Institutional viability

Viability:

Please state your agreement or disagreement with the following statement

			Ŭ				
	Strongly	Disagree	Indifferent	Agree	Strongly	unfamiliar	Response
	Disagree				Agree	with topic	Count
Currently the political will does not exist to create a forest focused International Financial Institution.	0.0% (0)	7.1% (2)	17.9% (5)	53.6% (15)	21.4% (6)	0.0% (0)	28
The current weakness in the global economy, especially in developing nations, is reducing the urgency of climate and biodiversity issues.	0.0% (0)	10.7% (3)	3.6% (10	39.3% (11)	46.4% (13)	0.0% (0)	28
It is worth pursuing the creation of an International Forestry bank.	7.1% (2)	7.1% (2)	14.3% (4)	53.6% (15)	17.9% (5)	0.0% (0)	28
	Answered Skipped	question question	28 13				

Chapter Six: Conclusions

The management of global forest carbon and biodiversity values will become increasingly important in the coming decades. Land use conversion, resulting from increased unsustainable economic development, may continue the process of deforestation and the extirpation and extinction of species. Projected increases in atmospheric carbon dioxide concentration levels may also lead to more climatic change (IPCC 2007), further destabilizing and endangering forests and their delicate ecosystems. Establishing an effective system to protect and sustainably manage forest carbon and biodiversity assets will not only provide a potential tool for addressing expected anthropogenic climate change but also ensure the bequeathing of a forest based biological inheritance to future generations.

Existing institutional arrangements, at the large scale global level, have shortfalls in their design. Apparent weaknesses in institutional transparency, governance, accountability and legitimacy are preventing these institutions from creating systems designed to identify and value forest carbon and biodiversity assets. These same weaknesses were also identified in both the literature but also identified in the web based survey. Figure 6.1 shows that new institutions appear better than those created after the Second World War but are still imperfect in design.

		Governance	Governance	Accountability	Accountability	Transparency
		Participation	Immunity	Internal	External	Information
Old	World Bank	Х	Х	✓	Х	\checkmark
	ADB	х	х	\checkmark	х	\checkmark
	EBRD	х	х	\checkmark	х	\checkmark
New	UK GIB	✓	\checkmark	\checkmark	Х	Х
	GCF	\checkmark	х	\checkmark	\checkmark	\checkmark

Table 6.1 Summary of institutional arrangements (reproduced)

Source: GAR 2007, GAR 2008, BIS Website, UN FCCC Website

Internal adaptive capacities have been identified within existing institutions but concern remains regarding the speed of implementation. Some institutions, such as the World Bank, may not be able to adjust to the new global political realities arising from the redistribution of political, economic and military power. Regardless of the adaptive efforts of forces within the World Bank, if the current hegemon, The United States, does not accommodate "increasing pressure from the rising, poorer, but highly populated states – with China and India in the forefront – for a general redistribution of voting rights" (Brzezinski 2012) the World Bank's overall legitimacy will be brought into question and its institutional relevance and effectiveness will be reduced markedly.

New forms of international co-operative agreements and structures might be formed during this period of transition from a unipolar to multipolar world. The establishment of the Banco del Sur in South America and the recent proposal at the fourth annual summit of BRICS (Brazil, Russia, India, China and South Africa) nations in New Delhi (March 2012) for the establishment of a new development institution, providing south-south development aid, is a direct result of legitimacy concerns towards existing institutional arrangements. Establishing all-encompassing international agreements within this new global geo-political environment may prove too difficult. The failure to achieve an effective post Kyoto protocol carbon agreement at the COP17 Durban shows the difficulty of achieving co-operative outcomes with such broad and diverse interest groups.

The establishment of an International Forestry Bank would be a grand undertaking requiring global cooperative measures and the allocation of scarce International capital. Such an endeavour may be too ambitious an undertaking. The re-emergence of a multi-polar world may warrant a more fragmented approach to the provision and protection of the 'global commons.' Further research studying the effectiveness and viability of establishing a smaller scaled forestry bank, perhaps based regionally, between national groups with a history of co-operative arrangements, such as the Commonwealth, or countries with aligned political interest, such as BRICS nations, may however be warranted.

An International Forestry Bank established by a 'coalition of the willing' may find the political legitimacy perceived to be lacking within established institutional arrangements. A smaller stakeholder group may have a more cohesive vision of an institutions goals and modus operandi creating an environment conducive to the establishment of governance, transparency and accountability practices that are endorsed by all members. Effective, mutually reinforcing governance, transparency and accountability practices will also reduce democratic legitimacy concerns, arising within any international organization, created by the dislocation of Principals and Agents, by encouraging the alignment of Principals' and Agents' objectives.

Participants would also have to decide whether a Forestry Bank would be established to distribute grants and knowledge expertise, to augment capacity building and market development, or whether its role would be to finance projects and work within established market systems on a for profit basis. Establishing a relevant social rate of investment return as opposed to a market based rate of return will be essential in assessing the financial success of a for profit based institution. Establishing effective mechanisms and products to overcome identified market barriers to forest carbon and biodiversity market development would also be vital in achieving greater forest carbon and biodiversity values.

Market development is of particular importance to biodiversity values. To date there has not been sufficient work on the pricing of biodiversity or the establishment of markets to affect the demand and supply of biodiversity products. Efforts enacted in the forest carbon sector to establish adequate carbon quantification and platforms for the international distribution of forest carbon products provide a useful template for the realisation of biodiversity values. Recognising that precise quantification of biodiversity may currently be beyond our abilities should encourage us to follow a more pragmatic approach to pricing. A more holistic approach, that not only incorporates absolute numbers of species but also the genetic diversity and rarity of species present, should be adopted. National and regional biodiversity

markets are certainly a step in the right direction but are grossly inefficient from the perspective of

global biodiversity provision.

Chapter Seven: Areas for Future Research

Further research into a sub-global International Forestry Bank should be pursued. Research should focus on composition, institutional arrangements and viability. Consideration should also be given to the kind of modus operandi the institution should adopt.

The composition of an International Forestry Bank is important so as to ensure a cohesive stakeholder base with a unity of mission objective. This may take the form of a regionally based Financial Institution created within existing international bodies such as the Association of South East Asian Nations (ASEAN), the European Union or the Organization of American States. An International Forestry Bank does not have to be confined regionally. Cooperative arrangements between nations of shared values, similar political and economic objectives or a history of cooperative associations may also provide a coherent stakeholder base. The Commonwealth or BRICS association would provide a good area for research. A Commonwealth Forestry Bank would also benefit from having a mix of high income countries with high carbon consumption levels on the one hand, and nations with large areas of forested land rich in biodiversity and carbon storage/sequestration capabilities on the other.

Institutional arrangements will depend on stakeholder preferences and will therefore be dependent on institutional composition. This paper has already outlined an array of institutional arrangement required for the operation of a publically funded international financial institution. Research identifying the best institutional arrangements will be vital to facilitate the creation and longevity of any International Forestry Bank.

Research regarding the viability of any institution will be crucial. Creating the most perfect institutional design will be futile if there is not the political will or financial resources available to create such an

institution. The different initial and ongoing funding costs associated with grant based and profit motivated institutions will significantly affect institutional viability.

Now that the scope of research has been narrowed down a more precise method of analysis will be needed to identify viable regional and institutional arrangements. It was noted that private sector actors were less inclined to answer open questions compared with those working within research institutions or MDBs. Future web based surveys would need to account for this discrepancy.

Personal interviews with the relevant subject group, such as market and financial professional, academics and policy makers, would offer greater insight into the viability of establishing an International Forestry Bank. To conduct these interviews requires a significant increase in funding requirements, especially given the subject group's vast geographic dispersal. Further improvements to the research methodology could come from developing cooperative research networks with other universities, government departments, private sector banks, non-governmental organizations or research institutions with the intention of reducing the financial cost of research and increasing survey penetration and participation rates. Research independence and objectivity would have to be ensured.

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Appendices

A.1

Web survey

International Forestry Bank Survey

Weblink: <u>http://www.surveymonkey.com/s/7K9YKY5</u>

COVER LETTER

THE UNIVERSITY OF BRITISH COLUMBIA

Faculty of Forestry

Forest Sciences Centre

2424 Main Mall

Vancouver, BC

Canada V6T 1Z4

Phone: +1 604-822-2727

Fax: +1 604-822-8645

http://www.forestry.ubc.ca/

Thank you for opening this Web based survey. My name is Guy O'Loughnane and I am currently writing my Thesis for an MSc (Forestry) at The University of British Columbia. The focus of my Thesis will be to ascertain whether a new international financial institution would augment the unlocking and upscaling of forestry values such as biologically sequestered/stored carbon and biodiversity. The survey will seek to quantify whether a new international financial institution is needed and if so, what institutional structure it should have.

In line with the UBC Ethics approval procedure, I would like to inform you of your rights as a survey participant. Participation in the survey is voluntary and your withdrawal is allowed at any time. Please also note that my academic supervisor Dr Gary Bull will be overlooking the survey procedure and process to ensure that ethical standards are adhered to.

The survey will take place at a time and location at your convenience. The data provided will be anonymous. The only identification provided on survey returns will be the IP address of the PC used. The data will only be used for research relating to this thesis programme.

There are no anticipated risks associated with taking this survey. It may even prove thought provoking. For any further information, please feel free to contact me. If you have any concerns about your

treatment or rights as a research subject, you may contact the Research Subject Information Line in the UBC Office of Research Services.

If you have any further interest in the survey's topic and would like a soft copy of the thesis proposal document, please feel free to contact me at the above address and I will ensure a copy is sent to you.

SURVEY PARTICIPATION CONSENT FORM

Faculty of Forestry

Department of Forest Resource Management

2424 Main Mall

Vancouver, BC

Canada V6T 1Z4

SURVEY PARTICIPATION CONSENT FORM

Project: The Potential Establishment of an International Forestry Bank

Principal Investigator: Dr Gary Bull, Associate Professor, Faculty of Forestry, University of British Columbia, Department of Forest Resource Management, 2424 Main Mall, Vancouver, BC, Canada,V7T 1Z4,

Purpose: This survey will help to understand whether an independent International Forestry Bank is warranted, and if so, what form it should take. The results will be an integral part of an MSc (forestry) programme's thesis document. You have been selected to participate in this short survey as a result of your experience in the field of finance, development programmes, policy making, policy advising, forest resource management, institutional arrangement and/or related academic research.

Potential Risks: There are no foreseen risks at this time with regards to taking the survey and your participation is voluntary.

Potential Benefits: The survey is designed to be thought provoking regarding issues relating to forestry carbon and biodiversity values.

Confidentiality: Your identity will be kept strictly confidential. The only identifying feature will be the IP of the computer used to conduct the survey. You will not be named in any parts of the final report whatsoever. All data records are kept on a computer hard disk that will be password protected.

Time Involvement and Location of Interview: The survey is estimated to take 10 minutes to complete. The location of which will be at your own convenience. The survey period will start from 1st December 2011 and close 31st January 2012.

Contact for information about the study: For questions about this study, contact the Principal Investigator, Dr Gary Bull.

Contact for concerns about the rights of research subjects: If you have questions about your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may contact - anonymously, if you wish - the UBC Office of Research Services.

Consent: Your participation is entirely voluntary and you have the right to withdraw your consent or discontinue participation at any time without penalty. You have the right to refuse to answer particular questions. Your individual privacy will be maintained in all data resulting from the survey.

Preamble

Forestry values, such as forest carbon and biodiversity, are not priced correctly in our market based economic systems. The current economic system has treated forest carbon and biodiversity as public goods. A regulatory approach to stemming these losses appear to have failed. 'Privatizing' these public good values would be necessary if we wish to use the market to supply increasingly scarce forest carbon and biodiversity values.

The challenges to privatizing are numerous. First, pricing environmental goods is difficult since their definitions and measurements are extremely complex. Second, the institutional infrastructure, which is required to ensure environmental goods markets function smoothly, is still in its infancy. Third, institutional legitimacy, derived from the consent of those within and affected by a system, is frequently questioned. The perceived lack of legitimacy at existing institutions, such as the World Bank, Asian Development Corporation, Commonwealth Development Corporation and European Bank for Reconstruction and Development, may inhibit the development of efficient, effective and equitable market structures designed to scale up forest carbon and biodiversity values. Fourth, poor market design will mean high transaction costs. Fifth and finally, the fair distribution of income from an environmental market is an extremely complex issue. Given these challenges we decided to undertake a survey of policy actors to gain some insight.

The survey has four sections: The first examines attitudes to markets and its potential role in forest carbon and biodiversity markets; the second explores the notion of legitimacy in existing institutions; the third section seeks to identify the economic efficiencies of existing and potentially new institutions; and, the final section examines the viability of establishing new institutions at the global level.

Participant Information

Academic

Lawmaker

Environmental Banker/Broker

Developmental Financial Officer

Other

Forest Carbon & Biodiversity Markets

Forest Carbon Markets

Effort has been made in the last 15 years to establish the necessary market infrastructure to facilitate trade in forest carbon products. Traded volumes have, however, been disappointing compared to initial expectations. We would like to know if this results from fundamental deficiencies in forest carbon markets or if there are market barriers that need to be removed.

Biodiversity

Nascent biodiversity markets currently exist but are typified by being localized in nature. Biodiversity offset values are more a function of local land prices and other associated costs rather than in situ biodiversity levels. The establishment of biodiversity markets is helping maintain biodiversity at the national level but may not be the most efficient approach to maintain international biodiversity levels

Please indicate your agreement or disagreement with the following statements.

Market based incentive systems can effectively promote forest carbon values.

With public sector resources limited, it is essential to attract private sector capital into forest carbon markets to ensure their success.

Biodiversity values cannot be monetized.

An international biodiversity offset scheme, similar to that established for carbon, would aid efforts to attain international biodiversity targets as set by the United Nations Convention on Biological Diversity.

Financial Products

Innovative financial products can be used to attract capital into forest carbon and biodiversity values. These products could increase the attractiveness of capital investment and reduce transaction costs in the new asset classes. These products could also be tailored to the needs of specific investment institutions. For example, the products could match the long term liability of pension funds.

Green Bonds Public sector equity investments Public-Private co-investment strategies Forest Carbon investment funds Retail distributed carbon investment funds Public sector first loss debt tranche bonds Fund of Fund Investment Carbon Price Support Guarantee

Legitimacy

The World Bank and, to a lesser extent the ADB, is perceived to represent a previous geo-political era with an unequal distribution of power and representation. Concerns abound that these institutions advance the interests and values of 'western' capitalist democracies, which is particularly the case with the EBRD. These concerns hinder their ability to find effective co-operative solutions in the provision of global public goods such as forest carbon and biodiversity.

The legitimacy of many of our International Financial Institutions (IFI) could be affecting the establishment and development of asset classes in forest carbon and biodiversity.

Please indicate your agreement or disagreement with the following statements.

Existing Multilateral Development Banks suffer from a democratic deficit.

Greater participation from developing nations is required to increase MDB institutional legitimacy.

Private sector governance practices offer a viable template for new institutional arrangements.

Governance issues affect the effectiveness of Multilateral Development Banks.

Transparency issues affect the effectiveness of Multilateral Development Banks.

Accountability issues affect the effectiveness of Multilateral Development Banks.

Legitimacy

An International Forestry Bank does not necessarily have to be constructed within the confines of the United Nations. An institution established by a 'coalition of the willing' may provide a more dynamic and focused policy platform.

What new institutional arrangements do you feel could remedy the shortfalls perceived in existing institutional structures?

Efficiency

The effectiveness of existing IFI could be limited due to mission creep, political bias and conflicting mandates. More institutional competition from new entities may spur efficiency gains and help existing institutions address the limitations just mentioned. For example to improve efficiency, the United Kingdom's Green Investment Bank has included a 'for profit' criteria so as to ensure market discipline and an increase in capital over time to help with providing yet even more finance for other investment opportunities.

Please indicate your agreement or disagreement with the following statements

Multilateral Development Banks (MDBs) mandated focus on economic growth and poverty alleviation have, on balance, led to increased deforestation.

MDBs investments in extractive industries severely undermine their forest carbon and biodiversity credentials.

The wealth of experience and capital in existing MDB makes them by far the best vehicles to promote forest carbon and biodiversity markets.

There is sufficient adaptive capacity within existing institution to meet the demands of forest carbon and biodiversity values.

Yet another international financial Institution in the forestry space will hinder global efforts to upscale forestry values.

A profit motivated publically capitalized bank can help catalyze private sector investment in forestry assets.

Efficiency

A 'grand plan' such as the Kyoto Protocol, may not be achievable within our system of independent heterogeneous nation states. Therefore finding a solution at the global scale might be difficult.

Would it be more effective to establish a less ambitious Forestry Bank with a smaller stakeholder base? Please express reasons.

Viability

Existing institutions offer a wealth of experience in the field of carbon finance. Existing institutions may offer us the ability to quickly, efficiently and effectively establish forest carbon markets. The need therefore, for the creation of new institutions may be unwarranted.

Please state your agreement or disagreement with the following statements.

Currently the political will does not exist to create a forest focused International Financial Institution.

The current weakness in the global economy, especially in developed nations, is reducing the urgency of climate and biodiversity issues.

It is worth pursuing the creation of an International Forestry Bank.

Please comment on the desirability, viability and institutional arrangements of a potential new international institution mandated to improve and promote the forestry values of forest carbon and biodiversity.

Desirability

Viability

Institutional Arrangements

Further Information

For those requiring further information regarding this survey, please feel free to contact Dr Gary Bull. Who will do his utmost to provide you with any information you may require. Thank you very much for spending the time to complete and participate in this survey.

Survey: Open question responses

6. What new institutional arrangements do you feel could remedy the shortfalls perceived in existing institutional structures?

You need to have all the major contries involved to make anyhtiing effective.

18/2/2012 9:15 AMView Responses

Feel an independant department/section within exisiting frameworks may prove most effective. Obviously developing nations would need to have a greater representation. Otherwise the imbalance wil persist. Funding any new organisation is unlikely to occur in the current environment.

15/2/2012 6:48 PMView Responses

Without the representation of public sector, it may be another international NGO and the more flexibility of operation may be obtained, but less influence on policy dialogue with stakeholders.

14/2/2012 9:59 PMView Responses

I agree that an International Forestry Bank doesn't have to be housed inside the UN, however so much of the "carbon" market and trading involves so much more than Forests...rangeland carbon, for example is promising, and the markets for these are so merged...I am not sure how a Forestry Bank would interface with a carbon market. I wonder if you are looking at a global "no net loss" of forest land, to which countries would join and "trade" rights to off-set their losses with others who have avoided the loss. Essentially what Maryland has in the US, similar to the "no net loss of wetlands" that has largely promoted wetland and biodiversity banks in the US. I am afraid I have little additional to offer. The challenge will be to fit into the existing systems, as they are, or see how they (EU, CDM, California) compliance markets for carbon might be adapted to something global...but again, these are designed with much more than Forests in mind. 13/2/2012 3:39 PMView Responses

A smaller regional institution that runs itself, however with developing nations backing or guarantee. For eg an ASEAN backed institution

8/2/2012 11:14 AMView Responses

If the coalition of the willing could be backed by a pool of capital that subsidises and incentivises countries to participate. The problem is where that funding could come from.

2/2/2012 1:55 PMView Responses

If a valid market based system can be established is a new institution necessary and who would be willing to fund in this environment? A new institution would require support from US, Europe, China and Japan as the major global economies. The best structure may be to incentivise existing Banks and world Organisations. A forestry world Bank would also work if the right framework could be found and appropriate support. In an ideal world the new forestry Bank would be a major player in new forestry markets, profitable and able to lend to forestery developers in the poorest regions.

20/1/2012 1:07 AMView Responses

I am questioning the soundness of your thesis.Question is:Would an international financial institution for forestry be more effective than a "UN" sanctioned bio-diversity regulatory agency? I doubt it. In addition, we already have seen the effects of leaving the dynamics of the operation to "market" forces. We have already seen the detriimental privatization to access to water supply...including its effects on biodiversity!

17/1/2012 1:05 AMView Responses

One can't create a 'market' simply by creating a Bank. The key global source of finance for biodiversity is the GEF, which has lost a lot of credibility by being ineffective and failing to deliver. It has become a 'process' tool of the UN system and fails effectively to generate outcomes or new investment in biodiversity conservation. These types of shortfalls would need to be overcome by any new institutional arrangement.

13/1/2012 12:59 AMView Responses

Within the framework of G20 or G2.

13/1/2012 11:21 AMView Responses

We need people to make hard but effective decisions. Forestry loss is a global issue and the current arrangements puts too much decision making power with local MINORITIES. So one big international institution that has the authority to overturn local shortsighted socialist selfish decisions.

12/1/2012 9:18 AMView Responses

8. Would it be more effective to establish a less ambitious Forestry Bank with a smaller stakeholder base? Please express reasons.

Need key stakeholders all to participate otherwise some will feel that they are subsidizing those who are not part of the treaty.

4/3/2012 8:56 PMView Responses

No as it needs to be ambitious in the first place to give it room to become smaller if doesnt work in forst place.

18/2/2012 9:23 AMView Responses

Yes, easier to capitalise and should be able to operate with a clearer mandate. As long government support of the major economies the smaller institution should be able to make its self relevent and grow. With growth will come competition and a more effective market based system.

15/2/2012 6:58 PMView Responses

The regional cooperation with common interests would be a better starting point and MDBs have knowledge and experience to promote it.

14/2/2012 10:03 PMView Responses

It might be best to focus on the largest forested countries with the highest rate of deforestation, and from there work with those who have shown a strong interest in this type of arrangement....Brazil, Indonesia, Peru, perhaps...not so much Malaysia.Maybe DRC, but transparency and corruption are worries. And even smaller countries with lots of forests per hectare might be interesting...maybe a set of less ambitious Forest Banks, for larger countries, for smaller...

13/2/2012 3:43 PMView Responses

No, it will be meaningless without those major economies' participation.

2/2/2012 2:46 PMView Responses

This the next best solution to every country on the planet agreeing to go along with it. Goernments need to put the incentives in the right direction for this to work. Evidence of success in a few places can help to motivate other countries to follow later.

2/2/2012 2:10 PMView Responses

It may be easier to gather support for a smaller institution. Once set up the Forestry Bank may be able to grow. Being successful and profitable is an important factor for any institution. The support of at least one major economy would be required.

20/1/2012 1:13 AMView Responses

It would be considered prudent to start with a given region/country first and work out the kinks before deploying on a wider scale. The effort may be different between a developed country versus a third world country where the emphasis is on meeting the basic human needs rather than issues like biodiverity and forests blah blah. This approach will significantly reduce the funding for the IFI. But it should still be resolved if we are better off with a regulatory agency versus leaving it to market forces. You could start organizing in those countries that has the most forest and biodiverse resources. and establish an small IFI type organzationt to serve that area.

17/1/2012 1:17 AMView Responses

Smaller Stakeholder I agree with - smaller, more engaged and more committed to near term action. Less ambitious not so much. Perhaps less ambitious on a global scale, but more ambitions on assets that are governed by the stakeholder. The ambition needs to be maintained but married with bilateral agreements that make achieving some of the change required realistic in the near term. Near term
action is important as it will demonstrate the ability of programs to be effective, giving other programs successful templates to use.

16/1/2012 11:01 AMView Responses

No. There are existing biodiversity markets -- if this is the objective -- and their prevalence and effectiveness is well described by efforts such as those of the Ecosystems Marketplace. The key thing limiting forestry investments (biodiversity aside), is the perception in the private sector of risk. Any institutional effort aimed at increasing investment in forestry must address the question of risk.

13/1/2012 1:02 PMView Responses

Reduce transaction cost, improve effectiveness

13/1/2012 11:23 AMView Responses

Yes. Too many cooks spoil the broth. Equally, too many steakholders result in nothing getting done.

12/1/2012 9:21 AMView Responses

10. Please comment on the desirability, viability and institutional arrangements of a potential new international institution mandated to improve and promote the forestry values of forest carbon and biodiversity.

Desirability

Volker rule has killed traditional methods of earning money by banks so new areas should be easy to convince the viability of

4/3/2012 8:57 PMView Responses

Medium High

15/2/2012 7:02 PMView Responses

Not so keen

14/2/2012 10:06 PMView Responses

An alternative to existing mechanisms is needed, something new, fresh and creative

13/2/2012 3:46 PMView Responses

It needs a catchy name

6/2/2012 9:51 AMView Responses

Carbon consumption becomes a more and more popular issue concern peopel

2/2/2012 2:48 PMView Responses

The sooner action is taken the less dangerous the environment will be to future growth

2/2/2012 2:19 PMView Responses

Certainly high

20/1/2012 1:19 AMView Responses

I am not convinced that an IFI is more effective than a regultory agency.

17/1/2012 1:18 AMView Responses

Highly - but only if there is a true diference between the new structure and what we currently have.

16/1/2012 11:03 AMView Responses

some

13/1/2012 11:25 AMView Responses

You need to have a nice office so talented people want to work there

12/1/2012 9:23 AMView Responses

Viability

skillset of staff already exists

4/3/2012 8:57 PMView Responses

Low Medium

15/2/2012 7:02 PMView Responses

Probably very difficult

14/2/2012 10:06 PMView Responses

People are looking for this alternative, so I think it is possibly viable, devil is in details

13/2/2012 3:46 PMView Responses

Rough unless it could be accepted gernearlly by major economies

2/2/2012 2:48 PMView Responses

There needs to be a huge pool of capital and the will of enough countries to get critical mass

2/2/2012 2:19 PMView Responses

Difficult because the Forestry industry does not carry much political clout in the major economies.

20/1/2012 1:19 AMView Responses

I am not convinced that an IFI is more effective than a regultory agency.

17/1/2012 1:18 AMView Responses

Low - I think sceptism of any additional institutions difference to the current infrastructure will prevent it being created.

16/1/2012 11:03 AMView Responses

some

13/1/2012 11:25 AMView Responses

It is viable if done properly

Institutional Arrangements

need central clearing houses and standardized contracts from the start

4/3/2012 8:57 PMView Responses

mandated bank and or department/section within exisiting framework.

15/2/2012 7:02 PMView Responses

Another NGO?

14/2/2012 10:06 PMView Responses

I am not sure what mechanism, unless propelled by promise of \$, would drive multiple countries to participate

13/2/2012 3:46 PMView Responses

A regional or G20 sposored institution with a narrower stakeholder base would be more desirable than in international forestry bank

7/2/2012 8:49 AMView Responses

What are institutional arrangements? It sounds like a made up academic word.

6/2/2012 9:51 AMView Responses

Again enough countries need to come together on this. the failure of Kyoto does not leave much hope.

2/2/2012 2:19 PMView Responses

Forestry Bank would seem greatest chance of success.

20/1/2012 1:19 AMView Responses

I am not convinced that an IFI is more effective than a regultory agency.

17/1/2012 1:18 AMView Responses

supported by G20

13/1/2012 11:25 AMView Responses

It needs decision making power over minorities for the greater good

IBRD executive director voting rights

			NO. OF VOTES	PERCENT OF TOTAL
	DIRECTORS APPOINTED BY:			
	UNITED STATES (SOLOMON)		265,219	16.03
2.	JAPAN (HAYASHI)		158,654	9.59
3.	GERMANY (HOVEN)		72,649	4.39
4.	FRANCE (FAYOLLE)		69,647	4.21
5.	UNITED KINGDOM (MOOREHEAD)		69,647	4.21
	ELECTED DIRECTORS:			
6.	GARCIA (SPAIN)		76,362	4.62
	COSTA RICA	483		
	EL SALVADOR	391		
	GUATEMALA	2,251		
	HONDURAS	891		
	MEXICO	19,054		
		808 24 822		
	VENEZUELA REPUBLICA BOLIVARIANA DE	20 611		
,		20,011	75 650	4 57
	AUSTRIA	11.313	75,050	4.57
	BELARUS	3,573		
	BELGIUM	29,233		
	CZECH REPUBLIC	6,558		
	HUNGARY	8,300		
	KOSOVO	1,216		
	LUXEMBOURG	1,902		
	SLOVAK REPUBLIC	3,466		
	SLOVENIA	1,511		
<u> </u>		8,578	72.146	4.42
ο.	ARMENIA	1 389	73,140	4.42
	BOSNIA AND HERZEGOVINA	799		
	BULGARIA	5,465		
	CROATIA	2,543		
	CYPRUS	1,711		
	GEORGIA	1,834		
	ISRAEL	5,000		
	MACEDONIA, FORMER YUGOSLAV REPUBLIC OF	677		
	MOLDOVA	1,618		
		938		
		35,755		
		11 158		
9.	MORIN (CANADA)	,	62,217	3.76
	ANTIGUA AND BARBUDA	770		0.10
	BAHAMAS, THE	1,321		
	BARBADOS	1,198		
	BELIZE	836		
	CANADA	45,045		
	DOMINICA	754		
	GRENADA	781		
		1,308		
	JAMAICA	2 828		
	ST KITTS AND NEVIS	525		
	ST. LUCIA	802		
	ST. VINCENT AND THE GRENADINES	528		
10.	STUDART (BRAZIL)		58,124	3.51
	BRAZIL	33,537		
	COLOMBIA	6,602		
	DOMINICAN REPUBLIC	2,342		
	ECUADOR	3,021		
	HAIII	1,317		
		635		
		1,094		
		2 014		
		2.914		

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT VOTING POWER OF EXECUTIVE DIRECTORS NO. OF VOTES PERCENT OF

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT VOTING POWER OF EXECUTIVE DIRECTORS

			NO. OF VOTES	PERCENT OF TOTAL
11.	WHITEHEAD (AUSTRALIA)		58.060	3.51
	AUSTRALIA	26,513		
		464		
		715 16.067		
	MARSHALL ISLANDS	719		
	MICRONESIA, FEDERATED STATES OF	729		
	MONGOLIA	716		
	NEW ZEALAND	7,486		
		266		
		781		
	SOLOMON ISLANDS	763		
	TUVALU	461		
	VANUATU	836		
12.	CIPOLLONE (ITALY)		56,705	3.43
	ALBANIA	1,080		
	ITALY	45.045		
	MALTA	1,324		
	PORTUGAL	5,710		
	SAN MARINO	845		
		767		
13.	PRASAD (INDIA) BANGLADESH	5 104	54,945	3.32
	BHIITAN	5,104		
	INDIA	45,045		
	SRI LANKA	4,067		
14.	BRANDT (SWEDEN)		54,039	3.27
	DENMARK	13,701		
		8 810		
	ICELAND	1.508		
	LATVIA	1,634		
	LITHUANIA	1,757		
	NORWAY	10,232		
45		15,224	50.407	0.47
15.	AZERRALIAN	1 896	52,427	3.17
	KAZAKHSTAN	3.235		
	KYRGYZ REPUBLIC	1,357		
	POLAND	11,158		
		3,096		
		26,856		
	TURKMENISTAN	776		
	UZBEKISTAN	2,743		
16.	TALAT (PAKISTAN)	•	51,544	3.12
	AFGHANISTAN	550		
		9,502		
		1,775		
	MOROCCO	5.223		
	PAKISTAN	9,589		
	TUNISIA	969		
17.	HASAN (KUWAIT)		47,042	2.84
		1,353		
	IRAO	7,330 3.058		
	JORDAN	1.638		
	KUWAIT	13,530		
	LEBANON	590		
	LIBYA	8,090		
	MALDIVES	719		
	QATAR	1,011		
	SYRIAN ARAB REPUBLIC	2,452		
	UNITED ARAB EMIRATES	2,635		
_	YEMEN, REPUBLIC OF	2,462		
18.	YANG (CHINA)		45,049	2.72
		45,049	45	
19.	GRISHIN (RUSSIAN FEDERATION)	45 045	45,045	2.72
20	ALMOFADHI (SAUDI ARABIA)	40,040	45.045	2 72
	SAUDI ARABIA	45,045	;*	

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT VOTING POWER OF EXECUTIVE DIRECTORS

			NO. OF VOTES	PERCENT OF TOTAL
21.	MANAO (INDONESIA)		41,096	2.48
	BRUNEI DARUSSALAM	2,623		
	FIJI	1,237		
		15,231		
	LAO PEOPLE'S DEMOCRATIC REPUBLIC	428		
	MALAYSIA	8,494		
	MYANMAR	2,734		
		1,218		
		570		
		0,599		
		1 21 9		
22		1,218	37 400	0.07
22.	CAMARASA (ARGENTINA)	18 161	37,499	2.21
	BOLIVIA	2 035		
	CHILE	7 181		
	PARAGUAY	1 479		
	DEDII	5 581		
		3,062		
22		3,002	20.542	1 70
23.		2 926	29,545	1.79
	NIGERIA	12,905		
	SOUTH AFRICA	13 712		
24	MENDES DIAS (SAO TOME AND PRINCIPE)	10,112	27 742	1.68
	BENIN	1.118	21,142	1.00
	BURKINA FASO	1.118		
	CAMEROON	1.777		
	CAPE VERDE	758		
	CENTRAL AFRICAN REPUBLIC	1,112		
	CHAD	1.112		
	COMOROS	532		
	CONGO, DEMOCRATIC REPUBLIC OF	2,893		
	CONGO, REPUBLIC OF	1.177		
	COTE D'IVOIRE	2.766		
	DJIBOUTI	809		
	EQUATORIAL GUINEA	965		
	GABON	1,237		
	GUINEA-BISSAU	790		
	MALI	1,412		
	MAURITANIA	1,150		
	MAURITIUS	1,492		
	NIGER	1,102		
	SAO TOME AND PRINCIPE	745		
	SENEGAL	2,322		
	TOGO	1,355		
25.	TAHA (SUDAN)		26,943	1.63
	BOTSWANA	865		
	BURUNDI	966		
	ERITREA	843		
	ETHIOPIA	1,228		
	GAMBIA, THE	793		
	KENYA	2,711		
	LESOTHO	913		
	LIBERIA	713		
	MALAWI	1,344		
	MOZAMBIQUE	1,180		
	NAMIBIA	1,773		
	RWANDA	1,296		
	SEYCHELLES	513		
	SIERRALEONE	968		
	SIERRA LEONE			
	SUDAN	1,100		
	SUDAN SUDAN SWAZILAND	1,100 600 1.545		
	SUDAN SUDAN TANZANIA UCANDA	1,100 600 1,545 867		
	SUDAN SUDAN SWAJII AND TANZANIA UGANDA ZAMDIA	1,100 600 1,545 867 2,050		
	SUDAN SUDAN SWAJII AND TANZANIA UGANDA ZAMBIA ZIMB ADWE	1,100 6an 1,545 867 3,060 2,575		

** MAY DIFFER FROM THE SUM OF INDIVIDUAL PERCENTAGES SHOWN BECAUSE OF ROUNDING.

NOTE: GUINEA (1,542 VOTES), MADAGASCAR (1,672 VOTES) AND SOMALIA (802 VOTES) DID NOT PARTICIPATE IN THE 2010 REGULAR ELECTION OF EXECUTIVE DIRECTORS.

CORPORATE SECRETARIAT November 28, 2011

Source: World Bank Website 2012