The Environment and Global Governance:
Can the Global Community Rise to the Challenge?

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Lincoln Institute of Land Policy
Working Paper

Lincoln Institute Product Code: WP10UL1

Abstract

This paper addresses the nature and magnitude of the global environmental challenge and the response of the international organizations responsible for environmental issues to that challenge. It assesses the strengths and weaknesses of the current global environmental policy and aid architecture by drawing upon evidence from independent evaluations of international organizations concerned with the global environment. The paper offers support for three key propositions: First, despite a shift from RED to REDD to REDD+, the focus of REDD+ has largely remained on forest carbon storage as a mitigation strategy and is not inclusive of other forest values, including biodiversity, watershed protection, forest production, income generation, social and cultural values. Second, even with efforts on all these fronts, attention to mitigation in brown sectors (i.e., housing, transport, and energy) in all countries must be an important complement to REDD+. Third, stressing mitigation in developing countries alone risks being a disincentive to mitigation in developed countries. The paper also concludes that funded activities reflect donor priorities, that the allocation of donor funds through fragmented and multiple channels reduces overall efficiency and makes systematic evaluation and learning from experience difficult, and that funding is inadequate relative to needs.

List of Acronyms

ADA	Austrian Development Agency
ADB	Asian Development Bank
AECID	Spanish Agency for International Co-operation
AF	Adaptation Fund
AFB	Adaptation Fund Board
AFD	French Development Agency
AfDB	African Development Bank
AU	African Union
AusAID	Australian Agency for International Development
BMU	Ministry for the Environment, Nature Conservation and Nuclear Safety (Germany)
BMZ	Federal Ministry for Economic Cooperation and Development, Germany
BNDES	Brazilian Development Fund
Bonn fund	A special UNFCCC fund for contributions from the Government of Germany to cover costs of UNFCCC events held in Bonn
BTC	Belgian Technical Cooperation
CBD	Convention on Biological Diversity
CDM	Clean Development Mechanism
CEP	Cool Earth Partnership
CGIAR	Consultative Group on International Agricultural Research
CIAT	Centro Internacional de Agriculture Tropical
CIDA	Canadian International Development Agency
CIFOR	Center for International Forestry Research
CIFs	Climate Investment Funds
CIMMYT	Centro International de Mejoramiento de Maizy Trigo
CIP	Centro International de la Papa
CO2	Carbon Di Oxide
COP	Conference of Parties
CPF	Collaborative Partnership on Forests
CSD	United Nations Commission on Sustainable Development
CTF	Clean Technology Fund
DAC	Development Assistance Committee
DAFF	Department of Agriculture, Fisheries and Forestry (Australia)
DECC	Department of Energy and Climate Change (UK)
DEFRA	Department for Environment, Food and Rural Affairs (UK)
DEG/BOND	Development and Environment Working Group of British Overseas NGOs for Development
DEW	Department of the Environment and Water Resources (Australia)
DFID	Department for International Development, United Kingdom
DGDC	Directorate-General for Development Cooperation, Belgium
DPL	Development Policy Loan
EBRD	European Bank for Reconstruction and Development
EC	European Commission
EDF	European Development Fund

ENRTP	Environment and Natural Resources Thematic Program (EC)
ERPA	Emission Reductions Performance Agreement
ETF-IW	Environmental Transformation Fund - International Window
EU	European Union
FAO	Food and Agriculture Organization (of the United Nations)
FCPF	Forest Carbon Partnership Facility
FDI	Foreign direct Investment
FRA	The Global Forest Resources Assessment
FIP	Forest Investment Program
FSC	Forest Stewardship Council
FY	Fiscal Year/ Financial Year
G-20	Group of Twenty
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GHG	Greenhouse Gas Emissions
GPG	Global Public Good
GPOBA	Fund Global Partnership on Output -Based Aid
GTZ	Deutsche GesellschaftfürTechnischeZusammenarbeit GmbH
Hellenic Aid	General Directorate for International Development Cooperation
HIV/AIDS	Human immunodeficiency virus/Acquired immune deficiency syndrome
IBRD	International Bank for Reconstruction and Development
ICARDA	International Center for Agricultural Research in the Dry Areas
ICRAF	World Agroforestry Centre
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IDA	International Development Association
IDB	Inter-American Development Bank
IEA	International Energy Agency
IEG	Independent Evaluation Group
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFPRI	International Food Policy Research Institute
IFRI	International Forestry Resources and Institutions
IIED	International Institute for Environment and Development
IITA	International Institute of Tropical Agriculture
ILRI	International Livestock Research Institute
IMF	International Monetary Fund
IPAD	Portuguese Institute for Development Support
IPCC	Intergovernmental Panel on Climate Change
IPF/IFF	Intergovernmental Panel on Forests/ Intergovernmental Forum on Forests
IRRI	International Rice Research Institute
ITTO	International Tropical Timber Organization
IUCN	International Union for Conservation of Nature
IUFRO	International Union of Forest Research Organizations
IWMI	International Water Management Institute
JICA	Japan International Cooperation Agency

LDC	Least Developed Countries
LULUC	land use and land use changes
Lux-Development S.A.	Luxembourg Agency for Development Cooperation
MAE	Ministry of Foreign Affairs and Cooperation, Spain
MDTF	Multi-donor Trust Funds
MFA	Ministry of Foreign Affairs, Singapore
MIGA	Multilateral Investment Guarantee Agency
MOFA	The Ministry of Foreign Affairs of Japan
NCCF	Swiss proposed National Climate Change Fund
NGO	Non-Governmental Organization
Norad	Norwegian Agency for Development
NZAID	New Zealand's International Aid & Development Agency
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
OED	Operations and Evaluation Department
OPS	Overall Performance Study
PEPFAR	President's Emergency Plan for AIDS Relief
PES	Payment for Environmental Service (Programs)
PPCR	Pilot Program for Climate Resilience
PPCR-SC	Pilot Program for Climate Resilience Sub-Committee
PROFOR	Program on Forest
PRSC	Poverty Reduction Strategy Credit
PRSP	Poverty Reduction Strategy Paper
RAF	Resource Allocation Framework
R & D	Research and Development
RED	Reducing Emissions through Reduced Deforestation
REDD	Reducing Emissions through Reduced Deforestation and Degradation
RRI	Rights and Resources Initiatives
SCF	Strategic Carbon Fund
SDC	Swiss Agency for Development and Cooperation
SECO	State Secretariat for Economic Affairs, Switzerland
SFM	Sustainable Forest Management
SHS	Solar Home System
Sida	Swedish International Development Cooperation Agency
STAR	System for Transparent Allocation of Resources
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNCED	United Nations Conference on Environment and Development
UNCTAD	United Nations Conference on Trade and Development
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Program
UNDPI	United Nations Department of Public Information
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests

UNIDO	United Nations Industrial Development Organization
UN-REDD	United Nations Collaborative Program on Reducing Emissions from Deforestation and Forest Degradation
US	United States
USAID	U.S. Agency for International Development
WB	World Bank
WBG	World Bank Group
WDR	World Development Report
WGI	Worldwide Governance Indicators
WHO	World Health Organization
WMO	World Meteorological Organization.
WRI	World Resources Institute
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization

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I. Scope, Overview and Structure

Scope

This chapter addresses the nature and magnitude of the global environmental challenge and the response of the international organizations responsible for environmental issues to that challenge. It assesses the strengths and weaknesses of the current global environmental policy and aid architecture by drawing upon evidence from independent evaluations of international organizations concerned with the global environment. It reviews the extent, to which the individual and collective responses of international organizations have been adequate to meet the challenge, what has worked and what has not, and lessons and implications for the future. In short this paper attempts a meta evaluation of the available evaluative evidence on international organizations concerned with the global environment.

This is no small task: Defining the global environment policy and aid architecture is a challenge because power relations among nation states are realigning and environmental programs have been evolving rapidly with a proliferation of partnerships including numerous recent climate and carbon initiatives. Moreover, experienced analysts are asking donors to "get more serious about 'thinking twice' "before establishing new ear-marked funds and to use existing institutions where possible to implement them with greater alignment with country assistance strategies (Isenman and Shakow 2010; and World Bank 2008a).

Using information from the rear view mirror to navigate the crowded road ahead calls for consideration of the legacy costs of the past architecture, and its relevance for the future. Independent evaluations vary greatly in scope, coverage, quality and evidence base, and their assessments of specific organizations, sectors, and programs frequently offer a limited view. However, by taking account of the changing external situation and aid architecture, the findings and relevance of the sum total of the evaluations become evident.

Overview

The substantive focus of the paper is on the environmental public goods related to climate change through natural resource management of global significance, i.e., forestry/biodiversity, agriculture, and energy (including renewable energy) that are related to sustainable and equitable economic growth and globalization. These areas were selected for focus for four reasons:

1. A third of the global Greenhouse Gas Emissions (GHG) emissions come from forests and agriculture, and almost all forest carbon emissions come from developing countries.

2. The focus on reducing emissions in developing countries reflects the argument that mitigation of climate change is less costly in developing countries than in developed countries (Stern 2006; and World Development Report [WDR] 2010). Therefore it is in the interest of the global community to focus on reducing emissions (a) where they are growing rapidly, and (b) where abatement costs are lowest. Developed countries, as beneficiaries, provide financing for such activities.

3. Among the various mitigation efforts, REDD + ("Reducing emissions from deforestation and forest degradation, forest conservation, the sustainable management of forests, and the enhancement of forest carbon stocks") has gained substantial momentum since the concept of RED (Reducing Carbon Emissions from Deforestation) was introduced by Costa Rica and Papua New Guinea at the United Nations Framework Convention on Climate Change's (UNFCCC) Conference of Parties (COP) 11 in Montreal in 2005. The "+" denotes that developing countries need to be remunerated for maintaining standing forests and also for preserving other forest functions (biodiversity, watershed, etc.), economic value (timber and non-timber forest products alike), and social objectives (livelihoods and cultural values). The shift is from a narrow focus on carbon stocks to a broader scope encompassing all the issues covered by the forests debate and development assistance (e.g., community forestry, joint forest management, and programs on payments for environmental services). Reducing deforestation is perhaps the most complex of all the global public goods to deliver and document (Lele 2009; Karsenty and Singner 2009; and Zazueta 2009) and REDD+ poses even greater challenges than RED. Each deals with issues of property rights, community participation, and benefit sharing—all aspects that are difficult to measure--whereas carbon sequestration is measurable in principle, although difficulties abound in practice.

4. Recent evidence suggests that rates of deforestation have slowed in Latin America (most notably in Brazil), Sub-Saharan Africa (e.g., in Cameroon) and Indonesia (Global Forest Resources Assessment [FRA] 2010), the regions that have had the highest rates of deforestation. Progress has taken place without programs of independently verified and certified emission reductions being in place. Some have noted that related carbon sequestration has cost as little as $2.50 per ton of carbon, compared to $18 per ton in the European Union carbon trading scheme (Lawson and McFaul 2010). Success is attributed to factors such as better law enforcement against illegal logging in Brazil, independent external verification in Cameroon, greater vigilance by civil society organizations in Indonesia, and a greater desire on the part of developing countries to be environmentally responsive. But some have questioned the extent of reduction in

forest loss and/or the factors explaining it (Karsenty 2008; and personal communication).Evaluations can shed some light on this debate.

The paper offers support for three key propositions: first, despite a shift from RED to REDD to REDD+, the focus of REDD+ has largely remained on forest carbon storage as a mitigation strategy and is not inclusive of other forest values, including biodiversity, watershed protection, forest production, income generation, social and cultural values. This limited focus will be neither sufficient nor sustainable without a land use/ land use change and landscape approach, which Intergovernmental Panel on Climate Change (IPCC) envisioned. Attention needs to be paid to land conversion to agriculture and to other uses and to many underlying issues related to REDD+ (e.g. international trade in commodities and private capital flows, technology transfers, and adaptation to climate change) involving diverse forest and agricultural lands and a large number of people dependent on natural resources. While only 70 million forest dependent people live in the remote areas of closed tropical forests, as many as 735 million live around forests in degraded or marginally forested areas and are involved in 50 percent of legal and illegal logging (Saunders and Nussbaum 2008). Households in these areas face multiple insecurities including loss of biodiversity, fuel wood, water, and other resources on which they have traditionally depended. Severe climate change is impacting these areas. Investments in agricultural research and development and adaptation, including in agro-forestry and community forestry, are needed to help those people secure livelihoods until growth in the rest of the economy can absorb them. While deforestation continues, recent evidence suggests that tree cover on community forest lands and agricultural lands is increasing.

Second, even with efforts on all these fronts, attention to mitigation in brown sectors (i.e., housing, transport, and energy) in all countries must be an important complement to REDD+. There is huge scope for private sector investment and financing of mitigation in these other sectors; although the financial returns to these investments are still unclear and financial markets for such investments are at early stages of development.

Third, stressing mitigation in developing countries alone risks being a disincentive to mitigation in developed countries. Private investors in the United States (US) have argued that until carbon prices reach $40 a ton there is little incentive for the private sector to invest in technologies that would cut emissions drastically. Cleaner electricity and transportation can address 75% of carbon emissions4[1] (Khosla 2010). Global subsidies to fossil fuels amount to US$150 billion annually whereas Research and Development (R&D) on those issues amounts to US$10 billion (WDR 2010). Resources to conduct science of global interest related to agricultural and natural resource management affecting poor people are similarly woefully low and are mostly concentrated in developed and a few emerging countries (Lele et al. 2010). The gaps between the private and public, and local and global, costs and benefits are obvious.

[1] With the currently pending U.S. legislation unlikely to support such prices, they argue, uncertainty is better than low prices that dis-incentivize the development of technologies that have radically less carbon. Therefore cap and trade or a carbon pricing bill with its likely compromises would be worse than no regulation. (Khosla 2010).

Differing visions have implications for the roles of the public and private sectors, and for the structuring of incentives. Identifying where the true comparative advantage lies among international and national actors in addressing sustainable and inclusive global growth agenda is critical to the effectiveness of the future international environmental architecture. Without a broader agenda beyond REDD+, and without a broader set of actors beyond the international organizations currently responsible for environmental rule setting and financing–the global environmental architecture will not be attuned to the current reality and will do little for the environment or for those whom REDD+ is meant to help directly and indirectly.

The Changing Global Context

While climate change is clearly the greatest threat facing planet earth, other inter-related environmental issues include the loss of biodiversity, marine resources, and the water crisis. With their rapid population and economic growth, the shares of developing countries in global environmental pressures have been growing rapidly and will increase under a business-as-usual scenario (WDR 2010 and in the introduction to this volume; and Lele et al. 2010).

The "global environmental architecture" would need to be far more inclusive of actors who are currently not sufficiently mobilized (including developing countries, the private sector and the civil society) in order to address these issues.

First, the environmental changes have only recently begun to be viewed, analyzed and understood in the context of ecosystem changes and interacting pressures. The current architecture reflects the incremental approach of the global community to specific perceived "environmental problem areas" of a global public good nature (e.g., ozone depletion, forest or biodiversity loss, international waters), each leading to targeted responses such as the Global Environmental Facility, the Montreal Protocol, or the recent Carbon and Climate Funds. There are also major gaps, such as the lack of mechanisms to address issues such as the BP oil spill in the Gulf of Mexico in 2009. Although international organizations and their evaluations address specific aspects of the environmental "problem sets," climate change is a relatively new topic. Currently available evaluations pertain largely to past project or sub-sectoral activities related to the environment. For these evaluations to provide important insights for the future, care must be taken to put them in the broader context of sectoral, country, and global activities.

Second, the prospects for a globally binding overarching climate change accord seem dim with vast differences in public opinion among countries, not just regarding climate change, but about the role of the government, the private sector and collective citizen action. At the same time bilateral deals between individual industrial and developing countries on climate issues are growing rapidly. Not all such deals are as transparent as the activities of multilateral organizations. Many are linked to other business investments, e.g., in mining. The collective roles of these deals and their implications for the way the current aid architecture works are unclear, and their role in the evolution of future global environmental architecture remains even less clear.

Third, overall private capital flows to developing countries now dwarf official development finance, even taking into account reported annual pledges of $10 billion until 2012 for climate related initiatives. Yet their role in future financing of the carbon market, or in the growing carbon funds in official development finance, also remains unclear. The absence of clear global rules and the current low carbon prices compound the challenge. Most importantly, the investment needs for environmental mitigation and adaptation dwarf the current availability of public funds.

Fourth, international organizations themselves are changing. This includes the reform of the United Nations (UN) System– the so-called one UN– which is still a work in progress. The World Bank, the largest multilateral actor in financing development aid, is now involved in the provision of global public goods as a complement to its traditional country assistance role. It has initiated Climate and Carbon funds (12 carbon funds and 2 climate funds in the World Bank alone)5[2]. It has received financial pledges and initiatives in support of mitigation and adaptation that by 2010 are expected to involve $30 billion channeled through the World Bank and managed by a variety of international financial institutions. These initiatives are occurring over and above the growth of other bilateral trust funds managed by multilateral institutions, including particularly the World Bank, a trend underway since the mid-1990s(Lele, Sadik and Simmons 2005; Kharas 2008; Lele 2009; Isenman and Shakow 2010; and World Bank 2008a). Reflecting these changes, the governance of the International Monetary Fund (IMF) and the World Bank is under review with slightly larger votes for emerging countries of The Group of Twenty (G−20) likely.

Fifth, reflecting the speed of globalization (i.e., in volumes of trade, international capital flows, labor migration, remittances, information and technology), the growth rate of economic activity in emerging countries is higher than in most developed countries (Aggarwal and Lele Forthcoming).China's tree planting program in support of environmental services is now the largest in the world. Brazilian Development Bank (BNDES) disbursed R$137 billion in 2009 (US $80 billion), while the World Bank's gross disbursements for the developing world as a whole excluding repayment of loans by developing countries were $20.7 billion in 2006 and $19.9 billion in 2007 and 2008, they rose to $27.8 billion in 2009, and to $40.3 billion in 2010. The rapid rise reflected the use of fast disbursing development policy loans and emergency financial assistance

[2] These include the 1. Bio Carbon Fund, 2. Carbon Fund for Europe, 3. Community Development Carbon Fund, 4.Danish Carbon Fund, 5.Italian Carbon Fund, 6. The Netherlands CDM Facility, 7. The Netherlands European Carbon Facility, 8. Prototype Carbon Fund, 9. Spanish Carbon Fund, 10. Umbrella Carbon Facility, 11.Forest Carbon Partnership Facility, 12. Carbon Partnership Facility. The Climate Funds are a pair of funds to help developing countries pilot low-emissions and climate-resilient development. With CIF support, 45 developing countries are piloting transformations in clean technology, sustainable management of forests, increased energy access through renewable energy, and climate-resilient development. The CIF are channeled through the African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, Inter-American Development Bank, and the World Bank Group and they include 1.Clean Technology Fund (CTF) and 2. Strategic Climate Fund (SCF). The former includes CTF Country and Regional Investment Plan and the latter the Pilot Program for Climate Resilience (PPCR), Forest Investment Program (FIP), and Scaling up Renewable Energy in Low Income Countries (SREP).

in response to the food, fuel and financial crises (World Bank Annual Report 2010). Global Environmental Facility's (GEF) disbursements incalendar year 2009, in support of all conventions it is responsible for financing, were $985 million. They would likely be $818 million for the calendar year 2010, ($562 million already disbursed and an additional $156 million having been technically approved and up for formal approval by the GEF Council in session at the time of completion of this paper). Both China and Brazil are important international traders of agricultural commodities and timber, contributing to land use changes of global proportions. Some have argued that Japan and China must also follow in the footsteps of the US and EU and prohibit the import and sale of illegally sourced wood (Lawson and McFaul 2010). These developments raise issues of the extent to which actions by individual countries (e.g. import bans and certification) are likely to reduce illegal logging without global agreements on the sustainable management of tropical forests, certification standards, and World Trade Organization (WTO) rules related to forest products (Robalino and Herrera 2009).

Sixth, in the age of internet, YouTube and Face book, civil society and the private sector now have a far greater role than ever before in global rule making by influencing actions of their governments and often by participating directly in international meetings, contributing to setting formal and informal standards, and to the governance of climate and carbon funds.

Finally the risk and uncertainty in the food, energy, and financial markets has grown considerably (as reflected in the events of 2007 and 2008 and 2010) through factors that interlink commodity, energy, and financial markets across sectors, and by climate change and the concomitant greater occurrence of extreme events and greater variability of temperatures and precipitation (World Bank Annual Report 2010). Domestic food prices have remained sticky at new higher levels in many developing countries. While evaluation findings can help us learn from the recent performance of international organizations, this experience offers few lessons for the treatment of climactic risks and eco-system impacts.

II. The Global Environmental Architecture

A snap shot of the current complex "bowl of noodles" global environmental architecture, is presented schematically in figure 1 in the annex 1. The figure distinguishes between the processes establishing scientific and political consensus through private and public entities and the processes that develop and implement rules through international financing mechanisms and organizations. Whereas past development assistance addressed issues of market failures and also reflected charitable and commercial considerations, increasingly assistance is based on demonstrated and measurable performance, such as school attendance, immunization, policy reforms, and payment for environmental services. In the case of climate and carbon finance, payments are meant to be provided for verifiable and certified emission reductions— fundamentally changing the nature of the assistance business.

Environmentally oriented development agencies have proliferated. There are now 45UN organizations that have responsibility for some aspect of environment. Bilateral activities have been growing substantially in recent years, and 29 bilateral agencies are now involved in the provision of climate and forest carbon funds either through the financing mechanisms established by international agencies such as the World Bank, or through bilateral assistance or other financing mechanisms. At a meeting of the Rights and Resources initiative (RRI) in Washington, DC in June 2010 (Fifth RRI Dialogue on Forests, Governance and Climate Change: Rights and Resources initiative meeting in Washington, DC: United States. June 22, 2010), an Non-Governmental Organization (NGO) representative from Cameroon described this current situation as an inverse pyramid with numerous bilateral and multilateral agencies and international NGOs on top, and at the bottom a weak governmental ministry of environment with a handful of local NGOs that are well-versed and able to engage effectively in the increasingly complex methodologies of payments on delivering REDD+. In contrast China's minimum reliance on external aid and its huge analytical capacity on forest tenure and reform issues as well as an ability to network internationally was evident in another Rights and Resources Initiative meeting on Forest Land Tenure in Beijing in September 2010 (Conference on Forest Tenure and Regulatory Reforms: Experiences, Lessons and Future Steps in Asia. Beijing, China. Sept. 24-25, 2010).

The Evaluative Evidence

The evidence for this paper comes from more than 55 evaluation reports, comprising comprehensive "agency or fund" evaluations and evaluations of specific environmental organizations that constitute important pieces of the architectural puzzle in figure 1 (e.g., the GEF, the Montreal Protocol, the United Nations Environment Program (UNEP), Food and Agriculture Organization (FAO), the International Union for Conservation of Nature (IUCN), Center for International Forestry Research (CIFOR) and World Agroforestry Centre (ICRAF)) or of sectoral issues (e.g., the United Nations Development Program (UNDP) and Asian Development Bank's (ADB) evaluations of energy, the World Bank's evaluations of forestry, energy, or agriculture), or thematic evaluations of the GEF and the World Bank on Climate, or of GEF on biodiversity. Also reviewed were Independent Evaluation Group's (IEG) Global Program Reviews of environmental programs.

Due to the evaluation mandates of the individual organizations, even forward looking evaluations of specific sectors do not always explore the broad and rapidly changing context of the sector in which their organizations conduct their activities. The World Bank's evaluation of safeguards (IEG 2010e) is noteworthy for its sensitivity to the changed context, its comparative analysis across the Bank group, and its sensitivity to client perceptions. Occasionally they explore the interactions among the activities of different organizations within a given sector well—e.g., the critical importance of GEF's grant financing for International Finance Corporation's (IFC) "success" in energy efficiency financing in China, or of GEF's financing for protected areas activities by the World Bank—but this exploration is by no means automatic nor systematic. Moreover, they do not look at the activities of other relatively more "distant" organizations (e.g. UNDP or ADB) in the energy sector in the same country, or the role of private energy

finance to assess the comparative advantage, complementarily, or competition with their own organization's programs.

The focus on portfolio analysis—i.e., the projects funded by one organization, has a lot of strengths but also weaknesses in terms of lacking a country context or a "client" perspective. Whereas the results focus is strong, largely prompted by donors[3], evaluations do not sufficiently explore why projects in some countries perform better than in others, or why advice imparted (e.g. on reduction on subsidies and provision of safety nets) is implemented in some countries but adopted only partially or not at all by others. Developing countries would be in a better position to assess the comparative advantage of different organizations if evaluations were conducted from a demand rather than a supply perspective. Such evaluations would contribute to knowledge and increase country ownership of the advice imparted. Whereas almost all evaluations are commissioned by funders, some are conducted entirely by external evaluators and others by the evaluation staff of the organizations. Some evaluators have had little operational experience, and others limited familiarity with evaluation methods. Knowledge bases as well as independence vary across evaluations.

An additional imbalance is the lack of evaluations of environmental NGOs and think tanks, even though some receive considerable outside resources including in some cases from international organizations[4]. That few truly independent evaluations of these organizations exist stands in sharp relief to the scrutiny they tend to demand of international organizations, including particularly the multilateral financial institutions. Bilateral organizations, which, are funded by taxpayer money, also tend to get less systematic scrutiny than the multilateral organizations. Unfortunately, a perennial evaluation finding is the weak monitoring and evaluation of aid-funded projects and programs. Inputs and outputs are more often known than outcomes and impacts. In the case of some bilateral donors, even the amount of project resources committed and actually disbursed are not known, so that evaluations can say little about the actual impact of financing[5]. Additional challenges in the area of environment result from the invisibility of some benefits (e.g., carbon, or soil fertility or biodiversity loss except in the case of charismatic species) and the long gestation lags in realizing benefits (Todd and van den Berg Forthcoming). Despite these weaknesses, the evaluative evidence is one of the best sources of information and data on the success of projects dealing with global environmental issues.

[3] Picciotto and Serageldin (in van den Berg and Feinstein 2009 and Isenman and Shakow 2010and World Bank 2008a) bemoan the lack of serious assessment of donor weaknesses in relation to the donor demands of performance by developing countries.

[4] In 2000 GEF together with the World Bank helped Conservation International set up the Critical Ecosystem Partnership Fund, contributing$ 75 million to which the Conservation International (CI), MacArthur Foundation and Government of Japan had contributed $25 million each as of 2007.

[5] It is well documented for example that a considerable share of bilateral assistance goes to donor institutions. The World Bank routinely estimates the share of International Development Association (IDA) funds going to US contracts to maintain support of the US Congress for US replenishments of IDA.

Deforestation and Economic Transformation in a Globalized World

Historically deforestation has resulted from land conversion for agricultural development, industrialization, and urbanization as part of overall economic growth. Land has gone back into forests after completion of economic transformation, i.e., after agricultural productivity growth leads to reduced inputs of land and labor to produce the same or more output. The idea in REDD + is to reverse, or at least to arrest the rate of deforestation. At the same time however, population growth and a deceleration in the rate of agricultural productivity growth in developing countries combined with declining investments in agriculture and an accelerated pace of global market integration, are changing the historical pattern of agricultural growth. Legal and illegal/formal and informal trade in forest and agricultural products has been growing as an integral part of globalization. Consequently agriculture's role through land use and land use changes in the global environment has become complex. Whereas the green revolution saved an estimated 150 million hectares of land from being deforested, it is now creating environmental challenges of its own, mostly of a local, regional, and national nature (soil degradation, water shortages, pollution due to the use of chemical fertilizers and pesticides).

The changing life styles associated with economic growth are changing consumption patterns and increasing demand for more resource intensive foods (rice, wheat, fruit, vegetables, and livestock). Investment in bio-energy has also risen. Future agricultural growth on current land under cultivation will depend on productivity growth. Whether this reduces deforestation depends on relative returns to land use (WDR 2008). Agricultural research is needed to achieve sustainable development but has been badly neglected over the last two decades. Moreover, the focus of climate change has been narrowly on deforestation, rather than on its agricultural linkages, and largely on mitigation and thus on forest carbon. But evidence has been mounting that the poorest populations are the hardest hit by climate change. This calls for greater attention to agricultural development, to the agriculture/forestry interface, and to adaptation, particularly in rain fed areas with considerable population pressure.

Despite Group of Eight promises to increase aid commitments to agriculture to $20 billion at L'Aquila, Italy in 2008, little has been forthcoming. The multi-donor Global Agriculture and Food Security Program established in the World Bank is under-subscribed while demand from developing countries has increased. World Bank lending commitments to agriculture went up sharply in 2009 from $1.3 billion in 2008 to $3.4 billion in 2009 but fell to $2.62 billion in 2010. A recent Bank evaluation recommends rebuilding internal World Bank capacity to resume lending (IEG 2010c).

REDD + thus is a movement in the right direction compared to the original RED (Reducing Emissions through Reduced Deforestation) and REDD (Reducing Emissions through Reduced Deforestation and Degradation) as the + is intended to address issues beyond forests of high carbon value but this is not sufficient and this point is now beginning to be recognized. (See for example, Grieg-Gran 2010; Chandani & Siegele

2010; and Ciplet, Chandani, Roberts &Huq 2010, IIED)Why has REDD + acquired momentum while the rest of the climate negotiations have stalled? The answer lies in the political economy of the international forest dialogue, underway for well over a quarter century, that involves a diverse and a growing number of stakeholders, each typically championing one (or a small subset) of the forests' multiple functions. The layered forest dialogue is unmatched in its complexity and texture, yet it has fostered the emergence of the idea of REDD+.

Over the last three decades the focus of stakeholders in the international community has shifted from social and production forestry in the 1980s, to the protection of primary tropical moist forests for the sake of biodiversity conservation in the 1990s, to a more balanced approach since 2000in pursuit of equity, environmental sustainability and growth. The World Bank's forest policy has followed these changing emphases. For example, the so-called "logging ban" in the World Bank's 1991 forest strategy introduced with pressure from environmentalists had a chilling effect on the activities of the World Bank in highly forested countries (Lele et al. World Bank, Operation Evaluation Department [OED] 2000). The World Bank's forest strategy adopted in 2002 reflected the more balanced approach. However, the World Bank's change in forest strategy did not elicit much client demand for Bank lending to forestry until the Forest Carbon Partnership Fund and the Forest Investment Fund offered grant funds for REDD Readiness. The low demand was due in part to the controversial history of the World Bank's involvement in forestry (IEG 2009b).

The World Bank (together with GEF support) remains the single largest donor in support of forestry. But relative to the size of the World Bank's overall lending, forestry sector operations have been small and particularly prone to complaints to inspection panels about safeguard violations. The sector, often described by country managers and client countries as "2% of the lending and 98% of the headache", is viewed by Bank and developing country managers as having high reputational risks and high transaction costs in the face of competing demand for Bank lending resources from other sectors. The role of Bank safeguards in REDD+ remains unclear but may entail similar complications.

A recent World Bank review of its Safeguards and Sustainability Policies concludes that while safeguards have avoided large scale social and environmental risks over the decade since they were instituted, their implementation required compliance with mandatory policies and procedures that lack strong client ownership. In addition, the quality of supervision has been deficient with growing separation between the work on safeguards and on environmental and social sustainability (IEG 2010e). With growth of Sector lending, Development Policy lending, and SWAPs, the evaluation also recommends consistency in coverage of social and environmental safeguards across types of lending instruments and across the World Bank, IFC and Multilateral Investment Guarantee Agency (MIGA); and also better coordination and supervision, greater responsiveness to clients, and greater disclosure of monitoring findings accompanied by third party verification for accountability. While it presents some sectoral data on complaints and inspection panel involvement, the evaluation does not compare the relative cost of doing business with the Bank across sectors or assess the Bank's sectoral comparative

advantage, including particularly implications for REDD+. For example, whereas mining operations attract more complaints, they also entail larger and faster disbursing projects than forestry.

Standards for accountability and transparency demanded by vocal stakeholders vary across organizations. The UNDP and UNEP, which also implement GEF financing, follow their own less strict and more consultative policies; bilateral donors pursue their own procedures unless the World Bank is trustee of their funds. The evaluation recommends greater harmonization of safeguards, across the Bank group but across international and bilateral donor organizations standards on safeguards remain highly varied. Moreover, without greater capacity building in developing countries to increase both transparency and accountability to their own domestic constituencies, it is unclear how these countries will improve accountability in the case of REDD+ without safeguards creating roadblocks for the implementation of REDD+.

The World Bank's shift to forest carbon for climate mitigation on a pilot basis has begun to contribute to knowledge transfers to developing countries and to the UNFCCC in designing and implementing carbon instruments. But it still lacks a holistic view of the challenges of the varying forest types and functions in different locales, and of the need for an appropriate level and form of support on a country-by-country basis for REDD+. While giving high marks to the Bank's Forest Carbon Unit for its demonstration role, the IEG Phase II evaluation notes the difficulty of forest carbon projects in delivering expected amounts of certified forest emission reductions for several reasons: Clean Development Mechanism (CDM) eligible land was overestimated; carbon payments were noncompetitive compared to other land uses; inadequate upfront financing posed problems; implementation capacity to carry out projects was low; and unanticipated poor weather impeded execution. Increased supervision is needed, but supervision costs often exceed budgeted costs due to the small size of the projects (IEG 2010a).Current low forest carbon prices and market uncertainty pose challenges for the long term viability of the REDD+ program if focused on carbon alone.

Despite these and other concerns, a range of forest stakeholders have come on board and gained attention to forest sector issues generally. The global debate has moved on to address the costs, benefits, size, conditions, and modalities of the needed resource transfers to developing countries in relation to their shared responsibility for reducing deforestation and degradation. Options currently on the table range from a legally binding cap–and-trade regime and a voluntary carbon market to an International Development Fund. Questions remain on whether to remunerate nation states or individual agencies, enterprises or sub-national units, or some combination of the above; whether the payment for REDD action should be ex ante or ex post; whether REDD can be fungible with emissions reductions/avoidance in other sectors; and the extent to which allocation of REDD payments should be contingent on the delivery of co-benefits. Several instruments are currently under design on a pilot basis (McAlpine, Griffiths, and Maginnis 2009).Other challenges include whether the traditional indigenous people's rights would be respected since they are often not incorporated in formal land laws; and also about the fairness of payments, procedures and methodological approaches for establishing REDD

baselines, defining national baselines, implementing credible and verifiable monitoring systems payment mechanisms, and capacity needs for meeting REDD requirements. Rules for making funding conditional on measurable performance have been developed under CDM of the Kyoto Protocol and by the various carbon funds, and the idea has been gaining ground. However there is considerable and widespread concern that the CDM rules are overly complex, rigid, and difficult to implement even for those countries with substantial capacity and expertise, such as China.

It is also increasingly clear that the upfront investments needed for REDD Readiness will be greater than originally provided in programs such as the Forest Carbon Partnership Fund (FCPF) leading to the establishment of Forest Investment Fund and other instruments listed in figure 1. After considerable initial criticism of its carbon-centric approach and lack of expertise in forest management, FCPF has taken many of these lessons on board. It is working in partnership with the United Nations Collaborative Program on Reducing Emissions from Deforestation and Forest Degradation (UN REDD +), Program on Forest (PROFOR), and the Collaborative Program on Forests (CPF) chaired by FAO and other stakeholders in developed and developing countries.

There are ongoing challenges in defining and demonstrating clear certifiable outcomes. The World Bank's Phase II evaluation (IEG 2010a) notes that the protected areas approach has worked in remote areas with sparse populations (using incidence of forest fires as a proxy for forest exploitation), and that the inclusion of indigenous people is consistent with forest protection. On the other hand the GEF's evaluation of the biodiversity program (GEF 2004), which encompasses two thirds of GEF commitments and virtually all World Bank support for protected areas, noted that the lack of evidence prevented firm conclusions about: the extent to which multi-use protected areas either reduce deforestation or protect biodiversity; how they balance livelihood needs of forest dependent people in high population pressure areas; and which of the many forest values beyond carbon, should and will be rewarded, and how they will be valued. A case study of the GEF funded protected areas in Kenya carried out for Fourth Overall Performance Study (OPS 4) confirms this finding (Todd and van den Berg Forthcoming).

Although two thirds of GEF resources go to biodiversity conservation, no comprehensive independent evaluation of the GEF forest portfolio has been done beyond that carried out for OED's study of the World Bank's 1991 Forest Strategy in 1999 (Campbell and Martin 2000). Similarly while areas under community forestry and agro forestry have been expanding (FRA 2010; Sunderlin et al. 2005 & 2008; and Garrity et al 2010) there is little systematic evidence from evaluations of donor funded programs on how such programs could be used to improve forest cover or sustainable use of forests by forest dwellers. Mexico's community forestry based program is considered highly successful, but no systematic independent evaluation of this program seems to exist.

China's recent tenure reform effort—arguably the largest in the world involving more than 100 million hectares and providing part of the livelihoods to 400 million people—recognize the land rights of indigenous people and other forest dependent people and communities. Evidence emerging from China suggests improved forest cover and better

incomes are associated with farmers having land certificates (Xu 2010). Chinese policymakers argue that giving tenure rights to forest dependent populations reduces income and asset inequality and creates employment opportunities in rural areas by enabling forest dependent households and communities to use land as collateral. There is currently much debate in China about giving tenure rights to communities as opposed to individuals, and how tenure will evolve over time as forest land markets develop (Xu, White and Lele 2010).China's tenure reforms are engendering widespread interest among policymakers as far away as Brazil, Indonesia and Central Africa. Brazil has recognized indigenous people's rights over 100 million hectares and granted property rights to millions of households settled in the Amazon. It is now actively promoting community forest management. There is also recent evidence of success with community based agro forestry and tree planting on farms in several countries (PROFOR 2010a & 2010b; Chhatre and Agarwal 2008 & 2009; Coleman 2009; Bernstein, Clapp and Hoffmann 2009; and personal communication with Peter Dewees).

How these rights will evolve over time and across regions is a matter of much debate and little conclusive evidence. The IEG's Phase II review's several observations illustrates just how location specific and time sensitive forest cover outcomes can be (IEG 2010a).It notes that tenure security is likely to increase rather than reduce the risk of land conversion to agriculture. In the case of Costa Rica it notes that the evidence does not indicate whether the success in protected areas was due to less than competitive international agricultural prices or to payments for protection. It also notes that targeting environmental programs to achieve social objectives has generally been a challenge.

Variation is great among developing countries in the political will to grant land rights on forest land (whether to communities or individuals), and in country capacity to provide the necessary services. Sixty years after independence India has legally acknowledged rights of forest dwellers but implementation still lags (Sarin 2010). Nepal's government is reported to be on the verge of reversing the gains it has made in giving rights to forest communities (Raj 2010; Sapkota 2010;and Paudel 2010).Elite capture is a threat because of poor governance (Mansuri and Rao 2004;and IEG 2010c).Large-scale acquisitions of farmland in Africa, Latin America, Central Asia, and Southeast Asia by international investors have made headlines with concern about the extent to which the principles of free, prior and informed consent are being followed. (Cotula et al. 2009; Hattcher 2010; and Sunderlin, Hattcher and Liddle 2008).

Accordingly, whether land rights are improving, and where and how they will ensure socially equitable, environmentally sustainable and economically efficient outcomes are issues that have not yet received attention in monitoring and evaluation. Tenure rights need support from land legislation, enforcement, and regular monitoring. The long-term remedy is to build legal systems and civil society in developing countries to ensure greater domestic adherence to laws, transparency, accountability, and fairness. After nearly 60 years of development assistance, the international development community has only recently begun to take on this complex governance agenda and to build capacity to evaluate its performance in this area. The Bank's Agricultural Evaluation (IEG 2010c) notes that World Bank agricultural lending in support of land reform was a significant

share and that governments found its analytical and advisory studies on agricultural land tenure to be useful. But overall such analytical work has diminished. Besides there has been no evaluation of Bank work on forest tenure rights where property rights are often highly contested. The frequent use of international NGOs as external verifiers by REDD+ seems to be a short term palliative that does not build local institutions.

In its 5th replenishment the GEF promises to take a more holistic view of forests, applying Transformative Programs in Sustainable Forest Management/REDD+ that include programmatic approaches or projects that address objectives in more than one of GEF's focal areas of biodiversity, climate change, and land degradation. It aims for greater impact on sustainable forest management, with additional resources as incentives on top of the countries' respective country allocations. The Sustainable Forest Management (SFM) and REDD+ and Land Use, Land Use change and Forestry line of financing is a clear commitment to go beyond conservation in the high forest and high biodiversity areas (the Amazon Basin, the Congo Basin, Papua New Guinea and Indonesia) that got priority in GEF4. GEF has issued a number of policy and guidance documents relevant to REDD+ (GEF 2010a and 2010c).

Evidence is also abundant that rapid expansion of investment in physical infrastructure (particularly roads and dams), mining operations, weak governance, poorly defined and contested land rights, corruption, and poverty all play a role in deforestation. Solutions to most of these problems lie outside the forest sector. Reducing illegal logging, beyond that which has recently occurred, will require a comprehensive overhaul of government policy and regulation in forested countries. Except for Brazil's better scores on some fronts, all of the following requisites remain weak in most highly forested countries: high level policy, legislative framework, checks and balances, tenure and user rights, timber tracking, transparency, resource allocation, law enforcement and financial management (Lawson and McFaul 2010). The present authors conducted regression analysis using Government Effectiveness and other indicators as determinants of outcomes across 37 countries that have applied to the Forest Carbon Partnership Fund (including Brazil, China, and India). Government Effectiveness was strongly associated with Regulatory Quality and Rule of Law, yet many highly forested countries, including those that have applied to FCPF, have poor governance (Lele 2009; Karsenty and Singner 2009; and Zazueta 2009). Whether development can be achieved through FCPF interventions such as REDD+, beyond pilot projects remains to be seen. Evidence is surfacing that even Australia, a country with large tropical forests and good governance, has not been able to control deforestation and has used emission reductions from forests in a manner which has been questioned by some (Macintosh 2010).

The Energy Sector

Energy shortages are pervasive in developing countries, and the critical needs of the sector are financing and efficient and equitable supply, generating, and distribution channels. Improving climate friendliness of energy expansion is critical because if present policies continue, energy-related Carbon Di Oxide (CO2) emissions in the non-Organization for Economic Co-operation and Development (non-OECD) countries—

currently on par with OECD emissions—will be twice those in OECD countries by 2030. Even if all emissions from developed countries were to cease, a change in the emission trajectory of the developing world would still be needed to stabilize global GHG concentrations at the levels considered manageable by the Intergovernmental Panel on Climate Change. International Energy Agency (IEA) estimates the incremental cost of mitigating GHG emissions from energy use in non-OECD countries needed to limit long-term CO2 concentrations would range from US$85 billion to $230 billion a year during 2010–2030 depending on the level (IEA 2008). Equity considerations call for significant financial and technology transfers to developing countries in the international effort to curb GHG emissions. Although sustainable energy requires concerted efforts over the long term by a wide range of actors in industry, finance, government, and international organizations, it is still being addressed with short-term financing and policy frameworks that are not aligned with the scale of the challenge (World Bank Group 2009). The Bali Action Plan under COP 13 for the enhanced implementation of the Convention, called for new technology, financing, and capacitybuilding. GEF-financed energy investments and numerous carbon funds are supporting energy development.

GEF's OPS 4 reports that it's financing has enabled countries to develop national environmental plans in specific areas such as energy. However, several evaluation reports of the implementing agencies (e.g. The World Bank, UNDP, and ADB) suggest slow progress by national governments and by the implementing agencies themselves in mainstreaming climate and environmental concerns in policy advice and lending (World Bank Group 2009; and UNDP 2008).

The World Bank has committed itself to increase financing for renewable energy and energy efficiency by 30 percent a year, and to increase the share of low -carbon projects by 50 percent by Fiscal Year or Financial Year (FY) 2011. It has already expanded its commitments dramatically from $1.8 billion in2007 to nearly$10 billion in 2010.

The Bank's evaluation of energy projects notes that Bank support for energy projects increased from $200 million in 2003 to $2 billion in 2008 and contributed to reduced fuel expenditure or improved air quality (IEG 2009a). Yet, "few projects tackled regulatory issues related to end-user efficiency, though the Bank has invested in some technical assistance and analytical work" (IEG 2009a). While this lack of emphasis reflects the complexity of pursuing end-user efficiency, "biases that favor electricity supply over efficiency, inadequate investments in learning, and inattention to energy systems in the wake of power sector reform" were part of the problem. Market failures and lack of financial as opposed to economic return to improved energy efficiency inhibits private financing for it, making grant funds essential—as noted by the IFC's Efficiency improvement assessment in China (IEG 2010Bb).

A primary reason countries offer to postpone policy reform and increased tariffs is their adverse impact on particular groups, even when reforms are beneficial to the country as a whole. The evaluation recommended:

1. Make promotion of energy efficiency a priority, using investments and policies to adjust to higher prices and constructing more resilient economies;

2. Assist countries in removing subsidies by helping to design and finance programs that protect the poor and help others adjust to higher prices;

3. Promote a systems approach to energy; and

4. Motivate and inform these actions, internally and externally, by supporting better measurement of energy use, expenditures, and impacts (IEG 2009a).

Phase 2 of IEG's Climate Change Evaluation focused on the development, transfer, and demonstration of technical and financial innovations, finance, and implementation issues. It found the Bank's investments in renewable energy (mostly hydropower projects) to have mixed results. Returns to wind power were less attractive than for hydropower due to high costs and capacity utilization issues. Other technologies were even less competitive, Solar home system (SHS) components in 34 countries that used GEF-funded subsidies were more successful than IFC's, but only in niche markets where micro finance was available. The Bank has increased its focus on policy reforms needed to achieve energy efficiency, and its largest programs financing energy efficiency were in China and Eastern Europe. Elsewhere and with GEF help, the Bank and IFC have used loan guarantees in support of financial intermediaries to promote energy efficiency projects. Issues in targeting, credit worthiness, and performance contracts related to financial intermediation led to a conclusion that loan guarantees may be required over a longer period. The report contains a number of specific recommendations including the need for the Bank, given its small financing role in the energy sector, to act as a venture capitalist focusing on high impact activities with potential for scaling up, and to promote resource mobilization, incentives, and capacity building with a strong focus on learning and impacts.

For these changes to occur, environmental concerns need to be mainstreamed first and foremost in country policies and in the Bank's routine work. Major challenges include inadequate treatment of alternative sources of energy, measuring the costs and benefits of energy efficiency investments, and institutional and financial barriers to scaling up. Having several agencies tackle them together would be more desirable than a fragmented organization-by-organization approach. Echoing Isenman and Shakow (Isenman and Shakow 2010) and the World Bank's (World Bank 2008a) own lessons from global programs, it remains to be seen how the numerous new funds will be integrated with the work of country assistance, a challenge that most global funds have faced. The external advisory panel of the GEF OPS 4 recommends evaluations of organizations working in a single sector across the board to promote such integration (GEF 2010b).

Changes in the Environmental Architecture: Proliferation, Fragmentation, Verticalization and Bilateralization of Multilateral Aid

Recent evaluations of sector and policy lending and grant making have not sufficiently addressed the "Architectural Issues" that constrain countries' mainstreaming of environmental concerns, although recent IEG reports do stress greater coherence at the operational level within the World Bank Group (World Bank 2010a, 2010c and 2010e). Ironically, evidence suggests that the very success of environmental advocates in getting the environment on the global agenda helps explain the failure of the modest reform efforts to come to grips with the magnitude of the challenge.

In contrast to the former centralized and top down era, today's debates about climate and forestry occur in a more decentralized democratic setting of the Internet. A growing number of actors influence agendas, governance arrangements, growth of organizations and new partnerships—making global governance a thriving but a chaotic scene (Ballesteros 2010; Mainhardt-Gibbs 2009; Isenman and Shakow 2010; and World Bank 2008a). Different versions of the REDD (+) concept exist today, and it is unclear how the current REDD+ structure will ultimately be articulated either organizationally or in terms of its financing. Multiplicities of intergovernmental and bilateral actors are competing for leadership, influence, and funds in the forest sector, while developing countries themselves play a more key role in the process.

Following the Rio Conference on Environment and Development (UNCED) in 1992, the United Nations placed forest-related debates with the Intergovernmental Panel on Forests (IPF), set up in 1995. As the debates progressed, the IPF turned into IFF (Intergovernmental Forum on Forests) in 1997 and into UNFF (United Nations Forum on Forests) in 2000, with universal state membership. Through the first half of the 2000s, the UNFF architecture was bolstered by the creation of the CPF, which brought together 14 international organizations to support the UNFF in its mandate. However, with the emergence of REDD+, the United Nations set up a separate structure around a program known as United Nations Collaborative Program on Reducing Emissions from Deforestation and Forest Degradation (UN-REDD). Yet a part of the World Bank also champions REDD (+) and has spearheaded the debate on REDD (+) while it also established the Forest Carbon Partnership Facility in 2007 which championed RED and REDD. The World Bank's Carbon Initiatives work closely with UNFCCC and UN-REDD through a global partnership program with the various UN agencies. Association with UN agencies has been important to enhance the credibility of the World Bank's efforts on REDD+ with NGOs and developing countries. In recent months, UN-REDD and World Bank initiatives have together been seeking greater harmonization in anticipation of a global agreement on REDD (+), but whether this "binary" system within the World Bank will, or can, be anchored to the existing global forests architecture—one for carbon and one reflecting broader development challenges—and also grafted on to country assistance strategies, remains to be seen. While from an institutional perspective the current overlapping forests and REDD+ architecture remain split and without clear leadership, in financial terms the World Bank is emerging as the organizational leader on both REDD and REDD+. However, with the rise of bilateral donors such as Norway (in

Brazil and Guyana) and Australia (in Indonesia and Papua New Guinea), and the growing demand of developing countries to be in the driver's seat as manifested in debates in governing bodies of these organizations, the overall leadership seems even less clear. Large countries such as Brazil will likely remain in charge. Whether small countries with less capacity and large countries with less effective governance would be able to discern the quality of external inputs when large financial resources are available, is less clear. The lack of clarity about leadership between convention secretariats, the GEF secretariat, and developing countries are noted in GEF's OPS 4 (GEF 2010b).

Today's climate funds are organized in a more democratic fashion with equal representation of developing and developed countries. Civil Society organizations and the private sector often participate as observers following the GEF model of governance[6]. In this context the similarities and contrasts between the health and the environmental sector are noteworthy. In both cases there has been proliferation of international initiatives, and civil society has played a key role in shaping the global agendas. But in the case of health, civil society helped to substantially increase financing for healt*h* for the benefit of the poor, albeit more for treatment than for prevention (e.g., Bono's campaign to allocate increased funding to Human immunodeficiency virus/Acquired immune deficiency syndrome (HIV/AIDS)).By contrast, in the case of the environment, international NGOs, particularly in the North, have contributed little to international fund raising for the benefit of the poor, while constraining the use of environmental funds unless they were exclusively used in support conservation. This situation is hopefully changing significantly under REDD+ as the range of stakeholders championing different forest functions may be coming together. The World Bank Group and the donor community as a whole too may improve their collective approach to safeguards such that it focuses more on harmonization, problem solving and greater ownership in developing countries.

Global Environmental Architecture and the Great Deficit

Global Governance

Four dimensions of international governance typically assessed in evaluations include voice, accountability, effectiveness, and efficiency. The nearly 50 organizations or their partnerships 100 considered in this paper testify to the proliferation of actors in this area, and the dynamics among them that has shaped the content, speed, and processes of international negotiations and outcomes both overall and within the forest and energy sectors. Certainly the voices of bilateral donors (through growth of trust funds) and of civil society have increased. Accountability is, however, not equally supported by all actors. Thus whereas evaluations are routinely issued by some organizations (most

[6] The IMF's or the World Bank's governance has less representation of developing countries than the GEF's. The 32 GEF constituencies - 14 developed and 16 developing and 2 transition recipient countries - elect a representative country in the Council. The GEF instrument provides for a double majority voting system, a majority of participants and a majority of contributors; this arrangement is a compromise between the UN (with one vote for each country) and the IMF and the World Bank systems (where contributions to the subscribed capital determine the voting rights). The double majority approval process of the GEF is more democratic than the World Bank's. The GEF was one of the first trust funds to permit NGOs to observe Council meetings, but unlike other funds, NGOs in the GEF have voice but no vote.

notably, the World Bank, GEF, or Consultative Group on International Agricultural Research (CGIAR)), this is not the case for UN agencies. They typically provide the platforms for international agreements, global data, and information, and establish standards and provide policy and technical advice and assistance to developing countries. Despite their strong legitimacy and the substantial technical expertise on complex global issues which they can muster as true intergovernmental organizations, the importance of their critical functions has been grossly underrated both by donor countries who foot most of the bills or developing countries who see a small stake in them. Most these agencies remain under funded and under staffed.

Besides, evaluations that have taken place have had mixed impacts on improving individual organizations. Reforms in the area of international cooperation for the environment have been attempted since the 1970s, with visions ranging from small incremental changes to large radical changes (Rouassant and Maurer 2007), but with few real achievements (Biermann, Davies and Van der Grijp 2009). Growth in the number of organizations in the face of limited resources has resulted in intense competition for resources and rivalry in environmental leadership, e.g. between UNDP and UNEP (UNDP 2008; and UNEP 2009). Whereas reform of the individual organizations has been challenging as in the case of UNEP, reforming the system as a whole (e.g. One UN and its relationship to specialized agencies) has been an even bigger challenge (Shaw 2010). Concurrently increased bilateralization of multilateral aid through the growth of trust funds has increased the voice of bilateral donors in international financial institutions, but it has also made the role of the World Bank (ranked high by donors for its fiduciary and other standards) in financing of Global Public Goods (GPG) relative to the UN organizations controversial among developing countries.

Together International Development Association (IDA) and International Bank for Reconstruction and Development (IBRD) loans, trust funds, and IFC and MIGA activities—while miniscule in relation to either the needs or demands—are the single largest source of funding for environmentally-related operations even excluding GEF (of which the World Bank is trustee and implementer). The World Bank's various Climate and Carbon funds are meant to strengthen the catalytic role of the UNFCCC regime in encouraging multilateral bodies to support mitigation and adaptation. Despite the many contributions of some of these funds to knowledge, their proliferation has undoubtedly increased transaction costs and confusion in developing countries and within the World Bank itself, while reducing effectiveness and efficiency of the system. The findings of GEF's latest evaluation, OPS 4, highlight the issues of growing, overlapping, and fragmented mandates; unclear and confused guidance from conventions; few resources; high pent-up demand from developing countries; and increased competition from the World Bank, regional Banks, and bilateral donors for programs related to climate change.

The Finance Deficit

The Monterrey consensus reached in 2002 called for developing countries to improve governance and policies aimed at increasing economic growth and reducing poverty, and for high-income countries to provide more and better aid and greater access to their markets[7]. From 2000 to 2006 developing countries as a group (including Sub-Saharan Africa) increased their economic growth and, for the first time as a group, were growing faster than industrial countries. Policy reforms and market and trade liberalization have been followed by booming demand and investments from China and other developing countries (Aggarwal Forthcoming). But since Monterrey, the average aid effort by the 22 member countries of the Development Assistance Committee (DAC) of the Organization for Economic Cooperation and Development (OECD) was just 0.45 per cent of national income. When weighted by the size of their economies, total net aid flows from the DAC members represented only 0.28 per cent of their combined national income (UN 2008). Financial assistance to least developed countries (LDCs) also fell short of the commitments made. The 2005 Paris Declaration on Aid Effectiveness represents the most comprehensive effort to date to improve aid coordination and alignment with national priorities. Progress has also been slow in meeting the Paris targets for 2010 set in 2005. Despite acknowledging the central importance of country ownership, progress on aid coordination and alignment with national priorities of developing countries agreed to in the 2005 Paris Declaration on Aid Effectiveness has also been slower than the targets donors set for themselves in 2005. The growing importance of vertical sectoral global programs has exacerbated the lack of coherence, leading the drafters of the Paris Declaration to appeal to the donors to think twice before starting new funds and to build on the Paris Accra Principles including retrofitting new funds with those principles (Isenman and Shakow 2010; and World Bank 2008a). Non-DAC countries' total Official Development Assistance (ODA) increased (in constant prices). Available partial records show non-OECD ODA went up from $1.5 billion in 2000 to $5.1 billion in 2006. Clearly additional donor effort is needed to improve dialogue and coordination with the new stakeholders so as to avoid further aid fragmentation, lack of transparency, and increasing transaction costs among recipient countries (UN 2008).

Against this overall background, the World Development Report 2010 estimates the annual incremental cost of climate mitigation at US$139 billion to US$175 billion, and of adaptation to climate change at US$28 billion to US$100 billion. Base costs for climate mitigation alone are much higher, ranging between US$265 billion and US$565 billion annually by 2030, compared to mitigation finance of a mere US$9 billion forthcoming during the 2008-2012 period (WDR2010). Investments needed to secure other environmental services provided by terrestrial and marine ecosystems are larger by multiples.

Most of the increase in environmental assistance in the period 1994-97, following United Nations Conference on Environment and Development (UNCED) and the establishment

[7] In 2002 at the International Conference on Financing for Development in Monterrey, Mexico, high-income and developing countries reached consensus on mutual responsibilities for achieving the Millennium Development Goals.

of UNEP and GEF has shown a steady decline until recently when climate-related and trust fund based partnerships burst on the scene. During the ten-year period 1998-2007 there was no clear trend in the assistance going to the environment, with some evidence of a decline from 2003 onwards until its reversal due to climate change funding which took off only in 2008. Aid to renewable energy rose from 3.4 percent of sector allocable ODA in 1998 to 13.6 percent in 2007 (Markie 2009).With the first significant increase in replenishments, the World Bank pledges substantial increase in aid to environment including renewable energy. However, the issues of its alignment internally within the World Bank Group (WBG) and externally with the functions of UN agencies and GEF remain unaddressed, and indeed unattended to.

A third of the assistance to the environment is multilateral, similar to the average for all sectors. The biggest challenge, beyond alignment, will be to substantially increase disbursements of funds for environmental programs if the new climate-friendly policies shift in favor of protected areas, REDD Readiness, renewable energy, and adaptation programs for the poor are all slow disbursing investments compared to the traditional capital intensive fossil fuel projects in the energy sector that have come under heavy criticism from international NGOs (Mainhardt-Gibbs 2009). On the other hand bilateral donors such as Norway and Australia are committing large sums in support of climate friendly policies under conditions that are seemingly less stringent than those of the World Bank.

Important new sources of funding for the environment take the formof18differentmulti-donor Climate Trust Fund partnerships, of which a number are in the Bank. In September 2008 GEF's Climate Funds had received pledges of US$6.14 billion for projects to be implemented through the World Bank and the regional development banks. This compares with pledges of new funds to GEF-5 of US$ 3.54 billion in current dollars compared to $2.30 billion in the GEF-4 replenishment, for the first time a significant increase of 54%. Donors have expressed a concern that the GEF, an agency created to provide finance for environment, may be sidelined (Markie 2009), but this remains to be seen in view of the decisions made by the GEF Council in its meeting on June 29-july 1, 2010. GEF has proposed a broadly defined approach, which can be applied from protected forests, to production forests, to degraded forests in need of restoration. Under its new System for Transparent Allocation of Resources (STAR) allocation mechanism all countries would qualify for assistance.

III. Conclusions, Lessons, and Implications Going Forward

Donors in the Driver's Seat

Although the challenges are global, the agendas of international organizations are more donor-driven along traditional North-South lines today than ever before. Instead of the country strategies and priorities of developing countries being the drivers of donor country assistance strategies, priorities, and resource allocation, aid flows are opportunistically determined by donor constituencies willing to support vertical programs. Raising money vertically to spend horizontally has its own risks, as World

Bank (World Bank 2008a) and Isenman and Shakow (Isenman and Shakow 2010) rightly note. Notwithstanding the stated emphasis on country ownership and country priorities, there are fewer attempts to help countries identify the needs of their populations (not always the same as country demands), and to respond to them. UNDP Evaluations stress that international organizations need to routinely encourage countries to establish their national development priorities and indicate how they will be addressed (UNDP 2008).

Deficiencies in Strategic Relevance in Relation to Ground Realities

Reviews of both (a) activities of international environmental agencies and (b) the independent evaluations of global environmental programs and organizations reveal the rapidly evolving external context in which international organizations and their environmental programs and funds operate, and the proliferation of financing mechanisms in the area of climate change. The reviews shed light on the deficiencies in the architecture itself and in the overarching strategies relative to the environmental realities on the ground. Intense competition among actors (both for current influence and future positioning) in the context of the limited resources for climate programs and uncertain prospects for an overarching binding global climate agreement, drive the agendas. The dual-focused reviews also raise questions about the relevance, efficacy, efficiency, and effectiveness of the current global environmental architecture and of the often-piecemeal nature of evaluations. Reviewing the organizations and their evaluations provides a limited context for the rapidly changing operational environment.

The dramatic changes in the overall aid architecture since the early 1990s are particularly noticeable since 2008, reflecting anticipation of a climate accord. Bilateral funding and influence in multilateral institutions have become worrisome, but the creation of many separate programs outside the main business lines of these organizations has also created challenges for mainstreaming environment in country assistance strategies while reconciling the diverse objectives and strategies of donors and recipients. The World Bank is now the largest mobilizer of environmentally related trust funds in support of climate initiatives. This situation raises multiple issues for developing countries relating to voice, costs, resources, and control, even though the new funds have equal representation of developed and developing countries in governance much like the GEF. The currently stalled UNFCCC accord has made its long-term future uncertain—in contrast to the health sector, where new funds went through new organizations, such as the Global Fund to Fight Aids. Tuberculosis and Malaria or the US President's Emergency Plan for AIDS Relief (PEPFAR). The relative merit of these alternative models of financing, as well as that of the GEF, should be systematically explored in the future.

GEF's enabling activities provide support for development of national plans and strategies for environmental management. Yet GEF's evaluations offer limited insights into its role in the establishment of country strategies or policies, in linking to other sectors, and in addressing harmonization among organizations. Cross-sectoral learning is also limited. For example, the challenging issues in the health sector—such as the need to balance health system capacity development with investments focused on eradication of

specific diseases—are very relevant in the area of forestry and climate change. But, as the earlier discussion of REDD+ indicated, approaches to forest protection, conservation, production, and income earning opportunities tend to be handled on a piece meal basis by each constituency and donor.

Weak Monitoring and Evaluation, and Limited Contribution of Evaluations to Knowledge Generation

Virtually every evaluation report stresses the importance of better monitoring and evaluation and the need for a shift from an "approval oriented" to an "outcome-oriented" culture. Donors are demanding more impact analysis. Moreover, challenges remain in the evaluation of efficiency, equity, and environmental sustainability of outcomes. For example, protected areas may be strong on environmental outcomes and efficiency but weak on livelihood benefits or sustainability; community forestry may be strong on equity but demanding of institutions but unknown in terms of efficiency and environmental outcomes. Much recent evidence suggests an urgent need for independent evaluations of country policies to learn cross country lessons about landscape management.

Furthermore, many of the current methods of evaluation are not suitable to evaluate environmental projects. Experimental design focuses on impacts of project interventions; but many of the impacts in protected areas are long term and contingent on factors outside the protected areas, such as population pressure, urbanization, pollution, illegal trade, and corruption. With the evaluation of adaptation projects, even the definition of objectives poses problems. It is a travesty to push for results orientation and payment for delivery of services when so much emphasis is placed on the performance of developing countries and so little on monitoring the behavior of donors, outcomes, and capacity building.

Standards for accountability and transparency are unequal across agencies. The World Bank, GEF, and the CGIAR conduct periodic independent evaluations, but others are not as consistent (e.g. UN agencies, civil society, think tanks, and bilateral donors). There are few independent evaluations of the work of international NGOs (barring IUCN). When systematic evaluations are done, they show that the cost of designing and supervising forest (including forest carbon) projects is high, disbursements tend to be slow, and the measurable benefits (particularly those that can be purchased and certified, such as emission reductions) tend to be uncertain due to a combination of policy, institutional, legal, methodological, and measurement issues. Developing countries' own experiments, however, are showing remarkable promise and should be assessed to better understand their performance.

There are major overlaps and gaps even as the number of international agreements and their government signatories has grown. Overlapping mandates of conventions and complex resource allocation mechanisms have caused more confusion than clarity (e.g., GEF's Resource Allocation Framework during GEF's 4th replenishment). The new STAR promises improvements. Yet confusion and disagreement remain among

convention participants (and between donor and recipient countries) on how to apply convention guidance on several key principles for the GEF, such as the concepts of instrumentality, full cost recovery, and co-financing.

Conventions lack clear priorities. The GEF Council received 317 requests of which over half were from the Climate Change Convention. GEF has taken steps to engage convention secretariats in GEF Council meetings and to improve communications with conventions. As the primary implementer of all major conventions, GEF has considerable experience and may well have comparative advantage in taking on climate change, as it promises to break down the silos of conventions related to climate, biodiversity, and desertification. A joint evaluation of the comparative advantages of GEF vis a vis other similar organizations will help improve the matrix management of conventions and organizations. The joint evaluation of Infrastructure and Environment, conducted by the Evaluation Cooperation Group of the OECD, shows considerable scope for reducing the negative environmental impacts of infrastructure by moving from a "do no harm" to a proactively "do good" approach at both project and national levels.

A Huge Funding Gap

The resources available to address environmental (and related developmental) issues is extremely small in relation to the amounts the World Development Report 2010 estimates for mitigation of climate change alone ($130 billion to $175 billion annually), even taking into account the recent increase in commitments of up to $10 billion annually by 2012**.** If other environmental concerns are added, such as the degradation of soil, water, and marine resources, this estimate must be multiplied many times over. New donor funding in GEF's 5th replenishment of $3.49 billion in current dollars, while 54 percent above the $2.17 billion in GEF 4 in nominal dollars, is only 6.1 percent above GEF 4 in constant dollars. Given GEF's large and growing mandate, a point the GEF OPS 4 stresses, the increase is miniscule compared to either the demand or the need.

The modest resources reflect the general ethos of development assistance: a decline in real resource transfers to all regions and significant positive flows of net disbursements (after paying for debt obligations) mostly to Sub-Saharan Africa. However, GEF's long gestation lags in processing projects to meet the requirements of GEF and its implementing agencies may also have played a role. Resources are quite limited just at a time when development assistance is experiencing a major paradigm shift from poverty reduction and growth to the delivery of environmental services by aid recipients where donor payments are contingent on the delivery of services that are independently verified and certified. But many developing countries lack the political will, the quality of governance, the institutional and financial capacity, and the technology to deliver such services. Furthermore, it is unclear if this shift embodies any real additionality of resources or if it merely involves reorganizing the existing aid financing.

Mission Creep

The extreme shortage of resources in the face of an expanding agenda has resulted in mission creep amongst existing intergovernmental organizations and the growth of new initiatives; both strategies are seen as ways to increase competitiveness in a resource scarce world. This has led to a huge increase in transaction costs for developing countries. In the case of the small and low-income countries (i.e., the majority of aid recipients) these costs have become onerous. Without fewer new initiatives, an effort towards the consolidation of existing initiatives, and far greater financial resources to implement ongoing initiatives on a consistent, predictable, and long-term basis, it is unlikely that environmental issues will be addressed in any serious way.

Incoherence: The Case of Safeguards

Apart from the sheer number of factors influencing the agenda, incoherence in policies and procedures of international organizations compound the problem for developing countries. Across organizations, there are critical inconsistencies in their treatment of safeguards, indigenous people, forest certification, forest management, procurement, and disbursement procedures. Without standard or systematic treatment of safeguards across REDD+ implementing organizations, safeguards will likely remain a major stumbling block in the implementation of REDD+.

Governance

Governance of the climate initiatives is more democratic, i.e., more like GEF than the World Bank or IMF, with equal representation of developing countries[8]. Civil society and the private sector participate as observers. However, in international financial institutions, the bilateralization of multilateral aid with the huge growth of trust funds, each with differing rules and expectations, has compounded problems of governance and management. Paradoxically, donors have established trust funds with the World Bank because the Bank manages funds with high standards for fiduciary oversight, safeguards, accountability, and transparency. But donors do not always apply those same standards to their own bilateral financing of operations in the countries. As a result, developing country costs of doing business with the World Bank are often greater than with donors. The World Bank may become the largest manager of trust funds without implementing much development finance, with the latter being carried out by other implementing agencies. To avoid this risk the Bank has increasingly moved to other financing instruments including development policy loans, sector loans and Swaps which use ex ante environmental and social assessments (safeguards apply to investment lending). But it is hard to assess the knowledge creation or transfer associated with these instruments.

Capacity Building

The Bali Road Map emphasized the importance of training and capacity building to enable developing countries to effectively tackle their own climate change challenges.

[8] See Footnote 2

Yet the newly emerging climate change literature and the reporting of internationals organizations suggest that many more resources go to the international consulting industry (dominated largely by the north) than to capacity building in developing countries. Similarly, many more resources go to Northern NGOs than to those in the south. Third party monitoring by international NGOs rather than by strengthened domestic constituencies provides one of many such examples. Building capacity of national organizations to conduct third party monitoring should become mandatory in donor programs[9].

Engagement with the private sector needs to increase. IFC is creative in the way it is adjusting to the external environment. IFC's financing role is increasing.GEF is doing some private sector partnerships phasing out ozone-depleting substances in transitional economies in Eastern Europe, and in the control and management of ships ballast water and sediments[10]. Overall, however, multilateral activity with the private sector has been limited and non-strategic, leading OPS 4 to note the need for greater and more effective engagement with the business sector.

Will the Global Community Rise to the Challenge?

The current global environmental architecture is clearly inadequate to meet today's challenges. A low carbon strategy for developing countries is necessary but not sufficient to achieve global environmental objectives. As part of this strategy, large-scale set-asides of publicly owned forest land may be necessary, but outside of remote areas, they are unlikely to be attained without simultaneous and substantial investment in food, livelihoods, and agricultural research and development in developing countries. This will mean integrating agricultural development with forest protection for "sustainable development." Large-scale investment in access to energy is critical to increase employment, income, and quality of life in vast rural areas. And yet at scale, hydropower, solar, and wind energy have all posed complex challenges of technology, distribution grids, market failure, and management. Devising effective solutions calls for greater innovation, deeper and more realistic analysis in developing countries, and institutional responses at the global level which are less fragmented, more coherent, more accountable for results, and less driven by resource capture. Under business-as-usual scenarios, significant portions of the investments needed in developing countries will have to come from growth in their own economies rather than from North-South resource transfers. Reining in climate change will remain a pipe dream while small-scale activities will no doubt continue, and households who are not responsible for climate change will bear the brunt of increased risks and uncertainty.

[9] With the introduction of the new Resource Allocation Framework during GEF 4 (2007-2011), the role of NGOs from developing countries in GEF operations has diminished. GEF Partnerships with local actors, e.g. civil society, are similarly weak. On the other hand GEF has been an active supporter of international NGOs.

[10] GEF Evaluation Office 2009.

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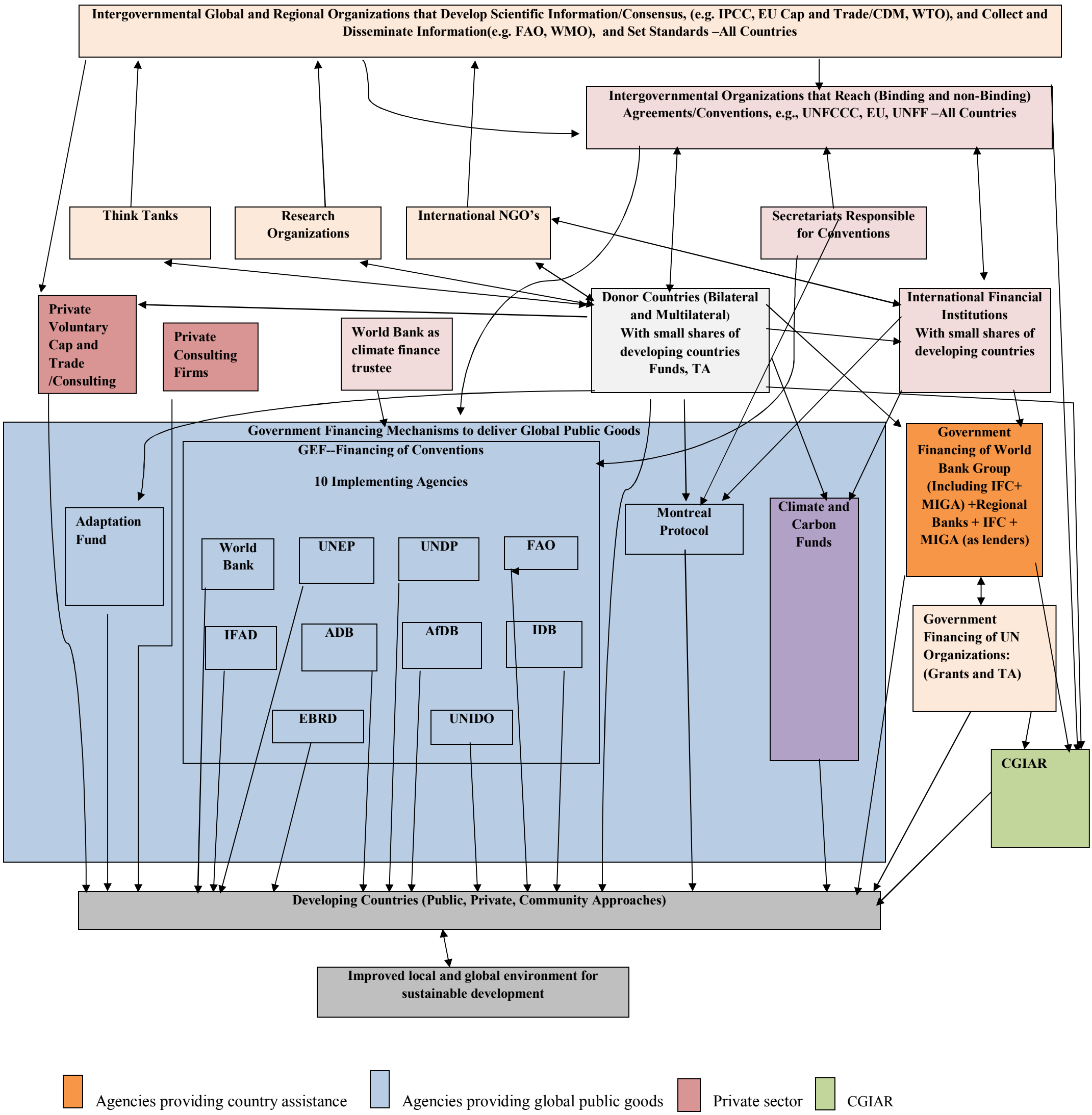
Annex 1: Figure 1: Stylized View of the Global Environmental Architecture:

Global Agreements, Rule Setting and Financial Flows to Developing Countries



Foot Notes

20 Donor Countries Participating in Carbon Funds:

Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Ireland, Italy, Japan, Luxembourg, Netherland, Norway, Portugal, Spain, Sweden, Switzerland, UK, USA.

12 Carbon Funds:

Bio Carbon Fund, Carbon Fund for Europe**,** Community Development Carbon Fund**,** Danish Carbon Fund**,** Italian Carbon Fund**,** The Netherlands Clean Development Mechanism Facility, The Netherlands European Carbon Facility, Prototype Carbon Fund , Spanish Carbon Fund**,** Umbrella Carbon Facility**,** Forest Carbon Partnership Facility, Carbon Partnership Facility**.** (The World Bank Carbon Finance Unit (CFU) uses money contributed by governments and companies in OECD countries to purchase project-based greenhouse gas emission reductions in developing countries and countries with economies in transition. The emission reductions are purchased through one of the CFU's carbon funds on behalf of the contributor, and within the framework of the Kyoto Protocol's Clean Development Mechanism (CDM) or Joint Implementation (JI)).

21 Climate Funds:

Climate Investment Fund--------Clean Technology Fund & Strategic Climate Fund-----Pilot Program for Climate Resilience, Forest Investment Program & Scaling-Up Renewable Energy Program in Low Income Countries.

Adaptation Fund, Amazon Fund , Congo Basin Forest Fund, Environmental Transformation Fund - International Window, GEF Trust Fund - Climate Change focal area (GEF 4), GEF Trust Fund - Climate Change focal area (GEF 5), Global Climate Change Alliance, Global Energy Efficiency and Renewable Energy Fund , Hatoyama Initiative, International Climate Initiative, International Forest Carbon Initiative, Least Developed Countries Fund, MDG Achievement Fund – Environment and Climate Change thematic window, Special Climate Change Fund, Strategic Priority on Adaptation, UN-REDD Programme

45 UN Organization (Including Convention Secretariats) that have some responsibility for environmental functions:

The Convention on Biological Diversity (CBD), The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), The Convention on the Conservation of Migratory Species (CMS), Economic and Social Commission for Africa (ECA), United Nations Economic Commission for Europe (ECE), Economic and Social Commission for Latin America and the Caribbean (ECLAC), Economic and Social Commission for Asia and the Pacific(ESCAP), Economic and Social Commission for West Asia (ESCWA), Food and Agriculture Organization (FAO), Global Environment Facility (GEF), The International Atomic Energy Agency (IAEA), International Civil Aviation Organization (ICAO), International Fund for Agricultural Development (IFAD), The International Labour Organization (ILO), The International Maritime Organization (IMO), International Strategy for Disaster Reduction Secretariat (ISDR), International Trade Centre (ITC), International Telecommunication Union (ITU), Office for the Coordination of Humanitarian Affairs (OCHA), Office of the High Commissioner for Human Rights (OHCHR), Ramsar Convention on Wetlands Secretariat (RAMSAR), Secretariat of the Basel Convention (SBC), United Nation Convention to Combat Desertification (UNCCD), United Nations Conference on Trade and Development (UNCTAD), United Nations Department of Economic and Social Affairs, Division for Sustainable Development (UNDESA/DSD), United Nations Development Program (UNDP), United Nations Environment Program (UNEP), United Nations Educational Scientific and Cultural Organization (UNESCO), United Nations Framework Convention on Climate Change (UNFCCC), United Nations Forum on Forests (UNFF), United Nations Population Fund (UNFPA), United Nations Human Settlements Program (UN-HABITAT), United Nations High Commissioner for Refugee (UNHCR), United Nations Children's Fund (UNICEF), United Nations Industrial Development Organization(UNIDO), United Nations Institute for Training and Research (UNITAR), United Nations University (UNU), World Tourism Organization (UNWTO), Universal Postal Union (UPU), World Food Programme (WFP), World Health Organization (WHO), World Intellectual Property Organization (WIPO), World Meteorological Organization (WMO), The World Bank Group (WORLD BANK), World Trade Organization(WTO).

Illustrative list of International Non Governmental Organizations:

WRI, WWF, CI, IUCN, TNC, Rainforest Alliance Forest Trends, the National Wildlife Federation, Bank Information Center, Greenpeace, Global Witness, IIED,IUCN, Right and Resources Initiative (RRI), CGIAR institutions such as CIFOR and ICRAF.

29 Bilateral Donors active in environment:

Australian Agency for International Development (AusAID) , Belgian Technical Cooperation (BTC), Canadian International Development Agency (CIDA) , Department for International Development-- United Kingdom (DFID), Deutsche GesellschaftfürTechnischeZusammenarbeit GmbH (GTZ) , Directorate-General for Development Cooperation, Belgium (DGDC) , Dutch Ministry of Foreign Affairs , Federal Ministry for Economic Cooperation and Development--Germany (BMZ) , French Development Agency (AFD) , General Directorate for International Development Cooperation (Hellenic Aid) , Irish Aid , Japan International Cooperation Agency (JICA) , Luxembourg Agency for Development Cooperation (Lux-Development S.A.), Ministry for Foreign Affairs (Finland) , Ministry of Foreign Affairs and Cooperation, Spain (MAE) , Ministry of Foreign Affairs--Denmark The South Group, Ministry of Foreign Affairs-- Singapore (MFA) , New Zealand's International Aid & Development Agency (NZAID), Norwegian Agency for Development Cooperation (Norad) , Portuguese Institute for Development Support (IPAD) , Spanish Agency for International Co-operation (AECID) , State Secretariat for Economic Affairs--Switzerland (SECO) , Swedish International Development Cooperation Agency (Sida) , Swiss Agency for Development and Cooperation (SDC) , The Austrian Development Agency (ADA) , The Ministry of Foreign Affairs-- France (MAE), Directorate General for International Cooperation and Development (DGCID), The Ministry of Foreign Affairs of Japan (MOFA) , The Ministry of Foreign Affairs of Italy, Directorate General for Development Cooperation (DGCS), U.S. Agency for International Development (USAID).

10 GEF Implementing Agencies:

World Bank, UNDP, UNEP, IFAD, FAO, IDB, ADB, AfDB, UNIDO and EBRD.

United Nations Member States (192) —144 Developing and 48 Developed Countries:

Afghanistan *Albania* Algeria *Andorra* Angola Antigua and Barbuda Argentina Armenia *Australia Austria* Azerbaijan Bahamas Bahrain Bangladesh Barbados *Belarus Belgium* Belize Benin Bhutan Bolivia *Bosnia and Herzegovina* Botswana Brazil Brunei *Bulgaria* Burkina Faso Burundi Cambodia Cameroon *Canada* Cape Verde Central African Republic Chad Chile China Colombia Comoros Congo Costa Rica Cote d'Ivoire *Croatia* Cuba Cyprus *Czech Republic* Democratic People's Republic of Korea Democratic Republic of the Congo *Denmark* Djibouti Dominica Dominican Republic Ecuador Egypt El Salvador Equatorial Guinea Eritrea *Estonia* Ethiopia Fiji *Finland France* Gabon Gambia Georgia *Germany* Ghana *Greece* Grenada Guatemala Guinea GuineaBissau Guyana Haiti Honduras *Hungary Iceland* India Indonesia Iran Iraq *Ireland* Israel *Italy* Jamaica *Japan* Jordan Kazakhstan Kenya Kiribati Kuwait Kyrgyzstan Laos *Latvia* Lebanon Lesotho Liberia Libya *Liechtenstein Lithuania Luxembourg* Madagascar Malawi Malaysia Maldives Mali *Malta* Marshall Islands Mauritania Mauritius Mexico Micronesia *Monaco* Mongolia *Montenegro* Morocco Mozambique Myanmar Namibia Nauru Nepal *Netherlands New Zealand* Nicaragua Niger Nigeria *Norway* Oman Pakistan Palau Panama Papua New Guinea Paraguay Peru Philippines *Poland Portugal* Qatar Republic of Korea *Republic of Moldova Romania Russia* Rwanda Saint Kitts and Nevis Saint Lucia Saint Vincent and the Grenadines Samoa *San Marino* Sao Tome and Principe Saudi Arabia Senegal *Serbia* Seychelles Sierra Leone Singapore *Slovakia Slovenia* Solomon Islands Somalia South Africa *Spain* Sri Lanka Sudan Suriname Swaziland *Sweden Switzerland* Syria Tajikistan Thailand *The Former Yugoslav Republic of Macedonia* Timor-LesteTogo Tonga Trinidad and Tobago Tunisia Turkey Turkmenistan Tuvalu Uganda *Ukraine* United Arab Emirates *United Kingdom* United Republic of Tanzania *United States* Uruguay Uzbekistan Vanuatu Venezuela Vietnam Yemen Zambia Zimbabwe.

*Italics are Developed Countries.

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http://www.climateinvestmentfunds.org/cif/

www.climatefundsupdate.org/listing

www.unep.org/un-env.

www.globalplanofaction.org

Annex 2: Institutional, Program, Sector, and Thematic Independent Evaluations of Organizations Responsible for Environmental Finance, Research and Other Assistance

	TITLE	INSTITUTION/PROGRAM UNDER EVALUATION	DATE
1.	**Report of the Sixth External Review of the Bioversity International**	Bioversity International (CGIAR)	2009
2.	**Report of the Second External Program Review of the Center for International Forestry Research (CIFOR)**	Center for International Forestry Research (CIFOR)	2006
3.	**FAO: The Challenge of Renewal. Report of the Independent External Evaluation of the Food and Agriculture Organization of the United Nations.**	Food and Agriculture Organization (FAO)	2007
4.	**Fourth Overall Performance Study of the GEF (OPS4): Progress Towards Impact**	Global Environmental Facility (GEF)	2010
5.	**Evaluation of the GEF Strategic Priority for Adaptation (SPA): Full Evaluation Report.**	Global Environmental Facility (GEF)	2010
6.	**GEF Impact Evaluation of the Phase-Out of Ozone-Depleting Substances in Countries with Economies in Transition, Volume One: Theory of Change**	Global Environmental Facility (GEF)	2009
7.	**Evaluation of the operation of the Least Developed Countries Fund for adaptation to climate change: Joint External Evaluation**	Global Environmental Facility (GEF)	2009
8.	**Midterm Review of the Resource Allocation Framework: Evaluation Report No. 47.**	Global Environmental Facility (GEF)	2009
9.	**Joint Evaluation of the GEF Small Grants Program: Evaluation Report No. 39.**	Global Environmental Facility (GEF)	2008
10.	**GEF Biodiversity Policy Review: Impact Evaluation Information Document No.3, Prepared by Foundations of Success**	Global Environmental Facility (GEF)	2007
11.	**The Role of Local Benefits in Global Environmental Programs: Evaluation Report No. 30.**	Global Environmental Facility (GEF)	2006
12.	**GEF Climate Change Program Study**	Global Environmental Facility (GEF)	2004
13.	**Third Study of GEF's Overall Performance (OPS3): Evaluative Framework.**	Global Environmental Facility (GEF)	2003
14.	**The First Decade of the GEF: Second Overall Performance Study (OPS2)**	Global Environmental Facility (GEF)	2002
15.	**Study of GEF's Overall Performance (OPS1).**	Global Environmental Facility (GEF)	1999
16.	**Studies in IMF Governance: A Compendium.**	International Monetary Fund (IMF)	2009
17.	**Building the Future: A report on the IUCN Program 2005 – 2008.**	International Union for the Conservation of Nature (IUCN)	2009
18.	**Report of the Third External Program and Management Review (EPMR) of the International Water Management Institute.**	International Water Management Institute (IWMI)	2008
19.	**Ecosystems and human well-being: current state and trends. Findings of the Condition and Trends Working Group of the Millennium Ecosystem Assessment.**	Millennium Ecosystem Assessment	2005
20.	**The Nexus Between Infrastructure and Environment.**	the Evaluation Cooperation Group of the International Financial Institutions (African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, European Investment Bank, Inter-American Development Bank, International Monetary Fund, and the World Bank Group)	2007
21.	**Evaluation of the Role and Contribution of UNDP in Environment and Energy.**	The United Nations Development Program	2008
22.	**Year Book 2010: New Science and Developments in Our Changing Environment**	The United Nations Environment Program (UNEP)	2010
23.	**Report of the Third External Program and Management Review of the World Agroforestry Center (ICRAF)**	The World Agroforestry Center (ICRAF)	2007
24.	**Global Program Review, The Global Water Partnership. Corporate and Global Evaluations and Methods.**	The World Bank	2010
25.	**Growth and Productivity in Agriculture and Agribusiness, Evaluative Lessons from World Bank Group Experience.**	The World Bank	2010
26.	**International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD). Global Program Review, Volume 4, Issue 2.**	The World Bank	2010
27.	**Safeguards and Sustainability Policies in a Changing World: An Independent Evaluation of World Bank Group Experience.**	The World Bank	2010
28.	**Water and Development, Volume 1: An Evaluation of World Bank Support, 1997 – 2007**	The World Bank	2010
29.	**Climate Change and the World Bank Group, Phase I: An Evaluation of World Bank Win-Win Energy Policy Reforms.**	The World Bank	2009
30.	**Annual Review of Development Effectiveness 2009: Achieving Sustainable Development.**	The World Bank	2009
31.	**The Global Invasive Species Program. Global Program Review, Volume 3, Issue 4.**	The World Bank	2009
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48. The CGIAR at 31: An Independent Meta-Evaluation of the Consultative Group on International Agricultural Research, Volume 1: Overview Report; Volume 2: Technical Report; Volume 3: Annexes	The World Bank	2003
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53. Bridging Troubled Waters: Assessing the World Bank Water Resources Strategy.	The World Bank	2002
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