



CORRECTING THE WORLD'S GREATEST MARKET FAILURE: Climate Change and the Multilateral Development Banks

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I. INTRODUCTION

Climate change has been called “the greatest market failure the world has seen,”¹ and many are looking to the Multilateral Development Banks (MDBs) to help correct it. MDBs such as the World Bank, the Asian Development Bank (ADB), and the Inter-American Development Bank (IDB) are public financial institutions whose missions are to alleviate poverty by financing projects and policy in developing countries. Many of their efforts focus on sectors that will be key to reducing greenhouse gas (GHG) emissions including energy, transport, forestry, and agriculture (see Box 1). They are also active in sectors where adaptation to the impacts of climate change is a critical challenge, such as water, health, and also agriculture. Unless economic development policies and practices reduce GHG emissions worldwide, the resulting change in climate will bring harm to millions, particularly the poor. The MDBs have a central role to play in supporting low-carbon development in their client countries.

When the world’s leading industrialized nations (the G8) met in Gleneagles in 2005, they agreed on an action plan on Climate Change, Clean Energy and Sustainable Development, which emphasized the role of MDBs in helping developing countries respond to climate

BOX 1	MDBs and GHG Intensive Sectors
<p>MDBs provide financing, policy advice, and some grants to developing and transitioning country governments and finance private sector actors (through debt, equity and guarantees) on behalf of the international community. The World Bank Group, for example, is owned by over 180 member governments. Each member government is a shareholder of the Bank: the number of shares a country holds is based roughly on the size of its economy. The United States is the largest shareholder, followed by Japan, Germany, the United Kingdom, and France. As such, the G8 is especially influential in establishing World Bank policies. MDB portfolios have significant investments in sectors with substantial greenhouse gas emissions, including transport, oil and gas, electric power, and mining. Recent annual investments in these sectors have totaled:</p> <ul style="list-style-type: none"> • World Bank Group: \$9.8 billion (28 percent of total 2007 lending of \$34.7 billion) • Inter-American Development Bank: \$2.1 billion (33 percent of total 2006 lending of \$6.4 billion) • European Bank for Reconstruction and Development: \$1.6 billion (25 percent of total 2006 lending of \$6.5 billion) • Asian Development Bank: \$2.8 billion (38 percent of total 2006 lending of \$7.4 billion) <p><i>Sources:</i> World Bank Group 2007 Annual Report (Infrastructure; Oil, Gas, Mining and Chemicals sectors). IDB 2006 Annual Report (Energy; Transportation and Communication; Industry, Mining & Tourism; Productive Infrastructure sectors). ADB 2006 Annual Report (Energy; Transportation and Communications sectors). EBRD 2006 Annual Report (Natural Resources; Power and Energy; Municipal Infrastructure; and Transportation sectors).</p>	

change (see Box 2). The G8 tasked the World Bank with mobilizing an “investment framework for clean energy,” recognizing that the MDBs’ technical expertise, development policy advice, and investment support should play an essential part in catalyzing a transition to sustainable energy in a carbon constrained world.

Since 2005, pressure on the Banks to address climate change has increased significantly with calls for a “Climate

Change Marshall Plan” to finance low carbon development,² and for the World Bank to re-orient itself as a “bank for the environment.”³ The 2007 Bali Action Plan adopted through the UN Framework Convention on Climate Change (UNFCCC) emphasizes the role the MDBs can play in supporting developing countries to identify appropriate national actions to address climate change. At the beginning of 2008, the United Kingdom, the United States, and Japan committed billions of dollars to a World Bank admin-

BOX 2

The Role of MDBs in the G8 2005 Gleneagles Plan of Action on Climate Change

In 2005, the G8 recognized the important role that MDBs could play in helping advance global efforts to respond to climate change. The Gleneagles plan of action committed the G8 to:

“9(a) Work with the multilateral development banks (MDBs) to expand the use of voluntary energy savings assessments as a part of major investments in new or existing projects in energy intensive sectors;

25 (a) make the best use of existing resources and financing instruments and develop a framework for energy investment to accelerate the adoption of technologies which enable cleaner, more efficient energy production and use;

25 (b) explore opportunities within their existing and new lending portfolios to increase the volume of investments made on renewable energy and energy efficiency technologies consistent with the MDBs’ core mission of poverty reduction;

25 (c) work with interested borrower countries with significant energy requirements to identify less greenhouse gas intensive growth options... and ensure that such options are integrated into Country Assistance Strategies;

25 (d) develop local commercial capacity to develop and finance cost-effective projects that promote energy efficiency and low-carbon energy sources.

35 (a) Invite the World Bank to develop and implement ‘best practice’ guidelines for screening their investments in climate sensitive sectors to determine how their performance could be affected by climate risks, as well as how those risks can best be managed, in consultation with host governments and local communities...”

Source: Gleneagles Plan of Action on Climate Change, Clean Energy and Sustainable Development, http://www.fco.gov.uk/Files/kfile/PostG8_Gleneagles_CCChangePlanofAction.pdf.

istered Clean Technology Fund (see Box 3) to help finance developing countries’ transitions to cleaner technologies. To rise to such tasks, MDBs will need to ensure that climate change becomes an integral component of their efforts to support sustainable economic development and poverty reduction.

In early 2005, WRI’s policy brief *Mainstreaming Climate Change at the Multilateral Development Banks* found that climate change had been considered in less than 20 percent of the World Bank’s lending for the energy sector.⁴ Three years later, this policy brief reviews the Country Strategies, and project documentation for the energy sector portfolios of the World Bank Group,⁵ the ADB, and the IDB. Some 35 percent of global GHGs come from electricity, heat, and other fuel combustion;⁶ an assessment of the extent to which climate change has

been “mainstreamed” into these MDBs energy sector portfolios should therefore indicate the extent to which climate change has been “integrated” into their overall portfolios.⁷

At a conceptual level, MDBs acknowledge that climate change considerations need to be mainstreamed into their operations. *Yet our analysis reveals that operationally, opportunities to mitigate emissions and reduce climate risk are still not systematically incorporated into MDB strategies and project development.* More than 60 percent of financing in the energy sector across these institutions does not consider climate change at all. MDBs remain heavily invested in “business as usual,” despite recognizing the need for transformative changes. MDBs need to mainstream climate change, by consistently seeking opportunities to reduce emissions, promote low carbon

growth, and respond to the likely impacts of climate change when designing strategies and projects across their entire portfolios. To help correct the “world’s greatest market failure,” MDBs must do more to internalize the environmental and social costs of climate change into their decision-making.

II. THE INTERNATIONAL RESPONSE TO CLIMATE CHANGE

In 2007, the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) concluded with unprecedented certainty⁸ that the observed global warming over the past 50 years has resulted from human activities. The planet is warming as a result of increasing atmospheric concentrations of GHG emissions, which results primarily from the burning of fossil fuels and from deforestation. In his comprehensive review of the economic implications of climate change, Nicholas Stern, formerly the World Bank’s chief economist, concluded that the costs of climate change from declining agricultural production, heat-waves, droughts, flooding events, biodiversity loss, disease spread, and soil erosion could consume 5 to 20 percent of global gross domestic product (GDP). While the details of Stern’s conclusions have been the subject of some academic debate, a political consensus is emerging that the costs of inaction will be much greater than the investment required to significantly mitigate climate change.

Addressing climate change demands leadership from industrialized nations, which have contributed most to the historical build up of GHGs in the atmosphere. While poverty remains a major problem in developing countries, their contribution to global GHG emissions

BOX 3

Financing the Incremental Costs of Low Carbon Development? The Climate Investment Funds

In February 2008, the governments of the United Kingdom, the United States and Japan announced their intention to “[pool] efforts to support a new clean technology fund, administered by the World Bank, help developing countries bridge the gap between dirty and clean technology... and boost the World Bank’s ability to help developing countries tackle climate change.”

The World Bank has proposed a portfolio of Climate Investment Funds (CIFs) to “provide concessional finance for policy reforms and investments that achieve development goals through a transition to a low carbon development path and a climate resilient economy.” As of April 2008, the World Bank proposes to establish a Strategic Climate Fund (SCF) which will support activities to build resilience to climate change (adaptation activities), as well as mitigation in the energy and forest sectors; and a separate Clean Technology Fund (CTF). The specific modalities of these funds are still being negotiated as of this publication. The CIFs will provide grants and concessional finance blended with financing from the International Bank for Reconstruction and Development and from Regional Development Banks (the Asian Development Bank, African Development Bank, European Bank for Reconstruction and Development, and the Inter-American Development Bank). A range of instruments to leverage private sector investment will be used, and efforts made to integrate the CIFs into mainstream development financing and policy dialogues. Donor countries and recipient developing countries will have equal representation on the governing committee.

U.S. President George Bush has pledged \$2 billion to the CTF over the next three years although the U.S. Congress will have to approve this request. The U.K. pledged part of its £800 million (\$1.6 billion) Environmental Transformation Fund, and has indicated that it will make additional contributions. Japan has also announced a \$10 billion Cool Earth 50 program to support developing countries address climate change, part of which will be directed through the CTF.

In responding to initial proposals from the Banks on the structure of these funds, the international community has reinforced the notions that (i) the Global Environment Facility (GEF) administered Adaptation

Fund is the appropriate mechanism through which developed countries should meet their obligations to finance adaptation efforts; (ii) developing countries must have ownership of programs supported by the funds, and equal voice in their governance.

Many observers have expressed concerns that activities and programs implemented through the CIFs and the CTF in particular may undermine or predetermine the outcomes of global negotiations on technology transfer and financing taking place as part of the UN Framework Convention on Climate Change (UNFCCC). More broadly, concerns have been raised about whether these funds will support or undermine established multilateral mechanisms to implement the major environmental agreements. For example, the Convention on Biodiversity (particularly given that the CIFs may fund the protection of forests). For its part, the World Bank has stated that the fund administration will be consistent with UNFCCC principles. Nevertheless, it remains to be seen whether the funds made available through the CIF will in fact be additional to development assistance commitments in practice. In addition, the CIFs may not adequately reflect the “polluter pays” principle—that developed countries must pay the costs of responding to climate change—since developing countries will have to repay resources made available through concessional loans. Both the United States and Japan have suggested that their contributions to the CTF should be administered as grants.

It is most urgent to deploy clean energy technologies in major economies that significantly contribute to global greenhouse gas (GHG) emissions, whereas many of the World Bank’s clients are poor countries (where basic access to energy is still a serious development challenge) and relatively small emitters. For many of these countries, adaptation and resilience efforts that would be supported by the SCF may be a more immediate concern than mitigation. The CTF design is intended to support large scale emission reductions. While the use of these funds should be technology neutral so that the most appropriate technologies for local needs can be deployed at scale, clear principles for determining what is in fact most appropriate are urgently needed. The use of CIFs to promote the adoption of best available coal technologies to achieve such reductions is currently permitted. However, “best available”

technologies such as supercritical coal are already more cost effective than conventional sub-critical coal in most cases, particularly since they require less fuel. It would seem a poor use of scarce resources to address climate change, to support investments in marginally less GHG intensive technologies that are already more cost effective than conventional coal and will still emit large amounts of carbon for decades to come. Technologies such as distributed renewable energy technologies, and some energy efficiency programs (particularly those that improve the efficiency and reach of transmission and distribution systems) are far more likely to have more direct benefits for poverty alleviation. Clean coal technologies, including carbon capture and sequestration ready facilities, may be able to play a role in reducing emissions from centralized energy infrastructure that powers economic growth, but are less likely to directly meet poverty alleviation and development priorities.

It is essential that the CIFs spark truly transformative changes in how climate change is integrated into economic development choices supported by the Multilateral Development Banks (MDBs). The success of the CIFs should be judged, at least in part, by whether they are supported by systematic changes in practice within the MDBs that mainstream climate change considerations into decision-making.

Sources: Henry Paulson, Alistair Darling & Fukushima Nukaga, “Financial bridge from dirty to clean” *Financial Times*, 7 Feb. 2008, <http://search.ft.com/ftArticle?queryText=paulson+darling+climate+change&aje=true&id=080207000559&ct=0>; Reuters, “Finance chiefs urge support for clean energy fund” 7 Feb. 2008, <http://uk.reuters.com/article/environmentNews/idUKN0763586520080207>; Prayas Energy Group, “Some Good News in the Power Sector: Initial Success in Solicitations for Ultra Mega Power Projects” *Economic and Political Weekly* Jan 2007, http://prayaspune.org/peg/publications/ultra_mega_commentary_epw_081A01.pdf; World Bank, “Consultation Draft on Climate Investment Funds”, 22 Jan. 2008; World Bank, Proposal for a Strategic Climate Fund, 3 April 2008.

BOX 4

The Special Role of the United States

The United States, as the World Bank's dominant shareholder, nominates the Bank's President, and through its replenishment of the Bank's International Development Agency, helps shape Bank policy. Historically, it has also been the world's leading contributor of greenhouse gas (GHG) emissions, and, beyond its UN Framework Convention on Climate Change (UNFCCC) commitments, has been reluctant to engage in significant multilateral efforts to confront global climate change and invest in GHG emissions reductions.

The United States has played an important role in prompting international financial institutions to link environmental and social considerations to their operations and investments, but until recently this has not included support for a Bank role in slowing global warming. Indeed, even as the World Bank worked to develop a Clean Energy Investment Framework (CEIF), U.S. government representatives undermined efforts to use the Framework to prioritize climate change

in the Bank's operations. According to the former Chief Scientist of the World Bank, Robert Watson, deputies of former World Bank President Paul Wolfowitz with close ties to the Bush administration, sought to water down references to climate change in early drafts of the CEIF.

In recent months, however, U.S. positions have begun to shift, reflecting in part the political momentum currently observed within the United States on the need for a federal policy on climate change mitigation. The U.S. government's recent pledge to commit \$2 billion to support clean technology research through a World Bank Group administered fund is a tangible sign of the beginnings of a change in attitude regarding the role of MDBs in a global response to climate change.

Source: Krishna Guha, Deputy's woes stir World Bank turmoil, *Financial Times*, 25 April 2007, http://www.ft.com/cms/s/0/e67b4470-f2c8-11db-a454-00b5df10621.html?ncklick_check=1.

is growing rapidly. For example, China's 2007 carbon emissions are thought to have exceeded U.S. annual emissions.⁹ Even if industrialized countries reduce their GHG emissions by 90 percent, significant emission reductions by developing countries will be necessary to keep global warming within 2° Celsius.¹⁰ At the same time, the rising costs of conventional fossil fuels such as oil and growing concerns about energy security in both developed and developing countries have sparked new interest in alternative energy choices, and a new opportunity to invest in low carbon options.

Since 1994, the Bank's major shareholders and the majority of its client countries have been parties to the UNFCCC and, with the notable exception of the United States, have joined the Convention's Kyoto Protocol (see Box 4).¹¹ Parties to these instruments are "guided" by the

principle that policies and measures to protect the climate system should be integrated into national development programs "in order to achieve sustainable development."¹² Guided also by the principle of "common but differentiated responsibility," developed countries have committed to helping developing countries meet the incremental costs of mitigating climate change. Furthermore, they have committed to helping developing countries meet the additional costs of adapting to climate change.

The idea that developing countries will also take actions to respond to climate change (both for mitigation and adaptation purposes) is central to the Bali Action Plan adopted by the parties to the UNFCCC in December 2007 (see Box 5). These "measurable, reportable and verifiable" actions must be nationally appropriate, embedded in sustainable

development strategies, and supported by technology transfer and finance. The Bali Action Plan explicitly notes the importance of multilateral bodies such as the MDBs in supporting both mitigation of climate change and adaptation to the impacts of climate change "in a coherent and integrated manner."¹³

The Bali Action Plan's emphasis on these factors suggests a central role for MDBs in this global response, as facilitators of national sustainable development strategies in their client countries. As providers of policy and financial assistance, MDBs are likely to be one vehicle through which developed countries support developing countries' mitigation and adaptation efforts.¹⁴ MDBs must help developing countries calculate the incremental costs of low carbon development, and then work to identify creative and legitimate ways to meet them, for example by accessing grant funding, including through the Global Environment Facility (GEF) which has provided billions of dollars for climate mitigation, as well as the new proposed Climate Investment Funds. The MDBs must also provide technical assistance, knowledge, and financing to support developing countries to define, design and implement appropriate actions to respond to climate change.

III. THE CHANGING ROLE OF MULTILATERAL DEVELOPMENT BANKS

MDBs have launched many new initiatives to address climate change over the past three years including efforts to: (i) account for GHG emissions and improve energy efficiency; (ii) support renewable energy; (iii) manage forests sustainably; (iv) promote carbon finance; and (v) adapt to climate change. In addition, they

have produced significant new research and analysis to advance understanding of the linkages between climate change and economic development.

Greenhouse gas accounting and energy efficiency. The European Bank for Reconstruction and Development (EBRD) has been a leader on these issues: it accounts for GHG emissions associated with all projects expected to emit more than 20,000 tons of CO₂-eq. (see Box 6). Emissions are calculated for the project as a whole rather than for the Bank's funded portion. Similarly, the International Finance Corporation's (IFC) environmental and social performance standards require that clients account for GHG emissions for all projects expected to emit more than 100,000 tons of CO₂-eq. Clients are also required to consider project design options that would result in reduced emissions.¹⁵ These standards have subsequently been adopted by private financial institutions that have signed onto the Equator Principles. In 2007, former World Bank President Paul Wolfowitz announced that the World Bank Group institutions would begin to measure and manage the GHG emissions associated with their portfolios; the International Bank for Reconstruction and Development (IBRD), the International Development Agency (IDA), and the IFC are still exploring how to operationalize these commitments in practice, however. Transparent GHG accounting should facilitate more accurate assessments of the incremental costs associated with reducing emissions, which can in turn help project managers and MDB clients find ways to finance these incremental costs.

Renewable Energy: MDBs have played an important role in supporting renew-

BOX 5	The Bali Action Plan
<p>Underpinning the Bali Action Plan (BAP) is the concept that both developed and developing countries will undertake mitigation actions. These efforts will include:</p> <p>“1.b.(i) Measurable, reportable and verifiable nationally appropriate mitigation commitments or actions, including quantified emission limitation and reduction objectives, by all developed country Parties, while ensuring the comparability of efforts among them, taking into account differences in their national circumstances;</p> <p>(ii) Nationally appropriate mitigation actions by developing country Parties in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner. ...</p> <p>(vii) Ways to strengthen the catalytic role of the Convention in encouraging multilateral bodies, the public and private sectors and civil society, building on synergies among activities and processes, as a means to support mitigation in a coherent and integrated manner;...”</p>	
<p>“1.(c) Enhanced action on adaptation, including, inter alia, consideration of: ... (v) Ways to strengthen the catalytic role of the Convention in encouraging multilateral bodies, the public and private sectors and civil society, building on synergies among activities and processes, as a means to support adaptation in a coherent and integrated manner;...”</p> <p>“1.(e) Enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology cooperation, including, inter alia, consideration of:</p> <p>(i) Improved access to adequate, predictable and sustainable financial resources and financial and technical support, and the provision of new and additional resources, including official and concessional funding for developing country Parties; ...</p> <p>(v) Mobilization of public- and private-sector funding and investment, including facilitation of carbon-friendly investment choices;</p> <p>(vi) Financial and technical support for capacity-building in the assessment of the costs of adaptation in developing countries, in particular the most vulnerable ones, to aid in determining their financial needs...”</p>	

able energy projects in developing countries, including through implementation of projects supported by grants from the GEF. The World Bank Group is an implementing agency of the GEF,¹⁶ and other MDBs including the ADB, EBRD and IDB, are “execut-

ing agencies” that can also implement GEF projects.

Reducing Emissions from Deforestation: The World Bank Group has played an important role in the international development community by presenting

BOX 6	Mainstreaming Energy Efficiency at the EBRD
<p>The European Bank for Reconstruction and Development (EBRD) screens all projects for potential energy efficiency components as part of the appraisal process, and rates projects based on their potential for saving energy. It is the only MDB with an explicit mandate to promote energy efficiency, and has a dedicated energy efficiency team that works with its corporate and industrial clients to conduct energy efficiency audits</p>	
<p>to identify opportunities for energy savings. Under EBRD's 2006 energy strategy, project managers are required to calculate the costs of not taking advantage of opportunities for energy efficiency, as well as the potential gains of doing so.</p>	
<p><i>Source:</i> European Bank for Reconstruction and Development. EBRD Sustainability Report 2006: Promoting Sound and Sustainable Development, http://www.ebrd.com/pubs/general/sus06.pdf.</p>	

BOX 7

Mobilizing Carbon Markets to Reduce Deforestation: The Forest Carbon Partnership Facility

Deforestation is a major source of carbon dioxide emissions—roughly 20 percent globally—that contributes to global warming and also causes local air pollution. Tropical forests have immense biodiversity value, and their loss and degradation is a major problem for the millions of people dependent on forest ecosystem services for their livelihoods. New proposed programs implemented through the World Bank's Forest Carbon Partnership Facility (FCPF) are expected to play a central role in the global "learning" process on how to reduce emissions from deforestation in developing countries.

The FCPF is a \$300 million effort that includes a "Readiness Mechanism" of \$100 million to help developing countries get "ready" to trade credits from deforestation, and a Carbon Finance Mechanism of \$200 million. In defining "Readiness" under the FCPF, the World Bank has focused on technical requirements for quantifying emissions reductions, tracking forest cover change, and distributing financial incentives. Yet the drivers of deforestation are enormously complex, and there are significant risks that a carbon market driven approach could create perverse incentives.

The World Bank's own record on governance and environmental sustainability in the forestry sector has been mixed. Further, in developing the FCPF, there has been limited stakeholder engagement at the local level, and the fundamental issues of human rights and forest governance have not always been emphasized. As the trustee of the FCPF, the World Bank is tasked with aligning the objectives of forested developing countries, donor governments and prospective buyers of emission reductions from the facility, in order to create a commodity that can be bought and sold. Because the bulk of the FCPF's resources are dedicated to Carbon Finance, there may be pressure to find countries ready to participate in these transactions even though the fundamental challenges of readiness have not been resolved. In setting up a new line of business through this facility, the World Bank is in a position where its ability to gauge whether the Facility is effectively meeting its objectives may be compromised, and thus faces a potential conflict of interest.

Source: World Bank Draft Information Memorandum on the Forest Carbon Partnership Facility (December 2007).

sustainable forest management as an opportunity to mitigate climate change in developing countries. Deforestation accounts for nearly 20 percent of global GHG emissions, and the World Bank has been very active in the forest sector.¹⁷ It is therefore important for the World Bank to integrate climate considerations into all of its forest activities. Independent reviews of the Bank's record in the forestry sector suggest mixed performance on environmental issues and on governance. For example, the World Bank's Inspection Panel recently concluded that the World Bank had not complied with its own policies on the need to take the rights of indigenous people into account in supporting forest reform in the Democratic Republic of the Congo.¹⁸ The MDBs will need to

focus more on fundamental issues of human rights and forest governance that lie at the heart of deforestation.¹⁹ In October 2007 the World Bank launched a new Forest Carbon Partnership Facility to explore ways to harness carbon markets to reduce emissions from deforestation and degradation (see Box 7). Over the past year, the idea of Reducing GHG Emissions from Deforestation in Developing Countries (REDD) has attracted significant political attention, particularly through UNFCCC processes. The World Bank has emerged as a "de facto" global mechanism for donor coordination on forests and climate change. Ideally, these efforts should reward countries that protect the rights of forest dependent communities and empower them to have a more central role in forest management,

while also reducing GHG emissions and protecting the critical ecosystem services forests provide.

Carbon Finance: MDBs have also been active in carbon finance, particularly through the Clean Development Mechanism (CDM) of the Kyoto Protocol (see Box 8).²⁰ Through the CDM, GHG-reducing projects in developing countries (e.g., installing wind-based power instead of coal-fired power) can generate emission credits that can then be used by industrialized countries to offset their own domestic emissions, as required under the Kyoto Protocol. The World Bank has pioneered these efforts through its Prototype Carbon Fund, which was established in 2000, and now has more than eleven different carbon funds in place. Efforts are underway to scale up the role of carbon finance in bank operations through its Carbon Partnership Facility (CPF). The IFC, for its part, is focusing its efforts on helping project developers address risks associated with delivering emission reductions to the market. In 2006, the ADB launched a new Carbon Market Initiative to expand the scope and ambition of its carbon finance activities. Through its Sustainable Energy and Climate Change Initiative, the IDB also intends to launch new carbon finance funds.

Adaptation to Climate Change: The MDBs have implemented a number of pilot projects (both loan and grant) to address climate risk in sectors such as agriculture, water and rural infrastructure. The World Bank has developed a "Climate Risk Screening Tool" that enables project managers to identify vulnerabilities and consider responses to make their projects more resilient to the impacts of climate change. IFC is exploring methodologies to evaluate

the risks of climate change for its investments and clients.²¹ The World Bank now serves as a trustee for the GEF administered Adaptation Fund, which is financed by a 2 percent charge on CDM transactions. MDBs are also exploring ways to use financial instruments that have been designed to address natural disasters, in order to address climate risk. The World Bank serves as trustee of the Global Facility for Disaster Reduction and Recovery, a \$50 million facility to support countries considered at high risk of natural hazards to develop and implement disaster risk mitigation strategies. The IDB has a Disaster Prevention Fund and a Disaster Prevention Sector Facility aimed at helping countries reduce vulnerability to natural hazards. In addition, the IFC and World Bank are preparing a commercial facility, the Global Index Reinsurance Facility, to insure people in poor countries against weather and natural catastrophe risk.

While the MDBs have many new initiatives in place to address climate change, however, core financing decisions still do not always give due emphasis to options to mitigate and respond to climate change.

IV. INTEGRATING CLIMATE CHANGE CONSIDERATIONS INTO OPERATIONS

In this section, we assess the degree to which climate change concerns are reflected in the country strategies and energy lending portfolios of the World Bank Group (IBRD, IDA and IFC), the ADB, and the IDB.

*Country Strategies*²² are used by MDBs to plan their support to each of their borrowing countries. These strategies are

often developed in partnership with the borrowing country, and are intended to provide a sound understanding of development challenges, as well as to identify priority sectors for Bank engagement. While these strategies must be country driven to respond to national needs, the MDBs are well placed to link national priorities to global challenges such as climate change. Country Strategies are therefore a logical starting point for MDBs to begin working with developing countries to consider opportunities to address climate change.

In preparing this policy brief, WRI reviewed all active Country Strategies at the World Bank, IDB and ADB.²³ We assess whether each strategy: (i) identified priority sectors that are central to climate change mitigation or will be affected by climate change; (ii) set any goals to mitigate GHG emissions in these sectors; (iii) considered the potential to adapt to the potential impacts of climate change; (iv) considered options to meet the incremental costs of low carbon development; and (v) considered the additional costs of adaptation. The complete results of our country strategy analysis are included in Annex 1 of this policy brief (available online at <http://www.wri.org/iff>).

Next, we take a close look at the MDBs' *portfolios in the energy sector*. Since energy is at the heart of the challenge of mitigating climate change, the consideration of climate change in this portfolio should reflect the extent to which these issues have been mainstreamed into the MDBs' operations overall. MDBs have made highly significant interventions in the energy sector in developing countries to support reliable access to energy. We review publicly available documentation for all energy projects supported between 2000 and 2007. We assess each energy sector loan against four criteria: (i) whether GHG emissions associated with the project were accounted for; (ii) whether alternative approaches that would have been more climate friendly were considered, such as options to enhance efficiency, low carbon technologies, measures to build the capacity of the recipient institution to manage emissions or otherwise deal with climate change; (iii) whether options to access additional resources to meet the "incremental costs" of less GHG intensive approaches (including alternative technologies) were considered; and (iv) whether the planned outputs or outcomes of supporting the projects include any climate change considerations (such as reduced GHG emissions, enhanced capacity manage clean energy

BOX 8 MDBs and the Carbon Market

MDBs have historically played a central role in international carbon finance, helping to inform international practice. The carbon markets are increasingly crowded as the private sector steps into the opportunity space carved out by the Clean Development Mechanism (CDM). Yet the CDM has not promoted fundamental shifts in infrastructure choices, and CDM projects have tended to remain on the margins of "core" sector decision-making. The role of carbon finance in deploying new clean energy technologies at scale and

delivering real development impacts has not always been clear. The World Bank may be well placed to explore new ways to harness carbon markets in combination with policy changes and the principles of co-benefits to enable more fundamental changes in infrastructure choice.

Sources: Michael Wara, *Measuring the Clean Development Mechanism's Performance and Potential*, Stanford Program on Energy for Sustainable Development (Working Paper 56, July 2006).

technologies, other regulatory or policy reform to support low carbon growth). This analysis does not fully address the extent to which vulnerability to climate change—which is a significant risk for this sector—has been incorporated into project development and appraisal.

If more than two of these criteria have been fully met, we consider climate change to have been “integrated.” All of these criteria will not be relevant in each case: for example, it might not be appropriate to calculate the GHG emissions of a loan to improve the management capacity of a power utility. However, such a project could be assessed on the basis of whether it included support for measures such as efforts to build the capacity of that utility to manage GHG emissions, or incorporate low carbon technologies into its energy mix. If a project meets one or two criteria, then we consider climate change to have been “mentioned.” If none of these criteria are met, then climate change is “not considered” or “ignored.” The complete results of our energy loan portfolio analysis are presented in Annex 2 of this policy brief (available online at <http://www.wri.org/iff>).

It would be useful to assess the extent to which these criteria are met in MDB portfolios for other key GHG intensive sectors such as transport or urban development to gain a more complete understanding of the extent to which climate change has been mainstreamed into overall MDB portfolios, although such analysis is beyond the scope of this policy brief. It is also necessary to develop criteria to assess the extent to which adaptation has been integrated into projects in sectors that are highly vulnerable to climate change such as health, water, and agriculture.

The World Bank Group

In developing its “Clean Energy Investment Framework” (CEIF), the World Bank focused on opportunities to: (i) extend access to energy services, particularly for the poor in Africa; (ii) explore options for low carbon growth; and (iii) build capacity to adapt to climate variability and change. Early versions of the CEIF were criticized for framing their efforts against “business as usual” GHG emission scenarios of 450 ppm to 1,000 ppm, rather than actively trying to help find solutions to keep global warming within 2° Celsius. In response to an independent review of its record in the Extractive Industries that concluded the World Bank should phase out of new investments in coal and oil, in 2004 the Bank committed to increasing its support for renewable energy projects by 20 percent per year over the next five years (although this target was set relative to an unusually low baseline level of investment).²⁴ This target has now become a central element of the progress the Bank has reported in implementing the CEIF. As Box 4 notes, representatives of World Bank President Paul Wolfowitz’s office and some governors of the Bank did not consistently prioritize the climate change agenda even after the Gleneagles Plan of Action was released.

The Bank also launched a Carbon Partnership Facility (CPF) in 2007, which seeks to make strategic, transformative interventions in key sectors by linking policy reform efforts and technical assistance efforts that generate large scale emission reductions with carbon finance revenues. It is intended to create new partnerships between companies and governments that would sell emission reductions, and prospective buyers of reduction credits. Realizing these objectives will require significant innovations

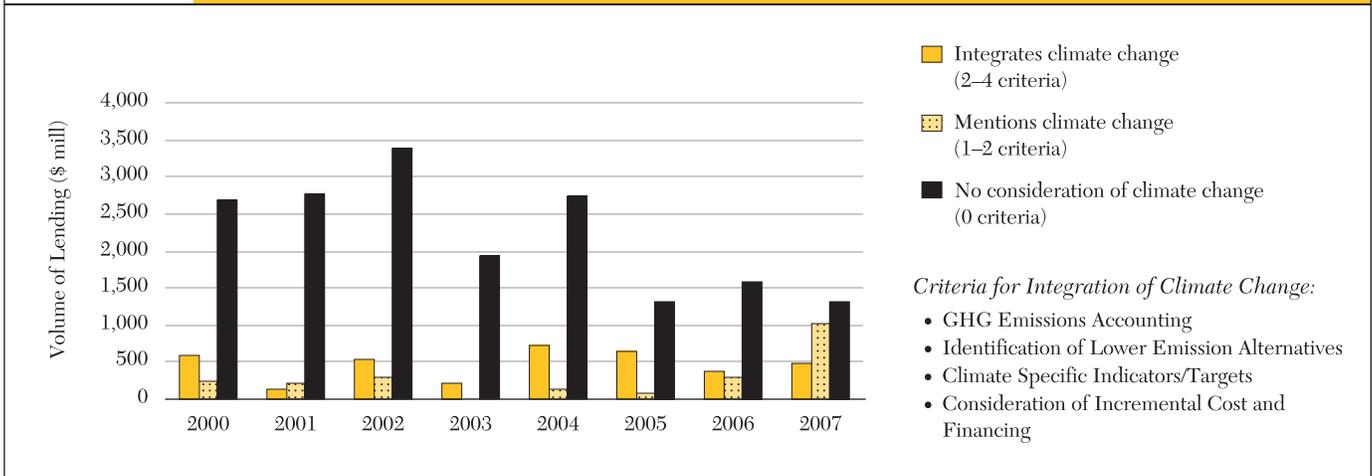
in methodologies for measuring and verifying emission reductions in a plausible way. It will be essential to ensure that projects implemented through the CPF are consistent with—and do not predetermine—the outcomes of negotiations on the role of carbon finance under the UNFCCC (see Box 8).

In late 2007 the World Bank Group began developing a “Strategic Framework on Climate Change and Development” that considers a range of climate change implications for its mission and operations. The IFC is developing a climate change strategy for its corporate funding portfolio that seeks to capitalize on emerging opportunities to invest in clean energy technologies, and to partner with financial institutions in developing countries to support renewable and efficiency projects. IFC is also exploring new approaches to project development including the use of a “shadow price” for carbon that would allow project managers to begin to integrate the costs of climate change into project development (see Box 11).

*Country Strategies.*²⁵ Several of the World Bank CASs have begun to integrate mitigation and adaptation considerations, but overall attention to these issues in CASs remains inconsistent. Of the 54 CASs reviewed, only 32 mention opportunities for GHG mitigation in sector level interventions; and 18 identify concrete targets or outputs to this end. Many CASs for major emerging economies note opportunities to reduce emissions. For example, the Mexico strategy discusses opportunities to reduce emissions from energy, industry, and transport, and sets clear goals to scale up renewable energy options. It considers a variety of possible sources of financing for these low carbon options including carbon finance and

FIGURE 1

Volume of World Bank Energy Finance that Considers Climate Change



GEF funds. However, the Bank does not yet take climate change considerations into account in all energy sector interventions in recipient countries: for example, the Philippines CAS emphasizes the need to restructure the power sector, but fails to consider the major opportunities that could exist to develop renewable energy and reduce GHGs in this context.²⁶ The CAS for Honduras notes the need to reduce deforestation and emissions from unsustainable agricultural practices. By contrast, the Cambodia CAS emphasizes forestry as a priority sector for World Bank involvement without considering climate change at all.

With regard to adaptation to climate change, 6 of the 54 CASs reviewed note vulnerability to climate change, and 3 CASs include indicators or targets related to adaptation, while 5 additional strategies consider opportunities to access adaptation finance. The CAS for the Organization of Eastern Caribbean States gives significant attention to climate change vulnerability, sets targets to improve disaster risk management and adaptation, and opportunities to access GEF financing to support these

programs. On the other hand, while the World Bank's current CAS for Bangladesh emphasizes natural disaster management as a priority issue for the country, it does not mention the impacts of climate change as an additional factor that will further strain these efforts and the economy. These examples illustrate the need for more systematic attention to how climate change is linked to the development choices of the countries the World Bank supports.

A key related challenge is to reconcile private sector investment strategies with the climate change and energy for sustainable development agendas. For example, a two volume World Bank strategy to "Revitalize Infrastructure Investment in Brazil" notes that Brazil's environmental licensing procedures present a significant administrative hurdle and that environmental considerations need to be incorporated into upstream policy and planning. But the Bank's strategy makes almost no mention of renewable energy and efficiency options (despite the fact that Brazil has very progressive legislation in place, that is driving significant investment in clean energy). Nor does it

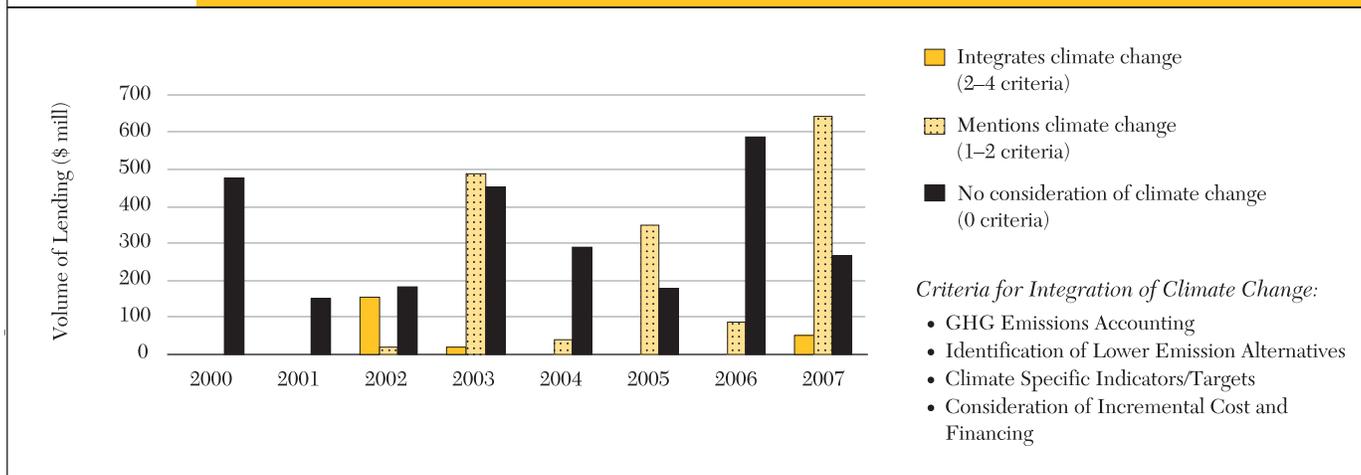
mention the potential impacts of climate change and changing water levels on reliability of water supply, which could significantly affect this hydropower dependent program.

Energy Portfolio: Our analysis of the World Bank's recent annual energy project portfolio reveals some improvement in the extent to which it has considered climate change (see Figure 1). However, in 2007, almost 50 percent of lending in this sector was made without any attention to climate change at all.

Over the past three years, less than 30 percent of its financing has met more than two of the criteria for "integrating" climate change into decision-making. The IFC has noted the relevance of climate change in the majority of its energy sector projects, but has only managed to integrate GHG emissions reductions into less than 10 percent of these efforts when measured by volume of financing (see Figure 2).²⁷ Oil & gas projects and coal fired power continue to play a significant role in its portfolio.

FIGURE 2

Volume of IFC Energy Finance that Considers Climate Change



The Asian Development Bank

A review undertaken by the ADB in 2000 of its 1995 energy strategy revealed a mixed record of success in integrating environmental considerations into energy projects.²⁸ Subsequently, the ADB initiated an effort to develop a new energy strategy, with an emphasis on “clean energy” to power soaring economic growth in the Asia region. In July 2005, the ADB established a \$1 billion Energy Efficiency Initiative with the aim of compiling and analyzing existing knowledge and experience on energy efficiency policies, and formulating a clean energy investment strategy. In 2008 the ADB announced a new fund for climate change with an initial capitalization of \$40 million.

In 2007 the ADB released a new draft of its energy strategy for review, organized around three themes: (i) meeting energy demand in a sustainable way; (ii) energy access; and (iii) energy sector reforms and governance. The draft strategy seeks to keep a range of energy options and technologies with significant associated environmental and social risks eligible for ADB support, placing a greater emphasis on compliance with environ-

mental and social due diligence on a case by case project basis for ensuring “environmental sustainability.”

*Country Strategies:*²⁹ Recent ADB country strategies have increasingly made note of opportunities to reduce GHG emissions. Of the fifteen strategies reviewed, twelve recognized the need to improve efficiency and reduce GHG emissions associated with interventions in the energy sector. Less than five of these strategies, however, also committed to specific targets or indicators to respond to these needs. For example, the Cambodia CAS notes the need to address environmental impacts of dependence on fossil fuels for power, but does not set any targets or consider any options to meet this objective. By contrast the CAS for Indonesia notes the need to enhance efficiency and reduce dependence on oil, and then sets goals to reduce air emissions, and also notes the need to find CDM opportunities to finance some of these lower emission options. ADB country strategies for Bangladesh, the Maldives, Mongolia, and Papua New Guinea make explicit mention of vulnerability concerns. A few strategies, such as those for Vietnam and Bangladesh, also

identify specific outputs and targets to increase resilience to the likely impacts of climate change. In general, country strategies do not consistently note vulnerabilities specifically related to the expected impacts of climate change.

Energy Portfolio: Climate change has tended to be a peripheral consideration in energy sector projects at the ADB (see Figure 3). In 2007, however, shortly after the launch of its new programs on clean energy and climate change, a significant improvement is observed in the extent to which climate change considerations are reflected in project documentation. This improvement seems to stem in part from implementation of its Energy Efficiency initiative, which involves screening all projects for efficiency opportunities, and monitoring efficiency components in its energy portfolio. It remains to be seen whether this emphasis will be sustained, and whether these changes are supporting transformative reductions in GHG emissions from energy sector projects in Asian countries.

Indeed, the terms of ADB’s engagement in the power sector are controversial. The Bank is increasing its support for

coal-fired thermal power plants although it acknowledges that these projects have negative impacts for climate change (see Box 9). In addition, its new energy strategy seems to open up space for ADB to venture further into high risk projects—including large hydropower—in countries with weak environmental governance at the national and local levels. At the same time, ADB is in the midst of revising its environmental, indigenous peoples and involuntary resettlement safeguards, with a view to allowing itself greater flexibility in applying these metrics. There is serious cause for concern that these revisions may significantly weaken ADB's internal standards, by undermining the need for robust Environmental Impact Assessments prior to project implementation.³⁰

The Inter-American Development Bank

In November 2006 the IDB launched a Sustainable Energy and Climate Change Initiative (SECCI) in response to the growing interest of its member countries in alternative approaches to energy supply, particularly in the context of rising global prices for oil and gas. Focal areas of SECCI include: the promotion of

BOX 9 Coal Fired Power in Asia

Coal plays a central role in Asia's electricity mix, and current policy, planning and regulatory frameworks for the region align to keep coal fired power one of the cheapest (and easiest) options to meet the electricity demands of powering rapid economic growth. In 2006 the Indian Ministry of Power announced an Ultra Mega Power Program to build seven 4GW supercritical coal fired power plants over the next few years. In Indonesia a program to add 10,000 MW of coal fired power by 2009 is underway. In 2006 China installed 90 gigawatts of coal-fired power capacity—these plants alone will emit nearly 500 million tons of carbon dioxide each year. Governments continue to extend significant support for coal power. While investment in new coal fired generation is commercially viable within current regulatory frameworks, the Banks' policy advice and financial incentives can guide markets and regulators towards more energy efficient and lower carbon choices.

These developments underline the urgency of finding new solutions to the climate impacts of coal, even as new ways to orient policy frameworks to reflect the real costs of coal power are sought. Coal power has severely problematic environmental and social im-

acts beyond climate change throughout its supply chain: for example, coal-fired thermal power plants use large amounts of water, and can have highly disruptive impacts on water ecosystems, and in turn on the people who depend on them; the coal industry is fraught with safety hazards (including environmental health) for its employees.

In its leadership of the 2008 G8 processes, the government of Japan has highlighted the importance of addressing the challenge of coal fired power, noting that: "all the coal-fired power plants are the real crux of the issue... and will define whether we peak and [reduce] emissions in time." Technologies to capture and store the carbon dioxide from coal-fired power generation are attracting significant interest from a climate perspective. The costs associated with such "carbon capture and storage" technologies remain very high, however, and there is significant scientific uncertainty around the technology.

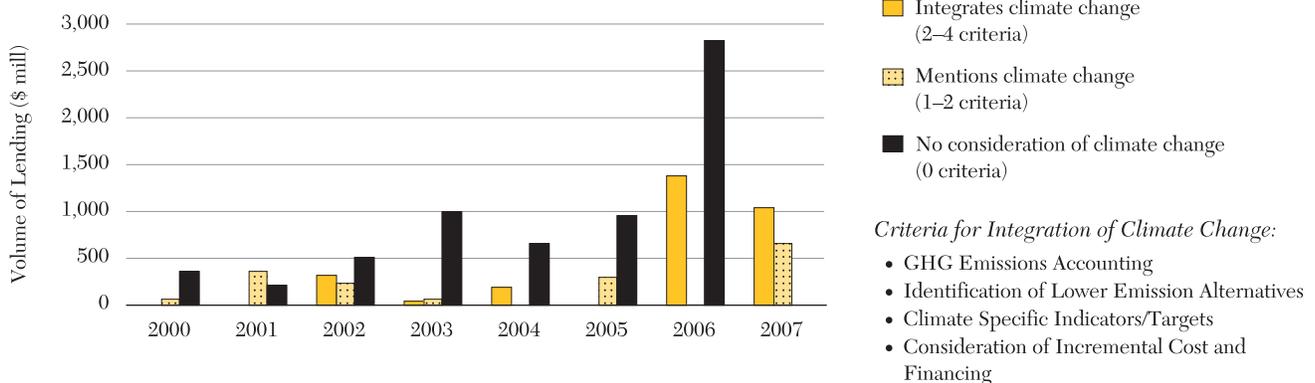
Source: Mutsuyoshi Nishimura, special advisor to the Japanese Cabinet on Climate Change, "Climate Change and the G8 Hokkaido Toyako Summit," Brookings Institution 3 March 2008.

renewable energy and energy efficiency; biofuels development; increasing the access of member countries to carbon finance; and adaptation to the impacts of climate change. Senior management

has focused on internal reorganizations within the IDB over the past year, which has slowed progress on the initiative. Through SECCI, however, energy efficiency programs have been integrated

FIGURE 3

Volume of ADB Energy Finance that Considers Climate Change



into several projects in energy intensive sectors. SECCI is also supporting specialized environment and climate change policy programs in Mexico and Colombia. In addition, the IDB has been working with governments in Central America and the Caribbean to develop detailed diagnostic studies on the scope to develop biofuels. Yet the rush to produce more biofuels is fraught with many risks for sustainable development—indeed not all biofuels are less GHG intensive than fossil fuels. The spikes in food prices experienced in early 2008, for example, have drawn global attention to the links between promoting the production of biofuels and displacing food production. By integrating measures such as life cycle GHG accounting and options analysis, and ensuring the robust application of high environmental and social standards to all projects it supports, the IDB might be able to help its client countries avoid and overcome these problems (see Box 10). The IDB is now developing sustainability guidelines for biofuels.

*Country Strategies:*³¹ Few of the IDB's country strategies consider climate change. The Chile country strategy emphasizes the need to develop alternative

BOX 10 Risky Business: Biofuels

Increasing oil prices, concerns about energy security, and growing efforts to reduce greenhouse gas emissions have elevated interest in biofuels development. Brazil has pioneered the development of biofuel markets, and over the past few years there has been enormous interest globally—from Kalimantan in Indonesia to the Mid-Western States of the United States—in developing biofuel production. More than 40 governments have taken on commitments to increase the use of biofuels.

Despite these gains, first generation biofuels are only cost competitive with fossil fuels under the most efficient feedstock production conditions, and only when oil prices are particularly high. There are many risks associated

with the biofuel “boom” and their development needs to be approached with caution. The potential environmental and social costs can be high, including the consequences of converting forests to cropland for biofuels. It is quite possible that biofuel production will displace food production, which may in turn increase food scarcity and prices, with particularly adverse impacts on the poor. Even the development of next generation biofuel technologies—such as cellulosic ethanol from non-food products—may not fully dispel these concerns.

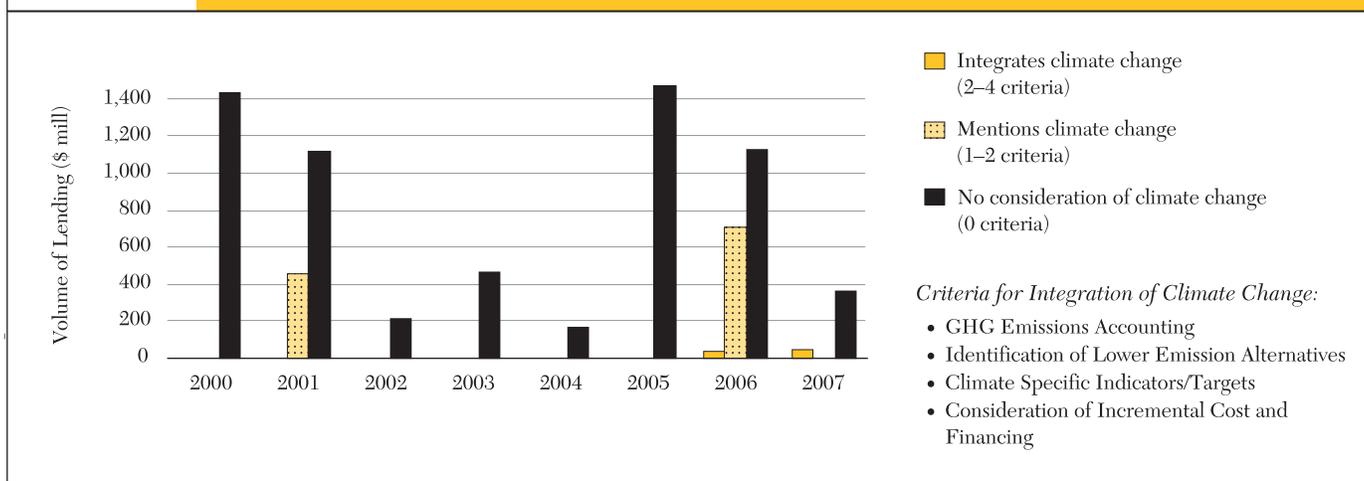
Source: Britt Childs and Rob Bradley, *Plants at the Pump: Biofuels, Climate Change, and Sustainability*, World Resources Institute: Washington DC, 2007.

sources of clean energy and improve efficiency within the sector. The Costa Rica strategy notes the potential for wind energy, and the Uruguay strategy recognizes the need for energy efficiency. Strategies for both the Dominican Republic and Jamaica note increasing vulnerability to natural disasters and the need to manage weather related risks, although the implications of climate change for increasing these risks are not considered.

Energy Portfolio: Climate change has been ignored in the majority of IDB projects in the energy sector, although there has been a bit of improvement on this count in the lead up to the launch of the SECCI in 2006 (see Figure 4). IDB is also significantly involved in financing climate-related infrastructure development through the Initiative for Integration of Regional Infrastructure in South America (IIRSA). IIRSA is coordinated by twelve South American governments, and the IDB serves as its technical sec-

FIGURE 4

Volume of IDB Lending for Energy that Considers Climate Change



retariat (which is also supported by the Andean Development Corporation). Key initiatives under IIRSA are roads, gas pipelines, and power plants that will generate electricity that can be traded to meet regional needs. More than 40 energy related projects have been proposed, all of which emphasize conventional fossil fuel or large hydropower technologies. There are no new renewable energy or efficiency projects currently in the pipeline, despite the significant potential for such initiatives in the region.

V. CONCLUSIONS AND RECOMMENDATIONS

“Climate change policies cannot be the frosting on the cake of development; they must be baked into the recipe of growth and social development. The World Bank has already been building on synergies between climate action and development – working on energy security and efficiency, encouraging renewable energy, protecting urban air quality, helping with the management of arid lands, and assisting with adaptation of agriculture. Now we need to help shift countries to a development paradigm based on low-carbon growth and adaptation to new risks.”

— World Bank President Robert Zoellick in a speech to the 13th Conference of the Parties to the UNFCCC (Bali, 2007).

As international and national policies begin to regulate carbon and the costs of conventional fossil fuels continue to rise, reducing GHG emissions is a serious challenge for all countries. All countries will also have to adapt to the impacts of climate change, even if they have played little role in causing the problem. Through their technical assistance, policy advice, and support for project implementation, MDBs can support

developing countries to improve their access to sustainable energy supplies while reducing the growth of GHG emissions. MDBs can also help developing countries reduce their vulnerability to the impacts of global warming.

The Gleneagles Plan of Action on Climate Change identified a central role for the MDBs in helping developing countries respond to climate change. The Banks are increasingly active in the UNFCCC processes. While the MDBs have undertaken significant new analysis on climate change issues, launched new initiatives on climate change and sustainable energy, and convened key actors around these issues, much remains to be done to integrate climate considerations into country strategies and project design in the energy sector in particular.

How “Mainstream” is Climate Change?

Although there has been some improvement in the past few years, it is difficult to identify a trend towards systematic incorporation of climate change issues into MDBs’ activities. More than 60 percent of financing for the energy sector over the past five years has not considered climate change at all (see Table 1). As late as 2007, nearly 50 percent of World Bank lending for the sector made no mention of climate change, and over the last three years less than 30 percent of its financing has comprehensively integrated climate change considerations. In 2007, about 60 percent of the ADB’s energy portfolio integrated climate change criteria; however in 2005 and 2006 more than 60 percent of lending ignored climate change completely. More than 60 percent of IDB’s lending for the energy sector in 2007 did not consider climate change at all, and less than 10 percent

of its financing over the past three years has integrated climate change.

Attention to climate change, as measured in the energy portfolio, has varied significantly from year to year across the institutions considered. This is in part because support for the energy sector tends to be “lumpy,” often involving several large scale discrete projects. Renewable energy projects are often smaller in scale than conventional projects, and therefore absorb a smaller share of institutional resources per project. While the MDBs have significant discretion over which issues will be prioritized in Country Strategies, inconsistent attention to climate change in the Strategies reviewed may reflect, in part, the priorities of developing member countries’ national development agendas (which may not always place due emphasis on climate change).

While the MDBs should be a key source of technical assistance and knowledge on how to integrate climate change into economic development, the capacity of MDB staff to integrate climate change considerations into decision-making remains limited relative to the scale of the challenge. Departments historically staffed by oil and gas experts or thermal power plant engineers will need new skills and expertise in order to think creatively about how to address the risks and opportunities that climate change presents. Although the MDBs have started many new programs related to climate change over the past three years, they have been slow to prompt systematic changes in staff incentives to incorporate mitigation or adaptation considerations into project development and appraisal. Managers at many of the MDBs have made some promising initial efforts to raise awareness of these issues,

TABLE 1 Climate Change Considerations in Energy Pipelines of the World Bank, IFC, ADB and IDB

	World Bank						IFC					
	Integrates		Mentions		Ignores		Integrates		Mentions		Ignores	
	m\$	%	m\$	%	m\$	%	m\$	%	m\$	%	m\$	%
2000	583.2	16.5	254.5	7.2	2697.1	76.3	0	0	0	0	460.4	100.0
2001	135.8	4.3	220.6	7.1	2759.7	88.6	0	0	0	0	143.6	100.0
2002	542.7	12.8	306.5	7.2	3383.6	80.0	150.0	43.44	18.0	5.2	177.3	51.4
2003	219	10.0	30.0	1.4	1938.8	88.6	18.5	2.0	470.0	51.9	435.0	48.1
2004	732.6	20.4	128.5	3.6	2731.7	76.0	0	0	40.0	12.5	281.0	87.5
2005	652.0	31.9	86.0	4.2	1304.0	63.9	0	0	335.0	66.0	172.4	34.0
2006	364.0	16.2	293.7	13.1	1588.3	70.7	0	0	85.0	13.1	566.3	86.9
2007	486.2	17.3	1015.8	36.2	1302.7	46.5	50.0	5.4	621.0	66.9	257.0	27.7
Total	3714.5	15.6	2335.8	9.83	17706.9	74.5	218.5	5.1	1569	36.7	2493.0	58.2
	ADB						IDB					
	Integrates		Mentions		Ignores		Integrates		Mentions		Ignores	
	m\$	%	m\$	%	M\$	%	m\$	%	m\$	%	m\$	%
2000	0	0	53.0	13.2	350.0	86.8	0	0	0	0	1169.0	100.0
2001	8.0	1.4	350.0	62.8	199.0	35.7	0	0	375.0	29.1	915.0	70.9
2002	308.0	30.5	223.0	22.0	480.0	47.5	0	0	0	0	178.0	100.0
2003	35.0	3.4	54.0	5.3	938.0	91.3	0	0	0	0	379.0	100.0
2004	188.0	23.4	0	0	615.0	76.6	0	0	0	0	136.0	100.0
2005	0	0	285.0	23.9	909.0	76.1	0	0	0	0	1202.7	100.0
2006	1317.0	32.8	20.0	0.5	2682.0	66.7	30.0	2.0	582.0	38.0	919.0	60.0
2007	982.0	61.9	615.0	38.3	8.0	0.5	40.0	11.7	0	0	300.5	88.3
Total	2838.0	26.7	1600.0	15.1	6181.0	58.2	70.0	1.1	957.0	15.4	5199.2	83.5

and provide training in new skills, but much more remains to be done. The metrics by which the success of projects is gauged do not yet place due emphasis on whether opportunities to reduce emissions were identified and seized, or efforts were made to “climate risk proof” investments. MDBs can more proactively help make the link between stated national priorities and opportunities to mitigate climate change, or to adapt to pertinent risks that may arise from climate change.

RECOMMENDATIONS

If the MDBs are going to remain engaged in energy intensive and fossil fueled sectors, then it is imperative that they do so in the most climate sensitive and energy efficient ways possible. While conventional energy projects are often lucrative commercial investments, they may not always deliver real sustainable development outcomes. The MDBs need to support transformative changes in key sectors to steer investment towards low carbon, environmentally sustainable development choices; this will be

difficult to achieve when they remain invested in many “business as usual” projects and policies. There are several examples of strong practice in integrating climate change considerations into Country Strategies and project appraisals that need to become universal practice. MDBs must follow through on their public commitments to help their clients address climate change, particularly in the energy sector. Progress along these lines must be measurable and measured—and made much more rapidly than it has been to date.

Since the analysis presented in this policy brief has focused on opportunities for MDB operations in the energy sector to support efforts to mitigate climate change, our recommendations emphasize improvements that the MDBs can make to this end. GHG accounting can be an enormously useful tool to help identify opportunities for energy efficiency, and to help project managers consider less GHG intensive alternatives. Although several MDBs have adopted GHG accounting practices for their direct operations as well as their investment portfolios, current practice at the MDBs still does not yet consistently explore less carbon-intensive approaches to economic development. The impacts of climate change need to be incorporated into economic appraisals for the projects and policies that the MDBs support. Efforts to integrate the cost of carbon into project appraisal through a “shadow price” mechanism, such as those proposed by the IFC (discussed in Box 11) are a promising innovation (that some private sector banks are already implementing). If properly implemented, such a system has significant potential to prompt different ways of thinking about how to integrate climate change considerations into financing decisions, and to internalize the real costs of continued investment in GHG intensive “business as usual” projects.

MDBs and their governors need to consider supporting renewable energy and efficiency projects for which stable and robust rates of return on an investment may not always be guaranteed, and higher levels of risk may need to be tolerated. The Banks are often still too conservative when it comes to investments in energy efficiency and renewable energy technologies. While the structure and flow of returns from such investments may

be less familiar, there is a growing body of evidence to suggest that such investments are in fact far less risky than they are often perceived to be.

The urgency of responding to climate change should not, however, lead to the imposition of a new form of “green conditionality” where MDBs coerce clients into reducing emissions at the expense of meeting economic development needs. Instead, MDBs must consistently help their member countries to assess the full suite of options for low carbon, climate resilient development. The proposed Climate Investment Funds are far more likely to be used to prompt transformative reductions in emissions, if climate change considerations are integrated into all aspects of the MDBs core operations. MDBs and the international donor community should therefore:

- *Measure and manage the GHG emissions associated with investments in all relevant sectors.*

MDBs need to implement rigorous and transparent GHG emissions accounting methodologies. Such measures are particularly important for their investments in projects, particularly those developed by the private sector. The World Bank Group has recently committed to this idea in principle, but has yet to operationalize it. MDBs can also do more to help developing countries build their own capacity to account for the emissions that will result from various development choices, and to more effectively consider alternative options to manage these emissions. In this vein, country strategies could consider options to work with and support local capacity—including in the private sector—to reduce GHG emissions, especially in the context of renewable energy and efficiency. If MDBs can help build the capacity of actors and

institutions in developing countries, such as electricity utilities and ministries, to measure and manage GHG emissions, they may have a transformative impact on future emission trajectories.

- *Work with developing country clients to identify low carbon approaches to development.*

MDBs can help developing countries assess alternative approaches that might help countries reduce carbon emissions while still meeting their development objectives. The economic impacts and implications of climate change need to be incorporated into MDB support for public sector programs and policies, particularly in key sectors for climate change mitigation as well as adaptation. Here, a shadow price for carbon may also serve as a useful tool in conducting such analysis (see Box 11). The relative costs of options to reduce emissions from development projects need to be considered in the same way as are options to minimize other financial costs (see Box 11). Just as the least financial cost option may not always be the best alternative, the least carbon-intensive options may not always be best suited to meet more urgent development goals. Nevertheless, project implementers should explore options to meet any additional project costs through funding from special carbon funds, the GEF, or other sources such as the new Climate Investment Funds. The decision as to which of these options will best meet needs for environmentally sustainable economic development will necessarily remain with developing country clients.

BOX 11

Mainstreaming Climate Considerations through Carbon Shadow Pricing

When investors assess the feasibility of investment in greenhouse gas (GHG) intensive sectors, the costs associated with the impacts of these emissions are not internalized. Yet if the true costs of carbon on the long term welfare of the planet are factored in, then cleaner alternative energy sources are often financially competitive with conventional fossil fuel energy.

In developing the Clean Energy Investment Framework, one approach that has been proposed is to integrate a “shadow price” for carbon into a financial appraisal of all projects in energy intensive sectors. Because the true costs of carbon are difficult to estimate, project

managers can use market valuations of the costs of complying with regulations aimed at limiting GHG emissions, such as current prices for carbon in major markets such as the EU Emission Trading System. This would prompt managers to fully account for GHG emissions associated with proposed projects, and to consider the real incremental costs of pursuing more climate friendly alternatives. The idea of a “Clean Energy Support Fund” that could be used to meet these incremental costs has also been floated.

In early 2008, the International Finance Corporation proposed to incorporate such an analytical framework into appraisals of invest-

ments in GHG intensive sectors. Operationalizing such a framework can be a significant step towards mainstreaming climate change considerations into decision-making at the MDBs. Transparency about the terms on which this framework is being implemented, and the impact of “shadow pricing” on decision-making, will be essential to ensure the success of this effort and to allow other MDBs to learn from this important innovation in practice.

Sources: World Bank, *Progress Report on the Clean Energy Investment Framework*, September 2007. David Wheeler, *Crossroads at Mmamabula: Will the World Bank Choose the Clean Energy Path?* Center for Global Development, February 2008.

- *Revise guidelines for country and sector strategies to explicitly integrate climate change considerations, particularly vulnerability to climate variability and change.*

Country Strategies need to identify how sectoral policies will affect emissions trajectories in client countries and how these strategies will be affected by predicted impacts of climate change. Strategy interventions in GHG intensive sectors should then consider options to reduce emissions (such as efficiency measures and best technology options) and build the capacity of country institutions to implement such initiatives. It is particularly important for Strategies to systematically assess the vulnerability of investments in key sectors to the potential impacts of climate change, and identify specific responses to such risks. Strategies should also consider options for financing incremental costs that might be associated with reducing emissions, and the additional costs of adapting to the potential impacts of climate change. Climate change should be linked to economic considerations in country strategies rather than included as an afterthought. The goal of such inte-

gration should be to increase the quality of information and the range of choices available to decision makers, without locking client countries into prescribed policies or technologies.

- *Maintain high environmental and social standards to manage climate risk.*

It is crucial to weigh the full economic, social, and environmental costs and benefits of various technology choices, particularly in the energy sector, and to conduct a comprehensive, life-cycle analysis of options available to meet the energy needs of member countries. Local environmental impacts and potential impacts on local communities, as well as the implications for global climate change must be emphasized in such an effort. It is imperative that high standards of due diligence and transparency promote compliance of Bank projects with existing environmental and social safeguard policies. These policies present an appropriate instrument to assess and prevent potentially harmful impacts of the development process on people and the environment, and can also further climate risk assessments.

At the same time, MDBs can work with national governments to build the scope and integrity of environmental impact assessments to this end.

- *Invest in the capacity of governments to practice good governance in order to respond to the realities of climate change.*

Climate change is greatly increasing the uncertainty around development choices. Responding to climate change in the context of supporting sustainable development inevitably involves intersecting—and often competing—values and interests. Fair and effective processes for weighing and resolving these interests are necessary to support effective efforts to both mitigate and respond to climate change. For example, addressing the climate impacts of tropical deforestation and degradation demands an emphasis on the underlying governance challenges that drive deforestation. New approaches may be needed to ensure that human rights are upheld, and that forest dependent people are empowered to play a central role in sustainable forest management. If new clean energy technologies are to be deployed at scale

then appropriate policy and regulatory frameworks that allow investment to align with local realities are essential. In the absence of definitive information about how climate change will affect specific weather conditions in particular geographies, it is not possible to “adapt” decisions to new circumstances; instead, climate variability will need to be included in decision-making processes to reduce vulnerability. Inclusive, transparent and accountable processes can help integrate climate change considerations into local decision-making. The MDBs can help build the capacity of developing countries to practice good governance; they can also lead by adhering to the highest standards of transparency and accountability with regards to their own involvement in both public policy reform as well as discrete projects and investments.

- *Significantly increase support for low carbon technologies, particularly in rapidly growing emerging economies.*

The MDBs are seeking new ways to invest in middle income countries where the widespread availability of

commercial private sector capital is reducing demand for their finance. Yet private financing for renewable energy technologies and energy efficiency programs is much less readily accessible, and urgently needed. Many private investors continue to be unfamiliar with new low carbon technologies and perceive the associated risks to be too high. MDBs can play a valuable role in supporting the commercialization and deployment of low carbon technologies and approaches—often in partnership with private investors—to help reduce future GHG emissions. Such projects may be smaller in scale than conventional energy investments and therefore more transaction intensive, but the “value added” of MDB support for such efforts is much greater. While institutions such as the World Bank and ADB have adopted specific targets to increase support for new renewable energy and energy efficiency respectively, there remains enormous scope to scale up these efforts. The MDBs will also need to be less conservative when investing in renewable energy and energy efficiency. By increasing support for low carbon options, MDBs may be able to find new relevance in emerging economies.

- *Build capacity and create new incentives for MDB staff to consider climate change in their interventions.*

Enhanced capacity, knowledge and expertise within the MDBs will be essential if these institutions are to successfully help developing countries integrate climate change considerations into economic planning and development. New incentives will be necessary to prompt project developers within the Banks to take this agenda seriously. The establishment of the Climate Investment Funds may prompt more systematic attention at the staff level to transformative options to address climate change through MDB interventions in developing countries.

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NOTES

1. Nicholas Stern, *The Stern Review of the Economics of Climate Change*, http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm.
2. See e.g., Yvo de Boer, Executive Secretary of the UNFCCC, "After Bali: Setting out on the road to Copenhagen," http://unfccc.int/press/news_room/newsletter/in_focus/items/4272.php.
3. UK Prime Minister Gordon Brown, speech at the World Economic Forum in Davos, Switzerland, Jan. 2008.
4. Jon Sohn, Smita Nakhoda and Kevin Baumert *Mainstreaming Climate Change at the Multilateral Development Banks* (Washington DC: World Resources Institute, 2005).
5. Our analysis focuses on three arms of the World Bank Group: the International Bank for Reconstruction and Development, International Development Association and the International Finance Corporation.
6. Tim Herzog, *Greenhouse Gases and Where They Come From*, (Washington DC: World Resources Institute, 2006), <http://www.wri.org/stories/2006/10/greenhouse-gases-and-where-they-come#>.
7. This portfolio level analysis does not capture the extent to which vulnerability and adaptation considerations have been mainstreamed into project development and appraisal: additional analysis is needed to fully assess progress on this count.
8. Greater than 90 percent likelihood. IPCC, 2007.
9. Greenhouse gas emissions per capita in developing countries remain much lower than they are in industrialized nations. By the same token however, there is growing disparity in emissions per capita within developing countries: affluent citizens in developing countries have emission footprints that are comparable with those of citizens in industrialized nations.
10. Navroz K. Dubash, "Inconvenient Truths Produce Hard Realities: Notes from Bali," *Economic and Political Weekly*, 29 Dec. 2007, pp. 31- 37. See also, Paul Baer, Tom Athanasiou & Sivan Kartha, *The Right to Development in a Climate Constrained World: The Greenhouse Development Rights Framework* (Berlin: Heinrich Boll Stiftung, EcoEquity and the Stockholm Environment Institute, 2007), <http://www.ecoequity.org/docs/TheGDRsFramework.pdf>.
11. United Nations Framework Convention on Climate Change, opened for signature June 4, 1992, 1771 U.N.T.S. 164, 31 I.L.M. 849 (1992) (entered into force Mar. 21, 1994) [hereinafter UNFCCC].
12. UNFCCC, Art. 3, ¶ 4; Kyoto Protocol Art. 10 Chapeau.
13. Bali Action Plan, 2007.
14. Consistent with the principles of the UNFCCC.
15. IFC is using the WRI-WBCSD Greenhouse Gas Protocol to this end. The Protocol is available online at <http://www.ghgprotocol.org>.
16. United Nations Development Programme and United Nations Environment Programme are also GEF implementing agencies.
17. Ken Chomwitz, *At loggerheads? : agricultural expansion, poverty reduction, and environment in the tropical forests* (Washington DC: World Bank, 2006), http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2006/10/19/000112742_20061019150049/Rendered/PDF/367890Loggerheads0Report.pdf.
18. World Bank Inspection Panel. Investigation Report Democratic Republic of the Congo Transitional Support for Economic Recovery Grant (IDA Grant No. H 1920-DRC) and Emergency Economic and Social Reunion (Credit 3824-DRC and Grant No H 064 DRC. August 2007. WRI served as an independent observer on the project in question. http://siteresources.worldbank.org/EXTFORINAFR/Resources/IP_2007_DRC_Foresty_2.pdf.
19. Florence Daviet, Hilary MacMahon & Rob Bradley, *REDD Flags: What we need to know about the options*, World Resources Institute, Washington, DC 2007, <http://pdf.wri.org/redd-flags.pdf>.
20. Kyoto Protocol, Art. 12, ¶ 2.
21. African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, European Investment Bank, Inter-American Development Bank & World Bank, *The Multilateral Development Banks and the Climate Change Agenda* (Nov. 2007).
22. In the World Bank, these documents are called "Country Assistance Strategies." A similar mechanism called the "Country Partnership Strategy" is used by the ADB. IDB also undertakes such an exercise, referred to as "Country Strategies."
23. The active Country Strategies have all been adopted since 2004; the majority of these strategies were adopted after 2005. These are therefore recent documents, approved well after the adoption of the Kyoto Protocol and UNFCCC that could reasonably be expected to address climate change.
24. This commitment was made at the Bonn Conference on Renewable Energy in 2004.
25. See Annex 1 for a complete analysis of the World Bank's active country strategies.
26. The government of the Philippines itself made ambitious renewable energy commitments at the Bonn Conference on Renewable Energy in 2004, the year before this CAS was approved.
27. Effective July 2008, however, IFC intends to include a carbon shadow pricing analysis and greenhouse gas accounting for most projects in GHG intensive sectors.
28. Operations and Evaluations Department (ADB), *Energy 2000: Review of the Energy Policy of the Asian Development Bank* (2007), <http://www.adb.org/Documents/SES/REG/SES-REG-2007-05/SES-REG-2007-05.asp>.
29. See Annex 1 for a complete analysis of the ADB's country strategies.
30. Bank Information Center, Environmental Defense Fund, Center for International Environmental Law, Forest Peoples Project, and International Accountability Project, "Summary of Concerns regarding the ADB's Draft Safeguard Policy Statement: Unacceptable Weakening of ADB Environmental and Social Standards; Concerns regarding the Continuation of Public Consultations Based on Deeply Flawed and Missing Documents," Feb. 2008, <http://www.bicusa.org/en/Article.2851.aspx>.
31. See Annex 1 for a complete analysis of the IDB's active country strategies.

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