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**TOWARDS A STRATEGIC FRAMEWORK ON CLIMATE CHANGE
AND DEVELOPMENT FOR THE WORLD BANK GROUP
CONCEPT AND ISSUES PAPER**

Attached for the April 13, 2008, Development Committee Meeting is a background report entitled "Towards a Strategic Framework on Climate Change and Development for the World Bank Group – Concept and Issues Paper," prepared by the staff of the World Bank.

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**TOWARDS A STRATEGIC FRAMEWORK ON
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ABBREVIATIONS AND ACRONYMS

AAA	Analytical and Advisory Assistance	GGFR	Global Gas Flaring Reduction
ADB	Asian Development Bank	GHG	Greenhouse Gas
AfDB	African Development Bank	GIPDF	Global Infrastructure Project Development Fund
AFR	Africa Region	GPG	Global Public Goods
ASAL	Arid and Semi-arid Lands	IADB	Inter-American Development Bank
BNPP	Bank Netherlands Partnership Program	IBRD	International Bank for Reconstruction and Development
C02	Carbon Dioxide	IDA	International Development Association
CAS	Country Assistance Strategy	IEA	International Energy Agency
CCRIF	Caribbean Catastrophe Risk Insurance Facility	IEG	Independent Evaluation Group
CDCF	Community Development Carbon Fund	IFC	International Finance Corporation
CDM	Clean Development Mechanism	IFI	International Financial Institution
CEA	Country Environmental Analysis	IGCC	Integrated Gasification Combined Cycle
CEIF	Clean Energy for Development Investment Framework	IPCC	Intergovernmental Panel on Climate Change
CER	Carbon Emission Reduction	IPP	Independent Power Producer
CF	Carbon Finance	IPR	Intellectual Property Rights
CFL	Compact Fluorescent Lamps	ISDR	International Strategy for Disaster Reduction
CFU	Carbon Finance Unit	JBIC	Japan Bank of International Cooperation
CGIAR	Consultative Group on International Agricultural Research	KACCAL	Kenya Adaptation to Climate Change in Arid Lands
CIF	Climate Investment Fund	KAP	Kiribati Adaptation Program
CMI	Carbon Market Initiative	LAC	Latin America and the Caribbean Region
CODE	Committee on Development Effectiveness	LCCCS	Low-Carbon Country Case Studies
COP	Conference of the Parties	LDCF	Least Developed Countries Fund
CPF	Carbon Partnership Facility	LED	Light-emitting Diodes
CPS	Country Partnership Strategy	LULUCF	Land Use and Land-use Change and Forestry
DEC	Development Economics Department	MDB	Multilateral Development Bank
DRC	Democratic Republic of Congo	MDG	Millennium Development Goals
EAP	East Asia and Pacific Region	MENA	Middle East and North Africa Region
EBRD	European Bank for Reconstruction and Development	MER	Market Exchange Rate
ECA	Europe and Central Asia Region	MFI	Multinational Financial Institution
EE	Energy Efficiency	MIC	Middle-Income Country
EEfSD	Energy Efficiency for Sustainable Development	MIGA	Multilateral Investment Guarantee Agency
EIB	European Investment Bank	NAPA	National Adaptation Programs of Action
ESMAP	Energy Sector Management Assistance Programme	NGO	Non-governmental Organization
ESW	Economic and Sector Work	NTB	Non-tariff Barrier
ETF	Environmental Transformation Fund	ODA	Overseas Development Assistance
EU	European Union	OECD	Organization for Economic Co-operation and Development
FCPF	Forest Carbon Partnership Facility	OVP	Operational Vice President
FDI	Foreign Direct Investment	PHRD	Policy and Human Resources Development
FEMA	Forum of Energy Ministers of Africa	PPIAF	Public-Private Infrastructure Advisory Facility
FLEG	Forest Law Enforcement and Governance	PPP	Purchasing Power Parity
GDP	Gross Domestic Product	PREM	Poverty Reduction and Economic Management Network
GEF	Global Environment Facility	PROFOR	Program on Forests
GFDRR	Global Facility for Disaster Reduction and Recovery	PRSP	Poverty Reduction Strategy Paper
		PSIA	Poverty and Social Impact Analysis

RDB	Regional Development Bank	TA	Technical Assistance
RE	Renewable Energy	TFESSD	Trust Fund for Environmentally and Socially Sustainable Development
RE/EE	Renewable Energy and Energy Efficiency	TFSD	Transformation Fund for Sustainable Development
REDD	Reduced Emissions from Deforestation and Degradation	UK	United Kingdom
SAR	South Asia Region	UNDP	United Nations Development Programme
SBSTA	Subsidiary Body for Scientific and Technological Advice	UNEP	United Nations Environment Programme
SCCF	Special Climate Change Fund	UNFCCC	United Nations Framework Convention on Climate Change
SDN	Sustainable Development Network	UNISDR	United Nation International Strategy for Disaster Reduction
SDP	Strategic Directions Paper	WB	World Bank
SEA	Strategic Environmental Assessment	WBG	World Bank Group
SFCCD	Strategic Framework on Climate Change	WDR	World Development Report
SIP	Sector Investment Program	WEF	World Economic Forum
SLM	Sustainable land management	WRI	World Resources Institute
SPA	Strategic Priority to Pilot an Operational Approach on Adaptation	WTO	World Trade Organization
SSA	Sub-Saharan Africa Region		
SWAp	Sector-wide Programmatic Approach		

TOWARDS A STRATEGIC FRAMEWORK ON CLIMATE CHANGE AND DEVELOPMENT FOR THE WORLD BANK GROUP

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TOWARDS A STRATEGIC FRAMEWORK ON CLIMATE CHANGE AND DEVELOPMENT FOR THE WORLD BANK GROUP

EXECUTIVE SUMMARY

1. **Addressing climate change is central to the development and poverty reduction agenda.** In its Fourth Assessment (2007), the Intergovernmental Panel on Climate Change (IPCC) makes clear that warming of the climate system is unequivocal and that a delay in reducing greenhouse gas (GHG) emissions significantly constrains opportunities to achieve lower stabilization levels and is likely to increase the risk of more severe climate change impacts. With increasing climate variability and risks, the poorest countries and communities are likely to suffer the earliest and most. Climate change has the potential to reverse the development gains that have been hard-earned by developing countries over the past decades and progress towards achieving the Millennium Development Goals (MDGs), such as eradicating poverty, combating communicable diseases and environmental sustainability. An effective response to climate change must combine both mitigation—to avoid the unmanageable—and adaptation—to manage the unavoidable.

2. **The past year witnessed impressive consensus building on the importance of addressing climate change** that culminated in an agreement at the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP)13 in Bali to launch negotiations towards long-term cooperative action by all countries. The framework for negotiations embraces mitigation of climate change (including, for the first time, consideration of reducing emissions from deforestation and land degradation), adaptation, technology development and transfer, and provision of financial resources in support of developing countries' actions. Because of their lower historical contribution to GHG concentrations, much lower *per capita* energy use, and higher vulnerability to the impacts of changing climate, developing countries expect a cooperative arrangement to finance their transition to low-carbon growth in a manner that does not compromise their energy access, growth agenda and adaptation efforts, in accordance with the principle of common but differentiated responsibilities. Importantly, financial resources are required in addition to the present level of Overseas Development Assistance (ODA) finance so as not to compete with achieving the MDGs.

3. The World Bank Group (WBG) has accumulated substantial experience in addressing climate change in the context of development and poverty reduction, most recently through the Clean Energy for Development Investment Framework (CEIF) (See Annex 1). The CEIF achieved commendable results: lending to energy access and low-carbon energy projects, and the Carbon Finance (CF) business have increased significantly. Increased awareness of the impacts of climate change found their reflection in the Country Assistance Strategies (CASs) and a growing program of analytical work and pilots. Work has begun on additional innovative mechanisms for climate financing, both for mitigation and adaptation. The WBG is an implementing agency of the Global Environment Facility (GEF), a major lender to renewable energy and energy efficiency (RE/EE), a pioneer in the carbon market, and a facilitator of energy sector reforms that provide incentives for efficiency, energy savings and better environmental practices.

4. **Progress on the CEIF resulted in a mandate to develop a comprehensive Strategic Framework on climate change for the WBG engagement.** The CEIF has been an important step in accelerating investments in low-carbon energy, while advancing the WBG knowledge on climate action, both mitigation and adaptation. At the 2007 Annual Meeting, the Development Committee welcomed the progress made in implementing the CEIF, recognized the critical importance of energy access for growth, and called on management to develop a comprehensive strategic framework for Bank Group engagement, including support for developing countries' efforts to adapt to climate change and achieve low-carbon energy growth while reducing poverty. It also called for enhanced cooperation and harmonization with other development partners, and for catalyzing substantial additional resources from both public and private sources.

5. The *Strategic Framework on Climate Change and Development (SFCCD) for the World Bank Group* will be proposed for endorsement by the Board in September 2008 and subsequently discussed at the 2008 Annual Meetings. This early draft, which outlines objectives, principles, approaches and key issues, will be distributed at the 2008 Spring Meetings, together with the attached *Clean Energy for Development Investment Framework—Implementation Report on the World Bank Group Action Plan*, which served as a platform to launch a more comprehensive and multi-sectoral SFCCD.

6. **The proposed SFCCD will be a way to articulate the WBG's vision on how to integrate climate change and development challenges,** without compromising growth and poverty reduction efforts through country operations, including policy dialogue, lending, and analytical work in client countries, and through regional and global operations. The SFCCD will include a results framework, priorities, operational approaches and a roadmap of actions, including addressing internal constraints, for achieving the results.

7. Scaling-up WBG action on climate change rests on the understanding that (a) economic growth, poverty reduction and achieving MDGs in developing countries is a continued priority, (b) access to energy services and increased energy use by developing countries are fundamental to these goals, and (c) adaptation to climate variability and change is critical to sustaining and furthering development gains in the majority of developing countries. Addressing climate change must not divert resources from core development needs. The WBG attaches the utmost importance—and has demonstrated its commitment by providing its own funds—to increasing International Development Association (IDA) resources.

8. **The WBG will continue scaling-up its engagement in energy access** through its Sustainable Infrastructure Action Plan (forthcoming) and the Africa Action Plan. The SFCCD will help explore opportunities to link energy access programs to carbon finance and provide cost-effective and reliable solutions through renewable energy and energy efficient devices.

9. **Reflecting the multi-sectoral and multidimensional nature of the challenge, the SFCCD will encompass activities in many sectors,** covering energy, transport, urban development, water, agriculture, forestry, industry, economic policy, and social and human development. The SFCCD acknowledges and will address multiple dimensions through which changing climate affects development: economic, financial, social, gender and environmental, including impacts on other global environmental goods such as biodiversity.

10. The development of the SFCCD is also guided by the principles of: (a) supporting the UNFCCC process; (b) being neutral to any negotiating party position; (c) helping developing countries manage the challenges of climate change and realize opportunities of climate action; (d) considering climate change an overarching development and economic issue, not only an environmental issue, which requires involvement and leadership by the ministries of development and finance, in addition to environment ministries; (e) recognizing the importance of partnerships given the many actors on the international arena with different mandates on the issue; and (f) building the SFCCD as an integral part of the Bank's strategy on inclusive and sustainable globalization.

11. **Climate change is a global challenge of unprecedented scale that requires collaboration among a large number of development partners**, including the UN system, the GEF, regional development banks, bilateral donors, the private sector, research institutions and civil society groups. The SFCCD will detail the roles and mandates of the key actors on the international arena, identify a particular niche that the WBG is well-positioned to fill, and propose specific steps towards strengthening collaboration with key actors in terms of both joining efforts and dividing responsibilities. Significant focus will be given to further strengthening collaboration with GEF in the area of climate change financing.

12. To exploit comparative advantages, the WBG will adopt an action framework based upon the following six pillars: (a) scaling-up operational approaches to integrate adaptation and mitigation in development strategies; (b) consolidating efforts to mobilize and deliver finance; (c) expanding the WBG's role in developing new markets; (d) tapping private sector resources for climate friendly development; (e) clarifying the WBG's role in accelerating technology development and deployment; and (f) stepping-up policy research, knowledge management and capacity building.

13. **The SFCCD recognizes distinct needs and demands of different country groups** based on multiple criteria: income (differentiated approaches to IDA and IBRD countries), institutional capacity and social stress (for example, fragile and conflict states might need a special strategy), vulnerability to climate risks (particularly relevant for many African countries, small island states, and countries with long coastal lines, acute water stress, or exposure to glacier melting); GHG emission profile (for example, dominance of energy vis-à-vis forestry sources of GHG emissions), and economy structure and dependence on energy sectors. Country ownership built on demonstrated development opportunities and multiple benefits from a low carbon, climate resilient strategy tailored to specific country circumstance is the key for the SFCCD. Importantly, development opportunities have to accrue to all groups of developing countries, including those whose economies are dependent on energy exports, such as oil producing economies.

14. **The SFCCD will outline how synergies within the WBG can be exploited to address climate change.** The work to articulate a specific strategy for each institution within a common framework has already started, and will be expanded during the preparation process. It is important to emphasize that the SFCCD is envisaged as a framework that sets directions and principles, and proposes tools, incentives, global products, and measures to track progress, with an agreement on the key messages to convey to our clients and external stakeholders. It is not a substitute for the International Finance Corporation (IFC), Multilateral Investment Guarantee

Agency (MIGA), sectoral and regional business strategies, which will be much more specific and detailed about integrating climate actions in their operations and deliverables.

15. **The need for further mobilizing and innovating finance for climate change emerged as a critical lesson from the CEIF implementation, and is amplified by the SFCCD's focus on scaling-up climate action.** In consultation with interested parties, the WBG and Regional Development Banks (RDBs) are joining efforts to establish a portfolio of strategic Climate Investment Funds (CIF). The funds aim to complement, build upon and enhance the activities of other existing instruments, like the GEF, IDA, International Bank for Reconstruction and Development (IBRD) and the IFC. In further developing the proposal for climate investment funds, the WBG will engage in extensive consultations with all key stakeholders to expand the donor base, seek the views of potential recipient countries and other interested parties and advance the design of funds and financial instruments. Other initiatives to increase financing for climate action are underway. Having pioneered and made significant progress in carbon finance, the WBG is continuing to facilitate the development and innovation of the carbon market.

16. **Going forward, the SFCCD will take stock and articulate complementarities among an increasing number of instruments and outline a plan of actions** that will serve to: (a) promote more effective and innovative use of existing and emerging financing instruments (IBRD, IDA, IFC, MIGA, GEF, CF funds, innovative climate insurance schemes, etc.) in WBG operations; (b) facilitate applications of new instruments at the target scale; (c) identify gaps and needs for developing new products, giving particular attention to public-private partnerships in adaptation financing; and (d) strengthen developing countries' capacity to avail these instruments.

17. **Given that knowledge about climate change, particularly its economic and social aspects, is continuously evolving and uncertainties remain, the design of the SFCCD will be flexible** so as to incorporate new knowledge and support actions, whose benefits are robust under any future scenarios of climate change negotiations and impacts. The SFCCD will benefit from close coordination with the proposed *World Development Report 2010 on Climate Change* and several other major analytical products, such as a global research program on the economics of adaptation to climate change, the work on economic policy and climate change in PREM, and the ongoing and expanding research programs in DEC. The findings of these and other studies will inform the formulation and implementation of the SFCCD.

18. **The development of the SFCCD will include extensive consultations with a full range of stakeholders**, including developing country clients, development partners (UN agencies, RDBs, bilateral donors), private sector, and civil society. Particular attention will be given to understanding the needs and concerns of the WBG shareholders from developing countries, and demonstrating how their views have been taken into account in preparation of the SFCCD.

TOWARDS A STRATEGIC FRAMEWORK ON CLIMATE CHANGE AND DEVELOPMENT FOR THE WORLD BANK GROUP

Climate change “is a development, economic, and investment challenge. It offers an opportunity for economic and social transformation that can lead to an inclusive and sustainable globalization. That is why addressing climate change is a critical pillar of the development agenda.”

Robert Zoellick

United Nations Climate Change Conference in Bali, Indonesia, December 2007

A. Background and Rationale

1. **Climate change presents an urgent challenge to the well-being of all countries...** In its Fourth Assessment (2007), the IPCC made clear that warming of the climate system is unequivocal and that a delay in reducing GHG emissions significantly constrains opportunities to achieve lower stabilization levels and is likely to increase the risk of more severe climate change impacts. The impacts of climate change include, among others: increased frequency and severity of droughts, floods and storms, water stress, decline in agricultural productivity and food security, further spread of water-related diseases, particularly in tropical areas, population displacement and conflicts over scarce resources. The globe is already experiencing the effects of climate change through changes in weather patterns and ecosystems. Continued GHG emissions at or above current rates would cause further warming.

2. **...and particularly to the poorest countries and the poorest people in vulnerable regions.** During the 1990s, 200 million people per year, on average, were affected by climate-related disasters in developing countries, as compared to about a million people from developed countries. With increasing climate variability and risks, the poorest countries and communities, particularly in Sub-Saharan Africa and South-East Asia, are likely to suffer the earliest and most because of their geographical location, low incomes, and limited institutional capacity, as well as their greater reliance on climate-sensitive sectors like agriculture (see Annex 2). The impacts—and social and political consequences—could be also devastating in extremely water-scarce economies and hydraulic civilizations, such as those in the Middle East, and regions with expected dramatic changes in water availability due to glacier melting, exemplified by the Himalayas in Asia and the Andes in Latin America.

3. **Addressing climate change is central to the development and poverty reduction agenda.** Climate change has the potential to reverse the development gains that have been hard-earned by developing countries over the past decades, and progress towards achieving the MDGs, such as eradicating poverty, combating communicable diseases and ensuring environmental sustainability. Early mitigation of GHG emissions will significantly decrease future adaptation costs, and especially the burden on the poor. Even if efforts to stabilize GHG concentrations are successful, some degree of warming and related impacts will continue to

occur in the next decades. An effective response to climate change must combine both mitigation—to avoid the unmanageable—and adaptation—to manage the unavoidable.

4. **Tackling climate change is feasible...** A series of major studies, such as the IPCC Fourth Assessment Report (2007), the UNFCCC Report on Investment Flows (2007), the International Energy Association's (IEA) World Energy Outlook (2007), and the forthcoming Organization for Economic Co-operation and Development (OECD) Environmental Outlook (2008), have improved our understanding of the feasibility and costs of curbing GHG emissions. Stabilization of GHG concentrations within the levels that keep the impacts of climate change manageable would require limiting global GHG emissions through multilateral action involving policy incentives and the deployment on a global scale of a portfolio of currently available and future low-carbon technologies in a range of sectors including energy supply, transport, buildings, industry, agriculture, forestry and waste management. This translates into significant emission reductions by developed countries and curbing growth in GHG emissions by developing countries, with eventual stabilization in the long term. Economic cost estimates from several recent studies vary from 3 percent of global Gross Domestic Product (GDP) (IPCC, 2007) per year to annual costs of only 0.1 percent of global GDP by 2050 (OECD, 2008).

5. **...but who bears how much of the costs remains the key issue.** The OECD study also shows that developing countries may face far bigger losses in GDP from the mitigation action than the industrial world. Because of their lower historical contribution to GHG concentrations, much lower per capita energy use, and higher vulnerability to the impacts of changing climate, developing countries expect a cooperative arrangement to finance their transition to low-carbon growth in a manner that does not compromise their energy access and growth agenda and adaptation efforts, in accordance with the principle of common but differentiated responsibilities and respective capabilities. The Secretariat of the UNFCCC estimates that by 2030, financial flows to developing countries should be in the order of US\$100 billion annually to finance mitigation, and somewhere between US\$28-67 billion for adaptation. Importantly, financial resources are required in addition to the present level of ODA finance so as not to compete with achieving the MDGs.

6. **The past year witnessed impressive consensus building on the importance of addressing climate change** that culminated in an agreement at the UNFCCC COP13 in Bali to launch negotiations towards long-term cooperative action by all countries. The framework for negotiations embraces mitigation of climate change (including, for the first time, consideration of reducing emissions from deforestation and land degradation), adaptation, technology development and transfer, and provision of financial resources in support of developing countries' actions (see Box 1).

7. **The WBG has accumulated substantial experience in addressing climate change in the context of development and poverty reduction, most recently through the CEIF** (Annex 1). The WBG is an implementing agency of the GEF, a major lender to renewable energy and energy efficiency, a pioneer in the carbon market, and a facilitator of energy sector reforms that provide incentives for efficiency, energy savings and better environmental practices. Realizing the need to scale-up its work on climate change, while at the same time ensuring increased energy access in poor countries, the WBG formulated the CEIF, together with the Action Plan, in 2006/2007. The CEIF focuses on three areas of the WBG involvement: (a) energy for growth, with a particular emphasis on

access to energy in Sub-Saharan Africa; (b) transition to a low carbon development trajectory; and (c) adaptation to the effects of climate change.

Box 1: Highlights from the Bali Action Plan

The Bali Action Plan was formulated by member countries of the UNFCCC at COP 13 in order to enhance the implementation of the Convention and negotiate further actions for a post-2012 period. While reaffirming that socio-economic development and poverty reduction are global priorities, the Bali Action Plan calls for:

- Enhanced action on mitigation of climate change:
 - nationally appropriate, measurable, reportable and verifiable mitigation commitments or actions, including quantified emissions limitation and reduction objectives by all developed countries, taking into account differences in their national circumstances;
 - nationally appropriate mitigation actions by developing countries in the context of sustainable development, supported by technology and enabled by finance and capacity building in a measurable, reportable and verifiable manner;
 - policy approaches and incentives relating to emissions reductions from deforestation and forest degradation in developing countries;
 - cooperative sectoral approaches and sector-specific actions, as well as market-based approaches.
- Enhanced action on adaptation to climate change:
 - international action to support implementation of adaptation actions;
 - risk management and risk reduction strategies, including risk sharing and transfer mechanisms such as insurance;
 - disaster reduction strategies;
 - economic diversification to build resilience.
- Enhanced action on technology development and transfer to support mitigation and adaptation:
 - effective mechanisms for scaling-up the development and transfer of affordable and environmentally-sound technologies to developing countries, and ways to accelerate their deployment and diffusion;
 - cooperation on research and development of current, new and innovative technology;
 - mechanisms and tools for technology cooperation in specific sectors.
- Enhanced action on the provision of financial resources and investment to support mitigation and adaptation:
 - improved access to adequate, predictable and sustainable financial and technical support and provision of additional resources, including official and concessional funding for developing countries;
 - positive incentives for developing countries to enhance mitigation and adaptation actions;
 - innovative means of assisting developing countries that are particularly vulnerable to adverse impacts of climate change, including financial and technical support to capacity-building;
 - incentives to implement adaptation via sustainable development policies;
 - mobilization of public and private sector funding and investment, including facilitation of carbon-friendly choices.

8. **The WBG realizes that addressing climate change must not divert resources from core development needs.** The WBG will continue its engagement in the energy access agenda, and explore opportunities to link it to carbon finance and provide cost-effective and reliable solutions through renewable energy and energy efficient devices. The WBG attaches the utmost

importance—and has demonstrated its commitment by providing its own funds—to increasing IDA resources. In 2007, the Bank undertook a review of how climate change impacts IDA countries, which highlighted strong links between poverty and climate vulnerability. It also highlighted the need for increased resources—that are in addition to the core development assistance to achieve the MDGs—to assist countries (a) with the higher costs of climate risk management and asset rehabilitation due to more frequent and severe natural disasters and (b) to adapt within their core development strategies. Lessons from the WBG experience also demonstrate that mitigation of, and adaptation to, climate change can have significant synergies with local development priorities, and bring new business opportunities.

9. **The CEIF process resulted in a mandate to develop a comprehensive Strategic Framework for the WBG engagement.** The Progress Report on the CEIF Action Plan issued in September 2007 underscored significant achievements with energy sector lending and noted that the WBG engagement on supporting low carbon growth opportunities has expanded beyond energy to other sectors such as urban, transport, industry (primarily by the IFC), agriculture, and forestry. The Report also pointed to a growing demand for scaling-up WBG work in the area of adaptation to climate variability and changes. At the 2007 Annual Meetings, the Development Committee in its communiqué (October 21, 2007) welcomed the progress made in implementing the CEIF, recognized the critical importance of energy access for growth, and called on management to develop a comprehensive strategic framework for Bank Group engagement, including support for developing countries' efforts to adapt to climate change and achieve low-carbon energy growth while reducing poverty. It also called for enhanced cooperation and harmonization with other development partners, and for catalyzing substantial additional resources from both public and private sources.

B. Objectives and Guiding Principles

10. **The proposed *Strategic Framework on Climate Change and Development (SFCCD)* will be a means to articulate the WBG's vision** on how to integrate climate change and development challenges, without compromising growth and poverty reduction efforts through its country operations, including policy dialogue, lending, and analytical work in client countries, and through its regional and global operations. Scaling-up WBG action on climate change rests on (a) a continued priority for economic growth, poverty reduction and achieving MDGs in developing countries, (b) an understanding that access to energy services and increased energy use by developing countries are fundamental to these goals, and (c) a recognition that adaptation to climate variability and change is critical to sustaining and furthering development gains in the majority of developing countries.

11. **Reflecting the multi-sectoral and multidimensional nature of the challenge, the SFCCD will encompass activities in many sectors**, covering energy, transport, urban development, water, agriculture, forestry, industry, economic policy, and social and human development. The SFCCD also acknowledges and will address multiple dimensions through which changing climate affects development: economic, financial, social, gender and environmental, including impacts on other global environmental goods such as biodiversity.

12. **Given that knowledge about climate change, particularly the economic and social aspects, is continuously evolving and uncertainties remain, the design of the SFCCD will be flexible** so as to incorporate new knowledge and support actions, whose benefits are robust under

any future scenarios of climate change negotiations and impacts. The development of the SFCCD is also guided by the principles of: (a) supporting the UNFCCC process; (b) being neutral to any negotiating party position; (c) helping developing countries manage the challenges of climate change and realize opportunities of climate action; (d) considering climate change an overarching development and economic issue, not only an environmental issue, which requires involvement and leadership by the ministries of development and finance, in addition to environment ministries;¹ (e) recognizing the importance of partnerships given the many actors on the international arena with different mandates on the issue; and (f) building the SFCCD as an integral part of the Bank's strategy on inclusive and sustainable globalization.

13. **The SFCCD is being developed in the context of a broader assessment by the WBG of its comparative advantages to play a greater role in financing Global Public Goods (GPGs).** Making a difference on GPGs in general and climate change in particular, requires a joint effort by many development partners. In this context, the WBG has a number of unique strengths to significantly contribute to, and play a leadership role in several areas of, this agenda, in partnership with others, while building on the core business of its various institutions:

- *Multisectoral perspective.* Climate change affects most sectors. Similarly, the WBG support for action on climate change occurs across many development sectors, thus facilitating mainstreaming of the work in a coordinated, integrated and holistic manner.
- *Financial resources and leveraging power.* The WBG loans, credits and other products are a powerful signal to other potential funding agencies that a country has both the ownership and capacity to implement climate actions in development projects.
- *Working with the private sector.* The IFC and MIGA are important players in increasing the awareness and engagement of the private sector in climate change issues through investments to support mitigation and adaptation, such as innovative technologies, sustainable forestry and agribusiness, and increased development and use of climate risk insurance mechanisms.
- *Building partnerships with a wide range of institutions and stakeholders.* The WBG has the capacity to form diverse partnerships, ranging from joint knowledge ventures to financial partnerships, thereby catalyzing greater synergy among players.
- *Knowledge base and policy advice.* Analytic and advisory activities at the WBG, including a growing research program on climate change, form a key input to country and sector strategies, and help to shape the country dialogue and operations on these issues.

¹ The first meeting of Finance and Development Ministers on climate change took place in Bali in December 2007, alongside the UNFCCC negotiations. It acknowledged climate change as a major development issue and pointed to the importance of continuing the dialogue with all stakeholders. An informal meeting of the Ministers of Trade to discuss trade-climate change linkages and key issues was also held.

- *Convening power, global reach, and local presence.* The WBG collaborates closely with other development agencies and a variety of stakeholders at the country level. Given the high sensitivity of climate change to developing countries, which often view it as a “rich country agenda,” the WBG’s ability to serve as an impartial broker and convener is an important advantage. The WBG also has vast cross-country experience and applies lessons learned from middle-income countries to low-income-countries. The WBG staff from country offices share their experience and knowledge with clients daily.
- *Strong fiduciary, environmental, and social policies.* The WBG ensures that all its lending operations (including those on adaptation and mitigation) are in line with its fiduciary, environmental, and social safeguards. The Bank is already working on addressing climate change issues in Environmental Assessments of water resources, in agriculture, and other key sectors, as well as in Country Environmental Analyses (CEAs).

14. **The Strategic Framework on Climate Change and Development for the World Bank Group will be proposed for endorsement by the Board in September 2008 and subsequently discussed at the 2008 Annual Meetings.** The SFCCD will include a results framework, priorities, operational approaches and a roadmap of actions, including addressing internal constraints, for achieving the results (by sector and region/group of countries where needed), and major products/deliverables leading to the COP15 in Copenhagen (see Annex 3). This Concept Note will be distributed at the 2008 Spring Meetings, together with the attached *Clean Energy for Development Investment Framework—Implementation Report on the World Bank Group Action Plan*, which served as a platform to launch the SFCCD.

15. **Going forward, the scaling-up of access to modern energy services will be addressed under the Sustainable Infrastructure Action Plan and the Africa Action Plan.** Although the access issues will be dealt with in parallel to the climate change agenda, the linkages and synergies will be given close consideration. For example, renewable energy options will be an important component of both grid-based and off-grid electricity supply options, drawing on sources of funds to buy-down incremental costs where it is economically efficient to do so. Energy efficiency options such as recent Compact Fluorescent Lamps (CFL) projects and the WBG “Lighting Africa” program will continue to be an important development tool as a way of decreasing both the supply-demand gap and the carbon intensity of development. The SFCCD will further explore opportunities to link energy access programs to carbon finance and provide cost-effective and reliable solutions through renewable energy and energy efficient devices.

16. **The SFCCD envisages strengthened collaboration among IDA/IBRD, IFC, and MIGA, while recognizing the need for a differentiated approach among different groups of clients served by these institutions.** The work to articulate a specific strategy for each institution and identify major areas of collaboration has already started, and will be expanded during the preparation process. It is important to emphasize that the SFCCD is envisaged as a framework that sets directions and principles, and proposes tools, incentives, global products, and measures to track progress, with an agreement on the key messages to convey to our clients and external stakeholders. It is not a substitute for sectoral and regional business strategies, which are being (or planned to be) developed and which will be much more specific and detailed about integrating climate actions in their operations and deliverables. The SFCCD, therefore,

will be prepared to provide a distinct value-added to—and not to repeat or significantly overlap with—other sector strategies. Specifically, it will focus on actions related to developing and disseminating tools and methods; sharing knowledge; creating internal incentives and building capacity to address priorities relating to the GPG agenda; developing new financial and other products; strengthening collaboration with key external players to achieve results; and building a system of monitoring and reporting progress and impact.

17. **The SFCCD will be prepared in parallel, and will benefit from close coordination with the proposed *World Development Report 2010 on Climate Change* and several other major analytical products,** such as a global research program on the economics of adaptation to climate change, led by the SD Network, and the work on economic policy and climate change in PREM, and from interaction with the ongoing and expanding research programs in DEC. The findings of these and other studies will inform the formulation and implementation of the SFCCD.

C. Action Framework: Strategic Pillars

18. **Building on its comparative advantages, the WBG will achieve the objectives of the SFCCD by adopting an action framework based upon the following six pillars:**

- Scaling-up operational approaches to integrate adaptation and mitigation in development strategies;
- Consolidating efforts to mobilize and deliver finance;
- Expanding the WBG’s role in developing new markets;
- Tapping private sector resources for climate-friendly development;
- Clarifying the WBG’s role in accelerating technology development and deployment; and
- Stepping-up policy research, knowledge management and capacity building.

19. **IDA has emerged as an appropriate platform for integrating adaptation into the development programs of poor countries** (with support from additional grant and concessional financing instruments). In addressing capacity and investment needs of IDA countries to deal with the impacts of climate change, the SFCCD will build upon the recent paper on IDA and Climate Change (see Box 2). As IDA countries comprise the majority of the most vulnerable to adverse impacts of climate change, a key priority for the WBG is to support a development process in IDA countries that is sustainable and resilient to climate variability. This will require mainstreaming climate risk management processes in IDA operations and programs, supported by financing and capacity building that is additional to the current level of development assistance. The IDA countries also have low levels of energy access and very low energy-related GHG emissions; thus, increasing access to energy remains a top priority. The WBG will support mitigation opportunities in these countries through “win-win” solutions beneficial for local development, such as energy efficiency measures, cost-effective and reliable uses of renewable energy, and facilitating access to carbon markets. Furthermore, deforestation and land degradation in many IDA countries are the

Box 2: Highlights from the IDA and Climate Change Paper

IDA countries are highly vulnerable. IDA and IBRD-IDA blend countries are the most vulnerable to risks associated with (a) extreme weather events such as floods, droughts, and storms; (b) rising sea levels and related coastal issues; and (c) changes in agricultural production. Furthermore, currently most important health burdens in poor countries, such as malaria and water-borne diseases are particularly likely to be worsened by climate change.

Adaptation is critical. However, it should be pursued not as an end in itself, but as a means to meet the development objectives of IDA countries.

Due to the impacts of changing climate, maintaining effective levels of development assistance will require additional resources. IDA countries will need additional finance just to maintain the development benefits of projects at their ‘without climate change’ level. The increase in IDA credits that would make this possible has been estimated to range from \$600 million to \$1.9 billion per year (i.e., a 6 to 21 percent increase from the total FY06 IDA credits), for each of the climate damage scenarios taken from the Stern Review of the Economics of Climate Change.

Approaching mitigation through the prism of local benefits. IDA countries contribute the least to GHG emissions, thus mitigating emissions constitutes a less pressing issue in the short to medium term. Yet, some mitigation actions—such as expanding access to clean energy (including through regional projects) or financing improved land and forest management programs—can offer win-win opportunities in IDA countries, both in terms of supporting good local development and reducing global GHG emissions.

Source: IDA and Climate Change, World Bank, 2007.

main contributors to their GHG emissions, as well as causing local-level problems. Investments in addressing these issues could provide multiple environmental and development benefits, including improved livelihoods for the poorest communities and greater resilience to climate risks.

20. There is a need to better articulate a middle-income country (MIC) agenda with respect to climate change, covering both mitigation and adaptation. The SFCCD recognizes a range of situations among the MIC pool with respect to the balance of priorities between adaptation and lower carbon growth opportunities, and supports the case for providing assistance to climate risk management and adaptation in the countries with high vulnerabilities (such as water scarce economies of Middle Eastern and North African or Latin American countries exposed to glacial melting in the Andes and other major climate risks). At the same time, the SFCCD will attach significant attention to developing *competitive* products for financing lower carbon investments in middle-income countries. In doing so, the SFCCD will draw upon the CEIF, the Sustainable Infrastructure Action Plan (forthcoming), the urban strategy (under preparation), and the WDR 2009 on spatial development, and will focus on exploring innovative joint products across IBRD, IFC, MIGA, CF and other climate funds that increase competitiveness of the WBG financial services in MICs.

21. Energy use patterns within middle-income developing countries diverge greatly between the poor and a growing and increasingly affluent middle class. This is likely to pose additional challenges for planning low carbon programs that address broad-based development needs. In addition to the need to protect population groups at-risk from the impacts of climate change, it will also be important to understand how mitigation action is expected to affect intra-country inequality, and clarify a WBG approach to this issue within its MIC strategy.

22. The SFCCD will also consider a more detailed segmentation of the WBG client countries according to their need and capacity to mitigate and adapt to climate change. Distinct approaches to IDA and IBRD countries, while important, may not fully reflect the differences in capacities and constraints that are present within these two groups of countries.

Moreover, countries with different geography differ in their exposure to climate change, irrespective of income levels, which affects their views about bearing the costs of prevention and mitigation efforts and their action priorities. In this context, special concerns, risks and limitations of small countries and island states needs to be recognized.

23. **Fragile states, as well as conflict-affected countries, are disproportionately represented among the countries most at risk from climate related threats.** These countries face special challenges to mitigate and adapt to climate change that deserve to be recognized. The business products that can be effective in fragile states need to take into account their institutional constraints, the limited funding availability and the scarce capacity to formulate and implement development-oriented actions. The additional threats posed by the potential impact of climate change will further strain their limited capacity.

24. **The SFCCD will attempt to address the specific needs of different countries, as well as, more generally, develop a typology of the countries' groups that require differentiated strategies in dealing with climate change.** Some countries, for example, would focus their demands on dissemination of, and financing for, clean technologies. Others facing the brunt of flooding, desertification and other effects of climate change are particularly concerned with obtaining financing to adapt to the effects of climate change. For a group of oil producing countries, assistance with diversification of their economies could be at the core of a strategy to help them deal with climate change. Many countries will have to address several issues at the same time, and in most countries, there are significant differences in priorities between rural and urban areas.

25. **The SFCCD will further address how the WB, the IFC, and MIGA can strengthen cooperation on climate change, building on their comparative advantages.** To this end, the SFCCD will draw on lessons from joint CASs and good project examples, including the Lighting Africa initiative, the cooperation on hydropower (e.g., Bujagali Dam), a joint WB/IFC/GEF clean energy finance project in the South Pacific, etc. It will also explain differences in approaches and focus between these institutions, tailored to the specific needs and interests of their clients. For example, the IFC is actively positioning itself as a leader in catalyzing and responding to a growing interest by the private sector in new business opportunities resulting from the need to adapt to and mitigate climate change (see Box 3 below with a summary of IFC progress on the climate change strategy).

Box 3: Towards an IFC Climate Change Strategy

Approach: The IFC is developing its Climate Change strategy as part of the overall WBG approach on climate change, which will fall under the WBG Strategic Framework for Climate Change in FY09. IFC's approach in this respect will build on and support World Bank (WB) efforts to address broader policy and regulatory issues. In addition, the IFC will partner with the WB, MIGA and other institutions to enhance effectiveness where possible.

The IFC proposes a balanced and demand-driven approach aligned with its mandate of supporting economic development in client countries while helping mitigate and adapt to global climate change. There are prospects of a new international consensus following the recent Bali discussions, and an expectation for the IFC to be a thought leader with respect to the role of the private sector and climate change in developing countries. Climate change also provides IFC with the opportunity to expand its activities and development impact.

Climate change is proposed to be included as one priority in the IFC's sustainability pillar. While still evolving, key features of the IFC's approach to climate change include near term actions on: (i) enhanced support for RE/EE investment; (ii) partnerships to address climate change mitigation and adaptation; and (iii) extending carbon finance activities. The IFC will review further: (i) its role in adaptation to climate change; (ii) measuring the GHG emissions in the IFC's portfolio; and (iii) the use of carbon shadow costs in project appraisal. As part of its approach, IFC will increase its investment support and aim for a catalytic role in helping facilitate the transfer of appropriate technologies and approaches to the private sector in developing countries.

The IFC has launched several initiatives in coordination with the Bank, e.g., it is finalizing a methodology to measure the IFC portfolio GHGs, initiating adaptation studies, and working with the Bank on effective private sector accessibility in the CIFs *currently* under discussion.

Process and next steps: A brief summary of the IFC's emerging approach on climate change will be attached to the Road Map, which will be discussed by Board committees on March 5 and March 27, 2008. The IFC is collaborating closely with the Bank on the development of its approach and will have discussions with its stakeholders.

Source: IFC.

D. Operationalizing the Action Framework: Key Issues and Approaches

Pillar 1: Scaling Up Operational Approaches to Integrating Adaptation and Mitigation in Development Strategies

26. **Country ownership and client demand are the key to the success of this pillar.** Improving understanding of the “development-adaptation-mitigation” linkages and supporting actions with multiple benefits is at the core of the SFCCD approach. At a broad level, the main synergies can be summarized as follows. Climate risk management is fundamental for preserving and enhancing development progress in many developing countries—even with the current climate variability and disaster management needs, and more so with on-going climate change. Successful mitigation efforts by the global community will reduce the burden of adaptation. Adaptation to aggravating climate risks and low carbon growth options are often directly linked to national development priorities and business opportunities, such as energy efficiency, renewable energy, sustainable livelihoods and environmental protection, and building resilience of infrastructure to climate variability (see Box 4). Accelerating economic growth is critical for increasing capacity to adapt and take full advantage of low-carbon business opportunities.

27. **Climate action can — and should — result in multiple local benefits for developing countries: commercial, developmental or environmental.** Lessons from many long-standing WB and IFC engagements show that the best entry points to client dialogue and program development on climate change arise from the synergies between development progress, disaster

management and adaptation, particularly in the infrastructure and agriculture sectors; the benefits, including additional revenues, from sustainable forest and land management; and the business opportunities of investing in energy efficiency, renewable energy and other “low carbon” projects. The scope for cost-effective, pro-development investments in energy efficiency and, increasingly, renewable energy especially against the background of rising oil prices, is particularly broad. This is becoming a key target area for the IFC in increasing their support for low carbon investments. The IFC’s focus on climate change has been prompted by growing demand from its private sector clients and expanding climate change related market opportunities. Existing and new concessional finance instruments for both mitigation and, more recently, adaptation, create other important levers for client demand, evident from a robust growth in the WBG carbon finance business. It is also important to strengthen the linkages and cooperative arrangements between adaptation and disaster management programs. The WBG has skills that can help countries, and regions within countries, anticipate and plan for disasters that will hit them in the near term, even as they invest in long term adaptation and risk reduction strategies.

Box 4: Climate Action as a Development Opportunity

“Climate-responsible” development creates opportunities for:

- Greater energy efficiency and diversification of energy base
 - New business and income-generating activities,
 - Rural renewable energy enterprises (mitigation)
- Increased sustainability of rural incomes due to adaptation to climate change risks
- Technological innovation that increases competitiveness
- Higher quality infrastructure resilient to climate-related disasters
- Improved air quality and reduced congestion
- Better forest and land management practices that also benefit local communities, with the potential to contribute to both adaptation and mitigation
- Improved spatial planning and accountable local governance with multiple benefits for local communities

28. These linkages and the WBG experience underscore the proposed building blocks to integrate climate change and development by helping developing countries to:

- Realize immediate climate risk and disaster management needs while taking into account and building capacity for dealing with longer-term adaptation needs; give priority to supporting the most vulnerable countries with low capacity in a manner that is cost-effective and does not compromise the short-term well-being of the most vulnerable and poorest groups;
- *Take advantage of low carbon growth opportunities* that benefit local communities, businesses, the economy and the environment, and that can be supported by concessional financing to cover increased costs, including the forestry sector; give priority to cost-effective interventions with large potential for GHG reductions;

- Identify and support development programs with multiple development and environmental benefits and strong adaptation-mitigation synergies that are particularly significant in the agriculture, forestry, water, and urban sectors; and
- Access concessional finance at the needed scale, obtain assistance with technology and capacity building, and attract private sector resources into pro-development climate-friendly investments (including investments that help diversify oil producing economies dependent on oil exports) through innovative incentives and market mechanisms.

29. **Scaling up a novel agenda of integrating climate change considerations into development assistance will require a dual approach** of (i) building on the strengths of the WBG's existing business models, such as a country-based assistance model and sectoral engagement driven by client demand, while (ii) developing new approaches and global products. It should be stressed that a simplistic approach of withdrawal from "carbon intensive" sectors, such as thermal power or transport, will not serve either climate change or development agendas. Supporting advanced and efficient technologies and more sustainable alternatives is the preferable way forward. Specific decisions will need to take into account the circumstances of the client country, many of which are poor and face acute energy and connectivity shortages (e.g., in Africa).

30. **The key elements of the proposed approach** are as follows:

- *Understand distinct needs and roles of different countries and groups of countries:* while the problem is global, most actions and impacts are local or regional, and a careful application of knowledge at both a local (country, regional) level and a global level is needed to define the issues;
- *Realize "quick wins",* i.e., immediate opportunities for addressing adaptation and/or mitigation issues based on an assessment of country/regional priorities, existing client demand, sectoral engagements specified in CASs and regional business programs; and available instruments;
- *Identify priorities for developing new business lines and areas of engagement* to help clients meet the challenges of reconciling climate and sustainable development objectives in the evolving international context, while retaining selectivity and coherence of a country program;
- *Engage on policy, institutional and social issues* that are linked to the climate change agenda, including through dialogue with Finance and Development Ministries;
- *Build public-private partnerships:* reach out to the private sector in developing countries, and those who wish to invest in developing countries, to understand their needs, promote appropriate public-private partnerships and share best practice.
- *Address the needs for new tools and products* -including knowledge, capacity building, and financial products at the country, regional and global levels and in collaboration with all its institutions to scale up the impact; and

- *Enhance skills and capacity*—inside the WBG and among clients—to develop, disseminate and apply knowledge and deliver on the new agenda.

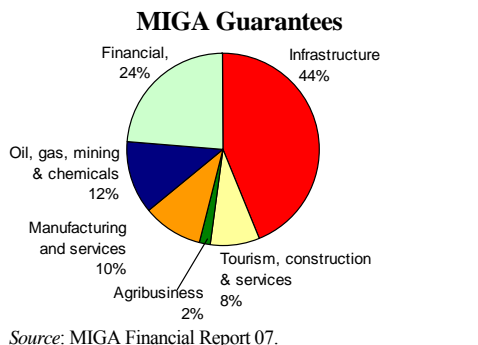
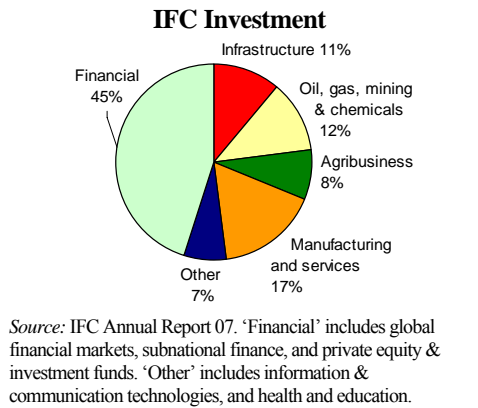
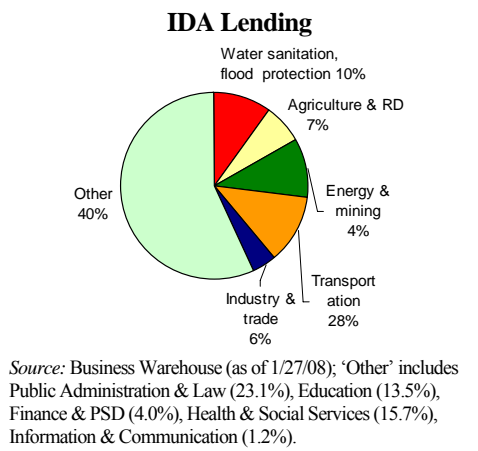
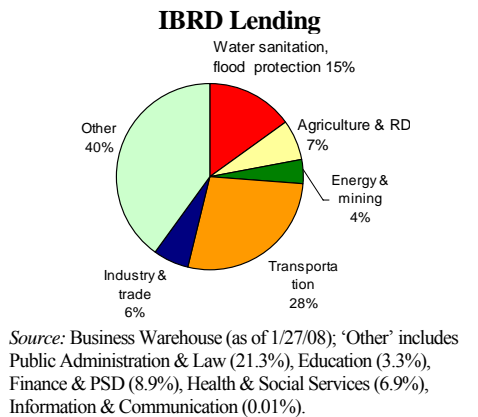
31. **The first step is to identify country-specific priorities related to climate change.** While climate change is a global challenge, priorities for climate action—with respect to vulnerability to climate risks, potential for cost-effective lower carbon growth options, and balancing mitigation and adaptation—are quite different among regions, among countries within the regions, and within the IDA and IBRD pools. Annex 2 shows brief profiles by regions and for select countries with respect to impacts and emissions. The Bali Action Plan (Box 1) recognizes the need for “nationally appropriate” mitigation programs and adaptation strategies and will likely create further demand by developing countries for support to develop and implement these programs.

32. **Key emphasis will be given to developing programs that are adjusted to national, and in some cases, multi-country or regional circumstances,** identified through regional business strategies, country dialogue, analytical work, and CAS processes. The CAS process will be essential to ensure that country development needs related to climate change are considered and incorporated as appropriate. Bank-wide analytical work and tracking progress using a strong results framework will help to link country/regional actions with indicators of progress for the WBG as a whole.

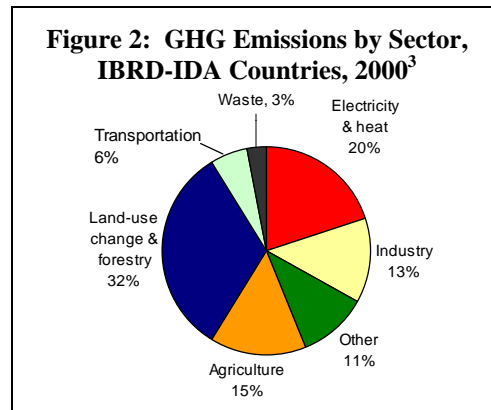
33. **The SFCCD will address adaptation and mitigation priorities through existing core engagements with the WBG clients in relevant sectors and areas.** The WBG can achieve a large impact by making its major existing support programs in key sectors (most relevant for adaptation and/or mitigation) climate-resilient and/or less emission intensive. The five SDN sectors—transport, agriculture (including irrigation and forestry), water, energy, and urban that have particularly strong linkages to the climate change agenda—account for over 50 percent of

² Urban lending as such cannot be shown as a distinct category on this chart (displaying activity by sector) since it is considered as a theme and not a sector.

Figure 1: WBG lending by Sector², FY07



WB's pipeline, ranging from about 40 percent for IDA to 60 percent for IBRD (see Figure 1). Economic activity in these sectors dominates GHG emissions at the global, regional, and national levels, even as their relative contribution varies across countries and regions (see Figure 2 for global sources of GHG emissions and Annex 2). Impacts from climate change on the agriculture and water sectors are identified as a priority by all regions, and the work to understand the impacts on the transport, energy, and water sectors is ongoing. These sectors lend themselves as a priority focus—and an opportunity for influencing the way the Bank does business. It is also important to start taking account of the health impacts of climate change in health sector projects, another key area of WB engagement, particularly in IDA countries.



34. **IFC and MIGA operate in sectors with significant mitigation potential (oil and gas), or which are sensitive to climate risk (tourism), or sectors for which both apply, such as infrastructure and industry.** The joint WB/IFC/MIGA Sustainable Infrastructure Action Plan (forthcoming) forecasts a shift in the composition of portfolio and investments, reflecting the key role played by the private sector in addressing climate change. A more nuanced analysis of overlaps between the current major lines of business, adaptation priorities and mitigation potential, and business implications, will be included in the SFCCD paper by region.

35. **In case of significant divergences between the current business lines, adaptation priorities, and mitigation opportunities at the country or regional level, there will be scope to develop new or expand certain areas of engagement.** For example, Latin America and the Caribbean Region (LAC) is planning to expand its currently modest energy sector business, which will help leverage climate objectives in energy sector dialogue, and the WBG adopted its Energy Efficiency Action Plan to scale up the work on energy efficiency.

36. **Given the scale of the transformational change, there will be a need for innovative business products,** particularly in countries with the highest risks (for example, many small island states, Bangladesh and many African countries,) or the greatest potential for reducing growth in GHG emissions. Examples of emerging new lines of business focusing specifically or largely on climate risks and actions include the Kiribati Adaptation Program (KAP) in the Pacific Region, several GEF-supported adaptation projects in Latin America, and the Bank's technical and lending assistance for enhancing the resilience of coastal areas in Bangladesh. There is also a scope for scaling up the WBG work on natural disasters, an important cause of persistent poverty in developing countries, and strengthening linkages with disaster management and adaptation programs through innovative projects and initiatives, such as *the Caribbean Catastrophe Risk Insurance Facility* (see Box 5).

³ Source: Climate Analysis Indicators Tool (CAIT) Version 5.0. Washington, DC: World Resources Institute, 2008)

Box 5: Helping the Caribbean Cope with Hurricane and Earthquake Damage

Caribbean states are highly vulnerable to natural disasters and have limited financial options to respond. On average, a major hurricane affects a country in the region every 2 years. The Caribbean Catastrophe Risk Insurance Facility (CCRIF) is the first regional disaster insurance facility in the world. It provides 16 participating governments from the Caribbean region with immediate liquidity in the aftermath of a natural disaster. By pooling their risks together, participant countries save approximately 40 percent over individual premiums. Participating governments are Anguilla, Antigua & Barbuda, Bahamas, Barbados, Belize, Bermuda, Cayman Islands, Dominica, Grenada, Haiti, Jamaica, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, Trinidad & Tobago, and the Turks and Caicos Islands.

CCRIF's reserves come from participating countries and donors. Its capacity to service claims is based on its own reserves combined with the financial capacity of the international financial markets. This allows CCRIF to respond to events that may occur only once every 1,000 years or more, achieving a higher level of resiliency than international standards. CCRIF was able to secure \$110 million of claims-paying capacity on the international reinsurance and capital markets. Work is also being considered to expand the scope of the coverage provided by CCRIF to other natural hazards such as floods and tsunamis, as well as to other Caribbean territories.

37. **Addressing climate change will require more attention to integrating all aspects of sustainable development and promoting a holistic approach, using natural resources and building infrastructure in an integrated manner.** With respect to adaptation, the SFCCD proposes to adopt a broad perspective, which addresses a better understanding of the immediate impacts of climate variability, but also economic, social and geo-political consequences, including the potential of climate related migrations and additional pressures imposed by increased rural to urban migration. Examples of the programs and products that have a potential to apply holistic approaches at different spatial scales, with adaptation and/or mitigation benefits, include:

- *Integrated natural resource or coastal zone management projects.* Forest, coastal and biodiversity conservation can provide multiple benefits of (i) improved local livelihoods and reduced poverty; (ii) reduced vulnerability to natural hazards and (iii) enhancing global public goods through carbon sequestration and biodiversity conservation;
- *Various regional and multi-country products* that can support multi-country water resource management programs, regional adaptation schemes, or regional energy systems;
- *Programs that acknowledge the centrality of the water cycle* as one of the key driving mechanisms in climate change impacts across sectors, particularly agriculture, transport, energy and health sectors and that address water and energy in an intergraded manner;
- *Cross-sectoral infrastructure programs at the local government level*, and particularly at a city level—where many mitigation and adaptation decisions can be taken (and have been taken by several city governments). Indeed, more than two thirds of modern energy consumption takes place in cities and they are the source of most solid waste and transport-related GHG emissions. Furthermore, many cities are located in coastal areas and deltas that are likely to be affected by climate change, and there are important synergies between adaptation and mitigation integrated in city planning and

development. Sub-national financing instruments are a useful tool for such programs; and

- *Integrated disaster management and climate change adaptation* that help mainstream these issues as part and parcel of regular development planning and project preparation. Innovative projects such as the Kiribati Adaptation Program, now in its pilot implementation phase, demonstrate such integrated climate risk management, ranging from national budgets and planning in all key ministries to consultation with local communities and NGOs.

38. **The role of forests in addressing climate change needs to be emphasized.** About 20 percent of global GHG emissions and over 30 percent of GHG emissions in developing countries result from land use changes, deforestation, and forest degradation. While sustainable forest management is a way to achieve tangible GHG emission reductions, forests themselves would suffer significantly from climate change, including impacts on natural habitat and biodiversity. This makes forests an important focus for developing and implementing adaptation measures. The 2002 World Bank Forest Strategy, together with its programs and partnerships, has provided the enabling environment to address global forest issues related to climate change mitigation and adaptation. Strategic programs such as the Forest Carbon Partnership Facility (FCPF), the BioCarbon Fund, the Forest Law Enforcement and Governance (FLEG) program, and the Program on Forests (PROFOR) are already helping client countries to engage in environmentally sustainable and carbon-positive forest management. The WBG is working on a broad, multi-stakeholder partnership approach, which would allow programming and implementation of financing to address climate change mitigation and adaptation through sustainable forest management on a participatory and equitable basis. The SFCCD will further support this initiative, promote its lessons as a demonstration of “development-mitigation-adaptation” synergies, and provide a broader strategic context.

39. **Importantly, institutional capacity, policy barriers, and a complex political economy of energy and water pricing are among the major constraints to adopting win-win solutions, absorbing additional financial resources and harnessing private sector investments.** Many of the policy and institutional development actions that help a country prepare for climate change are in the “no regrets” category, i.e., they would be beneficial even in the absence of climate change. This includes policies and institutions affecting natural resource management (especially water), energy sector reforms, risk management, and conflict resolution on the national and trans-boundary levels. But the specter of climate change can make the need for actions in these areas more apparent and urgent, and help raise their profile and advance the necessary reforms. The proposed approach of building on major sectoral engagements with WB clients and sectoral business strategies as an entry point for integrating the climate change agenda has an extra benefit of greater ability to address institutional and policy issues at the core of a successful transition to climate resilient development. Joining forces with the IFC and facilitating private sector investment in low carbon and climate risk resilient projects by creating an enabling policy environment and public-private partnership is another major area of action advocated by the SFCCD.

40. **There is a greater role for the WBG dialogue on economic policy, investment climate, governance and social protection in the context of climate change.** Analytical work

initiated by PREM on linkages between climate change and growth, poverty, trade, fiscal policy, and governance and decentralization will inform and facilitate the integration of climate change issues into economic management dialogue, CASSs, and policy lending. An increasing engagement of Economic and Finance Ministries provides an opportunity to further articulate these linkages and advance an understanding on how domestic economic policy can benefit both development and climate objectives. The IFC is stepping up its efforts to reach out to and engage with the private sector on the need to support climate action.

41. **The SFCCD will stress the importance of social and gender considerations in addressing climate change.** WBG work on climate change should give priority attention to ensuring that the poorest, least resilient social and gender groups who are most vulnerable to climate change impacts are supported in developing adaptation strategies. Coping strategies for these groups should not compromise their short-term well-being; nor long-term life chances. Climate actions should also take into account that impacts are often differentiated by gender, since women may be disproportionately engaged in particularly vulnerable sectors such as paddy cultivation, cotton, and tea plantations, and fishing. . Within the prevailing lack of equal rights of women to land, irrigation water, and access to education renders them especially vulnerable in a future with anticipated increases in pressure on these resources. Women, therefore, may often have a lower adaptive capacity arising from prevailing social inequalities and are ascribed social and economic roles that lead to increased hardship (e.g., through reduced food security or shortage of water resources). The SFCCD therefore will be an opportunity to further enhance attention to important social dimensions in the development agenda, such as the centrality to address especially vulnerable groups, including women, in policy dialogue and all its lending and non-lending activities.

42. **Resilient local institutions are critical for managing the adverse impacts of social stress and dislocations associated with climate hazards and climate change, and in mediating conflicts over increasingly scarce resources.** In this context, Middle East and North Africa (MENA) should be highlighted as a region experiencing water scarcity on a scale yet unknown in other regions in the world, so that any further precipitation declines pose a threat to the very foundation of human existence in some of its sub-regions. The specter of increasing rural-urban migration and an increase in urban slums population, social unrest, growing unemployment and sense of exclusion and the increased conflict in the region can already be witnessed in a number of countries. Understanding and supporting local institutions is vital in helping facilitate adaptation and mitigation strategies that maintain or increase social resilience.

Pillar 2: Consolidating Efforts to Mobilize and Deliver Finance

43. **The finance gap is large.** The benefits of a more sustainable, climate-friendly development depend on the success in mobilizing finance at the scale necessary to initiate transformational change. Making bold progress in this area—by increasing ODA and mobilizing finance from the private sector through a better use of existing instruments and innovative tools—is critical for the WBG credibility with client countries, the private sector, and civil society. This has been a key area of focus for the CEIF, with several important achievements, and will remain a top priority for the SFCCD.

44. **The WBG uses a wide range of existing instruments to support development investments and policies**, such as IDA credits and grants, IBRD loans and partial risk guarantees, partial credit guarantees and policy-based guarantees, MIGA political risk guarantees, and IFC's equity, loan and risk-management products. These instruments have occasionally been used to finance projects and programs that, de facto, support mitigation and/or adaptation, even if these actions are not their stated objectives. It is estimated that IBRD/IDA/IFC/MIGA invested about US\$1.4 billion in low-carbon projects in FY07. Examples include renewable energy projects (hydropower, biomass or solar), energy efficiency projects (district heating or large industrial facilities), waste management projects, policy lending targeting the energy sector, and more broadly, projects fostering sustainable management of natural resources and enhancing resilience to climate risks (response to natural hazards, sustainable water basin/land resources management, agriculture and forestry). An on-going IEG review of how the WBG used opportunities to support climate change objectives in core operations is expected to provide a more systematic assessment. The strong replenishment of IDA15 will help to establish IDA as the appropriate platform for adaptation investments that yield strong development benefits.

45. **Several instruments specifically dedicated to climate change are available, most significant of which are GEF and rapidly growing carbon finance business.** The WBG's long-term productive partnership with the GEF has been a major force in advancing the climate change agenda. GEF grant funding focuses on global environmental benefits and is available for piloting and innovating new approaches, as well as creating enabling environments for market transformation by removing barriers, capacity building, and institutional development. GEF resources have been often combined with IDA, IBRD, and IFC products, which allowed strengthening of climate change objectives in the WBG lending. In particular, the GEF's shift from project-by-project to programmatic actions is helping countries take a broader and longer term view in addressing barriers and strengthening national capabilities to understand and tackle both mitigation and, more recently, adaptation challenges. The GEF has played a critically important role in developing a knowledge base for adaptation. At the COP13 in December 2007, a new Adaptation Fund was agreed upon, with a special management arrangement by the GEF. Carbon finance, one of chief sources of mitigation financing, has grown to over \$2 billion, and two new instruments—the FCPF and the Carbon Partnership Facility (CPF)—were approved in September 2007. (See Table 1)

46. **The need for further mobilizing and innovating finance for addressing climate change was a critical lesson of the CEIF experience that is reinforced by the SFCCD's focus on scaling-up climate action.** The scale of action required calls for taking the important lessons learned from pilot and prototype projects and programs and capacity building efforts, such as those supported by the GEF through its implementing agencies, to broader programs which will help combat poverty and foster growth while transforming economies towards lower carbon and more climate resilient pathways. As noted before, supporting programs with strong country ownership and multiple development benefits is the key to success. By building on these lessons and capitalizing on the capabilities of the WBG and the RDBs, a scaled-up level of funding delivered in a package combining sectoral and private sector knowledge with the full range of development finance instruments will facilitate early transformational climate actions that are tightly linked to national economic and sectoral objectives.

Table 1: Existing resources and financing instruments dedicated to climate change

Adaptation—Climate-resilient growth		Mitigation—Low-carbon growth	
<i>Financing Source</i>	<i>Role/Scope/Operational criteria</i>	<i>Financing Source</i>	<i>Role/Scope/Operational criteria</i>
GEF Adaptation Fund—\$100 million to 500 million by 2012 (estimate); Least Developed Countries Fund (LDCF)—\$169 million; Special Climate Change Fund (SCCF) ~\$60 million (for adaptation); Strategic Priority to Pilot an Operational Approach on Adaptation (SPA)—\$50 million	Funding for the Adaptation Fund will mainly come from a 2 percent levy on revenues generated by the Clean Development Mechanism (CDM); LDCF helps in the preparation and implementation of national adaptation programs of action (NAPAs) in the least developed countries; SCCF supports adaptation projects in all developing countries; SPA is a funding allocation within the GEF Trust Fund whose objective is to support pilot and demonstration projects that address local adaptation needs and generate global environmental benefits in all GEF focal areas.	GEF ca \$250 million p.a. Trust Fund \$240 million p.a. SCCF ~ \$15 million p.a.	Focuses on global environmental benefits to finance incremental costs of removing barriers to market development of near commercial technologies through capacity building, policy and regulatory reform, institutional development, innovation and demonstration.
Global Facility for Disaster Reduction and Recovery (GFDRR) \$8 million FY07+\$40 million FY08	Partnership within the UN International Strategy for Disaster Reduction (ISDR), focusing on building capacities to enhance disaster resilience and adaptive capacities in changing climate. The goal is to reduce disaster losses by 2015.	Carbon Finance over \$2 billion under management	Improves financial returns through long-term purchase agreements for the GHG emissions reductions resulting from climate-friendly projects. The Bank manages 11 carbon funds, including the recently launched FCPF.
Other sources (trust funds, partnerships, etc.)	Provide grant financing for climate change knowledge products, capacity building, upstream project work or pilots (Japan Policy and Human Resources Development (PHRD), Climate Change Initiative Grant, Bank Netherlands Partnership Program (BNPP), Trust Fund for Environmentally and Socially Sustainable Development (TFESSD), etc.).	Other sources (trust funds, partnerships, etc.)	Provide grant financing for climate change knowledge products, capacity building, upstream project work, and small pilots (Japan PHRD Climate Change Initiative Grant, Energy Sector Management Assistance Programme (ESMAP), etc.).

47. **In consultation with interested parties, including developed and developing countries, the UNFCCC, GEF, the UN agencies and the private sector, the WBG and RDBs are joining efforts to establish a portfolio of strategic Climate Investment Funds (CIF).** The CIF would build on the ability of the Multilateral Development Banks (MDBs) to work across multiple sectors and to engage at both policy and project levels; their presence in the field, their ability to innovate, and their convening power will support the new funds in achieving their targeted objectives. The funds will complement, build upon and enhance the activities of other existing instruments, like the financing products of the GEF, IBRD and the IFC. The overall goal will be to make available a range of new financing, credit enhancement and risk management tools, such as loans, grants, guarantees and others, targeted to the needs of developing countries facing the new challenges of accelerating growth and poverty reduction in a world increasingly impacted by changing climate. The funds will aim to encourage early action by both private and public sectors and market-based solutions to the climate change challenge with a transformational impact.

48. **Achieving transformational impact will require investments at significant scale, market-enabling activities, a country focus, and a programmatic approach.** Consideration

is being given to the scope of the funds, and proposals are under consideration to address clean technology, forestry and climate resilience.

49. **The climate investment funds would rely as much as possible on existing processes of the WBG and RDBs, and therefore no new institution would be created to manage this program.** Donors could invest directly into these funds, or into another umbrella vehicle, such as the *strategic climate fund*. The strategic climate fund would, in particular, accommodate donors that wish to make investments in more than one of the investment funds or programs, thereby strengthening the coherence of their contributions.

50. **In developing the CIF, the following principles will be taken into account:**

- a. The core mission of the multilateral development banks is growth and poverty reduction. Climate change mitigation and adaptation considerations need to be integrated into the development process;
- b. The multilateral development banks should provide financing for adaptation and mitigation programs to address climate change that are country-driven and designed to support sustainable development. Activities financed by the fund should be based on a country-led programmatic approach and should be integrated into country-owned development strategies, consistent with the Paris Declaration focus on country ownership;
- c. The UN is the appropriate body for broad policy setting on climate change, and the multilateral development banks should not preempt the results. Actions to address climate change should be guided by the principles of the UNFCCC. The multilateral development banks should assist developing countries to build country-level knowledge, capacity and development project experience about the feasibility and implications of addressing climate change;
- d. Multilateral development banks can and should play a role in ensuring access of developing countries to adequate finance resources and appropriate technology for climate actions, and such resources should be made available without conditionality and on an incremental cost basis.
- e. The CIF should provide for provide for inclusion, transparency and openness in its governance.

51. **In further developing the proposal for climate investment funds, the WBG will continue to engage in extensive consultations with all key stakeholders to expand the donor base, seek the views of potential recipient countries and other interested parties** (UNFCCC, GEF, UN partners, and the private sector), and advance the design of funds and financial instruments. On-going consultations with the GEF are focusing on how best to ensure complementarities between the objectives of the climate investment funds to demonstrate the impact at scale within a relatively short period of time with the GEF's longer-term mandate to create enabling environments for market transformation, build capacity, and support institutional

development, and the GEF secretariat's newest mandate as Secretariat with respect to the Adaptation Fund. A summary of consultations to date is given as Annex 4.

52. **There are several other initiatives by the WBG.** The IFC is accelerating opportunities to expand its activities and development impact in the area of mitigation, particularly investments in energy efficiency and renewable energy, together with a continued development of carbon finance product. MIGA is pioneering ways to apply its political risk guarantee to cover specific host country-related risk potentially affecting delivery of carbon credits from projects. The World Bank Treasury Department is preparing structured notes, with a performance based on future prices of carbon emission rights, which will be eventually tied to the performance of carbon finance projects; it is also working with the EU donors on its proposed IFFI_m-like climate bond. Promising climate risk insurance products, such as weather risk management instruments, have been already introduced in several countries. The work is also on-going on ways to further combine carbon finance with regular IBRD/IDA/IFC or GEF funding or guarantees (e.g., buying down the cost of IBRD loans through blending with carbon finance).

53. **A variety of instruments and new initiatives is the key strength of the WBG** but it also creates a need for greater consolidation of the various financing instruments at the recipient level to help clients (i) obtain the most attractive financing packages and (ii) reduce the associated transaction costs (by offering, for example, a “one-stop” source of access to the WBG financial products). With a situation of a growing number of new instruments, often available in small amounts to a particular client/project, operational staff is requesting clearer guidance as to what instruments are most suitable in which situation, and how to minimize the transaction costs. There is also a need to increase the outreach of existing financial products that address climate change to strengthen the project pipeline.

54. **The SFCCD will articulate complementarities among the various instruments and outline a plan of actions** that will serve to:

- *Promote more effective and innovative use* of existing and emerging financing instruments (IBRD, IDA, IFC, MIGA, insurance schemes, CF funds, GEF, etc.) in the WBG operations, including better packaging and cross-leveraging and strengthening collaboration with GEF;
- *Develop guidelines to operational staff and clients* as to what instruments and their combinations work best for certain projects/situations;
- *Facilitate applications of new instruments at the target scale*, including knowledge products, training and capacity building to raise awareness of the WBG staff and clients on available financial products and their optimal application;
- *Identify barriers to financing climate-friendly investments* that are not yet addressed, drawing on the previous work done and coordinating with on-going activities, including analyses undertaken for the CEIF, the experience gained by the Carbon Finance Unit (CFU), conclusions by a working group on the constraints to the mobilization of private capital to finance climate friendly initiatives in developing countries; and an on-going assessment by the GEF;

- *Propose specific steps for developing new products* to fill the gaps, in collaboration with other development finance players, such as the GEF, RDBs, and the private sector;
- Recognizing that the mobilization of additional and innovative financing for adaptation is falling behind compared to initiatives focused on mitigation, *give particular attention to filling gaps in adaptation financing* and opportunities for public-private partnerships in this area, in partnership with GEF, IFC, RDBs, particularly the African Development Bank (AfDB) that made adaptation its top climate priority, and others; and
- *Explore the WBG advantages as a global platform* to enable effective and efficient use of various institutions, instruments and programs.

55. The WBG is working on a number of fast-track products to make additional financing available:

- *Operational CPF*: The WBG is currently conducting detailed consultations with potential CPF participants and other stakeholders to finalize the Facility design, including its governance structure. The target is to open the Facility for financial contributions in late spring/early summer 2008. The Facility would first start operating its Carbon Asset Development Fund (a fund aimed at supporting the development of emission reduction programs) before mid-2008 and become fully operational (i.e., launch the carbon purchase fund and the governance structure of the Facility) once the first tranche of the Facility is fully capitalized, which is expected during the summer/early autumn of 2008.
- *CIFs*—the design and consultations with donors, RDBs and other partners are on-going, with the launch of the CIF expected during summer 2008.
- *Treasury bonds* allowing to mobilize financing at reduced rates to support projects that yield climate benefits.
- *Structured financing packages using CF* to improve loan terms for project sponsors, as well as offering expanded guarantees on delivery of carbon credits to buyers, building on what the IFC already offers.

Pillar 3: Expanding the WBG's Role in Developing New Markets

56. The WBG played a pivotal role in the development of the carbon market by setting a Prototype Carbon Fund several years before the Kyoto Protocol would enter into force. The CFU of the WB has continuously sought to promote the catalytic role of carbon finance in securing underlying finance for climate-friendly projects in developing countries and economies in transition, raising awareness of the impact of carbon finance on climate-friendly investments, and encouraging lending against carbon revenue streams.

57. The WBG continues pushing boundaries of the carbon market, for example, by addressing GHG sources bypassed by the existing regimes and piloting new, programmatic

approaches, as evidenced by FCPF and CPF. The IFC is structuring innovative financial products for the carbon market; its Carbon Delivery Guarantee is currently the only product that provides improved and transparent market access to help projects in developing countries optimize the value of their carbon assets. Currently, CFU is undertaking a review to identify the specific ways for the WBG to integrate its carbon finance with other financial mechanisms to provide a more effective support to low-carbon projects. Blending carbon finance with the WBG lending operations and other financial mechanisms can eventually provide further development to the carbon market and these instruments. Finally, new opportunities are being explored such as the issuance of bonds, development of derivatives, and guarantee and insurance products. The SFCCD will reflect the recommendations of this review.

58. **The SFCCD will also identify other areas where the WBG and other MDBs can play a significant role in the facilitation of market development and financial intermediation.** The IFC is in a unique position among Multinational Financial Institutions (MFIs) with its comparative advantage in assessing and assuming emerging market risk. Efforts could focus on contributing to reducing barriers to market development, whether through analytical and advisory work at the sector level (to improve the business environment and therefore increase the amount of investment from private sector) or through the WBG convening power (to build confidence in pioneering areas and play a catalytic role in supporting the necessary technological breakthrough). One of such areas is the market of energy efficiency goods and services, estimated to have the greatest potential for GHG emission reductions in developing countries, not counting reduced deforestation.

59. Other areas of engagement could include: i) markets of supplies of climate change related products at competitive prices (including equipment for cleaner energy production which is currently in shortage); ii) markets of low carbon commodities that support economic objectives of developing countries; or iii) insurance markets that help the poor cope with climate risks. One example of the latter would be the use of the WBG convening power to help develop private sector managed multi-country risk pooling for the reinsurance of catastrophic risks—one of the options under discussion through the Catastrophic Risk Insurance Working Group. Building on WBG experience in supporting payments for ecosystem services is another area worth further exploring.

Pillar 4: Tapping Private Sector Resources for Climate Friendly Development

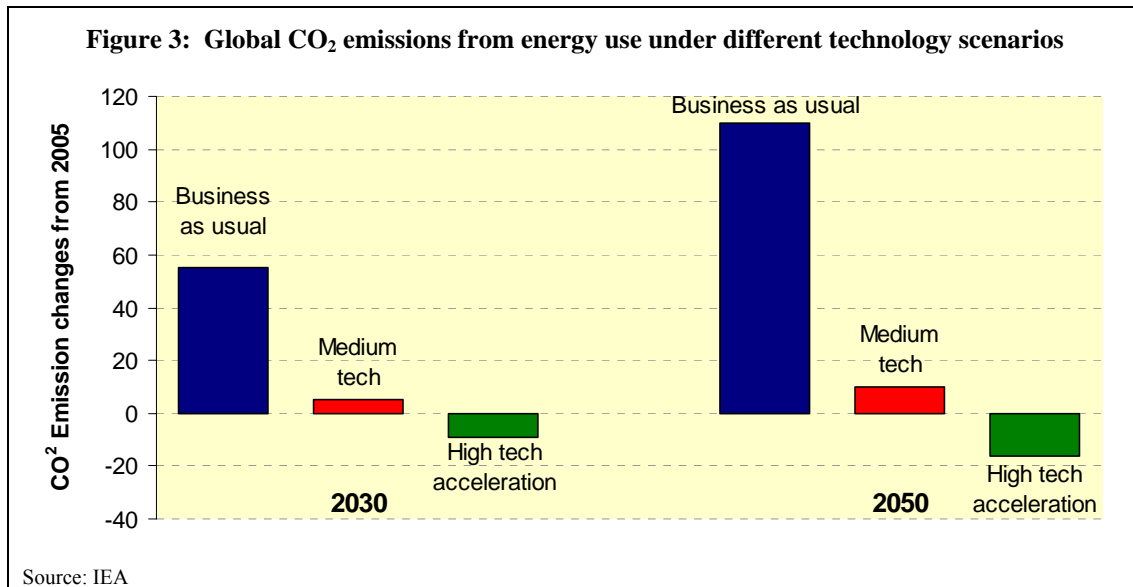
60. **Given that over 80 percent of financing to meet the needs of climate friendly development is expected to come from private sources, it is difficult to overestimate this area of action.** These requirements are large in relation to ODA but are modest when compared to global investment flows. Over the next three years, the IFC aims to double to triple its renewable energy and energy efficiency investments, with strong advisory services support; pursue mitigation opportunities in other industrial and economic sectors such as the supply of less GHG intensive fuels, sustainable forestry and agriculture; extend its carbon finance activities; and support the transfer and adoption of appropriate new technologies through direct and funds investments. The WBG has substantial experience in leveraging private finance through combined efforts of its agencies, including the IFC investments, guarantees and Technical Assistance (TA), MIGA's guarantees, and WB engagement on policy and regulatory reforms and capacity building in the public sector that help countries create an enabling

environment for private investment and harness investment flows to the desired areas with public good benefits.

61. **The SFCCD will build on collective experience of the WBG and outline opportunities for greater synergies and collaboration across WBG institutions as a way to increase flows of private investments in low carbon and adaptation projects.** The SFCCD realizes that the public sector role remains critical for facilitating private investment flows. It will address the role of policy and regulatory measures to create the right incentives to private sector investment, such as in case of cleaner energy projects, including rehabilitation of existing power plants and energy efficiency improvements. Some areas for working more effectively together include harmonizing project processing requirements for the clients and better disseminating information on the entire range of the WBG financial products, which can be readily accessed by the private sector.

Pillar 5: Clarifying the WBG Role in Accelerating Technology Development and Deployment

62. **Advanced and new technologies are a critical area for addressing climate change and highly demanded by developing countries** (see Figure 3). There is a need to speedily assess and establish an appropriate scope and level of engagement, taking lessons of experience with newly commercialized technology deployment, recognizing the WBG limitations in “picking the winners” at pre-commercial technology development stages, and revisiting issues related to intellectual property rights.



63. **While experience is mixed, the WBG, particularly the IFC, has a long-standing involvement with accelerated deployment of commercial clean technology—and its commercialization in different country’s setting.** This includes several successes, in particular the recent joint WB/IFC/GEF Lighting Africa program. Many of the pioneering efforts by developing countries to introduce clean technologies have been supported by GEF grants blended with the WBG and other funds. A notable technology adoption and innovation model to

be scaled-up is the approach used in WB-GEF China Renewable Energy Development Program (REDP) initiated in 2001, that shared product development costs with private Chinese firms to develop low-cost solar PV modules and increased quality by implementing standards and certification systems. The Chinese firms involved invested over \$75 million and introduced new PV system products both in China and for the export market. This approach is being replicated in the WB-GEF assisted China Renewable Energy Scale-up Program to facilitate technology transfer of wind turbine technology to China and improve standards of locally manufactured wind turbine systems. The Bank's approach of supporting the deployment of clean coal technology in China by introducing large-scale super-critical power plants in the late 1990s is being considered for replication for newer technologies with the support of concessional funding.

64. With support from GEF and other donors, the IFC has been a leading supporter of new clean energy technologies such as fuel cells, advanced biomass combustion, and solar cells. IFC's Cleaner Technologies investing focuses mainly on supporting small, high risk ventures with accelerated technology transfer and commercialization of intellectual property. IFC's Cleaner Production Technical Assistance work reduces the environmental footprint of its clients in a profit-maximizing manner. The IFC is working on rolling out Cleaner Production on a wider scale, including: (a) launching a new small Cleaner Production loan investment product; (b) launching Cleaner Production Technical Assistance programs in the regions and recruiting staff with the right skills; and (c) embedding a Cleaner Production perspective into new investment strategies as an integral part of IFC's approach to climate change.

65. The private sector will play a key role in transferring technology and needed know-how to developing countries. The IFC will support technology transfer through direct and funds investments, and play the role of catalyst in crowding in private investment in new technology areas, including by leveraging existing client relationships, and by accessing carbon finance and, eventually, CIF financing (currently under discussion with donors and discussed in paragraphs 45-48). The IFC investments in renewable energy, including hydro power, have demonstrated the potential of alternative sources of energy in developing countries—both at small and large scale. Overall, IFC investments aim to support climate friendly development by combining commercially viable approaches with energy efficient and modern technology in GHG-intense sectors (e.g., power, steel, cement, chemicals, etc.).

66. In addition to scaling-up efforts with technology deployment, on-going analytical work is looking at institutional models being used for accelerating technology R&D and commercialization in other sectors and their relevance to climate-friendly technologies. The models under consideration allow drawing lessons about such sensitive issues as intellectual property rights and creating local R&D centers. Extensive consultations over its early findings will inform the preparation of the SFCCD and its recommendations regarding the potential roles of the WBG and external partners in new technology development.

Pillar 6: Stepping Up Policy Research, Knowledge Management and Capacity Building

67. With over 100 products on-going or planned, there has been a steep increase in climate related Analytical and Advisory Assistance (AAAs) across the WBG in the past year. Highlights include low carbon growth studies in six countries—Brazil, China, India, Indonesia, Mexico and South Africa; regional flagship studies on adaptation or/and energy issues

in LAC, East Asia and Pacific Region (EAP) and Europe and Central Asia Region (ECA); a study on adaptation in the water sector, a series of policy notes by PREM and SDN. The challenge lies in effectively sharing this knowledge, minimizing duplication and enhancing added value for the WBG, clients and the global community. The SFCCD, with the help of regional, PREM, DEC and WDR teams, will summarize the state of a WBG program of research to date, propose steps for more effective information and knowledge sharing, and identify the key remaining knowledge gaps and policy questions to guide a future research program in a more coherent manner.

68. **The proposed WDR 2010 on climate change provides an excellent opportunity to position the WBG as a knowledge leader.** The low carbon and adaptation studies will also help improve critical knowledge of synergies and trade-offs between growth and climate objectives, which is fundamental for placing WBG support to integrating climate action and development on a solid analytical basis.

69. **Advancing economic analysis of investment decisions in the context of climate change can be a major added value of the SFCCD.** Climate change involves very long time frames and very high uncertainty. Scarcity of resources in developing countries further complicates policy planning. While recognizing the dangers posed by climate change and the urgency of taking action, developing countries have a very high stake in assessing the optimal timing of adaptation and mitigation measures. A clearer articulation of the framework for investment decisions could help better understand whether and why additional resources ought to be deployed today for adaptation and mitigation measures, rather than, as some will undoubtedly argue, for general development financing, with a view to shifting toward climate change-related investments at a later date. As a step in this direction, a series of brainstorming meetings have been held, with participation of top external experts, on intergenerational discounting and economic analysis in the context of unique uncertainties and risks associated with climate change. Developing guidelines in this area to strengthen an analysis of investment and policy choices will be a valuable contribution to global knowledge and the WBG operations.

70. **There is still much work to be done to establish appropriate tools and methodologies,** including how to assess the risks of climate change to investments, borrowers, and project beneficiaries; how to measure and report the “carbon footprint” (GHG emissions) of the WBG portfolio; how to best leverage carbon finance; how shadow pricing might be used in project economic analysis, and how to estimate the “true” costs of adaptation in projects, taking into account endogenous adaptation that is occurring.

71. **The work to develop new analytical tools to help understand the implications of climate change for WBG operations, such as climate risks screening and carbon footprinting, has been initiated.** The WB and the IFC taking the lead in different areas while ensuring close coordination. For example, the WB has taken the lead on the climate risk screening tool while the IFC is piloting, for information purposes, the use of shadow costs in its real sector project economic appraisals. Both the IFC and the WB are collaborating on carbon foot-printing, with the IFC proposing to measure the emissions of new real sector investments from the start of FY09 using the carbon accounting methodology for private business established by the World Business Council for Sustainable Development and the World Resources Institute (WRI). For the next two years, the WB, with assistance from WRI, will be developing and

testing methodologies more suitable for the nature of its projects in energy, transport and forestry sectors, followed by a plan for rolling out this initiative.

72. **The SFCCD will support—and attach a high priority to—the development, piloting and evaluation of these tools so that they are deemed practical, credible and useful** by key operational staff, clients and external stakeholders. Progress with developing and lessons from piloting the risk screening, carbon accounting, shadow pricing and other tools will determine the extent and pace at which they will be introduced in the WBG project analysis. The SFCCD will outline common tools and approaches to be used by both public and private sector “arms” of the WBG, rationale for using different approaches in certain cases, and collaborative arrangements with other MDBs.

73. **The SFCCD will also review opportunities for using existing instruments, such as Strategic Environmental Assessments (SEAs), CEAs and Poverty and Social Impact Analyses (PSIAs) for informing and influencing operations with respect to climate change impacts and actions.** For example, poverty mapping and social analysis tools can help in identifying those social groups within countries who are most at risk from the impacts of climate change as a result of their physical location in vulnerable environments (drylands, coastal zones, floodplains, areas prone to landslides, etc.), or owing to their primary dependence on land and natural resources for a livelihood. There is already useful experience of addressing climate change in CEAs and the WB is collaborating with OECD on the preparation of guidelines for integrating climate change issues in SEAs. The SFCCD will specify anticipated needs in developing and disseminating methodologies, assessments and tools to support integration of climate change aspects into various WBG products and services.

74. **The SFCCD will also support analytical work by the WBG that can assist countries in their preparation for the UNFCCC negotiations.** In particular, the WBG, particularly DEC, modeling capacities could be brought to bear in helping countries understand the implications of different global policies. The WBG's stance should be that of an impartial analyst laying out the consequences of different policy choices. However, if it were found that certain solutions generally fairer to developing countries than the others, the WBG could take a more active advocacy stance—perhaps similar to its involvement in trade negotiations.

75. **Enhancing skills and capacity to apply new and existing knowledge inside the WBG and in client countries will be a key component of effective actions for integrating climate and development.** The SFCCD will seek to promote collaboration with key regional, international and national partners to achieve improved capacity by developing countries to apply context-dependent knowledge for both mitigation and adaptation. This can also include assistance to developing countries with increasing capacity to formulate and articulate their views in international fora, including the UNFCCC negotiations. A variety of approaches for knowledge sharing, effective learning (including learning by doing), and skills enhancement will need to be explored through a collaborative effort of the World Bank Institute and other groups of the WBG. Mechanisms will also have to be developed to capture new knowledge, lessons learned (for example on policy development, institutional strengthening), and make it readily available for the WBG and client country use.

E. Results Framework

76. **The development of a results-based framework is a key area of focus for the SFCCD.** The results framework will specify time horizons, with milestones, for measuring the inputs, outputs, outcomes and indicators of progress, as well as clarify and harmonize among regions and sectors—basic definitions such as what “adaptation” and “mitigation” projects are.

77. **The preparation and implementation of the SFCCD will be an important opportunity to consult and agree with development partners, client countries and a broad range of stakeholders** on a set of measurable and practical indicators to track progress on low carbon and climate resilient development actions in various sectors. It will build on achievements under the CEIF, which introduced tracking of *low carbon energy* projects and established a clear definition and an information collection system across the WBG. The WBG has also been working with the GEF and other agencies to develop a minimum set of indicators for climate change mitigation projects as part of GEF’s move towards results based monitoring system.

78. **Following the CEIF approach, the development of outcome and output indicators for the SFCCD will be tailored to reflect the WBG comparative advantages,** its mandate of supporting growth and poverty reduction, its approach of working in partnership with client countries, and its business deliverables. The SFCCD will be guided by a set of specific actions related to climate change that was developed for the IDA15 results framework and includes: mainstreaming adaptive action in CASs; piloting climate change screening tools; scaling up adaptation actions and financial support; increasing technology dissemination by tapping into carbon finances; improving donor coordination in the area of climate actions; and reporting on progress with climate change actions

79. **The results framework will be strengthened and detailed over time,** as the WBG makes progress to address key analytical questions related to climate change risk assessment and carbon accounting/footprinting. There are areas, in which the World Bank, IFC and MIGA are already actively involved and coordinating the effort, and which have been identified as priorities for collaboration among MDBs on common approaches to addressing climate change.

80. **The WBG will continue to roll-out an initiative to make its office operations and travel carbon neutral** by extending to country offices and sharing its experience with UN agencies and other interested development partners.

81. **Without incentives to and the accountability of operational units, it will be difficult to scale up new approaches,** including tools for project analysis; more proactive identification of opportunities for enhancing projects by additional climate financing, and a more holistic, cross-sectoral planning. The IFC measures its Renewable Energy and Energy Efficiency commitments against the “Bonn” target of 20 percent increase per year (from FY05) for the WBG in its corporate scorecard. In addition, its departmental scorecard for the regions measures the percentage of investment projects which include an energy efficiency (EE) or renewable energy (RE) component. For the WB, an approach based on business incentives rather than targets could be more appropriate, and the SFCCD can propose a number of options. The results framework should be able to assess operational performance of the WBG units with respect to the agreed inputs and outputs and help structure incentives. It will also address the issue of skills mix and human resources as a principal input to delivering on outcome/output indicators.

F. Working with External Partners to Address a Global Challenge

82. **Climate change is an unprecedented global challenge that requires collaboration among a large number of development partners**, including the UN system, the GEF, regional development banks, bilateral donors, the private sector, research institutions and civil society groups. The SFCCD will detail the roles and mandates of the key actors on the international arena, and a particular niche that the WBG is best-positioned to fill.

83. **Under the CEIF, MDBs have established a close working relationship on climate change activities.** A regular formal session on the MDB's climate change initiatives would be added to each meeting of the existing MFI- Working Group on the Environment; measuring "carbon footprint" of lending and adaptation having been selected as initial topics. An MDB working group on the CEIF is also being established. The WBG has also worked extensively with the private sector on assessing barriers to clean energy financing and a possible design of new instruments.

84. **Our long-term productive partnership with the GEF has been a major force in advancing the climate change agenda.** The paper will outline the complementarities between the WBG and GEF strategies, including links to the new adaptation fund being creating within GEF. This will also be informed by ongoing work recently commissioned by GEF on scenarios for a post-2012 period.

85. **Recently, the WBG actively cooperated with other UN agencies on the development of "The UN system coordinated approach to climate change"** (summary of which was released in Bali, December 2007) and was assigned a role in all of the activities identified as priorities for UN engagement. The WBG is working with other UN agencies towards a "carbon-neutral" UN, using its experience as the first UN agency to make its Headquarters office operations and travel carbon-neutral.

86. **The SFCCD will summarize substantial progress made by the WBG in collaborating on climate change with various development partners, and outline specific areas for strengthening and broadening collaboration** with each group of the key players. Two areas are worth highlighting:

- The WBG needs to become more pro-active in supporting the work of the UNFCCC Secretariat towards success of a post-2012 inclusive and equitable global compact, while remaining neutral to any particular negotiation position. The WBG can combine efforts with other development partners in supporting developing countries with capacity, awareness, and consensus building efforts; training in negotiation skills; and information to provide the best platform for the negotiations to succeed.
- Another area of additional focus could be innovative partnerships with the private sector, including financial and insurance sectors.

G. Consultation and Feedback Process

87. **Climate Change is an all-encompassing, multi-faceted development issue with a very complex political economy context.** The development of the SFCCD will include extensive

consultations with a full range of stakeholders, including developing country clients, development partners (UN agencies, RDBs, bilateral donors), private sector, and a spectrum of civil society. Particular attention will be given to understanding the needs, and concerns of the WBG shareholders from developing countries, and demonstrating how their views have been taken into account in preparation of the SFCCD. A consultation draft of the SFCCD, a detailed plan for consultations, a set of guiding questions and contacts to provide feedback will be provided on a SFCCD consultation website which can be accessed on the home page of the World Bank Group website www.worldbank.org.

H. Risks

88. The work on the SFCCD will take account of and address several risks:

<i>Risks</i>	<i>Measures to address/mitigate them</i>
External	
<p>Uncertainty of several shareholders and clients about our role related to climate change. While the WBG is now stepping up engagement significantly, its role so far has not always been that of a leading institution in the field.</p> <p>Uncertainty about progress with UNFCCC negotiations and implementation of negotiated agreements. In a case of developed countries not taking bold actions and commitments, a focus on integrating mitigation in development strategies of poorer countries carries a reputational risk.</p>	<p>Extensive consultations sharing our experience and capabilities; careful drawing on lessons from past engagement; and scaling up, demonstrating and disseminating successes.</p> <p>The focus of the SFCCD will be on supporting adaptation and mitigation measures that are justified by local benefits (e.g., energy efficiency, energy diversification, rural employment, air quality), as well as generating additional concessional finance to reduce costs and risks of lower carbon and/or climate resilient investments.</p>
<p>Managing expectations: inability to generate substantial new finance; reluctance to dedicate WBG core resources (IDA/IBRD) to climate change.</p>	<p>The WBG will explore a wide spectrum of options, including better use and cross-leveraging of long existing and newly approved instruments, and innovative market approaches. This will minimize the risk of possible failure with any particular instrument.</p>
Internal	
<p>The challenge of coordination across regional, sector and IFC strategies and adopting coherent approaches given different situations, interests and demands of different countries and clients within countries.</p> <p>Tracking and reporting progress: Development of a robust and credible results framework might take a long time.</p> <p>Presently limited staff skills and knowledge of climate change issues, particularly on adaptation needs and options; only evolving in-house analytical frameworks.</p>	<p>The SFCCD will provide a common but flexible framework that is, in substance, built on demands voiced by clients and issues identified by regions & sectors across the WBG.</p> <p>Will develop a phased approach in consultation with MDBs, clients and other stakeholders.</p> <p>A large increase in climate change AAAs has already happened and will soon improve internal knowledge, analytical base and staff skills; the SFCCD will also address knowledge sharing, training and new recruitment.</p>
<p>Technology acceleration is critical; but WBG experience is lacking.</p>	<p>Will proactively explore a suitable role in the context of collaboration with other development partners.</p>

I. Timeframe and Milestones

89. The preparation of the Strategic Framework on Climate Change is on a fast track, as follows:

April 13, 2008	Development Committee (background paper)
April-June 2008	Consultations with stakeholders
Early July, 2008	OVP review of draft paper
July/August 2008	CODE Meeting on draft paper
August 2008	Web-based consultations on draft paper
September 2008	Committee of the Whole
October 2008	Development Committee

ANNEX 1. CLEAN ENERGY FOR DEVELOPMENT INVESTMENT FRAMEWORK: IMPLEMENTATION REPORT ON THE WORLD BANK GROUP ACTION PLAN

I. INTRODUCTION

1. **Addressing climate change as a development challenge has been on the agenda of the WBG and other MDBs** since the signing and ratification of the UNFCCC in the early 1990s. Over the years significant progress has been achieved in mainstreaming mitigation and pioneering adaptation, supported by the GEF, other multi- and bilateral partners and the expanding carbon market. However, it was the 2005 Gleneagles G-8 Summit in September 2005 that stimulated a concerted effort of the development community, led by the WBG, to broaden and accelerate these programs through the CEIF. Building on the CEIF experience and rapidly maturing international dialogue on the future climate agreements, the Development Committee of the WBG in October 2007 welcomed a deepening of the WBG efforts to address climate change by developing a broader, more holistic strategic approach and proposing further innovative financing measures to facilitate low carbon and climate resilient development in developing countries.

2. **This Annex provides an update on the implementation of the CEIF Action Plan.**⁴ It also outlines the development of a transition from the focus of the CEIF process towards a broad-base climate change strategy for the WBG. Over the past six months, coordination with other MDBs on climate change and clean energy issues has accelerated, with efforts focusing on the joint implementation of a climate change program. The results⁵ from the past six months confirm that the Bank's portfolio of projects continues to address the mitigation challenge as low carbon projects have increased from 28% of the Bank's energy projects in the three years prior to Gleneagles to 40% in FY07 and 45% in H1FY08. Continuing this trend will require increased funding for the incremental cost of low carbon projects.

3. **The past year has witnessed a remarkable surge in political and popular support for actions to combat climate change.** The IPCC, in its Fourth Assessment (2007), provided important guidance to the evolving agenda. The heightened awareness of increases in climate related risks and the disproportionate adverse impacts on developing countries have increased a sense of urgency in the development of both mitigation and adaptation strategies. The Bali Action Plan negotiated at CoP13 in December 2007, established a determined call for action with a pledge to engage in discussions towards a post-Kyoto framework by year-end 2009. Commercial banks are increasingly taking into account carbon principles in their lending procedures, exemplified by the formation of "The Carbon Principles" announced February 4, 2008, by Citi, JP Morgan, Chase, and Morgan Stanley.

⁴ "Clean Energy for Development Investment Framework: The World Bank Group Action Plan" (DC2007-0002, March 28, 2007).

⁵ The WBG has established internal reporting mechanisms for both outputs and outcomes, focusing initially on the former due to the time lag in the response for outcomes. These databases are used across the WBG to enable reporting on mitigation and adaptation activities identified in the Action Plan.

4. **Economic growth and poverty reduction remain paramount concerns, and created pressure for increased use of coal in light of high oil and gas prices.** With spot oil prices averaging \$88/bbl in Q4FY2007, peaking over \$100/bbl, as well as high price volatility has reinforced attention by many countries to increase use of domestic coal for both price and energy security reasons. Increased use of coal has not been without its problems as well: China recently has had to introduce supply cut-backs due to coal availability issues, as has South Africa. However, plans for continued and possibly accelerated use of coal for electricity generation, will increase the challenge regarding decreasing GHGs as coal-fired power plants have the highest CO₂ emissions per unit of electricity generated. High prices of fuels have induced investment in more efficient plants, but this will have marginal impacts on CO₂ emissions unless carbon capture and storage options are accelerated.

5. **At the same time, increasing energy supply and services are critical for economic growth** in all developing countries, as well as for improving the livelihoods and economic opportunities of about 1.6 billion poor people still living with no electricity. More broadly, it is imperative that options for tackling climate change recognize the need to protect broad-based development and poverty alleviation objectives and funding flows, especially to the poorest.

6. **With improvements in knowledge about the impacts and causes of climate change, a global consensus has emerged on a set of issues,** which can be summarized as follows:

- ***Tackling climate change is feasible and action is urgent.*** The Bali Action Plan has established a timetable for reaching an agreement on the post-2012 GHG reduction framework by end-2009. With atmospheric levels of GHGs currently at 431 ppm CO₂eq and growing at about 2 ppm per annum, decreasing this pace of emissions growth will need to take place quickly to prevent exceeding a 2°C global warming level, beyond which the likelihood of severe impacts significantly magnifies. Stern's 2006 economics review of climate change estimated that "business-as-usual" emissions of greenhouse gases might lead to damages between 5 percent and 20 percent of GDP over the next 200 years.⁶ Analyses by others⁷ have challenged the analysis and the optimal trajectory for GHG emissions. Noteworthy, however, is the consistency in the conclusions: the need to reverse the global growth of GHG emissions before 2015 by at least 14%. These studies also point to the important linkages between assumptions on discount rates and today's marketplace real interest rates and savings rates. The Bank has recently initiated a review of the implications of these models on GHG reduction policies and the incentives needed to induce behavior to support a decrease the economic impacts of global warming. In particular,

⁶ Lord Nicholas Stern, *The Economics of Climate Change: The Stern Review* (Cambridge: Cambridge University Press, 2006). Stern's approach to assessing the economic costs of climate change assumes a very low utility discount rate of 0.1 percent. This choice is driven by a strongly held position on the ethics of bequeathing climate change damages to future generations. Stern also seeks to include low-probability/high-cost events, such as catastrophic change, as well as non-consumption effects, such as damages to health.

⁷ "A Review of the Stern Review on the Economics of Climate Change" by William D. Nordhaus, *Journal of Economic Literature*, Vol. XLV, September 2007 and "A Review of the Stern Review on the Economics of Climate Change" by Martin L. Weitzman, *Journal of Economic Literature*, Vol. XLV, September 2007.

this analysis will consider the changes that need to be made to the effective cost of capital for both public and private sector investments in low carbon technologies.

- ***Stabilization of GHG concentrations must take into account the energy needs of developing countries for economic growth.*** Developing countries are looking to developed countries to play a leadership role in reducing GHG emissions. The UNFCCC principle of “common but differentiated responsibilities and respective capabilities” will guide contributions to this goal by emerging and developing countries cost-effective actions to reduce the GHG emission-intensity of their economic development. However, as agreed during the Bali CoP, there will be increased need to provide support for transfer of technology to developing countries to support both mitigation and adaptation issues.
- ***The CEIF premise that climate change is already occurring and that we are committed to more change irrespective of mitigation success has been confirmed by the Fourth Assessment Report of the IPCC and the 2007 UN Human Development Report which concludes that achievements in meeting the MDGs will be jeopardized unless there is effective response to the impacts of climate change. Nevertheless, progress on adaptation has been behind that of mitigation, due to a lack of awareness of the urgency of the problem and a lack of information and tools to deal with climate risk.***
- ***Work within the WBG and elsewhere has reaffirmed the principle that good adaptation arises from embedding climate risk management into national development planning.*** Although many adaptive actions will be autonomous, undertaken by households and businesses in response to changing circumstances, additional information (e.g., seasonal forecasts), improved infrastructure and better planning will be required for these actions to be most effective. This provides a challenge to national governments and the international community to ensure that the necessary resources are provided.
- ***Progress on implementing widespread adaptation has been hindered by the lack of sound estimates of the scope of the task and the financial implications.*** Developing countries have sought compensation for the additional burden of adapting to climate change that has resulted largely from the actions of developed countries and most developed countries have accepted that there is such a responsibility. The special adaptation funds set up at the request of the UNFCCC by the GEF have not been sufficient to meet demand. The recent decision at the Bali CoP 13 to operationalize the Adaptation Fund, with the GEF as secretariat, will provide a new flow of funds, but the size and timing is still uncertain. Governments will also need to take the lead in long-term planning and the establishment of an enabling environment to support the substantial resources expected from the private sector.

7. **Global directions for joint action on climate change will be further clarified and strengthened over the next year.** The UNFCCC has been leading formal discussions on post-2012 options since 2005 with a goal of coming to an agreement by end-2009. In parallel, a number of complementary initiatives have also been launched, these include: the Asia-Pacific Partnership on Clean Development and Climate (AP6)—an international arrangement among Australia, China, India, Japan, South Korea and the United States with a focus mainly on

technology; the EU strategy (January 2008) to reduce GHG emissions; the Japan “Cool Earth Partnership” announced in Davos, January 2008; and the U.S.-led, high-level “Meeting of Major Economies on Energy Security and Climate Change” September 2007 and January 2008.

II. IMPLEMENTATION OF THE WBG ACTION PLAN

8. **This section reports on progress in implementing the three pillars of the CEIF Action Plan:** (i) support for the energy sector, with an emphasis on the Sub-Saharan Africa energy scale-up plan; (ii) support for transitioning to a low-carbon economy; and (iii) support for countries to adapt to climate variability and change. This report focuses on particular areas of significant advancement since the September 2007 Progress Report. It also reports on lending approved up to the end of CY07 and highlights analytical work, with a particular focus on deliveries since the last report (see Attachment A.1).⁸

A. WBG Energy Lending and Access to Electricity in Sub-Saharan Africa (SSA)

9. **WBG lending for energy has exceeded US\$11 billion for the period FY06 to first half (H1) of FY08, above the target of US\$10 billion over the FY06–08 period.** Energy lending by the WBG for H1FY08 exceeded US\$2.6 billion and is on track to exceed this level in the second half of FY08. Cumulative energy commitments for FY06–FY08 to date are 57% higher than the energy lending of US\$7 billion in FY03–05 (see Table A.1 1). Projects funded in the first half of FY08 supported increased access to energy, with an emphasis on clean energy and energy efficiency, as well as the creation of an enabling environment for private sector participation in energy generation, transmission and distribution via effective public-private partnership arrangements.

Table A1.1: Energy Portfolio by Financing Source, FY03- First Half of FY08
(US\$ millions)

<i>Product line</i>	<i>FY03</i>	<i>FY04</i>	<i>FY05</i>	<i>FY03-05</i>	<i>FY06</i>	<i>FY07</i>	<i>FY08 H1</i>	<i>FY06- FY08H1</i>
World Bank Sub-total	1,194	938	1,825	3,957	3,132	2,017	1,505	6,654
<i>IBRD/IDA^{1/}</i>	1,120	841	1,640	3,601	2,993	1,734	1,346	6,073
<i>Carbon Offset^{2/}</i>	10	35	79	124	88	144	14	246
<i>GEF^{2/}</i>	64	63	105	232	51	128	78	257
<i>Recipient Executed</i>	0	0	0	0	0	5	67	72
<i>Special Financing</i>	0	0	1	1	0	6	0	6
IFC ^{3/}	638	705	791	2,134	1,472	1,170	1,032	3,674
MIGA	556	73	232	861	190	417	88	695
Total Energy	2,388	1,716	2,848	6,952	4,794	3,604	2,625	11,023

^{1/} Includes Guarantees

^{2/} Revised based on GEF and CF databases. The GEF data do not include IFC GEF projects.

^{3/} IFC numbers include GEF and Carbon Offset.

Source: World Bank Group Estimates

⁸ FY06 activities were covered in the June 2007 Progress Report (“An Investment Framework for Clean Energy and Development: A Progress Report,” op. cit).

10. **Pillar 1 of the CEIF is well into the implementation phase.**⁹ CEIF has made energy access in IDA countries a top priority. The WBG's energy lending increased from an annual average of US\$2.3 billion between FY03 and FY05 to reach an annual average of US\$4.4 billion between FY06 and H1FY08. Energy financing to IDA countries has also increased significantly, from an annual average of US\$0.9 billion between FY03 and FY05 to an annual average of US\$1.8 billion between FY06 and FY07. Despite these enhancements, energy access remains a policy and financing challenge in all regions, especially in SSA.

11. **WBG financing for the energy sector in SSA increased appreciably in FY07 and continues to be strong in FY08.** The WBG's energy lending for SSA increased from US\$1.4 billion for the FY03-05 period to US\$2.4 billion for the period FY06 to H1FY08. Carbon finance and the GEF funded US\$23 million and US\$13 million of low-carbon projects, respectively. A good example of the broad-based support that IDA provides to the sector is the US\$296 million in grant financing for the Regional and Domestic Power Markets Development project for the Democratic Republic of Congo (DRC), approved in FY07. The project, critical to DRC's energy needs as well as to the future development of regional energy trade in southern Africa, will leverage a total investment of US\$500 million to: (i) increase hydropower capacity through rehabilitation of the Inga generation facilities; (ii) boost transmission capacity between Inga and Kinshasa; (iii) extend electricity access to areas of Kinshasa; and (iv) improve the capacity of the government and utility to improve service.

12. **Efforts to leverage public resources through large private-sector led projects, particularly in generation capacity, are bearing fruit.** The IFC, IDA and MIGA are supporting the 250 MW run-of-the-river Bujagali power plant in Uganda, which will reduce supply costs, displace about 100 MW of expensive emergency thermal power and enable improved access to electricity in the country. The project reached financial closure in December 2007 and represents one of the largest mobilizations of private financing for an IPP project in Africa. The implementation of such projects provides synergies associated with increasing access to electricity with low carbon projects.

13. **But power sector development continues to represent one of Africa's most difficult infrastructure challenges.** The shortcomings of the power sector are manifold: insufficient investment in generation capacity, transmission systems and distribution grids; poor efficiency and reliability of existing supply systems; and high costs of service (see Box A.1.1). The resulting low reliability of electricity supply impacts business activity, by lower productivity and competitiveness, as well as a negative impact on the delivery of public services. The inability to meet basic household needs through simple lighting further diminishes social welfare.

⁹ Details of the Progress on Pillar 1 are included in Attachment A.1.

Box A1.1: Africa's Electricity Access Challenge

Insufficient Capacity: The installed power generation capacity in SSA is 63 GW which, if South Africa were excluded, falls to 28GW in total for over 45 countries, and is less than the installed capacity of Poland alone. A significant proportion of this capacity is not in usable condition. Given current economic growth rates of close to 5% per year, just to sustain this growth level would require annual expansion in generation capacity of 4GW, whereas at present barely 1GW is being added. Furthermore, hydrology stress in recent years and high costs of fuel have further reduced energy output from existing, usable capacity.

Low Access: Approximately 24% of the population of SSA (500 million) had access to electricity in 2005 compared to close to 54% in South Asia and close to 90% in East Asia, the Middle East and Latin America. At current rates of electrification and given the rate of population growth, household access to electricity is not increasing appreciably.

Poor Reliability: Rehabilitation, maintenance and upkeep of the power systems in place has not been adequate in many countries and electricity supply is unreliable as a result. Load-shedding and unplanned power outages are frequent across the continent. African manufacturing enterprises report an average of 56 days of outages per year. Consequently, firms lose 5-6% of their sales revenues and generation losses can amount to 20% due to the informal sector with limited backstop. As a result, many firms must operate their own generators at a cost of around US\$0.50 per kWh that both diverts scarce capital and adds to their costs with consequent loss of competitiveness.

High Costs: Power generation costs in many developing countries endowed with indigenous fossil or hydro fuel resources can be as low as US\$0.10. In comparison, many SSA countries face a much higher cost of power with costs ranging up to \$0.50 in landlocked countries or countries with small inefficient power systems that use diesel fuel for generation that has to be transported considerable distances. The impact of droughts on decreasing hydropower plant outputs and high oil prices has pushed costs up further.

14. **The CEIF progress report of September 2007 placed continued emphasis on a broad strategy of scaling up energy access in SSA in 2007 and beyond.** The approach builds on the overarching strategic objectives set out in the Action Plan for Energy Access in SSA, namely (i) ensuring energy access for enterprises and households to drive growth; (ii) powering the MDGs by connecting public facilities; and (iii) meeting basic needs. Implementation of the Action Plan was envisaged via five parallel implementation tracks:

- Increase electricity coverage for enterprises, households and agriculture.
- Improve electricity supply by expansion of generation capacity and transmission networks and regional integration.
- Energy services for key public facilities such as schools and clinics.
- Affordable modern lighting for unconnected households.
- Clean sustainable cooking and heating fuels and technologies.

15. **The severe power shortage gripping the sub-continent during the last two years has further threatened sector outcomes.** A combination of oil prices at or near historical highs and drought-induced hydrological stress has exacerbated existing supply constraints. The focus of policy makers has recently shifted to alleviating the immediate power crises. As a result, longer-term access programs and campaigns of countries like Ghana and South Africa have suffered setbacks, as funding and policy attention have been reallocated. The WBG has reacted by reallocating its resources to meet this challenge, assisting several countries with financial support

for emergency measures, such as in Uganda, Sierra Leone and Senegal. Countries experiencing such short term crises are not able to meet their electricity access targets when existing customers are enduring ongoing power outages.

16. **Despite these challenges, the World Bank continues to promote a balanced energy access agenda that takes the Action Plan for Energy Access forward.** The key factors to achieving success lie in simultaneously tackling power availability, the extension and reliability of distribution networks and affordability. Africa's formidable energy resources remain largely untapped: less than 10% of potential hydropower capacity has been exploited; the reserves to production ratio for natural gas and coal are 79 years and 192 years, respectively; and the energy dissipated via gas flaring alone would be enough to meet half of the continent's energy demand. Most countries, if acting in isolation from their neighbors, would be forced to develop assets that would be higher cost than regional projects due to the modest size of their markets. To reduce costs, resources should be developed as regional projects; reducing unit costs of supply and making electricity access a real and affordable prospect. In parallel, adequate investments in deploying wind, solar and biomass resources are also required to reach isolated communities.

17. **The World Bank continues to support sector-wide programmatic approaches (SWAps) that enhance countries' capacity to rapidly implement large multi-year roll-out programs of distribution networks.** The Bank is presently working with the governments of Rwanda and Senegal to complete SWAps by 2009, as well as actively supporting other International Financial Institutions (IFIs) and development partners in other countries. Successful partnerships could stimulate and leverage private and other concessional finance to support the government's own investment programs. A critical part of this effort is to ensure that the benefits of energy investments accrue to the poorest communities by prioritizing connections to public facilities, particularly health clinics and schools. These efforts are ongoing in Bank-supported projects, such as the public facility electrification campaign in rural Mozambique. The Bank is financing a review of challenges and best practices that will allow a faster scale-up of these efforts.

18. **Power utilities, electrification agencies and sector regulators are critical actors in achieving the Action Plan's objectives.** The Bank is undertaking a range of initiatives to strengthen commercial and technical performance in utility businesses, as well as to shore up capacity in critical sector enabling institutions. A major new initiative is the ESMAP-supported Electric Utility Support Facility that will enable individual utilities to benchmark and improve their performance and promote South-South cooperation to address technical challenges, including the critical task of reducing the cost of electricity by reducing losses and tackling inefficiencies.

19. **Sustained partnerships are needed to build the political consensus necessary to finance both regional energy developments and support capital subsidies for reducing the high upfront costs of rolling out multi-year grid-based, off-grid and decentralized electrification programs.** Increases in financing have occurred during the CEIF period, but not at the level set out in the CEIF proposals, which envisaged doubling external finance from approximately \$2 billion to \$4 billion. In addition, addressing the acute short-term power shortages has absorbed scarce financial and political capital. However, the CEIF and the

increased demands for access to energy supplies have succeeded in pushing countries to accord higher policy and funding priority to the energy sector. With support from international and bilateral assistance, a number of developing countries have given energy a more prominent place in Poverty Reduction Strategy Papers (PRSPs) and development plans. The action plan of the Forum of Energy Ministers of Africa (FEMA) announced in its conference in Maputo in March 2007 advocates for a broad push on all the necessary elements of energy access, including essential action on household energy, biomass and renewable energy solutions.

20. **The integration of the Bank's energy and natural resources teams into the Sustainable Development Network in FY07 has created new synergies.** These synergies will improve the Bank's ability to find creative and sustainable programs for rural household energy needs, building on the strengths of household energy/fuelwood components in existing projects that reduce inefficient and unsustainable usage, such as in Mali, Ethiopia and Senegal. Supporting WBG analytical work at varying stages of implementation includes: (i) improved stoves in Madagascar, related to addressing deforestation and use of alternative biomass for fuel and environmental health; (ii) charcoal management, production, marketing and consumption in Tanzania; and (iii) Miombo woodland management from Angola to Mozambique.

21. **The following two recent projects in SSA demonstrate how the Bank combined both the energy access and low carbon aspects into project design:**

- ***Ghana: Energy Development and Access Project (IDA)*** supports Ghana's multi-faceted energy sector strategy. The Energy Development and Access project will provide grants to developers of renewable energy generation projects — such as small hydropower, wind, and biomass — for the benefit of communities outside the main national grid system. It will also finance the establishment of an independent Rural Electrification Agency, which will coordinate all rural electrification programs. In all, 134,000 new customers in rural towns and villages will be connected to the national power grid by the project's end.
- ***Kenya: Olkaria II Geothermal Expansion (MIGA)*** consists of the design, construction, management and operation of a base-load geothermal power plant with a combined capacity of 48MW on a Build-Own-Operate basis in the Olkaria geothermal fields of the Rift Valley, 50 kilometers northwest of Nairobi. Electricity generated by the plant will be sold under a 20-year power purchase agreement with the national power transmission and distribution utility in the country—the Kenya Power & Lighting Company Limited. Geothermal electricity production does not result in any of the conventional air pollutants associated with other fossil fuel generation options thus improving local air quality as well as decreasing greenhouse gas emissions. The plant is situated in a rural area with high unemployment rates, and is expected to hire up to 200 new full-time employees and possibly up to 500 part-time employees during the construction period for the second phase. This project meets several of MIGA's priorities as it supports a South-South investment in the power sector in an IDA-eligible country in sub-Saharan Africa.

B. Accelerating the Transition to a Low-carbon Economy

22. **The WBG has strengthened its investment support for low-carbon energy projects.** The share of support for low-carbon energy projects increased from 28 percent in FY03–05 to 40 percent in FY06–H1FY08 (see Table A1.2¹⁰). Furthermore, it should be noted that this trend has been gradually increasing each year from 36% in FY06, 40% in FY07 and 45% in H1FY08. By December 2007, one and a half years ahead of schedule, the WBG exceeded its Bonn commitment¹¹ of investing US\$1.9 billion in new RE and EE for the FY05–09 period. Total commitments for new RE and EE for the period FY05 to H1FY09 was US\$2.3 billion.

Table A1.2: Sectoral Breakdown of WBG Energy Lending, FY03–H1FY08
(US\$ millions)

<i>Energy Sector</i>	<i>FY03</i>	<i>FY04</i>	<i>FY05</i>	<i>FY03-05</i>	<i>FY06</i>	<i>FY07</i>	<i>FY08 H1</i>	<i>FY06- FY08 H1</i>
Low Carbon	237	299	781	1,317	1,461	677	323	2,461
Access	684	475	627	1,786	727	482	440	1,649
Blended low-carbon & access	128	52	440	620	282	757	855	1,894
Transmission and distribution	90	103	200	393	645	469	80	1,194
Oil, gas and coal	325	496	529	1,350	1,038	628	485	2,151
Thermal generation	461	191	76	728	511	360	275	1,146
Other energy	462	100	196	758	130	231	167	528
Grand Total	2,388	1,716	2,848	6,952	4,794	3,604	2,625	11,023
Total Low-Carbon	365	351	1,221	1,937	1,743	1,434	1,178	4,354
Total Access	813	527	1,067	2,407	1,009	1,239	1,295	3,543

Note: Total may not add up due to rounding.

Source: World Bank Group Estimates

23. **Highlights include:**

- ***The share of projects with a low-carbon focus within the overall energy portfolio remains strong.*** For the FY06–H1FY08 period, GEF and Carbon Finance contributed US\$546 million, or five percent, of total WBG energy funding and 13 percent of funding for low-carbon projects. In FY07, nine hydropower projects (five of which are carbon financed) were approved, with US\$748 million in new WBG lending, of which US\$115 million is loan guarantees and US\$66 million is carbon finance. Recent activity represents a re-engagement in new hydropower generation (of varying

¹⁰ Table A.1.2 presents information that updates the equivalent Table 2 from the March 6, 2007 *Clean Energy For Development Investment Framework: The World Bank Group Action Plan, including FY07 data*. Differences between the data in the two tables are due to: (i) a more detailed analysis of Project Appraisal Documents for IBRD/IDA projects previously classified in the "Other Energy" category, especially Energy Sector Development Policy Loans to determine the breakdown; (ii) a more consistent application of the breakdown definitions across the WBG, leading to a disaggregation of IFC projects in the "Other Energy" category; (iii) an improved definition of Access projects to include all system components needed for increased electrification; (iv) exclusion of non-coal mining projects and components; and (v) inclusion of IFC data of energy components in other sectors.

¹¹ At the International Renewable Energies Conference in Bonn Germany in June 2004, the WBG committed to increase its lending for new renewable energy and energy efficiency by an average of 20 percent per annum from FY05–09 from US\$209 million the average over the previous three years. New renewable energy comprises solar, wind, biomass, geothermal and hydropower with capacities up to 10 MW per facility.

sizes), as well as rehabilitation projects. Two solar thermal power projects co-financed by the GEF (Mexico and Morocco) were approved by the Board in FY07, and the third (Egypt) was approved in December 2007. The Mexico Wind Umbrella Project, approved in 2007, is using carbon finance to stimulate new wind-field developments. Sixty-nine percent of the WBG oil and gas program consisted of natural gas projects, maintaining a three-year average exceeding 60 percent.

- ***The WBG is optimizing the use of available non-lending sources, such as GEF and Carbon Finance, for mitigation.*** The Bank has committed 22 percent of its notional GEF allocation for mitigation under the GEF 2006–2010 replenishment period. Bank Carbon Finance emission-reduction purchase agreements totaled US\$195 million in FY07 (of which US\$144 million is for energy) and are expected to reach US\$300 million in FY08. MIGA, which recently provided a Breach of Contract guarantee to an investor in carbon credits (carbon emission reductions, or “CERs”) expected to be generated by a municipal landfill gas project in El Salvador, is exploring how to expand guarantee operations for carbon finance projects. GEF support included financing for the aforementioned solar thermal projects.
- ***Innovative carbon finance product developed by the IFC:*** IFC’s Carbon Delivery Guarantee (CDG) is the flagship finance product for IFC’s own account and aims to further support climate-friendly products in emerging markets. The CDG was developed in response to market needs and is currently the only product in the market that: (i) improves market access for sellers of project-based carbon credits in developing countries; (ii) provides sellers with enhanced counterparty quality; (iii) helps maximize the value of future credits by providing a AAA credit enhancement and a transparent link to prices in secondary compliance markets like Europe. As of December 2007, four CDG transactions have been approved by the Board, of which two have been committed.
- ***The low carbon country case studies are achieving some early results.*** An important recent set of findings indicate that there may be considerable potential for GHG emission reduction by improving the effectiveness of the existing assets through better use of technology, improved financing capacity in the sector and institution-building. For example, if the bottom 70% of the thermal power plants in India were operating at the same efficiency as the top 30%, emissions would reduce power sector CO₂ by 16%. Taking assets out of service to upgrade them is not feasible in states that face load shedding problems. Therefore a three-pronged approach is being developed in which: (i) improving the financial health in the sector to enable accelerated implementation of new assets will decrease emissions from existing plants by enabling better maintenance practices and decreasing their duty cycle; (ii) rehabilitation of existing assets which still have more than 10 years operation left; and (iii) replacing plants coming near to the end of their economic life with new, more efficient plants. The Bank is currently preparing two such pilot projects in India and China with GEF support, with opportunities for further scale-up once the new Clean Technology Fund, under discussion with donors, is operational.

- Identification of additional gas flaring reduction and gas utilization projects which leverage carbon finance continue to take place with three new projects identified in Ecuador. In addition, project preparation on previously identified projects in Russia and Nigeria are also moving forward. A new methodology for CDM has been developed for the Nigeria project and is currently under evaluation. If successful, it has the potential to open up significant carbon finance opportunities in that country.

24. **While the CEIF has focused mainly on the power sector, work has extended to other sectors, such as transport, where there are opportunities to tackle development and mitigation together.** Within the transport sector, the Biofuel in Brazil and Bangladesh Inland Water Transport reports were delivered in H1FY08, the China Emission Intensities of Large Scale Road and Rail Projects is expected to be completed in Q3FY08 and the Carbon Finance and Urban Transport in India report is underway.

25. **The report on ethanol production in Brazil highlights the unique comparative advantage of Brazil in producing ethanol.** The sugarcane feedstock production costs are about a third lower than in the next lowest countries. Producing ethanol from sugarcane in the center-south of Brazil does not suffer from secondary costs: the sugar-cane production in this region is rain fed and not dependant on energy demanding irrigation. As the cost of sugarcane accounts for about 60 per cent of the production costs of ethanol, Brazil's low production costs make ethanol competitive to gasoline as an input to transport services. The strongly increased availability of flex-fuel vehicles has increased the attractiveness of building hybrid sugar-ethanol complexes. The Bank is exploring ways to facilitate lessons learned from Brazil's experience to foster South-South cooperation.

26. **The study on Bangladesh inland waterways shows the benefits of expanding inland waterways as a transport mode with low energy intensity.** Rates for bulk freight for water transport are a fourth of the rates for road transport. Connectivity of parts of the rural population depends on services provided by operators of river transport. The installation of proposed new gearboxes in boats used in rural areas could decrease fuel consumption by 30 per cent, increasing the energy efficiency and the affordability of transport services by the poor.

27. **Two new Carbon Facilities**—CPF and FCPF were approved by the World Bank Board in September 2007, to expand the scale and scope of carbon finance. The CPF is designed to: (i) scale up carbon finance through programmatic and sector-based approaches; and (ii) support long-term, low-carbon investments by purchasing emission reductions beyond 2012. It is intended to use carbon markets to promote GHG mitigation, enhancing the value of carbon finance to leverage investment for clean energy and the use of lower-carbon technology. In doing so, the CPF will also provide continuity and sustain capacity in the carbon market, both in developed and developing countries.

28. FCPF is designed to pilot and test activities for reducing emissions from deforestation and forest degradation (REDD). The FCPF aims to build country capacity, including a national accounting framework for REDD, in interested countries. The Carbon Fund of the FCPF will offer positive incentives for reducing emissions from tropical forest which can improve the livelihoods of poor people who depend on these natural resources, while also protecting the natural assets. These assets typically promote the maintenance of local environmental benefits

(for example, protection of watersheds); their clearing and degradation represents about 30 percent of GHG emissions from developing countries and a loss of biodiversity. Ultimately, the FCPF seeks to foster new and additional financing for forest protection and sustainable forest management.

29. **The FCPF has been developed in response to numerous requests from developing and industrialized countries, including expressions of interest received from 34 IBRD and IDA member countries to date.** In December 2007, ten donor countries and one international NGO announced contributions of US\$165 million at the public launch of the Facility in Bali, bringing it well on its way to the target capitalization of US\$300 million. Further consultations on the design of the Facility, including with the private sector and with representatives of forest-dependent indigenous peoples and other forest dwellers, are underway.

30. **The WBG is developing strategies to overcome the barriers to accelerated deployment of advanced clean energy technologies in developing countries.** The WB has recently completed an analysis which examines the need for new clean energy technologies to address climate change, the barriers to accelerated commercializing such technologies, and examples of novel approaches to innovation from non-energy sectors that could be applied to clean energy. The Bali Action Plan, the IPCC Fourth Assessment Report and the Stern Review make clear that a renewed push on clean energy technology development is essential to stabilize and then reduce anthropogenic CO₂ emissions. However, activity in this area had fallen considerably after peaking in the early 1980's as the combined effects of low oil prices and market reform work to substantially decrease energy R&D. In recent years, though, this trend has reversed as climate fears and high oil prices are rapidly increasing interest in new, alternative sources of energy. This "green tsunami" of public and private investment nevertheless faces a number of barriers, among them an uncertain carbon price, difficulties adapting and diffusing technologies of the developing world and the "valley of death" wherein technologies languish whose scientific proof of concept has been proven by basic research but which are still viewed as too risky by the private sector to take up. In order to inform novel and creative approaches to clean energy R&D, the report examined four case studies of successful technical innovation from non-energy sectors (vaccines, biotech, agriculture and software) that have overcome barriers similar to those faced in clean energy. These case studies provide numerous models and lessons for strategies that have proven effective in achieving effective and timely technical innovation in cases where traditional R&D had not been successful.

31. **Based on the case studies, as well as on examples drawn directly from the energy sector, the WB is preparing a proposal which aims at accelerating the development of clean energy technologies with developing country applications.** This will focus on opportunities to motivate and leverage private sector activity; link disparate existing and new energy R&D efforts through a virtual information sharing platform; provide incentives to develop new technologies that serve the global public good; provide the needed skills and resources to support energy technology efforts by companies operating in developing countries.

32. **The pilot program to begin measuring GHG emissions of the WBG lending portfolio is underway.** The main objective of this assessment is to help staff and clients understand and manage GHG risks associated with WBG projects, through credible and transparent approaches

to quantifying and reporting net GHG emissions associated with those projects as well as their potentials to reduce GHG emissions. The knowledge gained may help country teams identify opportunities or trade-offs among technological choices and support “technological acceleration.” It may also help identify additional opportunities for countries to benefit from carbon trading. The assessment initially focuses on the Bank's energy, transport and forestry portfolios. The first phase of the assessment will develop methodologies and tools to calculate GHG emissions resulting from investment lending. In the second phase, the study will analyze the GHG impacts of the Bank's policy lending in the energy, transport and forestry sectors. In each case, the expected net gain or reduction of emissions will be determined, as compared with the "business-as-usual" scenario. Findings, including methodological approach, will be communicated to operational staff with the goal of shaping future interventions; and this information and methodology will be developed, vetted and shared with our development partners (other MDBs, donors, country clients, and the private sector) so as to facilitate their participation in and ownership of the process.

C. Adaptation to Climate Variability and Change

33. **Although it has been recognized for some years that climate change is already occurring and more change will occur irrespective of mitigation success, adaptation to the impacts of those changes has not received the same attention in either the negotiations or in development planning as has the mitigation agenda.** The Delhi Declaration at CoP8 in 2002 sought to raise the profile of adaptation by calling for urgent attention and action on the part of all nations and for effective and results based measures in all development activities. However, activity remained limited to capacity building, assessments and some very early pilot projects.

34. **In developing the CEIF the World Bank insisted that adaptation should be one of the three pillars in tackling the issues of energy access and climate change in development.** The Bank showed that about 25% to 40% of its development projects are potentially exposed to significant climate risk but only a small percent dealt with it in preparation documents. This was partly due to a lack of awareness of the urgency of the problem and partly due to a lack of information and tools to deal with climate risk. The first CEIF document (2006 Spring Meetings) recognized that action on climate change, and in particular adaptation had to extend beyond the Plus 5 countries and to be factored into development planning in all developing countries.

35. **The CEIF argued for the need for a shift in approach to adaptation from a largely stand alone, project by project, approach to one where the management of climate risk, current and future, was regarded as an essential part of development planning.** The CEIF outlined the value of a “climate risk management approach” in which we seek to deal better with current climate risks, and opportunities, while considering the projected climate trends.¹² It also sought to make progress in the provision of tools and guidance for development practitioners to more readily screen for risks and incorporate climate risk management in their planning. Another

¹² Other development agencies have adopted a similar approach to adaptation, albeit with different descriptors including “mainstreaming adaptation”, “climate proofing adaptation”, “climate resilient development” and “integrated climate risk management”.

goal was to increase the amount of AAA work relevant to managing climate risk and to stimulate a series of country and sectoral assessments of climate risk.

36. The CEIF focused on the goals in Box A.1.2 and was translated into a work program, which sought to provide tools to assist in identifying risks arising from climate change and good practice guidance on implementing adaptive responses. Progress against the full range of target commitments is described in Attachment 2.

Box A1.2: Status of Adaptation Actions

Goals in CEIF and progress

- Screening tools: First phase completed and new more comprehensive phase underway
- Assess risk to existing capital stock: Not pursued
- Planning tools: Agriculture and water guidance to be available in FY08
- Hazard management: Joint work with GFDRR underway
- Promote research: Significant upswing in interest within research community—e.g., WCRP; CGIAR problematic.
- Explore existing financial instruments: Concluded that they are adequate in design but not in amount
- Pilot Projects: Underway (Kenya, China, LAC)

37. **New analytical tools and guidance for assessing and managing climate risk have become available through both efforts within the Bank and elsewhere.** A screening tool is now available and covers aspects of agriculture, water use, biodiversity, and some infrastructure and coastal issues. The screening tool is now seen as part of a wider range of tools to support development practitioners. These include good practice guidance notes, structured sets of climate change training and leadership programs. There is now a huge demand for basic climate observational and projection data and this will increase as new IPCC climate change scenarios and modeling become available over the next 2 to 3 years. Also there are almost 50 AAA efforts relevant to adaptation underway within the Bank and many more elsewhere. To cope with this rapidly expanding amount of information greater international coordination is needed and new tools to facilitate access to information by both development agency and developing country staff. The Bank, both internally and in cooperation with other agencies, is developing a comprehensive ‘portal’ to provide ready access to information and data relevant to climate change.

38. **The WBG has remained central in seeking to achieve effective global cooperation in developing the tools and information for mainstreaming.** Approaches range from cooperation with international efforts such as the UNFCCC Nairobi Work Program and the United Nation International Strategy for Disaster Reduction (UNISDR), to coordinating roles in capturing learning and disseminating information with UN agencies and coordinating informal meeting points between development practitioners (Table A1.3). The WB took the leadership in the preparation of the joint report by the MDBs on the Climate Change Agenda. It described the similar approaches being taken to integrating adaptation into their programs by the MDBs in general and in particular the increasing cooperation between the AfDB, Asian Development Bank (ADB) and Inter-American Development Bank (IADB).

Table A1.3: Summary of main cooperative activities by WBG on adaptation

<i>Activity</i>	<i>Goal</i>
MBD Report (lead)	Information sharing and coordination
GFDRR and climate change cooperation	Common assessment methods for disaster and climate risk management
Participation in the UNFCCC Nairobi Work Program	Cooperation with UNFCCC and the wider development community on promoting the goals of the FCCC and Kyoto protocol
Vulnerability and Adaptation Resource Group—VARG (lead)	Informal meeting point for coordination among development agencies and donors
WB & Least Developed Countries Expert Group of the UNFCCC (lead)	Informal meeting point between development agencies and LDCs
Geneva workshops on tools and data portals (lead)	Coordination in work programs of development agencies, NGOs and researchers on tools for adaptation
GEF / UNDP, UNEP, WB Adaptation Learning Mechanism	Common learning and knowledge sharing system for adaptation projects
Coastal Cities project (lead)	Cooperative AAA work between MDBs and donors
IFI Working Group on Environment	Coordination and information sharing
UNFCCC Secretariat “Costs of Climate Change”	Cooperation with UNFCCC led research

39. **Work within the Bank and elsewhere has reaffirmed the principle that good adaptation arises from embedding climate risk management into national development planning.** The IDA and Climate Change report (2007) shows that the poorest countries are most vulnerable to climate change impacts and that such countries need to consider immediate interventions that will increase their resilience to climate change. Although many adaptive actions will be autonomous, undertaken by households and businesses in response to changing circumstances, additional information (e.g., seasonal forecasts), improved infrastructure and better planning will be required for these actions to be most effective. This provides a challenge to national governments and the international community to ensure that these resources are provided.

40. **There is still an urgent need to raise the awareness of the private sector to the risks and opportunities related to climate change.** Many of the tools and information portals will be of relevance and need to engage with private sector in stimulating the rapid expansion of such facilities. The IFC is in the early stages of identifying appropriate methodologies for evaluating the risks of climate change to its investments and clients. In consultation with experts and other interested IFIs and private companies, the IFC plans to do a series of case studies by June 2008 to test available risk assessment tools, illustrate potential portfolio risks, and explore the feasibility of insurance and other response measures. The IFC is also collaborating with the Bank and other partners to develop and pilot new financial products relevant to climate change such as weather derivatives, a Global Index Reinsurance Facility, and other insurance products, as well as exploring ways to scale up our work with municipalities and private sector clients with particular emphasis on water infrastructure.

41. **The outcomes of the work associated with the CEIF have been a major contributor to a shift in thinking within the WBG, and the MDBs, that recognizes climate change, and in particular adaptation, as a central part of development planning.** Although climate change is commonly viewed as a threat to development it also provides opportunities. Carbon

finance associated with mitigation opens options for cleaner energy, while the impetus of needing to deal with a changing climate offers the opportunity to rethink and redesign systems and institutions to be much more resilient to multiple shocks.

42. **Each Region is currently engaged in formulating a business plan for dealing with the threats and opportunities associated with climate change tailored to the specific needs of its client countries.** These plans are being developed in consultation with client countries and will be supported by the WBG-wide Strategic Framework on Climate Change.

43. **Progress on implementing widespread adaptation has been hindered by the lack of sound estimates of the scope of the task and the financial implications.** Developing countries are unwilling to borrow for discreet adaptation activities and some appear to be reluctant to act until resources that are clearly “additional” to ODA budgets are made available for the imposed costs of adaptation. Although most donors agree with the need to support adaptive actions in the most affected developing countries, progress has been difficult as there were no clear estimates of the likely scale of the financial support.

44. **Resources made available through the GEF have been critical in promoting assessments, capacity building and initial project by project action, but fall a long way short of the resources required to support comprehensive adaptation.** In 2001 at CoP 7 the GEF was requested to establish two new funds for adaptation. The LDCF was to assist the least developed countries prepare and then implement National Adaptation Plans of Action (NAPAs) identifying their most urgent adaptation needs, and the Special Climate Change Fund (SCCF) was set up to support, among other things, a wider range of adaptation actions. The SPA was set up as part of the main GEF Trust Fund to encourage the integration of adaptation into GEF’s wider mandate. The SPA, LDCF and SCCF have totaled close to US\$300 million up to January 2008. The Adaptation Fund, based on a 2% tax on CERs issued through the CDM, will now be operationalized, but there are widely varying estimates of how much this tax will raise, ranging from an estimated US\$100 million and US\$500 million by 2012.¹³

45. **The Bali Action Plan agreed to at COP13 calls for assistance for developing countries with immediate adaptation priorities, improved risk management strategies, including disaster risk reduction, and more coherent and integrated actions on the part of all agencies.** It calls for “adequate, predictable and sustainable financial resources” to provide incentives for developing countries to act on adaptation. It is urgent that demonstrable progress is made on these goals over the next few years to help inform and build trust in the negotiations on the post-2012 framework.

46. **There is still little agreement over what is meant by the “costs of adaptation.** It is clear that the costs of some development actions will increase as a consequence of climate change (e.g., greater expense on coastal defenses, more damage from extreme events, etc). The additional capacity building and analyses required to factor in climate change are additional and

¹³ Some estimates are higher as the amount raised depends on how much the Annex 1 countries need to use the CDM in meeting their first commitment period targets and there is uncertainty as to the price at which the CERs will be converted to cash.

will require new resources although these are relatively modest (a few tens of millions US\$ per year). The bulk of the new investment will be needed to modify and expand infrastructure (existing and planned), to make changes in livelihoods, such as changes in farming practices, and even to facilitate migration where that proves necessary. However, specific adaptation actions would usually only be implemented where benefits outweigh the costs associated with alternative actions or inaction. Thus there is still disagreement over how these additional costs and investment flows should be calculated. Also, many agricultural systems, much infrastructure, etc is not adequately adapted to current climate conditions and the question arises as to whether making up this “adaptation deficit” should be included in cost estimates?

47. **The initial estimate in the Spring 2006 CEIF report of the financial resources required for climate resilient development has stimulated a number of studies that all confirm that existing funds are inadequate.** The initial CEIF Report (Spring 2006) included a rough estimate that suggested US\$1-4 billion per year would need to be directed to adaptation actions to “climate proof” global concessional finance for development which is an order of magnitude greater than current funding levels. The Stern Review elaborated these estimates a little further. During 2007 a study coordinated by the UNFCCC Secretariat of the investment needs for mitigation and adaptation in 2030 estimated that the adaptation needs would be US\$28 billion to US\$67 billion. Other groups (Table A1.4) using slightly different approaches and assumptions get compatible estimates. The core point is that effective adaptation measures in developing countries will require billions of dollars of investment per year immediately and that this will soon rise to tens of billions with most coming from the private sector, implying that new funding and incentive mechanisms are needed.

Table A1.4: Estimates of costs and investment requirements for adaptation in developing countries

<i>Study</i>	<i>Date released</i>	<i>Estimate US\$ billions/annum</i>	<i>Basis</i>
Various Academic	1990s on	Various	Usually sectoral and long term—e.g., end of century—and with widely differing assumptions
CEIF	04/2006	4—8 9—41	Investment to ‘climate proof’ ODA and concessional finance—near term As above but for all adaptation related activities in developing countries.
Stern Review	11/2006	1 -4 4—37	Revision of CEIF estimates done in cooperation with WBG.
IPCC	4/2007		No new estimates, but argue that most studies show a high benefit-cost ratio for adaptive actions.
Oxfam	5/2007	>50 8—33	Revision of CEIF calculations Costs (not annual) of immediate priorities similar to those in NAPAs applied to all developing countries.
UNFCCC	10/2007	28 – 67	Investment needs for adaptation activities in 2030— all sectors, private and public.
IDA Replenishment documents	11/2007	0.6 - 1.9	Increment in IDA resources to offset the effects of climate change (6% to 21% based on Stern Review).

48. **While the above studies have provided a first step towards tackling adaptation at an appropriate scale the current estimates are still too uncertain for effective planning and to properly inform the UNFCCC negotiations.** With the initial support of the Netherlands and UK (other donor countries have expressed interest) the World Bank is leading a Global

Economics of Adaptation study to “understand how to identify and prioritize adaptation measures and to estimate the financial costs of ensuring national development plans are climate resilient”. The study will focus on several countries and will be led by the WBG in cooperation with several research organizations in both developed and developing countries.

49. **Many of the expectations for adaptation funding are focused on the Adaptation Fund.** At CoP13 in Bali in December 2007, the management structure of the Adaptation Fund was agreed and a Board with a developing country majority was established to supervise and manage the Adaptation Fund with secretariat services provided by the GEF Secretariat. However, significant funds are not expected to be available immediately as the CERs have to be monetized. As noted above, the amount to be available by 2012 is still uncertain with estimates ranging from a few hundred million dollars to US\$500 million. The priorities and allocation rules for the Adaptation Fund are yet to be decided.

50. **A paper prepared for IDA 15 replenishment, IDA and Climate Change, made the case that IDA is also a strong platform for meeting the adaptation challenge.** The nature of the problem implies that the management of the risks and opportunities arising from climate change must be fully integrated within the broader development process. This will, in turn, require that funding be fully integrated within development planning. IDA is uniquely positioned to integrate adaptation into development through its multisectoral perspective, its range of lending and non-lending instruments and as a common platform for assistance by all donors. At the same time, much learning still needs to be to demonstrate the effectiveness of incorporating climate risk management in a programmatic way through core national planning and development financing. There are still no clear models for doing this—not even in developed countries.

51. **Thus, the WBG is placing priority on piloting a comprehensive and integrated adaptation planning process in a select number of developing countries over the next few years, with donor support under the proposed CIF (see paragraphs 60-70 below).** Such trials will require the full engagement of all levels of government within the selected countries and significant resources to not only implement fully integrated planning but to support immediate actions that are identified. Resources would be made available to support governments to assess risks and plan for cost effective climate resilient development; to develop comprehensive, nationally owned frameworks, building on the NAPA’s and integrated into PRSPs and other core planning processes; and to strengthen institutional arrangements. Lessons learned and knowledge generated through the pilot program should support programs under the Adaptation Fund as well as IDA and other highly concessional finance and grant resources through normal aid channels.

D. Coordination with Multilateral Development Banks (MDBs)

52. **Climate change is an unprecedented global challenge that requires collaboration among a large number of development partners, including the UN system, the GEF, MDBs, bilateral donors, the private sector, research institutions and civil society groups.** The WBG’s long-term productive partnership with the GEF has been a major force in advancing the climate change agenda. The WBG has also worked extensively with the private sector on

assessing barriers to clean energy financing and a possible design of new instruments. The Development Committee requested in March 2007 that this Progress Report describe progress on the implementation of an action plan for strengthened collaboration with RDBs (Development Committee Communique, April 15, 2007).¹⁴

53. **Strengthened Collaboration among the MDBs has been a hallmark of the CEIF.** In the period following the Gleneagles 2005 communiqué, each MDB revisited their climate change strategies and embarked on major new initiatives designed to help their clients mitigate the impact of past and future development programs on climate change. Each MDB has undertaken to develop climate change strategies and programs of actions tailored to their particular client needs, largely based on resources and funding mechanisms currently available. Under the CEIF, a joint MDB framework of action was advanced—the MDBs have strengthened collaboration on analytical work and programming and committed to expand this collaboration to optimize the impacts of their collective actions. Through the initial stage of joint work, a monitoring system was established to assist joint tracking of climate change-related investment operations. While much of this joint work was initially among the energy and environment operations of the MDBs, a collective ownership on the potential pay-offs for working closer together is emerging in a range of sectors such as transport, urban, forestry and agriculture. For example, a regular formal session on the MDB's climate change initiatives has been added to each meeting of the existing MFI- Working Group on the Environment, with measuring “carbon footprint” of lending and adaptation having been selected as initial topics. An MDB working group on the CEIF has also been established.

54. **The coordination process is intended to support greater consistency in setting policies, programs and instruments across the MDBs.** At the same time each MDB has had important achievements towards the objectives of the CEIF, as summarized for the WBG above. For example the European Bank for Reconstruction and Development's (EBRD) Sustainable Energy Initiative commits the institution to more than doubling its investments in energy efficiency and cleaner energy during the 2006–2008 period to over €1.5 billion in projects, with total costs of over €5 billion. The Asian Development Bank (ADB) is in the process of expanding its clean energy operations to reach US\$1 billion a year. The European Investment Bank (EIB) has adopted ambitious renewable energy targets, has adjusted its product offering so as to enhance its support for climate change mitigation, and works closely with the EU Commission's climate-change policy agenda, including support for the EU's flagship program that plans to support up to 12 carbon capture and storage power plants. The African Development Bank (AfDB) has just announced a program to provide financial support to 5 to 10 climate “adaptation” projects a year by 2010. And the IADB is in the process of establishing targets for expanding its sustainable energy operations to reach up to US\$1.5 billion per year over the period of 2008-2012.

¹⁴ The WBG is also actively cooperating with other UN agencies on the development of “The UN system coordinated approach to climate change,” summary of which was released in Bali, December 2007, and is assigned a role in all of the activities identified as priorities for UN engagement. The WBG is working with other UN agencies towards a “carbon-neutral” UN, using its experience of the first UN agency to have made Headquarters office operations and travel carbon-neutral.

55. **The immediate joint MDB work program is focused on improving projections of operational (lending and TA) activities on climate change for the next few years, with and without additional concessional and grant financing, and exploring how MDBs can optimize synergies to establish collective goals against which the collective performance can be measured.** Most recently, an MDB workshop was held in Washington DC at World Bank and Inter American Development Bank (January 17-18, 2008) to discuss how to move forward with joint efforts to scale-up funding for high-impact public and private sector investments to reduce GHG emissions and strengthen climate resilience (described below). Related to this new effort, an extension of the CEIF joint MDB work program is being developed in recognition that as MDBs' client countries gain access to new sources of concessional financing and possibly additional instruments, there will be an increasing need for MDBs to optimize collaboration in global, regional, and country policy dialogue, analytical work, and regional- and country-based lending and technical assistance operations (including private sector operations) to maximize both development and GHG abatement impact.

**ATTACHMENT A1-1: PROGRESS ON PILLAR 1:
ACCESS TO MODERN ENERGY IN SUB-SAHARAN AFRICA**

A. Scope and Causes of the Energy Crisis in Sub-Saharan Africa

1. **The energy sector in Sub-Saharan Africa is characterized by four principal shortcomings:** insufficient generation capacity to meet demand, low rates of household and public facility access to either grid or off-grid sources of energy, poor reliability of supply for those who are connected, and electricity costs running as high as US\$0.50/kWh in some landlocked countries.

2. **These shortcomings are symptoms of underlying causes that the Action Plan for Energy Access in SSA aims to address.** A principal factor accounting for the underperformance of the electricity sector in SSA is a lack of financing available for both new energy assets and for the maintenance of existing assets. Neglect in maintenance of generation, transmission and distribution assets leave utilities unable to function efficiently and meet the energy needs of existing customers. New investment and access expansion plans are grossly under-funded. Current levels of external concessional and grant financing invested in the sector amount are estimated to amount to only US\$2 billion per year. Low investment levels have meant that distribution networks have not kept pace with new household formation, while inadequate generation capacity means that even existing demand cannot be served, leading to widespread load-shedding.

3. **A project-focused approach to external financial assistance has detracted from the development of coherent national policies and programs.** Much of the current assistance has been channeled to governments on an ad hoc project-by-project basis, often with tough conditionalities that growing utilities with low financial returns are not able to meet. This has led to fragmentation, duplication of efforts, unbalanced sectoral development (at both geographical and sub-sectoral level), and high transaction costs. The overall value of private investment in the sector has averaged only around US\$300 million per year during the last decade, and the flows have been highly volatile due to the lumpy nature of investments, targeted to just a few countries. Overall, given the needs for rehabilitation, maintenance and expansion, the financing flows to the energy sector in Africa have been grossly inadequate.

4. **A weak enabling environment at the sector and utility level has undermined countries' capacity to provide reliable access to current customers and impedes scaling-up new connections.** At the sector level, a clear strategic vision for the sector is usually lacking, and tariff structures are often badly distorted. At the utility level, insufficient management capacity and lack of effective maintenance result in high levels of electricity losses, and billing and collection practices are inadequate. The combination of these shortcomings has meant that, in many cases, utilities in Africa are incapable of meeting their operating expenses from their operating revenues, much less being able to meet new debt service obligations for new investments. By comparison to higher income countries, many SSA utilities are far from having reached a mature 'steady-state' mode. By demanding the same financial standards as for mature utilities, donors often withhold much needed capital funding and subsidy for access expansion.

5. **The CEIF progress report of September 2007 placed continued emphasis, in the context of the Action Plan for Energy Access in SSA, on scaling up energy access in SSA in 2007 and beyond.** It contained the overarching strategic objectives of (i) ensuring energy access for enterprises and households to drive growth; (ii) powering the MDGs by connecting public facilities; and (iii) meeting basic needs, the Plan focused on five parallel implementation tracks:

- Increase electricity coverage for enterprises, households and agriculture.
- Improve electricity supply by expansion of generation capacity and transmission networks and regional integration.
- Energy services for key public facilities such as schools and clinics.
- Affordable modern lighting for unconnected households.
- Clean sustainable cooking and heating fuels and technologies.

6. **The scope of these five implementation tracks is broad.** First, this enables coherent and comprehensive capture of a wide array of activities required for accelerated access. Second, it allows for customized solutions on a country-by-country basis by governments, development partners, private sector partners and non-governmental agencies. Thereby each partner can focus on the track(s) of the Action Plan that plays to their strengths. In addition, the framework allows stakeholders to respond to emerging issues, such as the increasing importance of climate change, and the need to respond to the acute power shortages affecting many countries.

7. **Successful and sustainable implementation of the Action Plan along the tracks requires increased investment flows, improved government policies for sector governance and harmonized assistance among donor agencies across the sector.** An achievable path for electricity access scale up could result in an increase in household electricity access to 35% in 2015 and to 47% by 2030 for SSA as a whole. Initial estimates suggest that doubling the current level of financing to US\$4 billion per annum, from the current level of approximately US\$2 billion per annum would be required for the necessary electricity generation, transmission and distribution investments to meet these targets.

B. Operationalizing the WBG's Response

8. **The WBG will continue to identify and focus on those areas where its contribution is greatest.** In developing the Bank's own business plan in response to the Action Plan, several areas of competitive advantage and institutional strength have been identified, reflecting its financial products, convening power and areas of technical expertise:

- **Leading as a project developer in transformative generation and transmission projects, particularly those at a regional level.** This is an essential ingredient for powering the expanded access with affordable electricity. The Bank can provide financial support for high quality technical work (such as project feasibility studies), deliver expertise on policy, regulatory and safeguards issues, and bring global experience to bear. The Bank has a range of instruments that it can deploy both grants

and concessional finance as well as risk mitigation instruments (such as partial risk guarantees). This combination of strengths allows the Bank to significantly leverage the financial support it provides in order to expand the available co-financing, either through promoting private public partnerships, or by convening development partners. By being able to leverage country relations into regional coalitions, the Bank is particularly well-placed to assist in regionally-based generation and transmission projects that need to be developed on the basis of aggregated demand from several countries.

- **Strengthening the capacity of power utilities and other access agencies to function more efficiently and better plan system expansion, through analytical and advisory activities, including technical assistance.** These advisory activities also help governments put in place policy frameworks and institutions that can shore up the financial viability of the sector. The Bank acts an independent source of advice and has the convening power to promote sound policies, as well as to advocate for regional cooperation and encourage framework agreements for cross-border and multi-country projects.
- **The Bank is leading the push for a re-orientation of development partner assistance to the energy sector, characterized by SWAps.** SWAps are particularly important for harmonizing and scaling-up energy access efforts at the distribution level.

9. **As part of efforts to relieve the critical shortages of power on the continent, one area of WBG focus is on flagship generation and transmission projects with transformative potential.** These are defined as national or regional projects that (i) fit into the strategies and priorities set forth by existing power system expansion plans, particularly at the regional level; (ii) need to mobilize a substantial amount of financial resources (expected total investment cost per project above US\$ 100 million); and (iii) will facilitate directly or indirectly the highest amount of new energy output (kWh) within the shortest delay (i.e. the project could be structured and financially closed before the end of 2012). These types of least-cost projects represent progress on the second implementation track of the Action Plan for Energy Access in SSA. They include large hydropower rehabilitation projects, new large hydropower or thermal generation projects, but also key transmission interconnections that facilitate the provision of new power output to national or regional power markets with an important number of electricity consumers. This latter point is important: many of these ‘transformative projects’ aim to develop energy resources that have proven in the past to either be too physically distant from main centers of power demand, or located in countries that are economically too small to be able to develop those sources of energy on their own.

10. **In some projects, particularly those that demonstrate a high economic rate of return, but limited financial returns, the Bank leads as a financier using concessional or grant instruments.** For example, the rehabilitation of the Inga 1 and 2 hydro-plants, supported by a US\$296 million grant from the WB as part of the multi-donor Regional and Domestic Power Markets Development Project, represents a low-cost, low-carbon and low-environmental impact means of quickly increasing DRC’s generation capacity. It is a critical component of the future development of regional energy trade in southern Africa.

11. **In other instances, the Bank plays a catalytic role in facilitating project development and leveraging investments by others**, particularly the private sector in commercially viable projects. For example, the Bank is proposing to assist in the development and financing of the two-phase Mozambique transmission ‘backbone’, which will directly facilitate the development of several generation ‘mega-projects’ (including a gas-fired plant in Temane, a new hydro-plant at Mphande Nkua and a coal-fired plant at Moatize) to be developed on a commercial basis, and which will address the critical power deficits in the Southern African Power Pool.

12. **The Bank is also undertaking a range of initiatives to strengthen commercial and technical performance in utility businesses**, as well as in related institutions like electrification agencies and sector regulators. This is key to making progress on two tracks of the Action Plan: increasing electricity coverage for enterprises, households & agriculture, and providing for key public facilities such as schools and clinics. A range of tools are being deployed to this end, including strategic analytical studies, technical assistance and project-based financial support. For example, the Africa Infrastructure Country Diagnostic is a multi-country study co-ordinated by the World Bank that, by establishing an empirical baseline of the current infrastructure situation on the continent, is assisting individual countries in benchmarking their relative performance and formulating their own country-specific strategies in the light of regional experience.

13. **A major new initiative is the ESMAP-supported Electric Utility Support Facility that will enable individual utilities to benchmark and improve their performance and promote South-South cooperation to address technical challenges.** This agenda is particularly critical for fragile states like Liberia and Sierra Leone where the basic utility functions have been seriously damaged through conflict. The Bank’s ongoing consultations with our clients, particularly African Energy Ministers, have shown that this approach to utilities is a shared priority and one where scaled-up partnerships are needed.

14. **The Bank, in conjunction with other development partners, is encouraging countries that have a strong sector policy framework to adopt multi-year, multi-donor SWAp approaches to energy access.** The SWAp approach is an effort to move from a fragmented project-by-project engagement designed by each development partner to one that is country led and that rallies donors around a harmonized and programmatic framework aligned with national priorities. In the context of a SWAp, external partners will offer assistance that allows governments to engage expertise across a range of disciplines, including sector strategy development, costing of electricity expansion, technical solutions for grid and off-grid solutions, financial modeling, and investment planning techniques. A desired end-goal is for development partners and governments to work together towards use of a common framework for engagement, preferably one based on country systems and national procedures, and providing financial assistance via budget support where appropriate. In the early stages of a SWAp, it is to be expected that a mix of procedures and financing instruments—such as earmarked budget support, basket funds or project specific support—will co-exist side by side in use across the donor group. The important challenge is to ensure that development partners align their respective programs with the target program outcomes agreed to with the Government. The Bank is presently working with the governments of Rwanda and Senegal to complete SWAps by 2009, as well as actively supporting other IFIs and development partners in at least two other countries of the region. The aim is that the successful implementation of these first SWAps would lead to their adoption in other countries in subsequent years.

15. **The integration of the Bank’s energy and natural resources teams into the Sustainable Development Network in FY07 has created new synergies and new opportunities to reduce the intensity of woodfuel use.** The potential synergies will improve the Bank’s ability to find creative and sustainable programs for rural household energy needs, building on the strengths of household energy/fuelwood components in existing projects that reduce inefficient and unsustainable usage, such as in Mali, Ethiopia and Senegal. The Bank has analytical work starting, ongoing or being completed related to this area in three topics: (i) improved stoves in Madagascar, related to addressing deforestation and use of alternative biomass for fuel and environmental health; (ii) charcoal management, production, marketing and consumption in Tanzania; and (iii) Miombo woodland management from Angola to Mozambique. The Ghana Energy Development and Access Project and the Kenya Olkaria II Geothermal Expansion projects described above are two recent examples of how the Bank has combined both the energy access and low carbon aspects into project design.

16. **The multi-donor and private sector-oriented Africa Lighting Initiative has been launched to promote and facilitate access to affordable and efficient lighting for millions of African households.** Since launching in September 2007, the program has advanced substantially, with evidence of rapid acceleration in industry activity in developing clean, durable, lower cost, and higher quality lighting technologies that can meet the demands of low-income households.

Box A1-1.1: Lighting Africa

Lighting Africa is a joint IFC/WB program designed to tackle the challenge of making clean, durable, lower cost, and higher quality lighting—as embodied in new advances in lighting technology, such as compact fluorescent light bulbs (CFLs) and light emitting diodes (LEDs—accessible to the millions of “energy poor” across Africa. The program includes a significant private sector, market enabling focus as they are expected to be the engine of this program. Wide consultations during the design phase of Lighting Africa identified areas where WBG interventions would help to accelerate market scale-up. Since launching in September 2007, the program has advanced substantially, with evidence of rapid acceleration in industry activity. Initiatives to date include:

- Lighting Africa Development Marketplace (DM) competition to support the design, development and delivery of low cost lighting products and services. The competition received over 400 proposals from 54 countries, including 38 African countries, and up to 20 winners will receive seed capital of up to \$200,000 each.
- Lighting Africa B2B Web Portal. The Lighting Africa website is catalyzing B2B interactions in the off-grid lighting market. The portal allows companies to showcase their products and services, retrieve market intelligence and communicate with potential business partners
- Lighting Africa 2008 Global Business Conference. The first global business conference for off-grid lighting will be held in Accra, Ghana, May 5-8, 2008. The event is designed to attract investors, private lighting firms, local distributors, end users and development agencies to showcase and expand business opportunities targeting low-income populations in Sub-Saharan Africa.
- Quality Assurance. Shielding African consumers from poor-performing lighting products will boost confidence in new lighting products and services. A Quality Assurance Workshop has been held; solar lanterns are being tested; and a specification is being developed for LED lanterns.
- Financing. Lighting Africa financing components are being built into several World Bank rural electrification projects in Africa, such as in Kenya, Tanzania, Zambia, and Ethiopia.

ATTACHMENT A1-2: REPORTING PROGRESS ON THE WBG CLEAN ENERGY INVESTMENT FRAMEWORK ACTION PLAN

TABLE A1-2.1: SUMMARY TABLE

Impact	Commitments	Progress Update (current and planned up to March 2008)
Total Energy Program <i>Energy for economic growth and poverty alleviation, in an environmentally and socially sustainable manner.</i>	Strategy, Knowledge and Policy Country-level policy and regulatory support to improve financing prospects and scale up investments. Project Investments and Lending Total energy lending/investments projected to increase from \$7 billion (FY03-05) to over \$10 billion (FY06-08). ¹⁵	Strategy, Knowledge and Policy Ongoing. Project Investments and Lending Already exceeding the forecast for overall energy lending of \$10 billion for FY06-08. WBG energy lending in FY06-07 = \$8.4 billion. Q1 plus Q2 lending for FY08 projected to be \$2.6 billion, leading to an estimated \$4 billion for the fiscal year and an estimated \$13 billion for FY06-08.
Increasing Energy Access in Sub-Saharan Africa <i>Improve electricity access region-wide to enterprises, newly populated trading areas and households with positive impact on economic growth and household welfare.</i>	Strategy, Knowledge and Policy Target of increasing electricity access to 130 million more people in SSA by 2015 (Activities reported in Table A2). Project Investments and Lending Lending/investments for energy in SSA by the WBG are projected to increase from \$1.4 billion (FY03-05) to more than \$2 billion (FY06-08). Meeting targets of increasing electricity access in SSA requires increased funding from about \$2 to \$4 billion/year.	Strategy, Knowledge and Policy Progress Update reported in Table A2. Project Investments and Lending On track to meet SSA WBG energy lending of over \$2 billion for FY06-08. World Bank lending in FY '06 and '07 was \$0.6 billion and \$1.1 billion respectively. FY08 Q1 and Q2 lending alone is \$0.6 billion. Continuing to experiencing a shortfall of donor funding to meet the \$4 billion/year investment needs to reach 47 percent of electricity access in SSA by 2030.
Lowering Carbon Emissions <i>Reduce carbon footprint through strong program of analytical work and scale-up of low-carbon investments; extend financing to buy down incremental costs via new methodologies and mechanisms for carbon financing.</i>	Strategy, Knowledge and Policy Activities reported in Tables A3-1, A3-2, and A3-3. Project Investments and Lending Lending/investments for low-carbon projects projected to increase from \$2 billion (FY03-05) to over \$4 billion (FY06-08).	Strategy, Knowledge and Policy Low-carbon Country Growth Case Studies in G8+5 and Indonesia underway. Two new carbon facilities designed (Forest Carbon Partnership Facility launched in Bali Dec 2007 and Carbon Partnership Facility to be completed by end of FY08.). New large scale financing approaches being designed. Project Investments and Lending Already exceeding low-carbon energy lending of \$4 billion for FY06-08 (WBG lending for FY06-first half FY08 almost \$4.4 billion; in FY06—\$1.7 billion; \$1.4 billion in FY07, \$1.2 billion in FY08 Q1 and Q2).
Adaptation <i>Scale up opportunities to implement screening tools, mainstreaming pilots, financing mechanisms, adaptation awareness, and results dissemination at the country and global levels.</i>	Strategy, Knowledge and Policy <ul style="list-style-type: none"> ▪ Activities reported in Attachment 2 Table A1-1. Project Investments and Lending GEF grant financing (\$50-60 million) expected to leverage about \$500 million in WBG investments (FY06-09).	Strategy, Knowledge and Policy First version of adaptation screening tool launched along with new regional initiatives. New studies on risk management completed. 2 National Adaptation Programs of Action (NAPA) initiated. Mainstreaming in CASs (32% in FY07 vs. 15% in FY00-05). Project Investments and Lending In FY07, \$133 million in GEF grant financing leveraged about \$1.03 billion in WBG, private sector, and government cofinancing. Caribbean Catastrophe Risk Insurance Facility initiative launched.

¹⁵ Total numbers include SSA and low-carbon projected estimates.

TABLE A1-2.2: INCREASING ENERGY ACCESS IN SUB- SAHARAN AFRICA

Goal: Increase Access to Electricity in Sub-Saharan Africa (SSA) from about 25% to 35% by 2015 and 47% by 2030 ¹⁶		
Results: At least 30 countries increase generation capacity by > 20% and utilities in 20 countries reduce losses by 10% or better		
<i>Impact</i>	<i>Commitments</i>	<i>Progress Update (current and planned up to March 2008)</i>
<p>Alignment and harmonization of donor support</p> <p><i>Preparation of sector-wide programs (SWAPs) as first step toward implementing the five-track program, to make more efficient use of donor funding.</i></p>	<p>Strategy, Knowledge, and Policy</p> <p>FY07/08: Country assessments and preliminary work on access cost estimates in two pilot countries (Senegal and Zambia).</p> <p>FY08: SWAPs and prospectuses prepared for two pilot countries: Senegal and Rwanda.</p> <p>Mix of donor, IDA, and ESMAP resources required to develop SWAPs and prepare sector prospectuses.</p>	<p>Strategy, Knowledge and Policy</p> <p>Preparation of access cost estimates under implementation in Senegal and Kenya in FY08.</p> <p>Delivery expected by the end of CY08.</p> <p>Donor support through ESMAP is expected to be approximately \$3 million in FY08.</p>
<p>Mainstream SSA Energy Access Plan</p> <p><i>Bank will accelerate lending for projects for improved household access and additional commercial and industrial consumer connections.</i></p> <p><i>Region-wide performance milestones: at least 30 countries increase generation capacity by 20% or more (FY07- FY11) and utilities in 20 countries reduce their losses (technical and non-technical) by 10% or better by FY11.</i></p>	<p>Strategy, Knowledge, and Policy</p> <p>Approx. \$0.5 million/year in ESW activities to support diagnostic and capacity building interventions to improve policy development update legal framework and strengthen public utilities.</p> <p>FY07/08: Disseminate sector wide approach (SWAP) principles and promote discussion and adoption of approach among SSA countries.</p> <p>FY 08/09: GIS based methodology for least-cost grid planning (being piloted in Kenya and Senegal) will be disseminated region-wide.</p> <p>Project Investments and Lending</p> <ul style="list-style-type: none"> ▪ FY07-FY10: IDA plans to prepare about 10 investment projects/year (between \$700 and \$800 million/year). 	<p>Strategy, Knowledge and Policy</p> <p>Actual disbursement for ESW activities in FY07 = \$683,000. Current FY08 commitments = \$733,000. These include (i) preparation of an Electric Utility Support Facility (EUSF) for Africa) for customized training and capacity building programs through peer-to-peer support (ii) creation of a living body of knowledge on design and implementation issues for African rural, peri-urban and urban electrification</p> <p>Examples of ongoing dissemination activities: Energy Planning/Costing Workshop (June 2007 at Earth Institute with participation of electricity system planners from Zambia, Tanzania, Rwanda and Uganda).</p> <p>Technical and financial feasibility pre-investment work to advance the preparation of large generation and transmission projects. Technical and Economic Assessment of electrification technologies issued.</p> <p>Bangladesh Rural Energy Report completed by ESMAP, 2008</p> <p>Challenge to rural electrification launched</p> <p>Project Investments and Lending</p> <p>IDA commitments for energy sector investments in SSA in FY07 = \$0.8 billion. An additional \$527 million for 8 projects was approved in Q1 and Q2 FY08. IDA support has been catalytic in leveraging additional finance. For example US\$116 million of IDA guarantees for the Bujagali project leverages additional financing of US\$750 million from IFC, bilaterals and private/commercial sources and complements AfDB</p>

¹⁶ Limited donor funding for electricity access in SSA continues to be a constraining factor. However strong IDA15 replenishment was indicates that increased funding will be available for Bank supported energy projects.

Goal: Increase Access to Electricity in Sub-Saharan Africa (SSA) from about 25% to 35% by 2015 and 47% by 2030¹⁶
Results: At least 30 countries increase generation capacity by > 20% and utilities in 20 countries reduce losses by 10% or better

<i>Impact</i>	<i>Commitments</i>	<i>Progress Update (current and planned up to March 2008)</i>
		investment of \$55 million for a transmission line to evacuate the power from the plant. IFC commitments for energy sector investments in SSA in FY07 were \$130 million and \$4 million in FY08 Q1 and Q2
<p>Increase Energy Services to Public Facilities (e.g., schools and medical clinics) <i>Program will focus on improving service delivery to health and education facilities to meet the goals of the MDGs.</i></p>	<p>Strategy, Knowledge, and Policy FY08: TTL Guidance note will be prepared. Project Investments and Lending FY08: Electrification of public facilities will begin to be mainstreamed into Bank SILs.</p>	<p>Strategy, Knowledge, and Policy (ii) a review in cooperation with UNICEF and others of planning processes for upgrading public facilities with electricity services Project Investments and Lending Work is underway to deliver on this.</p>
<p>Accelerate the take-up of modern lighting services in mainly rural households and enterprises <i>The provision of access to modern lighting is 250 million people by 2030. “Lighting Africa” program will accelerate the benefits associated with lighting (education, health, and productivity).</i></p>	<p>Strategy, Knowledge, and Policy FY07: Three-year “Lighting Africa” Program will be launched as a joint World Bank and IFC initiative, with ESMAP and other donor support. FY07: Lending components designed in potential two investment projects. FY07/08: IFC-support for private sector delivery of low-cost off-grid light products in Kenya and Ghana.</p>	<p>Strategy, Knowledge, and Policy Lighting Africa program jointly managed by the Bank and the IFC is under implementation (http://lightingafrica.org). Approximately \$2.5 million in grant support has been raised for a Development Marketplace (DM), with funding provided by GEF, PPIAF, REEEP, Government of the Netherlands, and Good Energies. The 400 concept proposals received have been evaluated and a short list of 54 invited to submit full proposals. The DM competition that will conclude in May '08 is expected to provide grant support to up to 20 organizations, including partnerships between the global lighting industry and local technology/service providers and distributors (energy and non-energy) in Sub-Saharan Africa. Market surveys have started in Kenya, Ghana, Zambia, Tanzania and Ethiopia. The knowledge and B2B platform has generated major interest among international suppliers of off-grid lighting products and African distributors. Solar lantern testing has commenced and ten lantern models are to be tested. A plan for standards development quality assurance for LED lighting is under development. CDM methodology for off grid lighting to be completed by March 2008 Work ongoing (3 year program).</p>
<p>Access to clean cooking and heating fuels <i>Develop sustainable woodfuel supplies, complemented by measures to improve the efficiency and safety of biomass use. Reduce indoor air pollution and its health impacts, especially on women</i></p>	<p>Strategy, Knowledge, and Policy FY07 and ongoing: The Bank will advise governments on fuel pricing to remove barriers to prudent LPG and kerosene use by households. FY08: Provide policy note for Bank staff and support for national and regional initiatives for sustainable land management, including forestry. FY08: Investigate potential for bio-energy in Ethiopia and Mozambique (AAA activity).</p>	<p>Strategy, Knowledge, and Policy Work ongoing. Work includes joint work of the African Refiners Association (ARA) and the World Bank (WB) on fuel specifications and health impacts in SSA. Miombo woodland management from Angola to Mozambique analysis forthcoming. Madagascar: Improved stoves analysis to address deforestation and use of alternative biomass for fuel on the one hand and environmental health on the other.</p>

Goal: Increase Access to Electricity in Sub-Saharan Africa (SSA) from about 25% to 35% by 2015 and 47% by 2030 ¹⁶
Results: At least 30 countries increase generation capacity by > 20% and utilities in 20 countries reduce losses by 10% or better

<i>Impact</i>	<i>Commitments</i>	<i>Progress Update (current and planned up to March 2008)</i>
<p><i>and children, who are disproportionately affected.</i></p> <p><i>Increase LPG and kerosene use by households with positive impacts on health and productivity.</i></p>	<p><i>Project Investments and Lending</i></p> <p>FY07: Eight projects under preparation with forestry components, five of which are proposed for GEF.</p> <p>FY08: Three projects in pipeline, two funded by IDA and one by carbon finance.</p>	<p>Tanzania: Charcoal management, production, marketing and consumption research</p> <p>Bio-energy assessments in Ethiopia and Mozambique initiated.</p> <p>Pilot to use biofuels implemented in Kenya (Using <i>Jatropha Curcas</i> (physic nut) as an energy crop).</p> <p><i>Project Investments and Lending</i></p> <p>Eight projects with forestry components were approved in FY07.</p> <p>Projects under preparation.</p>

**TABLE A1-2.3: TRANSITION TO A LOW-CARBON ECONOMY;
GOAL: SUPPORT COUNTRIES TO MOVE TO A LOW-CARBON ENERGY PATH**

Goal: Support Countries to Move to a Low-Carbon Energy Path		
Results: Improvements in Energy Efficiency, Reduce Local & Regional Pollution, and Reduced GHG Emissions		
Impact	Commitments	Progress Update (current and planned up to March 2008)
<p>Sustainable Infrastructure</p> <p><i>The WBG Sustainable Infrastructure Action Plan, a three year action plan, provides an implementation framework for the core infrastructure sectors—water, energy, transport, and ICT—in coordination with regional business plans and highlights the leveraging impact of infrastructure sectors support to the cross cutting themes of climate change and sustainability.</i></p>	<p>Strategy, Knowledge and Policy</p> <p>Management and Board presentation of updates 2x/year (including coordination with OPCS, TRE, Regions, Networks, IFC and MIGA)</p> <p>Results Monitoring, including developing and monitoring the measurement of leverage (in coordination with SDNLR)</p> <p>Roll out of improvements in WBG instruments and approaches (in close coordination with TRE, OPCS, IFC and MIGA)</p> <p>Continued facilitation and coordination in reducing the non-financial costs of doing business (in close coordination with Bank Regions and networks, OPCS, IFC, and MIGA)</p>	<p>Strategy, Knowledge and Policy</p> <p>WBG Sustainable Infrastructure Action Plan in preparation</p>
<p>Clean Energy Technology</p> <p><i>Develop innovation vehicles aimed at accelerating new clean energy technologies which combat climate change while supporting developing countries to meet their energy needs.</i></p>	<p>Strategy, Knowledge and Policy</p> <p>Phase I report: The paper examines four case studies that provide lessons that can strengthen the development of new technology initiatives, which will address the needed balance between climate mitigation and the growing energy demands of the developing world.</p> <p>Phase II: Develop draft concepts for clean energy technology innovation vehicles and analyze possible WBG role.</p>	<p>Strategy, Knowledge and Policy</p> <p>Clean Energy Technology Phase 1 Flagship Report issued November 2007.</p> <p>Phase II: Draft prospectus for Clean Energy Technology innovation vehicles available March 2008</p>
<p>Energy Efficiency (EE)</p> <p><i>WBG committed in 2004 at Bonn to increase its lending for new renewable energy and energy efficiency by 20%/ year, reducing the need for additional power generation and thus reducing the financing gap.</i></p>	<p>Strategy, Knowledge, and Policy</p> <p>FY08: Finalize Energy Efficiency (EE) Action Plan.</p> <p>FY08 A regional report on energy efficiency prospects for MNA.</p> <p>FY09: Continue working with IEA to (a) prepare an “Energy Efficiency Indicator” program— report due by end 2008; and (b) identify specific sectoral and equipment opportunities for EE.</p> <p>Project Investments and Lending</p> <p>FY07 and ongoing: EE programs—e.g. Africa lighting program.</p>	<p>Strategy, Knowledge and Policy</p> <p>Energy Efficiency (EE) Action Plan finalized and delivered. Implementation of the key recommendation of the Action Plan, that is, strengthening the EE team in the Bank is under progress. Hiring process for four new dedicated, senior EE specialists in regions and ESMAP/Anchor completed. They are expected to be on board by March 2008. Recruitment of two EE secondments under progress, expected to be on board by end of 2008. EE Thematic Group monthly meetings being held on innovative topics for scaling up EE.</p> <p>Work on MENA regional EE strategy under progress</p> <p>Work on “Energy Efficiency Indicator” program has started in Mexico, China, Brazil and South Africa, in collaboration with IEA and IADB (work in India under development).</p> <p>Joint Govt. of Japan-World Bank "Energy Efficiency" Roundtable (July 19, Tokyo) delivered.</p>

Goal: Support Countries to Move to a Low-Carbon Energy Path		
Results: Improvements in Energy Efficiency, Reduce Local & Regional Pollution, and Reduced GHG Emissions		
Impact	Commitments	Progress Update (current and planned up to March 2008)
		<p>KM on EE institutional best practices completed (ESMAP publication expected by March 2008)</p> <p>Work (through ESMAP) on EE Toolkits for Motors and Lighting projects to be launched by March 2008.</p> <p>Project Investments and Lending In FY07 we have reached the Bonn Commitment with \$262 million WBG lending for EE, followed by \$222 million in FY08 Q1 and Q2. Highlights of EE projects approved in FY08 Q1 and Q2:</p> <ul style="list-style-type: none"> - Ukraine: Power Transmission Project (IBRD) - Ghana: Energy Development and Access SIL (IDA) - Burkina Faso: Energy Access SIL (IDA) - Vietnam Hanoi Urban Transport Project (GEF) - Nigeria National Energy Development Project (Carbon Finance) - China: Energy Efficiency Financing (IBRD/GEF)—planned FY08 approval - India GEF Programmatic Fund for EE project—planned FY09 approval—Pakistan EE TA (component of Electricity Distribution and Transmission Improvement Loan project)—planned FY08 approval - Turkey RE+EE Loan (under preparation)—planned FY09 approval
<p>Renewable Energy (RE)</p> <p><i>Bank committed in 2004 at Bonn to increase its lending for new renewable energy and energy efficiency by 20%/ year, displacing fossil fuel production and reducing GHG emissions.</i></p> <p><i>Activities require removal of policy and market distortions, increased capacity in planning and implementation, increased access to technology, and access to long-term financing.</i></p>	<p>Strategy, Knowledge, and Policy FY07 and ongoing: ESMAP support to strategic planning, policy support, and pre-investment studies. FY 07/08: Carbon Finance for Bagasse Cogeneration in Brazil. FY07-08: Energy Anchor in collaboration with ESMAP to update toolkit to support operational implementation of renewable energy projects in the Regions. FY08-09: IFC Sri Lanka Distributed Generation Project will include new contracting/financing models for small scale power generation.</p> <p>Project Investments and Lending Lending/investments for RE increases from \$1 billion (FY03-05) to nearly \$2 billion (FY06-08).</p>	<p>Strategy, Knowledge and Policy Work ongoing; 20 renewable energy projects in progress being financed by ESMAP. Awaiting the signing of letter of intention. Updated RE Toolkit scheduled to be complete in FY08. Work ongoing.</p> <p>Project Investments and Lending In FY07 we have reached the Bonn Commitment with \$420 million WBG lending for New RE, followed by \$291 million in FY08 Q1 and Q2. Highlights of RE projects approved in FY08 Q1 and Q2:</p> <ul style="list-style-type: none"> - Kenya: Olkaria II Geothermal Expansion Project (MIGA) - Egypt: Kureimat Solar Thermal Hybrid (GEF) - Tanzania: Energizing Rural Transformation Project (GEF) - Indonesia: Lahendong Geothermal Project (Carbon Finance) - Uganda: Ishasha (IFC) - Poland: Walbrzyck Coke Oven Gas CHP (Carbon Finance)

Goal: Support Countries to Move to a Low-Carbon Energy Path		
Results: Improvements in Energy Efficiency, Reduce Local & Regional Pollution, and Reduced GHG Emissions		
<i>Impact</i>	<i>Commitments</i>	<i>Progress Update (current and planned up to March 2008)</i>
		<ul style="list-style-type: none"> - Ghana: Rural Energy Access Project (GEF) - Ethiopia: Electricity Access Rural II SIL (IDA) - India: Himachal Pradesh Development Policy Loan (IBRD)
Decreasing carbon emissions from thermal power plants	<p>Strategy, Knowledge, and Policy</p> <p>Continued TA & dissemination of knowledge and research to increase efficiency of existing power plants (i.e. rehabilitation) and facilitate move to commercially available high efficiency power plants.</p>	<p>Strategy, Knowledge and Policy</p> <p>Highlights of TA approved in FY07-08:</p> <ul style="list-style-type: none"> - Kosovo Lignite Power TA project (IBRD/IDA) - Project preparation for super-critical in Botswana, the first super-critical plan in SSA - Support for project preparation for IGCC in China - Support for project preparation of coal plant rehabilitation in China and India. - Yemen: Gas Incentive Framework Study (IBRD/IDA) - Analytical work and support for potential implementation of CCS
Global Gas Flaring Reduction (GGFR) Program	<p>Project Investments and Lending</p> <p>Mobilizing private capital investments of \$1.9 billion in gas flaring reduction projects that offset some 22 MtCO₂ emissions by 2012 (Indonesia, Russia, Nigeria, and Ecuador).</p> <p>Capex for gas flaring projects by March 2008 reached \$2.21 billion (including previous Kwale Agip project in Nigeria).</p>	<p>Project Investments and Lending</p> <p>On track to mobilize private capital investment; Projects under preparation:</p> <p><u>Ongoing:</u></p> <ul style="list-style-type: none"> - Nigeria: Afam Integrated Gas and Power, approx. 3,750,000 tCO₂e < 2012—Pending approval - Ecuador: Sacha Associated Gas to LPG project, approx. 500,000 tCO₂e < 2012—going forward but not with carbon finance - Russia: Danilovsk Gas Flaring Reduction (Carbon Finance); 620,000 tCO₂e—under validation - Russia: Rosneft Associated Gas Recovery (Carbon Finance); 3,360,000 tCO₂e.- under validation - Uzbekistan: Uzbekneftegaz Associated Gas Recovery (Carbon Finance); 474,000 tCO₂e—in preparation <p><u>New project ideas formulated</u></p> <ul style="list-style-type: none"> - Ecuador: Secoya Gas Plant, approx. 85,000 tCO₂e < 2012 - Ecuador: Cuyabeno Flare Gas Recovery, approx. 212,000 tCO₂e < 2012 - Ecuador> Shushufindi Fuel Switch, approx. 40,000 tCO₂e < 2012
Accelerating Hydropower Projects	<p>Strategy, Knowledge, and Policy</p> <p>Develop strategic framework for the World Bank to re-engage in hydropower is to help maximize the value of hydro investments in economic development and poverty alleviation in an environmentally and socially sustainable manner.</p> <p>The priority regions for Bank investment in the next 3-5 years will be South Asia and Africa. Long term, sustained lending is expected to be in the order of \$1 billion per year.</p>	<p>Strategy, Knowledge and Policy</p> <p>Hydropower business plan presented for review. To be finalized end March 2008 .</p> <p>TA and ESW ongoing</p>

Goal: Support Countries to Move to a Low-Carbon Energy Path		
Results: Improvements in Energy Efficiency, Reduce Local & Regional Pollution, and Reduced GHG Emissions		
<i>Impact</i>	<i>Commitments</i>	<i>Progress Update (current and planned up to March 2008)</i>
	<p>Hydropower development strategy to include rehabilitation of existing plants, small and run-of-river plants and multipurpose hydropower plants with reservoirs.</p> <p>Supporting feasibility studies for technically, economically, and environmentally satisfactory projects (e.g. small hydro in China and Vietnam).</p> <p>Project Investments and Lending</p> <p>New run-of-the-river (RoR) hydropower, new dam hydropower, and rehabilitation of hydropower projects.</p>	<p>Project Investments and Lending</p> <p>9 hydropower projects were approved in FY07 with \$751 million in new WBG lending, of which \$115 million in loan guarantees, and \$66 million in carbon finance. 6 hydropower projects were approved in FY08 Q1 and Q2 with \$659 million in WBG lending.</p> <p>Highlights of Hydropower projects approved in FY08 Q1 and Q2:</p> <ul style="list-style-type: none"> - Africa: Niger Basin Water Resources Project (IDA) - India: Rampur Hydropower Project (IBRD) - Georgia: Small Hydro Rehabilitation Project (Carbon Finance) - Philippines: Magat Hydro (IFC) - Chile: La Confluencia (IFC)
Reducing carbon emissions in transport projects	<p>Strategy, Knowledge, and Policy</p> <p>FY07: Trade policies for liquid biofuels.</p> <p>FY07: Bio-diesel in Brazil.</p> <p>FY07: Bangladesh Inland Water Transport.</p> <p>FY08: Technical report on methodologies and data to assist with policy making and project design.</p> <p>FY08: Policy paper on replicable best practices.</p> <p>Project Investments and Lending</p> <p>FY08 pipeline of projects:</p> <ul style="list-style-type: none"> - India Sustainable Urban Transport - China Urban Transport - LAC Regional Transport 	<p>Strategy, Knowledge and Policy</p> <p>Bio-diesel in Brazil Report delivered in Q1 FY08.</p> <p>Bangladesh Inland Water Transport report delivered.</p> <p>Carbon finance and Urban Transport in India report underway.</p> <p>China Emission Intensities of Large Scale Road and Rail Projects, to be finalized February 2008.</p> <p>Project Investments and Lending</p> <p>Projects on track to be approved in FY08.</p> <p>Projects under preparation:</p> <ul style="list-style-type: none"> - Bangladesh Clean Air and Sustainable Energy Project (IBRD/IDA) - Philippines: Manila Transport Projects (Carbon Finance) - Vietnam: Northern Delta Transport Development Project (IBRD/IDA) - India: Sustainable Urban Transport (GEF); 8 pilot cities selected

**TABLE A1-2.4: TRANSITION TO A LOW-CARBON ECONOMY;
GOAL: PREPARE LOW-CARBON COUNTRY CASE STUDIES IN G8+5 COUNTRIES**

<p>Goal: Prepare Low-Carbon Country Case Studies in G8+5 countries that identify a development path that respects poverty alleviation and economic growth targets with lower carbon emissions</p> <p>Results: Intermediate results for India low-carbon study expected by October 2007; Mexico and China studies started in Q4 FY07; Brazil and South Africa are in the early phases of discussion</p>		
<i>Impact</i>	<i>Target Commitments</i>	<i>Progress Update (current and planned up to March 2008)</i>
<p>India</p> <p><i>Maintain India's relatively low-carbon intensity in context of high economic growth.</i></p>	<p>Strategy, Knowledge, and Policy FY08: India Low Carbon Growth Strategy. FY08: Identify opportunities for large hydropower generation in NE India. FY08: Assess opportunities to improve investments in renewable energy.</p> <p>Project Investments and Lending Possible clean energy lending program of up to \$4 billion for FY07–FY09. Projected programmatic lending to states (\$1–2 billion over 2008–13 period).</p>	<p>Strategy, Knowledge and Policy India ESW program on going.</p> <ul style="list-style-type: none"> - Power Sector report issued Oct 2007, second report to be completed for April 2008 - Status of the Indian Carbon market report issued Oct 2007 - GHG emissions from hydropower reservoirs report issued Oct 2007 - Indian Clean Coal Technology Review issued Oct 2007 - Household energy use analysis underway, to be completed April 2008 - Agriculture sector research contracted with IFPRI - Transport sector research contracted - Industry and non-residential buildings research contracted <p>Project Investments and Lending Projects to be approved in FY08: 16 projects under preparation (\$241 million); LOIs signed for 13. Highlights:</p> <ul style="list-style-type: none"> - Rampur Hydropower Project (IBRD/IDA) - Coal–Fired Power Rehabilitation project (IBRD/IDA) <p>Carbon Finance: Total projects under supervision 3 (\$9.56 million).</p>
<p>China</p> <p><i>China's economic growth, coupled with relatively high dependence on coal for power supply will make it the world's largest emitter of GHGs before 2010. Study will focus on ways to mitigate this trend.</i></p>	<p>Strategy, Knowledge, and Policy FY08-09: ESW—China Low Carbon Development Policy Notes FY08 China Coal Sector Strategy. FY08 -09: AAA Reform of district heating sector. FY08: AAA Economic dispatch of power plants— FY08: National- and provincial-level guidelines and regulations for coal mine methane collection and utilization.</p> <p>Project Investments and Lending FY08-09: \$500 million (IBRD). FY08-09: \$34 million (GEF or GEF/IBRD grants/lending). FY08-09: Avg. 4 projects/year (Carbon Finance).</p>	<p>Strategy, Knowledge and Policy China Low Carbon studies will be a multi-year activity—with key deliverables in FY09.</p> <ul style="list-style-type: none"> ▪ All ESWs on track. <p>Project Investments and Lending Projects to be considered by the board in FY08:</p> <ul style="list-style-type: none"> - China Energy Efficiency Financing (IBRD/GEF) - Thermal Power Efficiency Project (GEF) - China Liaoning District Heating Project IBRD - Huizhou Combined Cycle Gas Development Project (Carbon Finance) - China Xinjiang Aksu Pig Farm Biogas Project(Carbon Finance) - Shanghai Laogang Landfill Carbon Finance (Carbon Finance)

Goal: Prepare Low-Carbon Country Case Studies in G8+5 countries that identify a development path that respects poverty alleviation and economic growth targets with lower carbon emissions

Results: Intermediate results for India low-carbon study expected by October 2007; Mexico and China studies started in Q4 FY07; Brazil and South Africa are in the early phases of discussion

<i>Impact</i>	<i>Target Commitments</i>	<i>Progress Update (current and planned up to March 2008)</i>
Brazil	Strategy, Knowledge, and Policy FY07 and ongoing: Activities include energy efficiency, cogeneration, renewable energy, biodiesel, ethanol expansion, rehabilitating hydropower plants, avoiding deforestation, mitigating emissions from cattle and landfill, to be included within the Low-Carbon Country Case Study. FY07/08: Work in Amazon focuses on reducing pressures on standing forests, sustainable management of forests, and avoided deforestation.	Strategy, Knowledge and Policy President of Brazil has requested the preparation of a national climate change strategy, of which a first draft should be prepared by end of April 2008. Brazil ESW program on going. - Low Carbon Country Case Study under implementation. - 7 tasks have been identified to support the preparation of the national climate change strategy - Biodiesel in Brazil report to be delivered in FY08 Q3 - Energy Efficiency Report to be delivered in FY08 Q3 - Power Sector report issued Oct 2007, second report to be completed for April 2008 - Energy Security report to be delivered in FY08 Q4 Grant-financed TA activities to enhance the participation of public sector entities and financial intermediaries in the carbon markets and set up a CER spot and future market exchange within BM&F (Q3 FY8) MoU on refurbishment of potential 3,000MW Hydro dams to be signed.
	Project Investments and Lending FY07-09: IBRD program to be discussed with GoB.	Project Investments and Lending Preparation of loan for a national solid waste program with a carbon finance blended component Carbon Finance: Total projects under supervision 3. Including: - Nova Gerar SWM umbrella II (3-4 subprojects, Umbrella) - Caixa national SWM program and carbon finance (4 pilots, Program of Activities)
Mexico	Strategy, Knowledge, and Policy FY07/08: Low-Carbon Country Case Study. . Project Investments and Lending ▪ FY08: Rural Energy Services Project (GEF/IBRD—renewable energy).	Strategy, Knowledge and Policy Low Carbon Country Case under preparation. On track for delivery in Q2 FY09, with preliminary outputs in Q4 FY08. Project Investments and Lending FY08: Sustainable Transport (GEF) FY08: ENV DPL III focusing on climate change mitigation and adaptation
South Africa	Strategy, Knowledge, and Policy ESW (FY08) South Africa Low-Carbon Country Case Study. Project Investments and Lending Potential GEF and carbon projects.	Strategy, Knowledge and Policy ▪ Low Carbon Country Case under implementation. Project Investments and Lending Project approved in FY07: South Africa Renewable Energy Market Transformation Project (GEF).

Bioenergy and forestry programs may be important component of the potential to reduce global carbon concentrations.

Significant potential for energy efficiency as well as large wind and solar resources can contribute to Mexico's development and lower global GHG emissions.

Significant potential for reducing the growth of GHG emissions, in light of the power expansion plan and heavy reliance on coal.

Goal: Prepare Low-Carbon Country Case Studies in G8+5 countries that identify a development path that respects poverty alleviation and economic growth targets with lower carbon emissions

Results: Intermediate results for India low-carbon study expected by October 2007; Mexico and China studies started in Q4 FY07; Brazil and South Africa are in the early phases of discussion

<i>Impact</i>	<i>Target Commitments</i>	<i>Progress Update (current and planned up to March 2008)</i>
<p>Indonesia</p> <p><i>Provide options (analyze opportunities) for further lowering the carbon intensity of Indonesia's development path while maintaining acceptable levels of macro and sectoral growth.</i></p>	<p><i>Strategy, Knowledge, and Policy</i></p> <p>Phase 1: In Progress</p> <p>PCN for Initial analysis and baseline work approved October 2, 2007</p> <p>Plan to provide policy analysis overview and technical analysis inputs as part of learning, planning and engagement process with GOI on the road to Bali and beyond.</p> <p>Plan to provide concept for review to agree on scope and outputs for Phase II work.</p> <p>Phase II: Not Yet Started</p> <p>Plan to provide analysis of options as an input to GOI-led deliberations about a longer term strategy for low carbon growth.</p> <p>Planned for delivery in CY 2008</p>	<p><i>Strategy, Knowledge and Policy</i></p> <p>Phase 1: In Progress</p> <p>Initial analysis and baseline work approved October 2, 2007</p> <p>Output 1a: Survey of Fiscal and Financial Policy Instruments to Consider to Mitigate and Adapt to Climate Change in Indonesia (delivered as part of Min Finance High Level Event at Bali COP 13 in Dec '07).</p> <p>Output 1b: Technical Baseline Study of GHG Emissions, Sources and Trends. Draft in progress for review in Feb '08.</p> <p>Phase II: Not Yet Started</p> <p>Requires re-engagement with GOI after Bali and senior review within WB</p> <p>Planning for analysis of options and economic implications of alternate low carbon paths.</p> <p>Planning to include dissemination and constituency building for alternative energy development paths</p>

**TABLE A1-2.5: TRANSITION TO A LOW-CARBON ECONOMY;
GOAL: DEVELOP NEW METHODOLOGIES AND MECHANISMS**

Goal: Develop New Methodologies and Mechanisms for Carbon Financing and Innovative Mechanisms to Blend Existing Financing		
Impact	Target Commitments	Progress Update (current and planned up to March 2008)
<i>Facilitate programmatic and sectoral investments through the carbon market and demonstrate that carbon credits from deforestation are verifiable.</i>	<p>Strategy, Knowledge and Policy</p> <p>FY08: Board paper to propose development of two new carbon facilities focusing on a post-2012 market.</p> <p>FY07/08: Develop methodology for avoided deforestation; new initiatives to develop capacity, pilot policy reforms and invest to reduce emissions from deforestation and forest degradation.</p>	<p>Strategy, Knowledge and Policy</p> <p>The Forest Carbon Partnership Facility (FCPF) was launched during the 13th UNFCCC conference in Bali in December 2007. The FCPF aims to build the capacity of developing countries to reduce emissions from deforestation and degradation (REDD) and will pilot carbon transactions for REDD. US\$165 million in contributions to the FCPF have been announced to date. The Carbon Partnership Facility (CPF) is under advanced preparation and planned to be completed by end of FY08. The CPF aims at scaling up the impact of carbon finance on climate change mitigation in the longer term and post-2012. .</p> <p>Highlights of projects approved in FY07:</p> <ul style="list-style-type: none"> ○ Colombia: San Nicolas Carbon Sequestration Project (Carbon Finance) ○ Colombia: Caribbean Savannah Carbon Sink Project (Carbon Finance) ○ MIGA supported its first carbon finance project; landfill gas project in El Salvador
<i>Green investment schemes will expand the opportunities to cost-effectively reduce GHG emissions.</i>	<p>FY07/08: Develop methodology for Green Investment Schemes.</p> <p>FY08-09: Latvia and Ukraine Green Investment Schemes expected to become operational through pilot transactions initiated by governments in Central and Eastern Europe, including Latvia and Ukraine.</p>	<p>Green Investment Scheme (GIS) Options Studies, completed for Latvia and Ukraine, and follow up TA and PHRD grants to support implementation of GIS ongoing in both countries. Work on an Options Study for Russia will commence in January 2008 funded through a PHRD grant. This latter study is expected to be drafted by end CY08 and final by mid CY09</p> <p>Highlights of GIS projects approved in FY07:</p> <ul style="list-style-type: none"> ○ Ukraine: Green Investments Scheme Options Study ○ Latvia: Green Investment Scheme Options Study ○ Bulgaria: Green Investments Funding Framework Development <p>GIS Projects under implementation in FY08:</p> <ul style="list-style-type: none"> ○ Latvia—Reimbursable TA to support the Government of Latvia with GIS Implementation—under implementation ○ Romania: Design Options for GIS for emission reduction—to be delivered end FY08 ○ Croatia: proposed analysis of measures to curb GHG emissions
<i>Demonstrate that energy efficiency projects can qualify for carbon financing.</i>	<p>FY07/08: Issues paper to develop methodology for energy efficiency.</p>	<p>Strategic work completed (joint ESMAP-CF) on Synergies between demand side EE and Programmatic CDM. Report released in COP-Bali in Dec 2007.</p> <p>Global Carbon Finance-Energy Efficiency Network (led by WB, with participation from IEA, UNDP, UNEP, UNFCCC, REEEP, etc.) launched in November 2007, to promote scaling up of EE investments through carbon market incentives. Work program being finalized.</p>

Goal: Develop New Methodologies and Mechanisms for Carbon Financing and Innovative Mechanisms to Blend Existing Financing		
<i>Impact</i>	<i>Target Commitments</i>	<i>Progress Update (current and planned up to March 2008)</i>
<i>Provide product(s) to improve access to (secondary) markets and maximize pricing for sellers of credit credits in developing countries</i>	IFC Carbon Delivery Guarantee—10-12 million credits in 12-15 projects by end of FY10	4 projects approved by Board, 2 committed
<i>Reduce costs of carbon offsets through auction mechanisms</i>	FY07: Develop auction platform and related legal documentation— first auction conducted by end of FY07.	Development of the platform completed. Project in India underway.
<i>Efficient and innovative uses of existing financing mechanisms</i>	FY08: Design of country-specific clean energy financing programs that combine IBRD, IFC, MIGA, GEF, and carbon financing. FY07/08: Design innovative approaches to support clean energy investments via blending of existing financial instruments.	Ongoing in projects in G+5 countries
<i>Design new and innovative mechanisms that can provide the scale of investments needed to transition to a low-carbon economy</i>	FY08: Further evaluation and design of clean energy financing mechanisms in consultation with governments, GEF, and the private sector.	The WBG, in collaboration with the regional development banks, is consulting with donors on the establishment of a new fund to finance transformation to low carbon economies and cost-effective mitigation of greenhouse gas emissions. Key design elements of the new fund include: (i) concessional finance at scale, blended with MDB lending and other financing, to provide incentives for deployment of low carbon technologies; (ii) a range of financial services to leverage greater private sector investments; and (iii) financial instruments integrated into existing aid architecture for development finance and policy dialogue.

TABLE A1-2.6: ADAPTATION TO CLIMATE VARIABILITY AND CHANGE

Goal: Pilot Instruments on a Country-by-Country Basis to Scale Up Adaptation Activities		
Results: Set the Stage for Mainstreaming Adaptation into the Development Process		
<i>Impact</i>	<i>Target Commitments</i>	<i>Progress Update (current and planned up to March 2008)</i>
Climate Risk Assessment	Strategy, Knowledge, and Policy	Strategy, Knowledge, and Policy
<i>Analytical studies, a climate risk screening tool and a database will deliver robust and easy-to-use methodologies and tools for assessing climate risks and suggesting adaptation options in development projects and programs in different Regions.</i>	<p>Approximately 25 TA or sector analytical work are planned or underway.</p> <p>FY07-09: Complete the prototype screening tool for:</p> <ul style="list-style-type: none"> - Agriculture-irrigation sectors for South Asia and Africa and biodiversity-NRM sector plus some aspects of infrastructure (i.e. coastal planning and rural roads) globally (FY08) - All sectors for Africa (FY08) - All sectors for all regions (FY09); about \$5 million/year grant funding for screening to be integrated in upstream analytical work such as CEAs <p>FY07: Develop a systematic web/CD database for Africa including:</p> <ul style="list-style-type: none"> - development of relevant experience on adaptation to climate risks - core climate data and associated risks FY08: complete web/CD database for all regions. 	<p>Approximately 45 TA or sector analytical studies are planned or underway.</p> <p>Highlights of analytical work underway:</p> <ul style="list-style-type: none"> - Ethiopia: Weather Risk Management - India: Adaptation Strategies and Options to Address Climate Variability and Change in Rural India - Morocco: Adaptation to Climate Change in Agriculture - Morocco: Climate Change Impacts on City Development - Yemen: Adaptation to Climate Change (GEF) - Nepal: Adaptation to Climate Variability and Change - A series of studies has been initiated on the macro-economic implications of climate change (poverty, trade, etc.) - A series of working papers is underway on the social dimensions of climate change - IFC pilot studies in SSA, South Asia and China <p>Screening Tool—First release covering agriculture-irrigation sectors for South Asia and Africa and biodiversity-NRM sector plus some aspects of infrastructure (i.e. coastal planning and rural roads) globally. Agriculture/irrigation and NRM components completed for South Asia and Africa.</p> <p>Climate data portal for Africa under development.</p> <p>Initiated development of systematic database.</p>
	Project Investments and Lending	Project Investments and Lending
		<p>Highlights of projects under preparation:</p> <ul style="list-style-type: none"> - Regional (Bolivia, Ecuador and Peru): Adaptation to the Impact of Rapid Glacier Retreat in the Tropical Andes (GEF) - Mexico: Adaptation to Climate Change in the Coastal Wetlands in the Gulf of Mexico (GEF)

Goal: Pilot Instruments on a Country-by-Country Basis to Scale Up Adaptation Activities		
Results: Set the Stage for Mainstreaming Adaptation into the Development Process		
<i>Impact</i>	<i>Target Commitments</i>	<i>Progress Update (current and planned up to March 2008)</i>
<p>Good Practice Guidance and Capacity</p> <p><i>Guidance will be focused on selected countries and few priority sectors: i.e., water and agriculture, major infrastructure, and large coastal cities with a goal to identify specific achievable prioritized actions and opportunities</i></p>	<p>Strategy, Knowledge, and Policy</p> <ul style="list-style-type: none"> ▪ FY07/08: Three cross-sectoral country-wide risk assessments on climate variability/ change; FY08: Six cross sectoral assessments. ▪ FY08: Incorporate adaptation in 5 Global Facility for Disaster Reduction and Recovery (GFDRR) Country Assessments; FY09: 10 adaptation assessments. ▪ FY08: Good practice guidance in assessing and adapting to climate risk: (i) water-agriculture-rural infrastructure; (ii) low-lying coastal cities; (iii) integration of adaptation into disaster reduction programs; and, (iv) large infrastructure including insurance models. 	<p>- Guyana: Adaptation to Climate Change (GEF)</p> <p>Strategy, Knowledge, and Policy</p> <ul style="list-style-type: none"> ▪ Cross-sectoral studies initiated include: <ul style="list-style-type: none"> - Agriculture-NRM cross-sectoral study - Water sector study including all water sub-sectors - Coastal cities cross-sector study - Cross-sectoral social dimensions of climate change studies. • Common template for Disaster Risk Reduction and Climate Risk Assessments under preparation and will be applied to five country case studies: Mozambique, Malawi, Nepal, Nicaragua and Vietnam. • Preparation of guidance in mainstreaming adaptation in different sectors underway. Two have been completed, and six additional notes to be completed in FY08.
<p>Financing Climate Risk Assessment and Adaptation</p> <p><i>Approximately 40 projects (loans and grants) in 30 countries are under way or planned</i></p>	<p>Strategy, Knowledge, and Policy</p> <ul style="list-style-type: none"> ▪ FY08: Economics of Climate Change analysis in LAC. ▪ FY08: Joint IFC-IMF report to assess financial implications of climate proofing development. ▪ FY08: Assess options for increasing the flow and reliability of funds for adaptation. <p>Project Investments and Lending</p> <ul style="list-style-type: none"> ▪ FY07/08: Pilot projects to mainstream adaptation into Bank operations in Kenya, Tanzania, Burkina Faso; FY08: Additional three pilots in other regions. 	<p>Strategy, Knowledge, and Policy</p> <ul style="list-style-type: none"> ▪ This study has broadened to a global scale and is underway.. ▪ IMF assessments in India and Ethiopia under way; IFC consultancy in preparation; multi-donor workshop on economic analysis for adaptation held; cooperation with UNFCCC Secretariat on Financing Climate Change to be delivered in December '07. ▪ Major contributions to IDA replenishment paper and Climate Investment Facility discussions. <p>Project Investments and Lending</p> <ul style="list-style-type: none"> ▪ Pilot Projects mainstreaming adaptation under preparation in different Regions include: <ul style="list-style-type: none"> - LAC: Over 15 projects for coastal management, glacier retreat, water management, agriculture adaptation - MNA: Agrobiodiversity and adaptation (Yemen GEF) - AFR: Sustainable land management (Burkina Faso), Drought management (Kenya), Flood management (Mozambique) - ECA: Hydromet and early warning systems - EAP: Impact of climate change on large-scale irrigation in China; Small island risk management in the Pacific; Papua New Guinea CAS in preparation and to include adaptation section - SAR: Drought management and Natural Risk Management (Andra Pradesh). <ul style="list-style-type: none"> ▪ Highlights of adaptation projects in FY07: <ul style="list-style-type: none"> - Morocco: Water Sector DPL (including reforms aimed at promoting water savings at the water basin level) - Jordan: Integrated Ecosystem Management in the Jordan Rift Valley Project (GEF).

Goal: Pilot Instruments on a Country-by-Country Basis to Scale Up Adaptation Activities		
Results: Set the Stage for Mainstreaming Adaptation into the Development Process		
<i>Impact</i>	<i>Target Commitments</i>	<i>Progress Update (current and planned up to March 2008)</i>
	<ul style="list-style-type: none"> ▪ Grant funding (including GEF) for adaptation projects expected to increase from \$5million (FY06/07) to \$60million (FY08/09) Expected to leverage: <ul style="list-style-type: none"> - \$500 million in additional IBRD, IDA, and other funding - \$50 million/ year investments in related capacity development and institutional reform (FY09-12) - 10% to 20% increase in lending for irrigation, sustainable land management, flood control, coastal infrastructure (FY10). 	<ul style="list-style-type: none"> ▪ GEF funding has slowed due to lack of SCCF and SPA resources ▪ This amount will be exceeded with establishment of the CIF and with the increased IDA replenishment
<p>Adaptation Awareness, Capacity and Results Dissemination <i>Identify and deliver capacity and information needs directly into projects and facilitate the maintenance of capacity within countries</i></p>	<p>Strategy, Knowledge, and Policy</p> <ul style="list-style-type: none"> ▪ FY08: Customized awareness raising, capacity assessment and building tools in each Region. ▪ FY08: Report on methods for delivery of focused capacity building at project and program level. ▪ FY07-08: Develop information and trainer networks to maintain capacity. Example of African network with at least two core support institutions in Africa. 4 countries with active capacity maintenance programs. 	<p>Strategy, Knowledge, and Policy</p> <ul style="list-style-type: none"> ▪ Knowledge and capacity needs on climate change have been identified and a cross Bank training program in climate change will be delivered for the first time in February 2008. ▪ On track to be delivered. ▪ Workshops with African and LDC delegates held in Nairobi (Nov 06), Bonn (May 07) & Bali (Dec 07) on building of regional networks to share experience. ▪ East Asia Environment Monitor 2007, Adapting to Climate Change, a report on trends and projections of the expected impacts of climate change for all the countries of EAP, was approved and published in June 2007.

ANNEX 2. CLIMATE CHANGE AND REGIONS: RISKS, IMPACTS AND EMISSIONS

Who is worst impacted? The impact of climate change spans multiple sectors and development issues, and IDA countries are at significant risk. IDA and IBRD-IDA blend countries are the most vulnerable to risks associated with (a) extreme weather events such as floods, droughts, and storms; (b) rising sea levels and related coastal issues; and (c) changes in agricultural production (Table A2.1).¹⁷ The distribution of some of the major climate-related risks around the world is similarly skewed (Figure A2.1). Sub-Saharan African countries dominate the list of the most drought-affected and consequently also suffer the largest negative impacts on agricultural productivity. South and Southeast Asia are disproportionately flood-affected. Storms have their greatest effects in the hurricane belt of the Pacific and Indian Oceans, but winter storms in land-locked countries are also important.

Table A2.1: Countries most at risk from climate-related threats

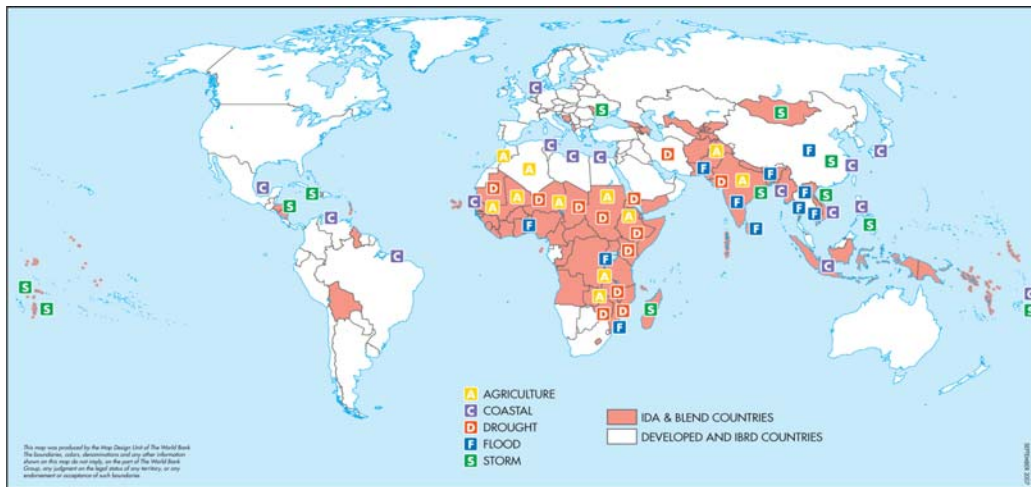
<i>Drought</i>	<i>Flood</i>	<i>Storm</i>	<i>Coastal 1m^a</i>	<i>Coastal 5m^a</i>	<i>Agriculture</i>
Malawi	Bangladesh	Philippines	All low-lying Island States	All low-lying Island States	Sudan
Ethiopia	China	Bangladesh	Viet Nam	Netherlands	Senegal
Zimbabwe	India	Madagascar	Egypt	Japan	Zimbabwe
India	Cambodia	Viet Nam	Tunisia	Bangladesh	Mali
Mozambique	Mozambique	Moldova ^b	Indonesia	Philippines	Zambia
Niger	Laos	Mongolia ^b	Mauritania	Egypt	Morocco
Mauritania	Pakistan	Haiti	China	Brazil	Niger
Eritrea	Sri Lanka	Samoa	Mexico	Venezuela	India
Sudan	Thailand	Tonga	Myanmar	Senegal	Malawi
Chad	Viet Nam	China	Bangladesh	Fiji	Algeria
Kenya	Benin	Honduras	Senegal	Viet Nam	Ethiopia
Iran	Rwanda	Fiji	Libya	Denmark	Pakistan

Note: Light Grey= IDA and blend countries. Dark grey = IBRD. Bolded = developed countries. The typology is based on both absolute effects (e.g., total number of people affected) and relative effects (e.g., number affected as a share of GDP). See Annex C for more detail on the indices used.

a. Meters above the seal level. b. Winter storms.

¹⁷ The table is purely indicative, as the ranking depends very much on the indices used and on the random nature of climate events even over a 25-year period. However, almost every index shows that IDA countries are disproportionately vulnerable to risks associated with climate change.

Figure A2.1: Distribution of World Climate Risks



Note: See Annex C of IDA paper for details.

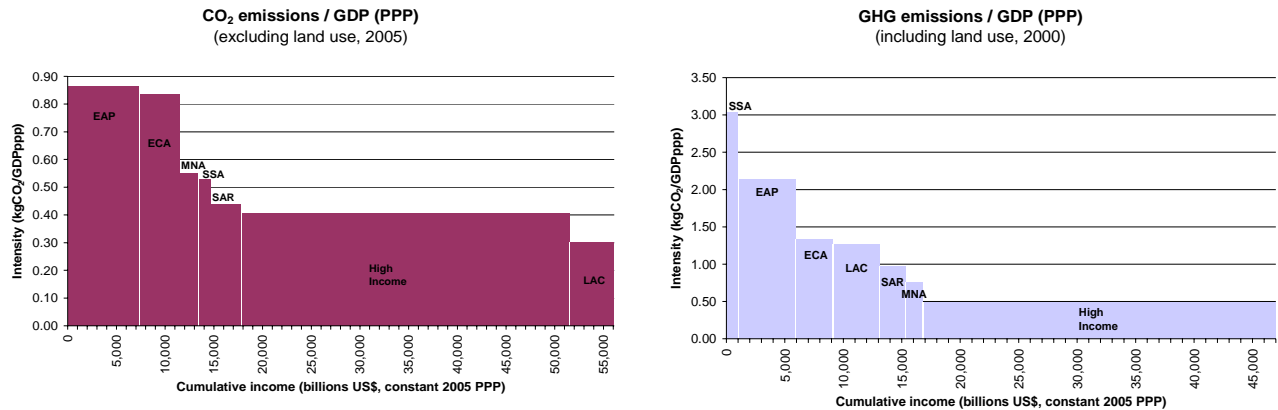
Different CO₂ emission characteristics of select developing countries and transition economies

Table A2.2: Emission characteristics

Rank	Country	CO2 Emissions, 2005	CO2 intensity, PPP, 2005	CO2 intensity, MER, 2005	CO2 growth, 1995-2000	CO2 growth, 2000-2005	CO2 per capita, 2005	GDP per capita, PPP, 2005	Income group
		(MtCO2)	(tCO2 per Million \$)	(tCO2 per Million \$)	(%)	(%)	(tCO2)	(\$ per annum)	
1	United States	5,957	480	480	1.9	0.5	20.1	41,813	High: OECD
2	China	5,323	998	2,372	0.5	12.1	4.1	4,088	Lower middle
3	Russia	1,696	999	2,218	-0.5	1.4	11.9	11,858	Upper middle
4	Japan	1,230	318	271	2.0	0.7	9.6	30,290	High: OECD
5	India	1,166	479	1,447	2.8	3.2	1.1	2,222	Low
6	Germany	844	336	302	-0.7	-0.1	10.2	30,445	High: OECD
7	Canada	631	559	567	2.0	2.5	19.5	34,972	High: OECD
8	United Kingdom	577	305	262	0.0	0.8	9.6	31,371	High: OECD
9	Korea, South	500	486	631	3.0	2.5	10.3	21,273	High: OECD
10	Italy	467	287	265	0.8	1.0	8.0	27,750	High: OECD
11	Iran	451	700	2,375	4.0	6.9	6.6	9,314	Lower middle
12	South Africa	424	1,066	1,751	2.2	2.0	9.0	8,478	Upper middle
13	France	415	223	195	1.5	0.8	6.8	30,591	High: OECD
14	Saudi Arabia	412	841	1,331	4.3	7.1	17.8	21,220	High: non OECD
15	Australia	407	584	555	4.2	2.9	20.0	34,106	High: OECD
16	Mexico	398	339	519	3.5	0.9	3.9	11,387	Upper middle
17	Spain	387	328	344	5.3	3.6	8.9	27,180	High: OECD
18	Brazil	361	228	409	3.6	1.1	1.9	8,474	Upper middle
19	Indonesia	359	508	1,253	4.8	5.6	1.6	3,209	Lower middle
20	Ukraine	343	1,303	3,977	-5.2	1.2	7.3	5,583	Lower middle
21	Poland	285	551	939	-1.0	-0.4	7.5	13,535	Upper middle
22	Taiwan	284	480	..	6.3	2.7	..	26,057	..
23	Netherlands	270	479	..	2.4	1.6	16.5	34,492	High: OECD
24	Thailand	234	526	1,329	2.2	7.5	3.6	7,061	Lower middle
25	Turkey	230	410	633	5.5	2.8	3.2	7,786	Upper middle
26	Kazakhstan	198	1,503	3,466	-0.4	7.6	13.1	8,699	Upper middle
27	Egypt	162	486	1,804	3.8	6.1	2.2	4,574	Lower middle
28	Malaysia	156	519	1,189	4.5	6.7	6.1	11,678	Upper middle
29	Venezuela	151	576	1,045	1.6	2.5	5.7	9,877	Upper middle
30	Argentina	147	350	800	2.8	1.3	3.8	10,815	Upper middle
31	UAE	138	1,003	1,063	1.8	4.6	30.4	33,484	High: non OECD
32	Belgium	136	409	366	2.1	-1.2	13.0	31,699	High: OECD
33	Singapore	134	743	1,147	5.2	4.5	30.8	41,479	High: non OECD
34	Pakistan	121	357	1,092	4.4	2.3	0.8	2,184	Low
35	Uzbekistan	118	2,246	8,078	0.3	2.2	4.5	2,008	Low
36	Czech Republic	113	544	910	-1.6	0.3	11.0	20,280	High: OECD
37	Nigeria	105	490	1,084	-4.3	5.4	0.7	1,520	Low
38	Greece	103	317	458	3.3	0.5	9.3	29,261	High: OECD
39	Romania	99	490	1,005	-5.5	1.4	4.6	9,368	Upper middle
40	Iraq	98	..	..	-0.9	5.9	..	..	Lower middle
41	Algeria	88	442	866	-1.0	1.1	2.7	6,062	Lower middle
42	Vietnam	80	451	1,519	6.7	10.6	1.0	2,143	Low
43	Austria	78	279	255	1.7	4.1	9.5	34,075	High: OECD
44	Philippines	78	312	794	4.1	2.1	0.9	2,956	Lower middle
45	Kuwait	77	695	949	7.9	5.2	30.2	43,551	High: non OECD
46	Hong Kong	75	309	422	3.2	6.1	10.8	35,690	High: non OECD
47	Korea, North	74	..	..	-3.6	1.3	3.3	..	Low
48	Chile	66	332	557	6.5	3.6	4.1	12,248	Upper middle
49	Israel	65	415	527	4.9	0.9	9.4	22,627	High: non OECD
50	Portugal	65	309	354	4.5	0.6	6.2	19,956	High: OECD

Note: the table presents top 50 countries ranked by total CO₂ emissions. It shows that most countries rank differently by several measures such as total CO₂ emissions, emission intensity of GDP, and the rate of emission growth. CO₂ intensities are tons of CO₂ per million US\$ of GDP. Source of CO₂ emissions is EIA website (as of September 18, 2007). GDP PPPs (constant 2005 US\$), GDP MER 2005 and Population data in 2005 are from World Development Indicators database.

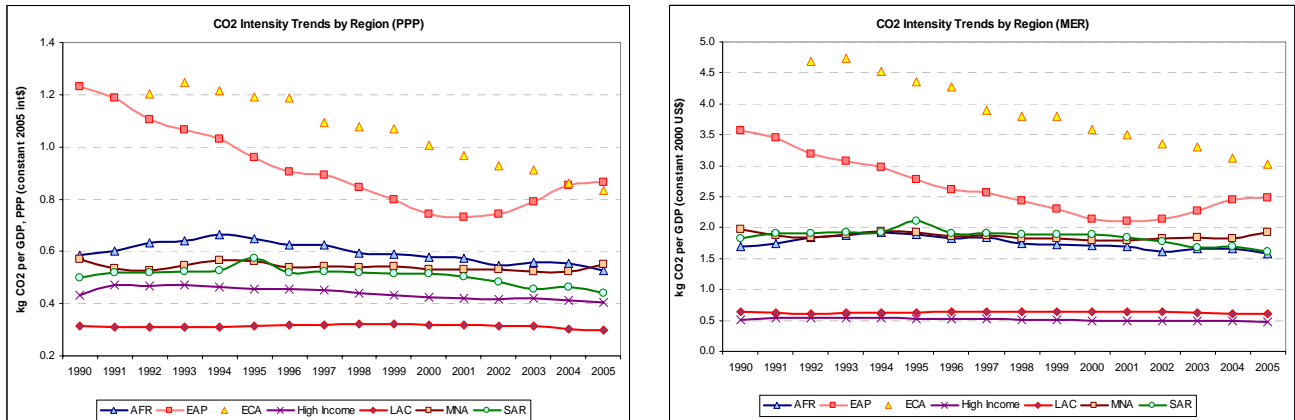
Figure A2.2: CO₂ and GHG Intensity by Region



Note: The charts show significant variations in energy-related CO₂ and total GHG intensities per GDP by region and a significant shift in ranking when a measure of emissions changes from CO₂ to GHG. The ECA region has the highest energy-related CO₂ emission intensity per GDP while LAC has the lowest. High income countries generate by far the largest volume of CO₂ emissions. Taking into account all GHG emissions, including those arising from land use, land use change and forestry would tend to increase SSA, EAP and LAC intensities and contributions to global GHG since land degradation and deforestation has been progressing at a rapid pace in these regions.

Source: CO₂ emissions (emissions from energy use) from EIA website (as of September 18, 2007); GDP, PPP (constant 2005 US\$) from WDI; GHG emissions from Climate Analysis Indicators Tool (CAIT) Version 5.0. (Washington, DC: World Resources Institute, 2008). Comprehensive (as many countries and GHG as possible) data for emissions are only available up to 2000.

Figure A2.3: CO₂ Intensity Trends by Region, with PPP and MER



Note: The charts show that the dramatic decline in CO₂ intensity during 1990s in highly intensive regions has been reversed (EAP) or slowed down (ECA). Meanwhile, CO₂ intensity in other regions remains relatively stable. The use of PPP or MER measure does not change the relative ranking of different regions, except for high income countries that have the lowest intensity when MER is used.

Source: CO₂ emissions (emissions from energy use) from EIA website (as of September 18, 2007), and GDP, PPP (constant 2005 US\$) from WDI.

Figure A2.4: Regional Profiles: Key Impacts and Emissions Sources¹⁸

Regions	GHGs by sector	Issues/Key impacts																
AFR	<table border="1"> <caption>GHG Emissions by Sector - AFR</caption> <thead> <tr> <th>Sector</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Land-Use Change & Forestry</td> <td>59%</td> </tr> <tr> <td>Electricity & Heat</td> <td>10%</td> </tr> <tr> <td>Agriculture</td> <td>13%</td> </tr> <tr> <td>Other</td> <td>7%</td> </tr> <tr> <td>Transport</td> <td>4%</td> </tr> <tr> <td>Industry</td> <td>4%</td> </tr> <tr> <td>Waste</td> <td>3%</td> </tr> </tbody> </table>	Sector	Percentage	Land-Use Change & Forestry	59%	Electricity & Heat	10%	Agriculture	13%	Other	7%	Transport	4%	Industry	4%	Waste	3%	<ul style="list-style-type: none"> • Food security and risk associated with agricultural production • Lack of access to safe water and increased water stress • Low adaptive capacity and high vulnerability to climate variability and natural disasters such as droughts and floods • Negative health impacts, especially increased risk of malaria • Sea-level rise and its impact on low-lying coastal areas
Sector	Percentage																	
Land-Use Change & Forestry	59%																	
Electricity & Heat	10%																	
Agriculture	13%																	
Other	7%																	
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Waste	3%																	
EAP	<table border="1"> <caption>GHG Emissions by Sector - EAP</caption> <thead> <tr> <th>Sector</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Land-Use Change & Forestry</td> <td>34%</td> </tr> <tr> <td>Electricity & Heat</td> <td>19%</td> </tr> <tr> <td>Industry</td> <td>16%</td> </tr> <tr> <td>Agriculture</td> <td>14%</td> </tr> <tr> <td>Other</td> <td>9%</td> </tr> <tr> <td>Transport</td> <td>5%</td> </tr> <tr> <td>Waste</td> <td>3%</td> </tr> </tbody> </table>	Sector	Percentage	Land-Use Change & Forestry	34%	Electricity & Heat	19%	Industry	16%	Agriculture	14%	Other	9%	Transport	5%	Waste	3%	<ul style="list-style-type: none"> • Decreased freshwater availability • Endemic morbidity and mortality due to diarrhoeal disease associated with floods and droughts • Degradation of marine and coastal ecosystems by sea-level rise and temperature increases • Sea-level rise potentially results in displacement of millions of people • Damage to aquaculture industry by sea-water intrusion • Increased threats to the ecological stability of wetlands, mangroves and coral reefs
Sector	Percentage																	
Land-Use Change & Forestry	34%																	
Electricity & Heat	19%																	
Industry	16%																	
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ECA	<table border="1"> <caption>GHG Emissions by Sector - ECA</caption> <thead> <tr> <th>Sector</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Electricity & Heat</td> <td>40%</td> </tr> <tr> <td>Other</td> <td>24%</td> </tr> <tr> <td>Industry</td> <td>15%</td> </tr> <tr> <td>Agriculture</td> <td>8%</td> </tr> <tr> <td>Transport</td> <td>8%</td> </tr> <tr> <td>Waste</td> <td>3%</td> </tr> <tr> <td>Land-Use Change & Forestry</td> <td>2%</td> </tr> </tbody> </table>	Sector	Percentage	Electricity & Heat	40%	Other	24%	Industry	15%	Agriculture	8%	Transport	8%	Waste	3%	Land-Use Change & Forestry	2%	<ul style="list-style-type: none"> • Increased climate-related hazards including prolonged droughts, more frequent storms and floods, and fire risk • Coastal floods and erosion due to sea-level rise • Increased health risks due to more frequent heatwaves, flooding and greater exposure to vector- and food-borne diseases • Higher water stress • Decline of forest productivity
Sector	Percentage																	
Electricity & Heat	40%																	
Other	24%																	
Industry	15%																	
Agriculture	8%																	
Transport	8%																	
Waste	3%																	
Land-Use Change & Forestry	2%																	

¹⁸ Note: Data on key impacts is from regional climate change business strategies; data on emissions is from WRI 2007.

Regions	GHGs by sector	Issues/Key impacts																
MNA	<table border="1"> <caption>GHGs by sector for MNA</caption> <thead> <tr> <th>Sector</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Electricity & Heat</td> <td>33%</td> </tr> <tr> <td>Industry</td> <td>21%</td> </tr> <tr> <td>Transport</td> <td>16%</td> </tr> <tr> <td>Other</td> <td>20%</td> </tr> <tr> <td>Agriculture</td> <td>5%</td> </tr> <tr> <td>Waste</td> <td>4%</td> </tr> <tr> <td>Land-Use Change & Forestry</td> <td>1%</td> </tr> </tbody> </table>	Sector	Percentage	Electricity & Heat	33%	Industry	21%	Transport	16%	Other	20%	Agriculture	5%	Waste	4%	Land-Use Change & Forestry	1%	<ul style="list-style-type: none"> Increased occurrence of droughts and water scarcity More widely fluctuation of agricultural yields, especially in rain-fed areas Worsening of public health due to heat waves, decreasing water and air quality, and ground ozone formation Sea level rise and its impacts on agricultural, low-lying coastal areas and wetlands
Sector	Percentage																	
Electricity & Heat	33%																	
Industry	21%																	
Transport	16%																	
Other	20%																	
Agriculture	5%																	
Waste	4%																	
Land-Use Change & Forestry	1%																	
LAC	<table border="1"> <caption>GHGs by sector for LAC</caption> <thead> <tr> <th>Sector</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Land-Use Change & Forestry</td> <td>49%</td> </tr> <tr> <td>Agriculture</td> <td>20%</td> </tr> <tr> <td>Transport</td> <td>8%</td> </tr> <tr> <td>Other</td> <td>6%</td> </tr> <tr> <td>Industry</td> <td>7%</td> </tr> <tr> <td>Electricity & Heat</td> <td>7%</td> </tr> <tr> <td>Waste</td> <td>3%</td> </tr> </tbody> </table>	Sector	Percentage	Land-Use Change & Forestry	49%	Agriculture	20%	Transport	8%	Other	6%	Industry	7%	Electricity & Heat	7%	Waste	3%	<ul style="list-style-type: none"> Decreased water availability in many water scarce regions and impact on high mountain ecosystems Reduction in agricultural productivity Distortion of the functioning of ecosystems, including coral reefs, wetlands and mangrove, forests, and so on Large-scale displacement of populations due to increased extreme events and sea-level rise Health impacts e.g., heat stress mortality and greater exposure to vector-borne diseases
Sector	Percentage																	
Land-Use Change & Forestry	49%																	
Agriculture	20%																	
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SAR	<table border="1"> <caption>GHGs by sector for SAR</caption> <thead> <tr> <th>Sector</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Electricity & Heat</td> <td>29%</td> </tr> <tr> <td>Agriculture</td> <td>26%</td> </tr> <tr> <td>Industry</td> <td>15%</td> </tr> <tr> <td>Other</td> <td>10%</td> </tr> <tr> <td>Land-Use Change & Forestry</td> <td>7%</td> </tr> <tr> <td>Waste</td> <td>7%</td> </tr> <tr> <td>Transport</td> <td>6%</td> </tr> </tbody> </table>	Sector	Percentage	Electricity & Heat	29%	Agriculture	26%	Industry	15%	Other	10%	Land-Use Change & Forestry	7%	Waste	7%	Transport	6%	<ul style="list-style-type: none"> Increased intensity and frequency of storm surges, cyclones, floods and droughts Negative impact on agricultural yields particularly in the arid zones and flood affected areas Decrease in river flows in the Himalayan countries, unreliable supplies of fresh water and the need for management of shared trans-boundary systems Sea level rise and its impact on coastal livelihood through flood, damage on groundwater aquifers, loss of wetlands and ecosystems Lack of scientific information on the consequences of Himalayan snow melt and associated risks and climate change impact on biodiversity and ecosystems
Sector	Percentage																	
Electricity & Heat	29%																	
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ANNEX 3. STRATEGIC FRAMEWORK ON CLIMATE CHANGE AND DEVELOPMENT: DRAFT OUTLINE

Guiding question for strategy development:

1. Why should the WBG make climate change a priority?
2. What's the Bank's comparative advantage?
3. What do we want to achieve?
4. Where are we now?
5. How are we going to achieve what we want?

A. Climate Change and Development

1. Status of climate science/scientific consensus
2. Mitigation- Adaptation-Development linkages
3. Priorities of WBG client countries and support needs

B. The Need for a WBG Strategy

1. Emerging global consensus on enhanced multilateral action
2. WBG experience and comparative advantage
3. Justification for increased WBG role and a comprehensive strategy

C. WBG Vision and Strategic Objectives

D. Results Framework: Outcomes, Outputs, Inputs and Indicators

E. Framework for Action: Towards climate resilient future

- Integrating adaptation to climate change and low-carbon growth opportunities into development strategies
 - Aligning with Regional and Country Strategies
 - Scaling Up Opportunities in Sectoral Programs
 - Priorities for IDA countries
 - Agenda for Middle-Income Countries
 - Knowledge Sharing, Advocacy and Capacity Building
- Stepping up Policy Research and Advice
- Supporting Technology Acceleration
- Facilitating Development of New Market Mechanisms
- Creating an Enabling Environment for Private Sector
- Meeting the Financing Challenge

F. Collaborating with the global community

G. Addressing internal needs and constraints

ANNEX 4. SUPPLEMENTAL NOTE ON CLIMATE INVESTMENT FUNDS

1. The purpose of this Supplemental Note is to provide updated information to the Committee of the Whole on the WBG consultations that have occurred since the concept and issues paper, *Towards a Strategic Framework on Climate Change and Development for the World Bank Group*, was discussed at the Committee on Development Effectiveness on February 27, 2008 (CODE2008-0027).
2. The concept and issues paper, *Towards a Strategic Framework on Climate Change and Development for the World Bank Group*, recognizes the need for further mobilizing and innovating finance for addressing climate change, and provides information on the efforts of the World Bank Group, in collaboration with the Regional Development Banks and in consultation with interested parties, to establish a portfolio of strategic Climate Investment Funds (CIF). The report notes in paragraph 48 that “the WBG will engage in extensive consultations with all key stakeholder to expand the donor base, seek the views of potential recipient countries and other interested parties (UNFCCC, GEF, UN partners and the private sector) and advance the design of the funds and financial instruments.
3. The World Bank convened a meeting of interested donors in Paris on March 4-5, 2008, to consider the scope and design of the CIF. Representatives from Australia, Belgium, Canada, Denmark, the European Commission, Finland, France, Germany, Iceland, Italy, Japan, the Netherlands, New Zealand, Norway, Republic of Korea, Spain, Sweden, Switzerland, the United Kingdom, and the United States attended.
4. At the meeting, there was a general acceptance of the urgency of the challenge presented by climate change and the need to take early action to address the challenge. It was recognized that it was important to the success of these efforts that the CIF be carefully designed. In this regard, some of the main issues raised as requiring further development include the following:
 - (a) The CIF should ensure strong recipient country inclusion in the fund governance. The working proposal for the CIF is being elaborated to provide for greater voice for recipient countries and representation of other financing mechanisms and UN partners in the relevant trust fund governance committees.
 - (b) The MDBs should maintain a good dialogue with the UNFCCC, and the link between the CIF and the Bali Action Plan should be made clear. The CIF should not prejudice current negotiations for a new international financial architecture.
 - (c) In designing the CIF, consideration should be given to building links to the relevant UN agencies. Good cooperation will need to occur with the UN (in particular UNDP and UNEP) at the country level, and it would be beneficial for some of the funds to seek UN representation at the fund’s governance committee (for example, the UN Forum on Forest and FAO could contribute important perspectives to the Forest Investment Fund).

(d) More work needs to be undertaken on defining the gap to be addressed by the Forest Investment Fund. A mapping exercise of ongoing programs should be undertaken.

(e) On the Pilot Program for Climate Resilience, a strong link needs to be assured with the Adaptation Fund that has been established under the Kyoto Protocol. The pilot program would aim at learning how to include climate resilience into mainstream development processes, and knowledge generated by the pilot will be made available to the Adaptation Fund. The Adaptation Fund Board Chair may be invited to the committee responsible for overseeing the pilot program.

5. After the initial consultation with donors in Paris, the World Bank and Regional Development Banks are making a significant effort to consult with a broad range of recipient countries. Senior staff of the World Bank, accompanied by staff of the relevant regional development bank, travel to South Africa, India, and China to consult on the proposals for the CIF. Similar trips are scheduled to Mexico and Brazil, and a broader schedule of consultations is being organized that will include World Bank and Regional Development Banks joint missions to a number of IDA and IBRD countries to consult further in the coming weeks. In the consultations to date, there has been general support for the CIF and interest in continued participation in the design, governance and implementation of the funds. Countries indicated their expectations that the governance structure of the CIF would include recipient countries. Issues were raised about the need for clarity about the linkages to the negotiations on a climate change agreement, and it was indicated that participation of countries in the CIF should not be interpreted as prejudicing the negotiations. While support was expressed for increased financing for integrating climate resilience into development policies and plans, countries cautioned that the pilot program should not undermine the Adaptation Fund. A number of technical questions were raised that will be taken into consideration in preparing background work to advance discussions on the design of the CIF.

6. World Bank staff met with staff of the Global Environment Facility (GEF) to discuss complementarities between the proposed CIF and the GEF. As a result of these discussions, agreement was reached on some common understandings on how the CIF could work with the GEF. The GEF and the WB agreed that the financing needs for climate change are enormous and that all multilateral institutions must work with their clients to address this agenda. The WB confirmed its commitment to the GEF partnership and recognized the critical role of the GEF in the financial architecture. It was agreed that the CIF would fill a critical gap: scaling up while transforming development paths of the countries, and that this would contribute to promoting an international environment supportive of a global agreement to address climate change.

7. On February 28, 2008, a briefing on the *Strategic Framework on Climate Change* (SFCC) and the CIF was held at the UN Headquarters in New York for interested representatives of the UN agencies and programs. The meeting was convened by the Director of the Secretariat of the UN Chief Executives Board for Coordination. It was agreed that the World Bank would keep the agencies informed on the design of the funds as discussions on the SFCC and CIF advance. The World Bank staff also met with senior staff of the United Nations Development Program to discuss how best to collaborate on climate change activities.

8. On February 22, 2008, IFC organized a consultation with 25 representatives of 18 major private financial institutions to seek their feed-back on the role, structure, and function of the CIF. The private banks expressed their interest in climate change sectors and identified the areas of specific risks and costs that concessional finance and the involvement of multilateral development banks could usefully help address. The risks and costs noted related mainly to the regulatory and legal environment in specific emerging markets, to enhancing project size through fund-type approaches, and to managing environmental and technical risks. The participants noted that the CIF could play an important role in providing instruments such as guarantees, insurance, back-stop facilities, mezzanine financing and risk-sharing.

9. On March 7, 2008, IFC organized a second consultation with over 50 senior executives from private energy companies primarily related to the power industry. The meeting was facilitated by the World Resources Institute. The attending companies reflected a cross section of geographies, technologies and types of businesses (manufacturers of conventional and emerging power technologies, project developers, and innovative technology proponents). The participants addressed some concerns similar to those expressed by the financial sector, particularly with respect to the importance of transparency and the speed of processing. Also, the participants highlighted the potential role that the clean technology fund could play for achieving impact and transformation by making advances in clean energy deployment in developing countries.

10. Senior staff also met with the Executive Secretary of the UNFCCC in Bonn, who expressed support for a stronger MDB engagement in climate change financing. A retreat for staff of the WB and the UNFCCC is being organized to provide opportunity for further consultations with the UNFCCC on the CIF and the SFCC.

11. Meetings of donor and recipient countries to continue deliberations on the design of the funds will be convened in Washington in mid-April. In preparation for the meetings, work will be undertaken to provide more clarity on, and definition of, the objectives, scope and niche of each of the funds, the types of activities that may be funded, the role of the private sector and other partners, such as UN agencies, and the expected impacts and results.