



IDA16 Mid-Term Review

Achieving Climate Resilient Development Progress Report

**IDA Resource Mobilization Department
Concessional Finance and Global Partnership
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ABBREVIATIONS AND ACRONYMS

AAA	Analytical and Advisory Activities
AICD	African Infrastructure Country Diagnostic
AOSIS	Alliance of Small Island States
CAP	Community Action Program
CAS	Country Assistance Strategy
CCKP	WB Climate Change Knowledge Portal
CIF	Climate Investment Fund
CODE	Committee on Development Effectiveness
CPS	Country Partnership Strategy
CTF	Clean Technology Fund
DPO	Development Policy Operation
DRC	Democratic Republic of Congo
EACC	Economic of Adaptation to Climate Change
ESW	Economic and Sector Work
FCPF	Forest Carbon Partnership Facility
FIP	Forest Investment Program
FY	Fiscal Year
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environment Facility
GFDRR	Global Facility for Disaster Reduction and Recovery
GHG	Greenhouse Gas
IDA	International Development Association
IEG	Independent Evaluation Group (formerly OED)
IFC	International Finance Corporation
IPCC	Inter-Governmental Panel on Climate Change
ISN	Interim Strategy Note
LDCF	Least Developed Country Fund
MDB	Multilateral Development Bank
MTR	Mid Term Review
MLF	Multilateral Fund for the Implementation of the Montreal Protocol
NAMA	Nationally Appropriate Mitigation Action
OECD/DAC	Organization for Economic Cooperation and Development/Development Assistance Committee
PPCR	Pilot Program for Climate Resilience
REC	Regional Economic Community
SAWAP	Sahel and West Africa Program
SCCF	Special Climate Change Fund
SCF	Strategic Climate Fund
SDN	Sustainable Development Network
SLM	Sustainable Land Management
SREP	Scaling Up Renewable Energy Program
SFDCC	Strategic Framework for Development and Climate Change
TA	Technical Assistance
UNFCCC	United Nations Framework Convention on Climate Change

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Executive Summary

i. **During the IDA16 Replenishment, IDA Deputies and Borrower Representatives discussed the urgent challenge that climate change poses to development, especially in the poorest countries.** They noted that adaptation and development are two sides of the same coin: efforts on one reinforce those on the other. They also noted that IDA has a comparative advantage in promoting climate resilient development by integrating knowledge, strategic work, investment and policy support and by leveraging finance from other sources. IDA Deputies and Borrower Representatives requested that during the IDA16 period IDA focuses on: (i) building climate resilience and capturing mitigation opportunities in core development activities, and (ii) strengthening monitoring and reporting of IDA resources used for mitigation and adaptation. They asked that an update on progress on these efforts be prepared for the IDA16 Mid Term Review. This paper responds to that request.

ii. **IDA has made substantial progress in implementing agreed actions in the area of climate change for the IDA16 period.**

- All Country Assistance Strategies (CASs) and Interim Strategy Notes (ISNs) completed in the first year of IDA16 included a discussion on the vulnerability of the country to climate change. While the quality and depth of the discussion varied, all CASs and ISNs recognized the risks posed by climate change. Five out of 12 CASs completed in FY12 included actions on climate mitigation, especially through energy efficiency and renewable energy. Most CASs also included analytical work, investments and technical assistance on climate change in the work programs.
- Data for FY12 shows that IDA completed 27 country-specific Economic and Sector Work (ESW) and Technical Assistance (TA) activities on climate change, which was close to the number in FY11 (28). In addition, IDA completed 41 multi-country activities in FY12 (as compared to 58 completed in FY11). Since several ESW and TA are ongoing, a more complete picture on AAA efforts will be possible at the end of FY13. Some highlights of this work include multi-country technical assistance and analytical work, including a major climate risks analysis in the Niger Basin riparian countries to enhance the climate resilience of the basin's US\$8 billion investment plan, and individual country climate change assessments. The Bank has also developed a number of innovative analytical and technical assistance tools to respond to client demand and support Bank staff in delivering more targeted services to clients. These include the Open Climate Data Initiative (comprising the Climate Change Knowledge Portal, the Little Climate Data Book and the Operational toolkit on the social dimensions of climate change) to make the latest knowledge and quality data available to support climate impacts and risk analysis to development at the country level. IDA is also helping countries develop national-level platforms that bring data from different stakeholders and ministries together to inform decisions on disaster risk management and adaptation.
- Analysis of potential climate impacts are increasingly informing design of projects funded by IDA in climate change sensitive sectors; the analysis also helps ensure that the

design is consistent with climate change mitigation and adaptation strategies of the beneficiary countries. Sectors such as power and transport often incorporate adaptation and mitigation considerations into project design. Development of methods and tools is ongoing for both mitigation and adaptation. This work will develop a framework methodology for mainstreaming climate risks/impacts analysis at the strategic (CAS) level; and guidance for select climate sensitive sectors (agriculture, water, roads) at the project level.¹ These tools are expected to be completed in FY13. In addition, a Rapid Assessment of Climate Change Vulnerability, Risk and Adaptation screening tool is being developed for the energy sector.

- The World Bank has rolled out a new system to track funding committed to activities that support low-carbon and climate-resilient development. It is among the first international development institutions to have a system for consistent monitoring and reporting of climate change co-benefits. This is an important breakthrough which enables IDA to report on financing commitments with adaptation and mitigation co-benefits.² The system was used to retroactively estimate IDA lending intended to provide climate change co-benefits in FY11 and FY12. Results from this exercise show that the financing with potential climate change co-benefits in IDA lending increased significantly between the two fiscal years. In FY12, IDA lending commitments with potential adaptation co-benefits grew to US\$2.3 billion (up 61 percent from FY11). IDA lending commitments for mitigation were US\$2.3 billion (a 161 percent increase from FY11). The share of adaptation financing in total IDA lending nearly doubled to 16 percent in FY12 (from 9 percent in FY11) while the share of financing for mitigation more than tripled to 16 percent in FY12 (from 5 percent in FY11).
- At the same time, the World Bank has continued to work with partners to facilitate global progress on monitoring financial flows to developing countries. The tracking system described above builds on the internationally-recognized Rio Markers for climate change, but takes it one step further to ensure greater accuracy in reporting. The Bank consulted on the proposed system with Multilaterals Development Banks (MDBs), the OECD DAC Secretariat, the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat as well as with NGOs and think tanks active in this field. Experience with the Bank's system is supporting global efforts to improve tracking of climate finance, including client demand for strengthened national systems for climate change. Notably, the World Bank participates in the MDB working group which has recently finalized a joint approach for mitigation finance reporting and released the first Joint MDB Report on Mitigation Finance at Rio+20 (June 2012). For adaptation finance, MDBs are finalizing a joint approach for announcement in Doha (December 2012).

iii. **Notwithstanding progress to date, significant challenges remain to address the urgent and increasing impacts of climate change.** IDA is playing a key role in mainstreaming climate resilient, low carbon approaches into development. As recommended in the upcoming

¹ Climate sensitive sectors include inter alia agriculture, water supply, health and infrastructure.

² The methodology is detailed in Annex 1.

Independent Evaluation Group (IEG) evaluation “Adapting to Climate Change: Assessing the World Bank Group Experience”, ramping up the Bank’s and partners’ capacity and effectiveness will require stepped-up action on climate-related capacity building and knowledge and application of tools for development. Moreover, large gaps remain between the scale of development assistance needed to support developing (and in particular least developed) countries in adaptation and mitigation efforts and available resources. The World Bank study ‘Economics of Adaptation to Climate Change’ (EACC) estimated annual adaptation costs at US\$70-100 billion, considering only the direct impacts on infrastructure, coastal zones, water supply and flood protection, agriculture, fisheries, human health and forestry and ecosystem services under a 2 degree Celsius global warming scenario. Recent global assessments suggest that the rate and magnitude of the changes in the climate system are likely to be greater than suggested even five years ago; this adds to the urgency to move towards climate resilient development.

iv. **Given these challenges, IDA countries have to prepare for large-scale and possibly unprecedented and transformational actions to move to low carbon and climate resilient development pathways.** IDA resources are limited and there is high competition for their use at the country level. IDA funded activities clearly need to minimize climate related risks to poverty alleviation. There is a critical need to explore options for IDA-supported programs to have access to substantial and predictable climate finance, knowledge and technical support beyond IDA16. Climate finance is likely to be scaled-up through the Green Climate Fund, but time will be needed to operationalize the new financial architecture. IDA is well positioned to respond to the challenges posed by climate change immediately, within the framework that should result from the Rio+20, Post-MDG, and UNFCCC processes. IDA has the relevant experience and capacity to promote climate resilient development by integrating knowledge, strategic work, investment and policy support with a focus on results and to deliver large amounts of financial assistance efficiently in IDA countries. In addition, IDA offers an established governance structure to reach agreements between developing and developed countries on varied matters, including on climate change adaptation and mitigation.

I. Introduction

1. **Rapidly changing climate and increasing variability are already affecting many countries, communities and sectors.** In a report published in April 2012, the Intergovernmental Panel on Climate Change (IPCC) indicates that the frequency and intensity of climate extremes, such as hot days, droughts, floods and storm surges has increased since the 1950s.³ These increases are projected to continue with some events, such as the number of hot days, changing from decadal events to annual events by the end of this century. Sectors most affected include agriculture, water, health and infrastructure. There is already increasing mortality due to seasonal weather events resulting from higher vulnerability and exposure to a changing climate.

2. **Climate variability and climate change pose an urgent challenge to development and call for transformational adaptation actions, especially in IDA countries.** Current climate variability is already a strong constraint on growth in Sub-Saharan Africa where it is estimated to cause an annual loss of 1-2 percent of GDP. In the case of Ethiopia, the Economics of Adaptation to Climate Change estimates that climate change might produce GDP losses in the order of 8-10 percent by 2050. Changing climate patterns are also affecting ecosystems and thus the livelihood of people. A large number of people are exposed to climate related events in South Asia, the small island developing countries and Sub-Saharan Africa; in 2008 devastating floods displaced 2 million people in the state of Bihar (India), and in 2011, 13 million people, including 2 million children under the age of 5, were affected by the drought in the Horn of Africa. The IPCC report concludes that climate related disaster risk management and adaptation to climate change should be integrated into development to provide short-term and long-term benefits. Thus, IDA countries have to be prepared and ready for large-scale and possibly unprecedented actions – or transformational adaptation actions – that could include relocation of people, major changes in agricultural crops, investment in public health systems and disaster preparedness.

3. **During the IDA16 replenishment negotiations, IDA Deputies and Borrower Representatives discussed the challenge of climate change.** They agreed that adaptation and development are two sides of the same coin: efforts on one reinforce those on the other. Participants stressed the importance of building climate resilience in IDA countries as part of the country-based development efforts. They noted that IDA has a comparative advantage in promoting climate resilient development by integrating knowledge, strategic work, investment and policy support and by leveraging finance from other sources. They requested that during the IDA16 period IDA focus on: (i) building climate resilience and capturing mitigation opportunities in core development activities, and (ii) strengthening monitoring and reporting of IDA resources used for mitigation and adaptation.

³ IPCC, 2012: Intergovernmental Panel on Climate Change Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation, Field, C. B., Barros, V., Stocker, T.F., Qin, D., Dokken, D., Ebi, K.L., Mastrandrea, M. D., Mach, K. J., Plattner, G.-K., Allen, S. K., Tignor, M. and P. M. Midgley (eds.). Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

4. Specifically, IDA Deputies and Borrower Representatives asked Management to implement, monitor and report on the following actions:

- i. discussing in 100 percent of IDA Country Assistance Strategies climate change vulnerabilities as part of the discussion of the country's development challenges and priorities and including activities in climate change mitigation and adaptation areas when requested by the recipient country;
- ii. scaling up IDA Analytical and Advisory Activities on adaptation and mitigation;
- iii. analyzing in all projects in climate change sensitive sectors the potential climate impact of project activities to ensure that they are consistent with the climate change mitigation and adaptation strategies of the country;
- iv. establishing a coding system to measure the share of IDA's investments that provide climate adaptation and mitigation co-benefits, and reporting on the number of projects that aim at climate change co-benefits in their design (e.g., percent of IDA investments that have climate change co-benefits) by the Mid Term Review; and
- v. continuing dialogue with OECD/DAC on Rio-Markers with the objective of developing and agreeing on quantitative measures of global financing for climate adaptation and mitigation.

5. IDA Deputies requested that an update on progress on these actions be prepared for the IDA16 Mid Term Review. This paper responds to that request. Given the short period of time covered, the findings of this report should be interpreted as preliminary, since the full IDA16 picture will only be available after the completion of FY14.⁴ The report is structured as follows. Section II reports on one of the IDA16 climate change commitments, a new coding system developed by the World Bank which enables to track IDA's investments with climate adaptation and mitigation co-benefits, as well as on IDA's leveraging of additional resources. Section III reports on the progress made regarding the other IDA16 climate change commitments. Finally, Section IV discusses challenges and opportunities going forward.

II. IDA Funding and Other Sources of Funding in Support of Climate Change

6. A key deliverable for IDA was the establishment of a new coding system to track IDA's investments with climate adaptation and mitigation co-benefits. This new system was rolled out in FY13 (see Annex 1 for more details). This section provides information on the system itself, as well as the results of applying it retroactively in FY11 and in FY12.⁵ It also reports on IDA's efforts to leverage additional sources of climate change funding for IDA countries.

⁴ The implementation period of IDA 16 is from July 1, 2012 to June 30, 2014.

⁵ The new system tracks commitments at the time of Board approval and this report focuses on the share of IDA investments that could yield climate change co-benefits.

A. IDA Funding for Adaptation and Mitigation

7. **As of the beginning of FY13, the Bank rolled-out a system to track and report transparently and consistently funding that contributes to climate change adaptation and/or mitigation, independently of the primary objectives of the activities.**⁶ This system builds on the internationally-recognized Rio Markers on climate change methodology, developed by the OECD-DAC, to track aid flows that support climate action. It is not set up to track the results from financing such as reductions in greenhouse gas (GHG) emissions or improved adaptive capacity/resilience. The system now tracks financing for actions intended to yield co-benefits at the lowest level of financing information available, even by considering individual components of the project, thus adding granularity to the Rio Markers.

8. **The tracking system covers lending operations financed by the World Bank resources (IBRD and IDA) as well as trust funds.** The latter include trust funds such as the Climate Investment Funds (CIFs), the Global Environment Facility (GEF), the Least Developed Country Fund (LDCF), the Special Climate Change Fund (SCCF), and the Multilateral Fund for the Implementation of the Montreal Protocol (MLF). The system was rolled out on July 1, 2012 and applies to newly approved Bank projects. A separate system to track the finance provided for Economic and Sector Work (ESW) and Non-Lending Technical Assistance (TA) products with climate change co-benefits is under development.

9. **The system tracks co-benefits at the sub-component level of a project, thus adding granularity to the approach under the Rio Markers.** Only those project components which have explicit climate adaptation or mitigation rationale and directly address vulnerability or impact from climate variability and change are recorded as such. For example, if only US\$10 million of a US\$100 million power project tackles energy efficiency, then only US\$10 million are recorded as having mitigation co-benefits. Furthermore, the system tracks only direct climate change co-benefits. For example, paving roads that would otherwise get washed away by increasingly frequent floods has a direct co-benefit. Building a road to increase incomes which in turn increase the adaptive capacity of the residents has indirect co-benefits. This system to track financing commitments complements efforts to measure climate change results. Parallel complementary efforts to include greenhouse gas accounting are already underway in IFC and are envisaged to start at the World Bank in mid-FY13.

10. **Funding for adaptation and mitigation co-benefits are tracked independently.** The same activity can provide both adaptation and mitigation co-benefits and the financing that supports such an activity is counted in full both towards adaptation and mitigation. As a result, the financing for adaptation and mitigation should not be added together to prevent double counting.

11. **Experience with this system will support global efforts to improve tracking of climate finance, at both country and international levels.** There is already a demand from client countries for assistance to strengthen national systems for climate finance (including

⁶ The approach adopted by the World Bank differs from the one adopted by OECD/DAC which records a project as having adaptation as a principal objective if the activity would not have been supported but for that objective.

monitoring), as part of a broader effort to build institutional readiness for climate change. Also, Multilateral Development Banks (MDBs) – which play a key role in mobilizing and leveraging resources for climate action – are in the process of harmonizing their climate finance tracking systems with a view to jointly reporting on climate flows in the future.

Table 1: IDA Lending Intended to Yield Climate Co-Benefits by Major Sector
(US\$ million)

IDA in FY12

Major Sector	Total IDA Commitment	Adaptation Co-Benefits		Mitigation Co-Benefits	
	(US\$ million)	Committed (US\$ million)	Share (%)	Committed (US\$ million)	Share (%)
Agriculture, Fishing and Forestry	1,970.73	768.37	39%	291.11	15%
Education	1,663.25	0.00	0%	0.00	0%
Energy and Mining	2,151.47	313.36	15%	1,537.13	71%
Finance	354.19	0.00	0%	0.00	0%
Health and Other Social Services	1,701.19	471.94	28%	8.73	1%
Industry and Trade	638.49	1.32	0%	8.47	1%
Information and Communications	63.42	0.00	0%	0.00	0%
Public Administration, Law and Justice	3,347.23	202.47	6%	261.08	8%
Transportation	1,065.51	16.52	2%	79.78	7%
Water, Sanitation and Flood Protection	1,797.82	547.15	30%	147.86	8%
Total	14,753.31	2,321.14	16%	2,334.16	16%

IDA in FY11

Major Sector	Total IDA Commitment	Adaptation Co-Benefits		Mitigation Co-Benefits	
	(US\$ million)	Committed (US\$ million)	Share (%)	Committed (US\$ million)	Share (%)
Agriculture, Fishing and Forestry	1,340.60	300.22	22%	184.04	14%
Education	1,057.37	1.85	0%	5.70	1%
Energy and Mining	1,164.13	0.10	0%	584.39	50%
Finance	183.14	0.00	0%	0.00	0%
Health and Other Social Services	2,193.27	54.70	2%	0.00	0%
Industry and Trade	932.84	69.17	7%	0.00	0%
Information and Communications	413.89	0.20	0%	3.42	1%
Public Administration, Law and Justice	3,705.88	144.76	4%	58.01	2%
Transportation	3,553.37	753.00	21%	5.04	0%
Water, Sanitation and Flood Protection	1,724.04	114.90	7%	52.83	3%
Total	16,268.54	1,438.90	9%	893.43	5%

12. **The Bank applied this system to retroactively estimate the share of IDA lending with intended climate change co-benefits in FY11 and FY12.** Results from this exercise (see Table 1) show that the IDA financing of investment and development policy operations intended to yield climate change co-benefits increased significantly between the two fiscal years. In FY12, IDA lending commitments for operations with potential adaptation co-benefits grew to US\$2.3 billion or 16 percent of the total (from US\$1.4 billion in FY11 or 9 percent of the total). IDA lending commitments for operations focusing on mitigation were US\$2.3 billion – or 16 percent of the total – compared to US\$0.9 billion in FY11 or 5 percent of the total. Overall, the share of operations targeting adaptation in IDA financing nearly doubled while the share of operations targeting mitigation tripled.

13. **Agriculture, Fishing and Forestry (US\$768 million) and Water, Sanitation and Flood Protection (US\$547 million) account for 57 percent of the FY12 IDA commitments intended to yield adaptation co-benefits.** These two sectors also saw a major increase in the share of financing intended to yield adaptation co-benefits in their own commitments: lending commitments with intended adaptation co-benefits account for 39 percent of FY12 lending commitments for Agriculture, Fishing and Forestry (up from 22 percent in FY11) and 30 percent for Water, Sanitation and Flood Protection (up from 7 percent in FY11).

14. **Energy and mining account for the largest share of financing with mitigation co-benefits,** at about two-thirds of the IDA commitments with mitigation co-benefits in both FY11 and FY12. Financing with mitigation co-benefits corresponded to 71 percent of the total commitments for the sector in FY12, a significant increase from 50 percent in FY11.

Box 1: TerrAfrica Partnership for Improved Land Management

Through the TerrAfrica partnership (kick-started by the Bank's Development Grant Facility and other partners and currently housed in NEPAD/Africa Union) the Bank has helped prepare and finance two umbrella investment programs to improve land management and contribute to climate resilience. The first is the US\$1.24 billion Strategic Investment Program (SIP) for Sustainable Land Management (SLM), which until FY12 had covered 36 operations in 26 IDA countries, and which expanded existing SLM practices on an estimated 250,000 hectares of land in those countries. Under the SIP, IDA has provided financing of US\$755 million. Other partners contributed with US\$350 million while the GEF provided US\$140 million. The second umbrella program -- the WB-GEF Sahel and West Africa Program (SAWAP) in support of the Great Green Wall Initiative -- includes US\$108 million financing from the GEF and LDCF/SCCF which was approved in May 2011 and almost US\$2 billion from IDA either committed or in the pipeline. In FY12, three new operations were approved for Chad, Nigeria and Togo for a total amount of US\$525 million financing from IDA and an additional US\$27 million from the GEF and LDCF/SCCF. In Togo, the project addresses the challenge of floods with a combination of sustainable land management approaches in flood prone areas, enhancement of local knowledge and institutional capacities, an early warning system and community-based adaptive activities. In Nigeria, the project addresses the challenge of gully erosion with a strategic combination of civil engineering, vegetative land management and other watershed protection measures, as well as community-led adaptive livelihood enhancements. In Chad, the project addresses the issue of drought related widespread crop failures and the loss of large numbers of livestock with emergency food support, restoration of vulnerable ecosystems and capacity building.

15. **IDA financing for renewable energy and energy efficiency is a key win-win area for mitigation and development** and was estimated to be US\$1.25 billion in FY12. This represents a threefold increase compared to FY11. Renewable energy and energy efficiency financing represented 68 percent of IDA's total energy financing in FY12, up from 37 percent on average in IDA15.

Box 2: Addressing the Climate Vulnerability of Sub-Saharan Africa's Infrastructure

A key ingredient required for Sub-Saharan Africa's attainment of its development aspirations is the rapid upgrading of the region's infrastructure, which is at present woefully inadequate in physical stock and quality of service to support sustained growth in the years and decades to come. Some US\$93 billion per year for the next decade will need to be invested if Sub-Saharan Africa is to fill the infrastructure gap. The gap is defined as the distance between the current quantity and quality of infrastructure, and a set of sector-specific targets that if achieved would enable Sub-Saharan Africa to catch-up with the rest of the developing world. Much of this investment will support the construction of long-lived infrastructure (e.g., dams, roads, and power stations), which will need to be capable of delivering services under current and future climate.

Relatively little is known on how climate change may affect the desirable design, location, timing, and composition of the stock of infrastructure that will need to be built in the short to medium term. In particular, while there is widespread scientific consensus that the climate of the next few decades will be significantly different from today's climate, and the current trajectory of increasing temperatures is likely to accelerate over the next several decades, there remains large uncertainty on whether drier or wetter conditions will prevail in the continent's various sub-regions and countries. A better understanding of the range of climate impacts on infrastructure development, and of the approach to deal with climate uncertainty, is thus necessary in order to inform future investment decisions and to avoid locking Sub-Saharan Africa in a pattern of climate-vulnerable development that will be very costly, or in some cases impossible, to undo in the future. To address these concerns, the World Bank, together with the African Climate Policy Center (a think-tanks housed by the UN Economic Commission for Africa) has launched a flagship study that will add a climate dimension to the knowledge platform earlier developed in the context of the African Infrastructure Country Diagnostic (AICD). Funding is being provided by the Nordic countries, Germany and France.

The objective of the study is to strengthen the analytical base for investments in Africa's infrastructure under a future uncertain climate. More specifically, the program seeks to:

- a) Evaluate a range of impacts of climate change on a subset of infrastructures (roads, hydro-power, irrigation, municipal water supply) over a wide range of climate scenarios;
- b) Develop and test a framework for investment decisions that can be "robust" under a wide range of climate outcomes;
- c) Enhance the "investment readiness" of African countries to use climate finance resources geared at increasing their resilience to climate variability and change.

Expected outcomes: The study will develop a new set of aggregate cost estimates for achieving Africa's infrastructure development objectives, including the extra costs to make investment climate-resilient, and will develop a methodology to plan and design specific projects in ways that can deliver the intended services under as many climate scenarios as possible.

16. **IDA-financed operations in Sub-Saharan Africa are targeting multiple benefits from climate mitigation and adaptation actions.** Climate resilience is being mainstreamed in IDA countries through targeted programs, investments and partnerships focusing on key sectors. Through the TerrAfrica Partnership and the two umbrella investment programs under it (Strategic Investment Program for Sustainable Land Management and the Great Green Wall Initiative), IDA resources have leveraged significant resources from other programs (GEF, LDCF, and SCCF) for a wide range of IDA countries. In FY 12, three investments in Chad,

Nigeria and Togo mobilized US\$525 million financing from IDA and an additional US\$27 million from the GEF and LDCF/SCCF to increase ecosystem and community resilience (see Box 1). On investment readiness, the Sub-Saharan Africa Region is working with the African Union and the Regional Economic Communities (RECs) on a Climate Risk Management and Green Growth project. This will help strengthen institutions and support planning for climate action, at the regional, sub-regional and country level. Work is also underway to address climate vulnerabilities in infrastructure (see Box 2).

17. IDA-financed Development Policy Operations (DPOs) are increasingly supporting climate sensitive policy actions. DPOs are well positioned to encourage economic policy reforms that change incentives and improve both economic efficiency and environmental performance, as well as institutional capacity development that improves the ability of governments to implement good adaptation and mitigation policies. Among operations approved in FY12, 11 DPOs in nine IDA countries support reforms intended to provide climate change co-benefits. Out of the total commitments for these DPOs, US\$81 million (or 15 percent of commitments) finance actions that could yield adaptation co-benefits and US\$109 million (or 19 percent of commitments) finance actions intended to yield mitigation co-benefits.⁷ The Ghana Natural Resources and Environmental Governance DPO series supported the drafting of a national climate change strategy. The first operation of a programmatic Climate Change DPO series of three operations for Vietnam was approved in the third quarter of FY12 to support policies and institutional capacity strengthening to promote climate resilient and lower carbon intensity development (see Box 3).

Box 3: Vietnam Climate Change Development Policy Credit

The Government of Vietnam has sought support from the Bank to respond to the challenges of climate change and the opportunity to shift to sustainable, low carbon growth. The DPO series aims to support Vietnam adopt policies and strengthen institutional capacity to promote climate resilient and lower carbon intensity development. Policy actions are organized in three pillars: (1) the adaptation pillar, to lay the basis to improve the climate resilience of water resources; (2) the mitigation pillar to facilitate lower carbon intensity development mainly through improved energy efficiency; and (3) the cross-cutting pillar, to strengthen the Government's capacity and preparedness to formulate, prioritize and implement climate change policies. This includes supporting the multi-donor platform for strategic dialogue and coordination.

The policy actions will build up the analytical and scientific basis for climate policy formulation and implementation, and integrate climate change considerations into development planning. The DPO will also strengthen the financing framework for climate action. IDA is also working with local governments pioneering the use of social accountability approaches to ensure that climate finance is put to effective use.

⁷ These are Gambia: Budget Support (P123679), Ghana: 4th Agriculture DPO (P122808), Kyrgyz Republic: Economic Recovery Support Operation (P125425), Niger: Shared Growth Credit I (P125272), Rwanda: Support to Social Protection System (P1256877), Sierra Leone: Budget Support (P126355), Tonga: Economic Recovery Operation (P126355), Vietnam: PRSC 10 (P111183), Vietnam: Climate Change DPL (P122667), Vietnam: Power Sector Reform DPO2 (P124174), and Zambia: PRSC-3 (P126349).

B. Leveraging Additional Sources of Funding

18. **IDA continues to play a crucial role in helping leverage additional development funds for climate change and in providing a comprehensive development platform for its clients.** IDA resources, investments and the country dialogue have increasingly been used as a platform for climate-change funding – both mitigation and adaptation – from various trust funds. During IDA15, IDA staff worked with other donors in designing and implementing new financing mechanisms for climate actions as well as in enhancing coordination in implementing climate actions in IDA countries. During IDA16, IDA continued to help countries access other sources of finance, notably through the Climate Investment Funds relevant for them, the Global Environment Facility, the Forest Carbon Partnership Facility (FCPF), and the Global Facility for Disaster Reduction and Recovery (GFDRR).

Climate Investment Funds

19. **Within the Climate Investment Funds, the Strategic Climate Fund is particularly relevant for IDA countries.** The CIF is comprised of two distinct funds, the Clean Technology Fund (CTF) and the Strategic Climate Fund (SCF). The SCF includes three programs: the Pilot Program for Climate Resilience (PPCR), the Forest Investment Program (FIP), and the Program for Scaling-Up Renewable Energy Program in low income countries (SREP). The CIFs are implemented jointly by the World Bank, the African Development Bank, the Asian Development Bank, the European Bank for Reconstruction and Development, the Inter-American Development Bank, and the International Finance Corporation. Each of these programs has used the IDA dialogue and investments to leverage effective mainstreaming of climate mitigation and adaptation agendas. Early reviews of the CIF programs highlight the innovative approach, transformational impact and ability to leverage financing as their key strengths. Of the total US\$6.8 billion for endorsed CIF investment plans for all programs, and across all MDBs, up to FY12, US\$2.5 billion was for IDA countries (including blend countries).

20. **The Pilot Program for Climate Resilience under the SCF is making strategic contributions to 17 IDA countries (including 6 blend countries).** The US\$1 billion PPCR aims to pilot and demonstrate ways in which climate risk and resilience can facilitate transformational change through scaled-up climate resilient investments. As of August 2012, 17 IDA countries have had their Investment Plans (termed Strategic Programs for Climate Resilience) endorsed by the PPCR Sub-Committee for a total amount of US\$856 million to be implemented through the various MDBs.

21. **An envelope of almost US\$400 million (40 percent) of PPCR total resources will be implemented by IDA to start transformational changes towards climate resilient development in IDA countries.** These resources will complement planned IDA financed investments for an indicative amount of US\$425 million. PPCR financed projects reflect country's visions of transformational change towards climate resilient development, which in turn reflect their specific contexts, local needs and priorities. Many of the changes incorporate process from policies to actions. Examples include setting up coordinating mechanism to develop and design policies and actions across multiple sectors in Bangladesh, Zambia, Samoa; scaling-up investments in coastal protection in Bangladesh combining tree planting, changes in

planning codes, and hard infrastructure options; financing climate resilient infrastructure in Grenada and Saint Vincent and the Grenadines including through improved design standards, integration of new technologies, and building codes; in Niger, there will be help for farmers to address climate resilience measures to enhance food insecurity through the use of root crops; and Nepal aims to increase resilience to climate-related hazards by improving the accuracy and timeliness of weather and flood forecasts and warnings for vulnerable communities through use of new and mobile technology. Up to FY12, a total of five IDA investment projects amounting US\$125 million had been approved with co-financing of US\$98 million in PPCR resources.

22. The Forest Investment Program allocated US\$145.6 million to fund World Bank implemented investment operations, of which US\$51 million are for IDA countries. For FY12, US\$13 million have been approved for investment operations in Lao PDR which will have an IDA co-financing of US\$15 million. The FIP is designed to provide fast track finance for developing countries' Reducing Emissions from Deforestation and Forest Degradation (REDD) readiness efforts by investing in the underlying causes of deforestation and forest degradation. For example, in the Democratic Republic of Congo (DRC), FIP investments will help improve charcoal making and provide efficient wood stoves. FIP resources will also enhance productivity of essential food crops through agro-forestry. While the REDD, or forest based mitigation, is intended to deliver GHG emission reductions, livelihood and poverty impacts are co-benefits; early lessons from FIP investment plans indicate that countries need to address forest dependent livelihoods, governance and security of tenure to achieve success on REDD. Three of the FIP investment plans (DRC, Lao PDR and Burkina Faso) are using an 'adaptation based mitigation' approach, largely through community based sustainable management of forests, wood fuel plantations and agro-forestry to address food and fuel needs and efficient biomass conversion through improved wood stoves.

23. The Program for Scaling-Up Renewable Energy in Low Income Countries resources are assisting 6 IDA countries to demonstrate the economic, social, and environmental viability of low carbon development pathways. The Program was introduced in 2009 and these countries (Kenya, Ethiopia, Mali, Nepal, Honduras and the Maldives) have received endorsement for US\$210 million in support of their Investment Plans and are currently preparing the investments/projects. Of these, US\$82.2 million of SREP funding will be channeled through the World Bank. The Maldives will seek endorsement of its SREP investment plan for US\$30 million in FY13. An additional group of IDA countries – Tanzania, Liberia, Armenia, Yemen, Mongolia, Solomon Islands, and Vanuatu – have started to develop SREP investment plans to support a low carbon transition in the energy sector. These countries will seek endorsement for a further US\$240 million in SREP funding for the implementation of their investment plans.

24. IDA platform role has been crucial in leveraging reforms and transformational development for the CIF programs' dual objective of achieving climate resilient and low carbon development. For example, the CAS and DPO in Mozambique have informed and leveraged climate resilient development in the water and urban (coastal cities) sectors through the PPCR. The Dominica Strategic Program for Climate Resilience articulated a national low carbon growth and climate resilience strategy. A project to support the implementation of the strategy is under preparation with proposed support combining IDA and CIF resources. Meanwhile the Community Action Program (CAP) for Climate Resilience investment in Niger to

secure food security has built on the successful foundation laid by the IDA supported CAP investments.

Global Environment Facility

25. **IDA continues to leverage the Global Environment Facility and related trust funds to advance the climate agendas.** In FY12, climate change mitigation projects combining IDA and GEF resources were approved by the Board for energy efficient lighting in Burundi and Liberia; energy efficiency in industry for Vietnam; and energy efficiency in the public sector in Armenia. New concepts to reduce GHG emissions were approved by the GEF Council in FY12 to complement IDA-supported operations in Bosnia and Herzegovina, India and Uzbekistan. The Least Developed Countries Fund (LDCF) is managed by the GEF and targets the adaptation needs of the least developed countries. During FY11 and FY12, the Board approved adaptation operations using LDCF resources in the IDA countries of Sao Tomé and Príncipe, Chad, Malawi, Togo and Kiribati. During FY12, three additional IDA-supported initiatives were cleared by the LDCF Council for adaptation funding in Malawi, Rwanda and Ethiopia. Additionally, the GEF-managed Special Climate Change Fund (SCCF) provides additional cost funding for projects supporting adaptation to the adverse impacts of climate change as well as technology transfer. During FY11 and FY12, the Board approved an operation using SCCF resources within the overall financing package in Nigeria, and an SCCF concept was approved by the GEF Council to complement the IDA-funded PRASNICA water resource management project in Nicaragua.

Forest Carbon Partnership Facility

26. **The Forest Carbon Partnership Facility is supporting the ongoing IDA funded activities in the forest sector in IDA countries.** The FCPF, managed by the World Bank, is a global partnership program focused on reducing emissions from deforestation and forest degradation, forest carbon stock conservation, sustainable management of forests and enhancement of forest carbon stocks (REDD+). The FCPF has created a framework and processes for REDD+ readiness, which helps countries get ready for future systems of financial incentives for REDD+. As of end of FY12, 22 of the 37 countries selected in the partnership were IDA countries.⁸ A recent review by the Bank's Independent Evaluation Group has highlighted that the FCPF has opened dialogue between donor and recipient countries, as well as between national governments and civil society stakeholders, forest-dependent communities and indigenous peoples' groups.⁹ The IEG review also indicates that the FCPF has rekindled interest in addressing challenges that have plagued the forest sector for years.

⁸ These include Bolivia, Cambodia, Cameroon, Central African Republic, Democratic Republic of Congo, Ethiopia, Ghana, Guyana, Honduras, Kenya, Lao PDR, Liberia, Madagascar, Mozambique, Nepal, Nicaragua, Papua New Guinea, Republic of Congo, Tanzania, Uganda, Vanuatu and Vietnam.

⁹ IEG, Global Program Review on the Forest Carbon Partnership Facility (2012).

Global Facility for Disaster Reduction and Recovery

27. **The Global Facility for Disaster Reduction and Recovery, a global partnership managed by the World Bank Group (WBG) and the UN, includes climate adaptation as an integral part of its work.** A 2010 joint World Bank Group-UN report showed that investing in preventative measures can lower vulnerability to natural hazards like earthquakes, cyclones and floods. In eight focus countries (Burkina Faso, Ethiopia, Ghana, Mali, Malawi, Mozambique, Senegal and Togo) IDA has supported the development of national plans for Disaster Risk Management (DRM) with national governments. The implementation of these plans will reinforce countries' ability to respond to current climate variability, and improve their readiness for the higher climatic variability of the future. In Bolivia, a combination of GFDRR and IDA financing has supported the development of a national DRM plan, associated capacity building, and investments that have improved the countries' understanding of flood risk, and their resilience to future floods. Ex-ante investments have significantly lower costs than relief and rebuilding after disaster hits. Preventative measures are all the more important given that the estimated number of people exposed to storms and earthquakes in large cities could double to 1.5 billion by 2050.¹⁰

28. **IDA countries receive a relatively small share of trust funds supporting climate related efforts.**¹¹ With respect to all recipient-executed trust funds supporting climate change related activities implemented by the World Bank, during IDA15 about US\$344 million were committed and US\$158 million were disbursed for IDA-only countries.¹² This represented about 22 and 15 percent, respectively, of the total recipient-executed trust funds with climate change related activities channeled through the World Bank. Compared to the annual averages during IDA15, commitments and disbursements increased in FY12, when US\$236 million were committed and US\$87 million were disbursed for IDA-only countries (against annual averages of US\$115 million and US\$53 million for commitments and disbursements respectively during IDA15).¹³ However, the share of recipient-executed trust funds with climate change related activities channeled through the World Bank to IDA-only countries remained almost the same in FY12, at 22 and 14 percent, for commitments and disbursements respectively). Including blend IBRD/IDA countries, commitments and disbursements in FY12 accounted for 31 and 40 percent, respectively.

¹⁰ World Bank and UN, 2010 *Natural Hazards, UnNatural Disasters: The Economics of Effective Prevention*. Washington, DC: World Bank.

¹¹ These figures relate to activities aimed at carbon sequestration, renewable energy technologies, gas-flaring abatement, energy conservation and efficiency improvements, non-motorized transport, clean transportation technologies, natural disaster management, vulnerability assessment and monitoring, and water resources management.

¹² Including blend countries, total commitments for IDA countries during IDA15 increased to US\$426 million and disbursements to US\$194 million.

¹³ Including blend countries, total commitments increased even more rapidly in FY12 to US\$417 million and disbursements to US\$191 million.

C. Challenges Facing IDA Countries in Accessing Climate Finance

29. **Despite the progress made in mobilizing resources for climate change, significant challenges remain.** Poverty reduction needs remain very high, and climate related issues add to the development challenges faced by IDA countries. The World Bank study ‘Economics of Adaptation to Climate Change’ estimates annual adaptation costs of US\$70-100 billion. These were based on a 2°C global warming scenario, and consider only direct impacts on infrastructure, coastal zones, water supply and flood protection, agriculture, fisheries, human health and forestry and ecosystem services. Considering costs of multisectoral or indirect impacts and recent revised projections on global warming, efforts needed to ensure that poverty reduction efforts are climate resilient –and when possible, include low carbon development opportunities – are enormous. Sufficient resources – both human and financial – are also needed to identify and prepare projects that contribute to the mainstreaming of climate response into country planning and sector operations. While the Green Climate Fund (GCF) is being put in place, IDA could play a central role in these efforts, building up from existing country relationships and knowledge, experience with implementation issues, tested disbursement systems, the new tracking mechanism and a focus on results.

III. Implementing IDA’s Agenda on Climate Change and Adaptation: Key Achievements of the First Year of IDA16

30. **Results achieved in FY12 indicate that significant progress has been made in capturing climate mitigation and resilience opportunities in core development activities.** Progress is presented here for the key monitorable actions for the first year of IDA16 (i.e., FY12). The World Bank Group’s New Environment Strategy, the new Social Protection and Labor Strategy, and IEG’s evaluation “Adapting to Climate Change: Assessing the World Bank Group Experience”, all provide a backdrop and context for the reporting on these actions.

31. **An important development since the beginning of the current replenishment period was the launch of the World Bank Group’s new Environment Strategy (2012-2022).**¹⁴ The strategy, discussed by the Executive Directors in May 2012, lays out an ambitious action agenda that seeks to respond to calls from client countries for a new kind of development path – one that supports growth while focusing more on sustainability and ensuring that the environment is a key enabler for green, more-inclusive growth. Building on the WBG’s Strategic Framework on Development and Climate Change (SFDCC) for FY09-11, which provided a roadmap for climate action and guided the Bank’s work in mainstreaming climate change in country and sector strategies, the new Environment Strategy lays out a vision for a “Green, Clean and Resilient World for All”. “Resilient” means being prepared for shocks and adapting effectively to climate

¹⁴ The Social Protection and Labor Strategy (SPL) (2012-2022) was also discussed by the Executive Directors since the beginning of the IDA16 replenishment period. The strategy responds to a changing world in which people and countries are struggling to manage risk and volatility. Economic shocks and epidemics transmit rapidly across national borders and, as mentioned above, disasters have increased in frequency. The Strategy aims to help all countries develop more responsive, inclusive and productive SPL systems. It places high priority on building resilience given its importance in the livelihoods of poor and vulnerable groups.

change. The Environment Strategy and the various regional climate strategies stress the role of IDA as the main platform for funding and mainstreaming climate change into development, through sector strategies, operations and related knowledge activities.

32. Increasingly social protection programs are incorporating climate change as part of their activities. The Social Protection and Labor Strategy clearly articulates the contribution of social protection to longer term climate adaptation, directly and indirectly, especially by increasing the resilience of poor households through building assets, livelihoods and insurance mechanisms, as exemplified by some analytical work (see Annex 3).

33. The IEG evaluation “Adapting to Climate Change: Assessing the World Bank Group Experience”, to be considered by the Committee on Development Effectiveness (CODE) of the Board of Executive Directors, will contribute to the World Bank Group’s efforts to address the impacts from climate change on development. The evaluation notes that the Bank’s continued and sustained engagement has led to positive outcomes for climate resilient development in partner countries. It calls for the Bank to put in place systematic processes (e.g., guidance at the project level) and an outcome-oriented results framework to guide and track its adaptation efforts. The evaluation recognizes that while to a large extent pursuing climate change adaptation starts with the pursuit of sustainable development (especially sustainable agriculture, integrated water resource management, and disaster risk reduction), the challenge for the Bank is to integrate adaptation more seamlessly and cost-effectively, and to go beyond that to identify and support adaptation needs over the longer-term.

A. Addressing Climate Resilience in CASs

34. In FY12, vulnerability to climate change was discussed in all Country Assistance Strategies/Country Partnership Strategies (CAS/CPSs) and Interim Strategy Notes (ISNs) for IDA countries (a total of 18).¹⁵ Twelve CASs/CPSs and 6 ISNs were completed. While the quality and depth of the discussion varied, all CASs/CPSs and ISNs considered climate change vulnerabilities as part of the discussion of the country’s development challenges and priorities. Overall, the coverage of the discussion on vulnerability and climate resilience in CASs and ISNs improved compared to FY11 (88 percent) and is up from 32 percent in FY07 and 63 percent in FY09. Almost three quarters of the strategies included analytical, lending or technical assistance with climate change forming a major focus as a standalone or as a cross-cutting issue both for adaptation and mitigation (see Annex 2). For example, the Vietnam CPS explicitly recognizes the serious challenge that climate change poses to development and discusses present and future vulnerabilities. The Mozambique CAS includes a pillar on vulnerability and resilience with three main objectives to: (a) effectively respond to macroeconomic and idiosyncratic shocks; (b) improve resilience to natural disasters and the impacts of climate change; and (c) strengthen social safety nets for the most vulnerable people. The objectives of this pillar will be supported by ongoing and new projects and analytic work including: (1) a Cities and Climate Change project; (2) a Social Protection project; (3) a Climate

¹⁵ Country Assistance Strategy (CAS) is sometimes called Country Partnership Strategy (CPS).

Change DPO; and (4) Targeting and Review of Social Protection (AAA). The PPCR was able to build on the CAS to develop a pipeline of investments to realize the resilience pillar.

35. **Five out of twelve CASs/CPSs in FY12 (or 42 percent) included actions to improve energy efficiency and/or increase the use of renewable energy** (see Annex 2). The Climate Change Pillar of the Sri Lanka CPS emphasizes renewable energy (hydro, solar, biomass, and wind), energy efficiency, and agricultural and irrigation efficiency activities, which are expected to result in lower carbon footprints. Similarly, the Kosovo CAS includes objectives to strengthen infrastructure, with emphasis on production, efficiency and financial and environmental sustainability of the energy sector and reducing carbon emissions. In Bolivia, efforts are ongoing to increase knowledge about current climate variability and future climate change through investments in hydromet systems. Priority is given in most countries to mitigation activities in the energy sector followed by agricultural and irrigation efficiency activities.

36. **ISNs also included a discussion of climate resilience.** The ISN for Madagascar has a detailed discussion of vulnerability to climate change – recurrent droughts and their effects although it has no detailed discussion of the vulnerability or adaptation options to climate change. In addition to discussing the country’s vulnerability to climate change, the Afghanistan ISN plans to support actions with adaptation focus through investment projects (Improving Agriculture Inputs Project) and through the annual DPO (see Annex 2).

37. **CASs are including climate change related indicators and targets in their results frameworks.** For example, the Ethiopia CPS targets an increase in the area under sustainable land and water management practices in selected watersheds (PSNP, SLMP, Tana and Beles) from zero in 2010 to 1,000,000 hectares by end FY16. The Vietnam CPS on the other hand targets a reduction in CO₂ emissions compared to the “business as usual scenario associated with investments” of 1.5 million tons through actions supported by IDA and 1 million tons through actions supported by IFC by 2015. A third example is the Samoa CPS, which includes targets of climate proofing and improved drainage for 30 km of the West Coast road by end 2016 and for 6 districts, to complete high priority coastal protection initiatives (such as mangrove planting) by 2016. However, much more needs to be done to ensure adequate attribution and monitoring of results. As recommended in the above-mentioned IEG evaluation, there is a need to establish an outcome-oriented results framework on resiliency to climate change. Working with the World Development Report (WDR) on decision making under risk and uncertainty, the Bank intends to gradually develop methodologies and processes to capture intermediate and long term outcomes.

B. Scaling up Analytical and Advisory Activities

38. **Data for FY12 shows that IDA completed 27 country-specific ESW and TA on climate change, which was close to the number (28) in FY11.** In addition, IDA completed 41 multiple country ESW and non-lending technical assistance activities as compared to 58 completed in FY11. Since several ESW are ongoing, a more complete picture on analytical and advisory efforts will be possible at the end of FY13. Some highlights include:

- “Adaptation to a Changing Climate in the Arab Countries” covering 22 Arab countries, including Yemen and Djibouti;

- multi-country technical assistance and analytical work in the Sundarbans (India and Bangladesh);
- analytical work on the drivers of deforestation in the Congo Basin;
- development of standardized methodologies for evaluating carbon storage potential from sustainable forest management at sub-regional level in Sub-Saharan Africa;
- a major climate risks analysis to enhance the climate resilience of the Niger Basin’s US\$8 billion plan for investments in irrigation, hydropower and other infrastructure;
- a disaster and climate risk management project in Moldova including measures to strengthen the capacity of hydromet services, emergency response and providing support to pilot climate risk management in agriculture;
- low carbon growth studies in Vietnam providing knowledge of the incremental costs and benefits of development programs with lower GHG emissions and offering a foundation for Nationally Appropriate Mitigation Actions (NAMA);
- adaptation prioritization tool in Vietnam in support of the Ministry of Planning and Investment to guide decision making in the development and implementation of the Government Strategic Economic and Development investment planning; and
- a climate change assessment for Nigeria organizing and enhancing knowledge and policy insights on low carbon, climate-resilient development; the results have been used to inform the design of a US\$500 million IDA lending operation on soil erosion and climate change; and
- a green growth study of the transportation sector in Georgia, titled “A Policy Framework for Green Transportation in Georgia-Achieving Reforms and Building Infrastructure for Sustainability”, supports the Government of Georgia in pursuing a green transportation strategy by reducing reliance on energy imports, reversing air pollution, and strengthening Georgia’s position as a regional trade hub and tourism destination by developing efficient and clean transport services.

39. **There are concerted efforts to bridge the climate change knowledge gap.** These efforts include the development of a climate change knowledge portal, the open climate data initiative and flagship/special reports on adaptation and low carbon development. Examples of efforts to scale up analytical and knowledge work in FY12 include:

- Readiness facility to support renewable energy/energy efficient initiatives for small islands states (SIDS-DOCK);¹⁶
- the Open Climate Data Initiative that continues to make the latest knowledge and quality data available for accelerating resilient development and to support climate impacts and risk analysis. The Initiative includes the Climate Change Knowledge Portal and the Little Climate Data Book with climate and climate related data including latest country socio-economic datasets to support vulnerability and impact assessments;¹⁷

¹⁶ SIDS-DOCK is an initiative among member countries of the Alliance of Small Island States (AOSIS) to provide them with a collective institutional mechanism to transform their national energy sectors into a catalyst for sustainable economic development and generate financial resources to address adaptation to climate change.

¹⁷ A partnership of the Sustainable Development Network, Development Economics Data Group and the Global Facility for Disaster Reduction and Recovery.

- the growing compendium of Disaster Risk Financing and Insurance analytical work and publications, including country case studies developed or supported by the GFDRR's Disaster Risk Financing and Insurance program and Damage, Loss and Needs Assessment Guidance Notes;
- the Open Data for Resilience Initiative (Open DRI) provides tools to share, source and create disaster risk data by making publicly available quality information on exposure, vulnerability and risk;
- a Post-Disaster Needs Assessment (PDNA) methodology developed and applied to slow-onset disasters such as the Horn of Africa drought in 2011-2012. Work is underway to integrate upstream disaster risk management and climate adaptation considerations into the PDNA;
- the Weather and Climate Information and Decision-Support Systems Program, including reports on *Implementing Hazard Early Warning Systems* (2011) and *Managing and Delivering National Meteorological and Hydro-meteorological Services* (2011);
- PPCR has advanced shared learning and exchange of experiences between pilot countries which are largely IDA, on the critical role of Hydromet and Climate Services as a critical and fundamental pillar of climate resilience;
- a toolkit on precipitation induced landslide risk management based on successfully piloted community based approaches in St. Lucia;
- knowledge products on climate and water resources (Zambezi, Uganda, the Nile); improved charcoal management in Tanzania; flood risk mapping in Luanda and Dakar; and the implications of climate change on fisheries, gender, youth, communities, coastal cities, migration and health (in particular malaria) in selected Sub-Saharan African countries;
- an operational toolkit on the social dimensions of climate change;
- analysis prepared at the request of the G20 on "Mobilizing Climate Finance"; and facilitating and supporting international dialogue on climate agreements, and promoting the inclusion of the Sub-Saharan Africa's agenda into the process (e.g., the Durban climate summit).

40. **The Bank is also undertaking work in collaboration with UNDP to develop a new Climate Change Public Expenditure Review (CCPER).** The instrument aims to help governments' better plan, monitor and evaluate the use of scarce public resources for climate adaptation and mitigation purposes (see Box 4). One related area where future IDA work may be helpful is in supporting countries in the development of national "climate finance mechanisms" so as to facilitate climate expenditures within a sound, well-managed framework. Several IDA countries are already moving well along this path (e.g., Ethiopia, Rwanda, Kenya), and others may be able to benefit from a similar approach. For Tanzania, together with the authorities and DFID, IDA is working on identifying possible options for such a finance mechanism. Funds could also be made available to help countries articulate investment packages that are climate resilient for implementation with donor financing now and in the future, or for inclusion in country's development plans.

Box 4: Public Expenditure Reviews on Climate Change

Bangladesh, Cambodia, Morocco, Nepal, Philippines, Samoa and Thailand have pioneered Public Expenditure Reviews on climate change issues. Similar reviews are now underway in Indonesia and Vietnam. Several countries in Latin America and Sub-Saharan Africa are considering launching similar expenditure review processes. Motivations vary. National and international environmental agencies tend to see Climate Change Public Expenditure Reviews as an opportunity to raise awareness of climate change and promote responsive policies by engaging central planning and finance agencies. After all, Public Expenditure Reviews translate climate change into fiscal policy and public expenditure management issues that are familiar to these agencies. Those countries with climate change strategies in place use Climate Change Public Expenditure Reviews to assess the climate change impacts of policies and suggest how they can be adjusted to better address climate change adaptation and sustainable development objectives. Reviews highlight alternative applications of scarce resources, the trade-offs between climate change and other policy objectives as well as identifying potential co-benefits. This facilitates the integration of climate change policies into expenditure plans and budgets.

Pilot reviews have focused much of their attention on the definition of climate change expenditures. This process has helped clarify policy objectives. It has also revealed that a substantial, indeed the major part of climate change adaptation activities are financed from domestic resources, through the budget rather than externally financed projects. Attention is now turning to some of the public expenditure management challenges posed by climate change. Risk management comes to the fore to deal with increased exposure to climate related hazards. Decision making now has to take into account the cascade of uncertainties surrounding climate change and its impacts on ecosystems, economies and societies. National authorities are also considering how to configure their financial management systems to interact with the changing global architecture for climate change finance. Many countries have established or are establishing National Climate Change Funds. Climate Change Expenditure Reviews reveal a wider range of options, drawing on the experience from poverty reduction spending, using the government's budget and financial management systems to manage target resources for climate change. This has important implications for the external financing, demonstrating the potential for budget support climate change objectives.

C. Assessing Potential Climate Impact of Projects in Climate Change Sensitive Sectors

41. **Progress continues on building the capacity, methods and tools to enhance applications of climate risks/impacts analysis to support work in IDA countries.** In climate change sensitive sectors efforts are ongoing to ensure that they are consistent with the climate change mitigation and adaptation strategies of the country. Efforts are also ongoing to enhance staff technical skills and training to use risk screening tools, user interfaces and applications of tools. Some key achievements and work underway include:

- Rapid Assessment of Climate Change Vulnerability, Risk and Adaptation in the Energy Sector, a virtual screening tool developed by the Energy Sector Management Assistance Program (ESMAP) and the Environment's Climate Change Team. The objective of this virtual screening tool is to help energy planners and decision-makers perform a very preliminary country level diagnosis to: (i) screen broad energy sector vulnerability and risks based on existing climatic variability, trends and projections of future changes, and (ii) pre-identify possible adaptation options or the need for further analysis. The

screening tool will include an interactive version of the tool to be hosted within the World Bank Climate Change Knowledge Portal (CCKP) for complementarity with additional climate information at the country/regional level.

- Using probabilistic modeling techniques piloted through the Central America Probabilistic Risk Assessment (CAPRA) initiative is allowing the Bank to support Caribbean and Central American IDA clients analyze climate risk to portfolios of assets, informing decision making and potentially providing quantifiable climate resilience progress at sector and national levels.
- A study has been initiated to develop a methodology to support the systematic and enhanced treatment of climate impacts at the strategic (e.g. CASs, Strategic Programs for Climate Resilience) level. The study will also develop sector guidance (agriculture, water, roads) to incorporate considerations of climate impacts and risks at the project level.¹⁸
- Work undertaken by the Water Anchor on the impact of climate change on hydrologic indicators and exposure risk at the level of catchments will form the basis for project level screening for climate risk in the near future. These datasets can be accessed through the Climate Change Knowledge Portal.
- An e-learning online module on “Economics of Climate Resilient Development” will be launched through the World Bank Institute for client countries, building on the case studies and lessons of the World Bank study on “Economics of Adaptation to Climate Change”.

42. **Operations in IDA countries are increasingly including climate change analysis in sensitive sectors and incorporating multiple benefits from climate mitigation and adaptation actions.** Sectors such as power and transport often incorporate adaptation and mitigation considerations into project design. Development of methods and tools has been initiated in FY12 for both mitigation and adaptation. Some examples include: (1) common metrics for city wide GHG analysis; (2) Open Data for Climate Change, Climate Change Knowledge Portal, Climate for Development and Open DRI initiatives; (3) tools and methodologies for low emissions planning with e-learning and capacity building (WB/ ESMAP/ WBI) . In addition, the roll out of harmonized methods and tools for Greenhouse Gas analysis in the energy, forestry and transport sectors across the WBG is planned for FY13.

43. **Combining resilience and GHG emission reduction is showing promising results.** In Kenya, a pilot program is supporting the adoption of innovative sustainable agricultural land management practices by small-holder farmers. This could additionally raise farm productivity levels, enhance their resilience to climate shocks, and enable them to receive payments from voluntary carbon markets for storage of carbon in agriculture soils. A similar approach is being followed in Ethiopia.

¹⁸ Generally, the PPCR is structured in two phases. In the first phase countries receive support to undertake cross-sector dialogue to arrive at a common vision of climate resilience in the medium and long-term, and formulate strategic approaches for climate resilience. A Strategic Program for Climate Resilience (SPCR), outlining an underlying investment program, is also prepared.

44. **Despite the progress made in developing knowledge, tools and innovations on resilient development in IDA countries over FY11-12, many challenges remain.** The 2012 IEG evaluation “Adapting to Climate change: Assessing the World Bank Group Experience” recommends that more effort be devoted to learning about the costs, benefits, and impacts of climate interventions, and to helping countries better track progress in promoting resilience and reducing vulnerability. The Economics of Adaptation work highlighted many methodological issues and data needs involved in assessing costs and benefits of adaptation. Another recommendation made by the IEG evaluation regards the need to develop screening tools to identify climate risks and opportunities in IDA- (and client-) financed operations. The Bank is responding to this need. Tools developed by the IFC could provide a good starting point for the preparation of a tool to be used in IDA countries. In the meantime, country specific efforts are ongoing. For example, Tanzania is working with partners to undertake screening of government programs in several vulnerable sectors (agriculture, urban infrastructure). However, cross-sectoral collaboration, institutions and partnerships necessary for climate resilient development take time to build. This means that progress could be slow, but the lead-up time is proving to be necessary to ensure results and sustainability.

D. Continuing Dialogue with Development Partners on Rio Markers

45. **The World Bank has worked with partners to facilitate global progress on monitoring financial flows to developing countries.** It was among the first international development institutions to be equipped with a system for consistent and comprehensive monitoring and reporting of climate change co-benefits in its activities. The Bank consulted on the proposed system with MDBs, the OECD DAC Secretariat, the UNFCCC Secretariat as well as with NGOs and think tanks active in this field (e.g., the Climate Policy initiative, the Overseas Development Institute and the World Resources Institute). The Bank’s climate finance tracking system is compatible with the Rio Markers approach as it uses similar definitions for adaptation and mitigation and tracks separately adaptation and mitigation co-benefits. To keep the benefit of more granular data, a new field is being introduced by the OECD DAC Secretariat to report adaptation and/or mitigation financing (instead of a more approximate “principal” or “significant” marking). This field (used by the Bank in its reporting) could progressively be used also by donors when they report to the DAC on their climate change-related aid.

46. **To meet commitments for harmonizing climate finance tracking among MDBs, a joint MDB working group has been established** (with World Bank participation), with IDB coordinating the mitigation track and AfDB the adaptation track. MDBs have recently finalized a joint approach for mitigation finance reporting and released the first Joint MDB Report on Mitigation Finance (covering FY11) at Rio+20 (June 2012). For adaptation finance, MDBs are finalizing a joint approach for announcement (with first numbers, covering FY11) in Doha (December 2012).

47. **Experience with the Bank’s system will support global efforts to improve tracking of climate finance, at both country and international levels.** At the country level, there is growing demand from client countries for assistance to strengthen national systems (including monitoring) for climate finance. For instance, IDA is assisting Vietnam in monitoring climate finance, as part of a DPO aiming at strengthening institutional readiness for climate change.

IV. Looking Forward: Challenges and Opportunities for IDA

48. **Notwithstanding IDA's progress in supporting the climate change agenda, significant challenges remain.** IDA16 is playing a key role in adaptation and mitigation efforts. As a main source of core development assistance, IDA is a key avenue for mainstreaming climate resilient, low carbon concerns into sector development. However, the development community only recently began developing the knowledge, tools and financial instruments needed to integrate climate resilience into the development process. Moreover, large gaps remain between the scale of development assistance needed to support developing (and in particular least developed) countries in adaptation and mitigation efforts and resources actually available. As mentioned earlier, the World Bank study 'Economics of Adaptation to Climate Change' estimated annual adaptation costs of US\$70-100 billion, considering direct impacts on infrastructure, coastal zones, water supply and flood protection, agriculture, fisheries, human health and forestry and ecosystem services. Eighty percent of these costs are likely to be spent in urban areas alone. These estimates, were based on a 2°C global warming scenario, and did not include costs of multisectoral or indirect impacts. The increasing demand for support, and the urgency for tools and technologies, will require continued ramping-up of the World Bank's, IDA's and partners' capacity and effectiveness.

49. **It looks increasingly likely that the world would exceed the 2°C threshold, and that global mean temperatures are projected to rise by 1.5°C-4.5°C within this century** and up to 6°C-8°C by 2300, depending on the underlying emission scenario.¹⁹ Even small changes in mean global temperature are likely to lead to dramatic changes in extreme weather events. A warming of 4°C is likely to lead to extremely high temperatures, massive rainfall events, extreme fire conditions, large hail in some locations, increased tropical cyclone intensity, and storm surges. In a world potentially well beyond +2°C, research is indicating that there is a significantly higher probability of tipping elements in the Earth's system being activated, with cascading effects around the world. Instead of incremental change, such (non-linear) dynamics could be disruptive and inherently difficult to predict. Examples include substantial reductions in growing seasons, significant loss of land-based glaciers, significant and rapid losses of ice from the Greenland and/or West Antarctic ice sheets leading to increased sea level rise, the conversion of the Amazon rainforest to savanna or grassland, and risks of losing a half or more of the world's coral reefs. These changes will be in addition to the incremental changes that are already a challenge to many IDA countries, such as increasing night temperatures affecting pollination of critical crops like rice, latitudinal and altitudinal shifts in vectors and water borne diseases. Water scarcity is a problem for many parts of the world; development of storage and conjunctive uses, flood management and drainage would have to be addressed consistently and increasingly linked to low carbon options (e.g., use of renewables, management of gravity irrigation and development of low-head hydropower and large hydroelectric schemes where possible).

¹⁹ Meinshausen et al, 2011, "The RCP Greenhouse Gas Concentrations and their Extension from 1765 to 2300." Climatic Change (Special Issue), DOI: 10.1007/s10584-011-0156-z, freely available online ([PDF](#)).

50. Repercussions will be profound as the reduction in the resilience of natural and managed ecosystems caused by sudden non-linear phenomena will affect the resilience of socio-economic systems globally. It will increase their vulnerability to other global non-climatic stressors and shocks, such as emerging pandemics, trade disruptions or financial market shocks. If the increase in the world population (predicted to peak later this century) happens when global temperatures peak, the world will face both a demand side and a supply side squeeze.

51. Given these challenges, IDA countries will need to prepare for large-scale and possibly unprecedented and transformational adaptation actions. These include relocation of people given that at least 50 percent of the world’s population lives in coastal areas, major changes in agricultural crops, changes in water infrastructure investments and water management options, and investment in public health systems and disaster preparedness. It would be important to avoid, and if possible prevent, adaptation actions that might be suitable for the short term, but that are likely to create more risks to development in the future, such as hard infrastructure for coastal systems which, if damaged by increased storm surges, would cause massive loss of property and lives. The longer-term planning is applicable to strategies, “landscapes – or ridge-to-reef – planning”, large-scale projects/programs and investment in long-term infrastructure that is expected to last to 2040-50 (such as energy infrastructure, ports, bridges, and airports). A longer-term planning horizon would help capture positive synergies, and incorporate short- and long-term risks from changing climate. Better linking climate related disaster risk reduction and climate will help meet the present challenges that countries face and also prepare for the changes to come.

52. The imperative to scaled-up investments in climate resilient development in IDA countries is now. Key areas of focus include investments in institutions, information and communication strategies to enhance public awareness of the causes and effects of climate change, and perceptions of how to adapt to and/or mitigate climate impacts.²⁰ IDA has a role to play on all of these and especially to strengthen institutions that would allow a systematic approach for moving towards low carbon and climate resilient development. IDA can also help incentivise scaling up private sector engagement. Private companies are taking greater responsibility for promoting sustainability as a good business principle. This includes reducing GHG emissions but increasingly taking action on other natural resources, especially water that can contribute to the resilience of communities and countries. Private sector finance is essential for addressing climate change challenges, but it is not going to happen at the scale and with the impact needed without developing close partnerships and innovative approaches. Blended finance for many IDA operations already exist and including the private sector would help with increasing climate finance and also bring in practical knowledge.

53. Going forward, it is critical to explore opportunities for IDA-supported programs to have access to substantial and predictable climate funding, knowledge and technical support beyond IDA16. Action this decade is particularly important given the challenges outlined above. Climate finance is likely to be scaled-up through the Green Climate Fund, but

²⁰ There are some important institutional efforts underway to address some of these challenges, including the Multi Donor Trust Fund on Climate Change Communication and the Connect4Climate initiative.

time will be needed to operationalize the new financial architecture. There is thus a risk that the growing pace of increased climate actions in developing countries over the last five years could slow down due to limited access to climate finance. IDA is well placed to bridge the climate finance gap and strengthen innovative climate finance, to help countries' ability to address climate change issues within the framework that should result from the Rio+20, Post-MDG, and UNFCCC processes.

Annex 1: Details of the Climate Coding - a New System to Measure Funding Contributing to Climate Change Adaptation and Mitigation

To meet commitments set out in the *World Bank Group's Strategic Framework for Development and Climate Change* and the IDA16 replenishment, the Sustainable Development Network (SDN) and the Operations Policy and Country Services (OPCS) have jointly developed a new system to track funding that contributes to climate-change adaptation and mitigation, enabling transparent and consistent reporting on its climate-related lending. The system was rolled out on July 1, 2012 and applies to newly approved, including IDA, projects.

What are climate co-benefits? Development activities provide climate co-benefits when they contribute to climate change adaptation and/or mitigation, even when adaptation and/or mitigation are not their main objective.

For coding purposes, an activity provides:

- **Adaptation co-benefits** if it reduces the vulnerability of human or natural systems to the impacts of climate change and climate variability related risks by maintaining or increasing adaptive capacity and resilience.
- **Mitigation co-benefits** if it reduces Greenhouse Gases emissions or enhances their sequestration in reference to a no project situation.

Main Characteristics

The new system tracks commitments at the time of Board approval, not the amount of emission reductions or the climate resilience resulting from the financing of activities with climate change co-benefits. This is a first step to provide open and transparent information about the Bank's engagement on climate change. Complementary efforts are underway to measure impacts or results, such as GHG accounting to be piloted in select sectors in 2013.

The tracking system covers lending operations financed by the World Bank resources (IBRD and IDA) as well as trust funds. The latter include funding from climate change related trust funds such as the Climate Investment Funds, the Global Environment Facility, the Least Developed Country Fund, the Special Climate Change Fund, and the Multilateral Fund for the Implementation of the Montreal Protocol. It applies to newly approved projects.

The climate finance tracking system builds on the internationally-recognized Rio Markers on climate change developed by the OECD DAC Secretariat to track aid flows that support climate action. The World Bank system tracks co-benefits at the lowest level of financing information available, even considering individual components of the project, thus adding granularity to the Rio Markers. For example, if only US\$10 million of a US\$100 million power project tackles energy efficiency, then only US\$10 million will be recorded as having mitigation co-benefits.

Financing intended to yield adaptation and mitigation co-benefits are tracked independently. Importantly, the same activity can provide both adaptation and mitigation co-benefits and the

financing that supports these activities may be counted in full for both adaptation and mitigation. As a result, the financing for adaptation and mitigation should not be added together to prevent double counting.

Step-By-Step: Identify and Assign Climate Change Co-Benefits in Bank Lending

The assessment of climate change co-benefits is performed in conjunction with sector and theme coding. Like sector and theme coding, it has no operational or budgetary consequences. Adaptation and mitigation co-benefits are tracked independently. Their assessment is performed at the lowest possible level, e.g., (sub-) component for Investment Lending (IL) or Prior Action for Development Policy Operations (DPOs). For Investment Lending, this is based on financing with climate co-benefits; for Development Policy Operations (DPO), this is based on number of prior actions with climate change co-benefits. This is done through the four steps highlighted below (example for investment lending):

- Step 1: Screen each (sub-) component for Adaptation and Mitigation co-benefits,** based on project's appraisal and/or supporting document (e.g., greenhouse gas analysis). To facilitate climate coding, World Bank climate experts have developed an illustrative typology of activities delineating what constitutes adaptation or mitigation co-benefits for each World Bank sector code. Climate coding is conservative: if the intended impact of (sub-) component action is unclear, then no climate benefit should be accounted for. The same development (sub-) component action can provide both adaptation and mitigation co-benefits. The same development (sub-) component action does not systematically qualify as adaptation under different circumstances.

Component	Sector Allocation (\$)	Adaptation co-benefits	Mitigation co-benefits
1	WA:\$20million	✓	✗
2	WA:\$15million WB:\$15million	✗ ✗	✓ ✗
3	WB:\$50million	✓	✓

- Step 2: Assign funding for adaptation and mitigation co-benefits to sector codes for each (sub-)component.** If a (sub-)component is considered to provide climate adaptation or mitigation co-benefits, then the entire funding supporting this (sub-) component counts towards adaptation or mitigation co-benefits. Unless there is clear rationale for allocating otherwise (i.e., a detailed financing breakdown), percentages will be shared equally across sectors in the case where more than one Bank sector is relevant for a particular activity/prior action.

Component	Sector Allocation (\$)	Adaptation co-benefits	Mitigation co-benefits	Adaptation co-benefits (\$)	Mitigation co-benefits (\$)
1	WA:\$20million	✓	✗	WA:\$20 million	
2	WA:\$15million WB:\$15million	✗ ✗	✓ ✗		WA:\$15million
3	WB:\$50million	✓	✓	WB:\$50 million	WB:\$50 million

- Step 3: Regroup funding for adaptation and mitigation co-benefits by sector code.** There are two sectors that are relevant to the activities supported by the project: WA (Sanitation), and WB (Solid Waste Management). In this step, one simply regroups funding for adaptation and mitigation co-benefits by sector code. For instance for WA, lending commitments with adaptation co-benefits amount to US\$35 million (US\$20 million from component 1 and \$US15 million from component 2).

Sector	Sector Allocation	Adaptation co-benefits (\$)	Mitigation co-benefits (\$)
WA	\$35 million	\$20 million	\$15 million
WB	\$65 million	\$50 million	\$50 million

- Step 4: Compute the share (percent) of funding by sector code that could provide adaptation and mitigation co-benefits.** For instance, the share of the sectoral allocation to WA with adaptation co-benefits is 57 percent (US\$20 million out of US\$35 million).

To be entered in SAP	
Adaptation co-benefits (%)	Mitigation co-benefits (%)
57%	43%
77%	77%

Task Team Leaders (TTLs) enter a preliminary assessment in SAP of adaptation and mitigation co-benefits in the Activity Initiation Summary (AIS). TTLs can modify codes as needed during project preparation in the Activity Update Summary (AUS), up until Board approval. Similar to current practices for sector and theme coding, OPCS will review and finalize the assessment of climate change co-benefits in consultation with TTLs at the time of project approval. The World Bank Climate Change Team may be called in to arbitrate some cases. The assessment at appraisal is final and will not be modified during the supervision phase.

Timeline for Development

Work started in July 2010, with the draft system presented to the SDN Council and consultations by Spring 2011, finalization in Fall 2011 and approval by OPCS Vice President on December 23, 2011. The last six months have been devoted to preparation of implementation (including extension of system to climate finance sources), retroactive coding for FY11 and FY12, and interaction with MDBs and external stakeholders.

The system was developed and piloted in an iterative manner with sector anchors and regions, to benefit from expertise across the Bank and minimize burden for Task Teams. Four pilots were carried out at different stages of the system's development, covering more than 200 projects in the Sub-Saharan African, the East Asia and Pacific, the Middle East and North Africa and the South Asia regions. The system and preliminary results were presented to all of the Regional

Management Teams, which supported the new system. Finally, OPCS has been closely associated to the process, to integrate the system with existing Bank processes and systems and therefore minimize burden to task teams as well as to ensure consistency with the Bank's accountability framework and maintain the integrity and quality of the results.

The system has been progressively phased-in. Climate change co-benefits in FY11 lending have been assessed by the WB Climate Change Team, with review by OPCS. Climate change co-benefits in FY12 lending have been assessed by OPCS, with review by the WB Climate Change Team and shared with task team leaders (TTLs). For FY13, the tracking of climate change co-benefits will be initiated by TTLs and reviewed and finalized by OPCS in consultation with TTLs at the time of project approval. Even though TTLs have had a first exposure to the new system through FY12 activities, there will be a need to quickly roll-out the training. To this end, the World Bank Climate Change Team and OPCS are offering face-to-face training sessions and an e-learning module is under finalization.

Annex 2: Country Assistance Strategy /Partnership Analysis for IDA Countries – Discussion on Climate Change

Country & CAS period	Country and climate change coverage	Adaptation related focus	Mitigation related focus
<i>Country Assistance Strategy / Partnership</i>			
1. Bolivia (FY12-15)	General discussion on climate change and impacts included	<p>Improving the capacity for disaster risk management and promoting adaptation to climate change</p> <p>Restore access to basic infrastructure and strengthen the Government's ability to respond to disasters</p> <p>Reduce social, economic and environmental vulnerability to climate change</p> <p>Ongoing lending: Emergency Recovery and Disaster Management</p> <p>Ongoing TF: Pilot Program for Climate Resilience (PPCR) Phase I</p> <p>Proposed: PPCR Phase II</p>	
2. Bosnia and Herzegovina (FY12-15)	Integrated into Environmental sustainability as part of development, especially resources, such as water	<p>Adapt to climate change. Promote the sustainable development of basic municipal services</p> <p>Strengthen capacity to mitigate the risk of natural disasters such as flooding and drought.</p> <p><u>Current portfolio:</u> Neretva-Trebisnjica Management Project (P084608)</p> <p>(preparation: AAA Vrbas River basin management (P117927) Forest and Mountain Protected Areas - GEF (P087094).</p> <p><u>Potential new financing:</u> West Balkans Flood and Drouhjt Initiative (FY13) and potential follow-up with Regional IDA for flood protection.</p> <p>Forestry Project II, Regional Flood Control, CRIF Forest and Mountain Protected Areas - GEF (P087094).</p>	<p>Renewable Energy through IFC</p> <p><u>AAA:</u> IFC advisory services - Renewable Energy Bosnia and Herzegovina Project.</p>

Country & CAS period	Country and climate change coverage	Adaptation related focus	Mitigation related focus
		<p><u>New financing:</u> Irrigation Development Project (FY12), CRIF, Regional Flood Control Project</p> <p><u>Potential new financing:</u> Forestry Project II, Regional Flood Control, CRIF</p>	
3. Honduras (FY12-14)	<p>Discussion of exposure and vulnerability to climate related risks.</p> <p>Expanding opportunities and reducing vulnerabilities: Support in identifying existing capacity and/or building new capacity within the appropriate implementing entity to access these and other equivalent funding sources directly</p>	<p>Given the vulnerability work needed to strengthen national capacity to mitigate risk from disasters at the national and municipal level</p> <p>More Effective Disaster Risk Management through improved risk mapping and planning capacity and use of <i>Trust Fund to the Regional CAPRA and CEPRENDENAC</i> initiatives</p>	<p>The National Power Utility (ENEE) has massive financial losses annually, and strengthened institutional capacity and reduced losses of the national energy utility are included as a result area.</p> <p>Investments Power Sector Efficiency Enhancement Project</p> <p>AAA Central America Programmatic Study V: Promoting Geothermal Energy Central America Improved Cook Stoves Framework</p> <p>Technical assistance: Central America Programmatic Study Module: Diversification of Energy Matrix</p>
4. Kosovo (FY12-15)	<p>Improving environmental management, reducing environmental footprint of development activities, especially by reducing environmental hazards, supporting energy efficiency and the use of renewables, and moving towards harmonization with EU environmental standards.</p>		<p>Strengthen infrastructure, with emphasis on production, efficiency and financial and environmental sustainability of the energy sector. Reducing carbon emissions and improved energy efficiency</p> <p>FY06 Energy Sector Clean-Up and Land Reclamation Project</p> <p>FY12 Sustainable Energy</p> <p>Development and Diversification FY15 Energy Efficiency Project</p>

Country & CAS period	Country and climate change coverage	Adaptation related focus	Mitigation related focus
<p>5. Lao PDR (FY12-FY16)</p>	<p>Sustainable natural resource management as a major focus</p>	<p>Participatory approaches to sustainable forest and biodiversity management at the District to Central levels. The Department of Forestry will continue to develop and expand its program of independent certification through the Forest Stewardship Council (FSC) and its engagement in Global Climate Change adaptation and mitigation efforts through the Forest Carbon Partnership Facility (FCPF) and the Forest Investment Program (FIP).</p> <p>Climate related risk consideration in improved road services and sustainability</p>	<p>Hydropower and forestry related activities of relevance. Hydropower is also included as renewable energy</p> <p>Hydropower and Mining TA</p> <p>Nam Theun 2</p> <p>Lao Environment and Social Project (LEnS)</p> <p>Hydropower and Mining TA- AF</p> <p>Nam Ngum 3 (IFC)</p> <p>IFC Hydropower Advisory work and potential investments</p> <p>REDD Readiness Implementation Grant</p>
<p>6. Mongolia (FY12-16)</p>	<p>Discussion of climate variability and its impacts, especially risks for herders who are exposed to a range of climate-related risks. Mongolia's environment and unique biodiversity are stated to be under stress not only from climate change but also from human activity enhancing regional and rural development and environmentally sustainable development</p>	<p>Focus on reducing vulnerabilities</p> <p>Create more opportunities in the agricultural sector and for rural livelihoods, including through increased resilience to risks</p>	

Country & CAS period	Country and climate change coverage	Adaptation related focus	Mitigation related focus
7. Mozambique (FY12-15)	Good discussion on vulnerability to extreme weather events, namely droughts and floods that are likely to be aggravated by climate change. Also discussed are chronic food insecurity, vulnerability to climate change, price fluctuations, and variable agricultural productivity	<p>Adopt measures to reduce the risk of disasters and adaptation to climate change</p> <p>From FY10-13 CAS: An early warning system for coastal disaster risk assessment, planning, and management developed by 2013.</p> <p><u>Active:</u> Programmatic support to Disaster Risk Management (DRM) Phase 1 (FY11)</p> <p>National Water Resources Development Project (FY12)</p> <p><u>Pipeline:</u> Coastal Cities and Climate Change (FY12) Climate Change DPO (FY12) Trans-Frontier Conservation Area and Tourism Project II (FY14)</p>	<p><u>Pipeline:</u></p> <p>Coastal Cities and Climate Change (FY12)</p> <p>Climate Change DPO (FY12)</p> <p>Reduction of Emissions from Deforestation and Forest Degradation (REDD) (FY12)</p>
8. Samoa (FY12-16)	Strengthening resilience against natural disasters and climate change	<p>PPCR with the Phase 1 analytical work, Phase II investments</p> <p>Pacific Catastrophe Risk Financing and Insurance (PCRAFI)</p> <p>Weather Risk insurance through IFC</p> <p>Exploring Immediate Response mechanism PPCR West Coast</p> <p>Road Climate Resilience (FY12)</p> <p>PPCR Coastal Communities Resilience (FY13)</p> <p><u>AAA:</u> “Acting Today for Tomorrow” (FY13)</p>	

Country & CAS period	Country and climate change coverage	Adaptation related focus	Mitigation related focus
9. Sri Lanka (FY12-16)	Climate change discussed but more so as a major focus of IFC work	TA - Disaster Reduction and Recovery in Sri Lanka ongoing in FY12, was added later and was not foreseen in FY09-12 CAS	Climate change pillar emphasizes renewables (hydro, solar, biomass, and wind), energy efficiency, and agricultural and irrigation efficiency activities, which are expected to result in lower carbon footprints.
10. Tuvalu (FY12-15)	In-depth discussion on the country already experiencing impacts of climate change. Extreme vulnerability to economic shocks, natural disasters and the effects of climate change adaptation makes these issues imperative	<p>All planned World Bank activities will incorporate climate resilience measures such as the introduction of efficient water resource management practices, rain water harvesting and water storage measures as integral elements</p> <p>Strategic area: Building resilience against exogenous shocks Improved resilience to climate change and natural disasters</p> <p><i>Proposed Analytical and Advisory Activities (AAA) - FY12-FY15</i></p> <p>(Regional) Fisheries Engagement Strategy Drought Risk Management Strategy GFDRR support; potential follow-on investment supported by European Union. Drought Risk Management Strategy AAA.</p>	
11. Uzbekistan (FY-15)	<p>Improve water management and climate change preparedness as national priorities.</p> <p>Sustainable transport: - increased transport efficiency , minimum ecological footprint of public and private transport</p>	<p>SPN: Central Asia Hydromet Project Ferghana Valley Water Resources Management Project, RESP II, South Karakalpakstan Drainage New IDA: RESP II AF IDA/IBRD AAA: Water Utility Pricing Policy Note</p>	<p>SPN: Enterprises Energy Efficiency (UZEF), Talimarjan transmission Project New IBRD: Advanced electric metering project, Electricity Distribution, Urban Integrated project, UZEEF II, Transport project IDA/IBRD AAA: Energy Sector strategy, Regional power market</p>

Country & CAS period	Country and climate change coverage	Adaptation related focus	Mitigation related focus
			<p>assessment (UAP), Transport Assessment</p> <p>TFs: Cities Alliance Catalytic Fund, Transport and Logistics in Central Asia (Trade Facilitation Facility)</p>
<p>12. Vietnam (FY12-16)</p>	<p>Climate change is discussed as posing a serious challenge to development with an array of complex and interrelated consequences for every sector and society.</p> <p>Climate change mitigation and adaptation discussed</p>	<p>Climate change impacts and vulnerabilities discussed in the context of water resources, climate extremes (floods, droughts, cold-spells) and spatial planning. Dry-season water supply is under pressure, and climate change will exacerbate the situation</p> <p>One of cross-cutting pillars: improving resilience in the face of external economic and natural hazards and shocks and the impact of climate change</p> <p>Enhanced preparedness for natural hazards and climate change</p> <p><u>On-going</u></p> <p>Water Resources (FY04)</p> <p>Natural Disaster Risk Management (FY06 + AF FY10)</p> <p>Forest Sector Development + GEF(FY05)</p> <p>Mekong Delta Water Management (FY11)</p> <p>GEF Critical Ecosystem Partnership</p> <p>Capacity Building in Key Ministries for Dealing with Climate Change Issues</p> <p><u>Pipeline</u></p> <p>Forest Sector Development AF (FY12)</p> <p>Coastal Resources for Sustainable Development (FY13)</p>	<p>Strengthened environmental protection and management</p> <p>Participating as country in the Reduction of Emissions from Deforestation and Forest Degradation (REDD) program.</p> <p><u>On-going</u></p> <p>Hanoi Urban Transport (FY10) (P083581)</p> <p>Haiphong Urban Transport (FY11)</p> <p>Renewable Energy Development (FY09)</p> <p>GEF Clean Prod & Energy Efficiency (FY12)</p> <p>Capacity Building in Key Ministries for Dealing with Climate Change Issues</p> <p><u>Pipeline</u></p> <p>Power Sector Reform DPO2 (FY12)</p> <p>Climate Change DPO 1 (FY12)</p> <p>Climate Change DPO 2 (FY13)</p> <p>Climate Change DPO 3 (FY14)</p>

Country & CAS period	Country and climate change coverage	Adaptation related focus	Mitigation related focus
		Irrigation Modernization and Rehabilitation (FY15) Regional Mekong Water Resources (FY13) Regional wildlife protection (FY13) <u>AAA</u> : Eco2Cities, Business incubation and green technology, GHG assessment for Danang <u>Pipeline</u> Climate Change DPO 1 (FY12) Managing Natural Hazards (FY12) ; Climate Change DPO 2 (FY13) and DPO3 (FY14)	<u>AAA+TFs</u> : Eco2Cities, PHRD Disaster Management, GFDRR, Ausaid Urban Resilience in CanTho
Interim Strategy Notes			
1. Afghanistan	Discusses the impact on environment and climate change, as the latter exacerbates the risk profiles of natural hazards.	<u>Ongoing investments:</u> -- Horticulture and Livestock Project -- JSDF Strategic Grain Reserves -- Irrigation Restoration and Development Project <u>New investments:</u> -- AREDP II -- Improving Agriculture Inputs -- Annual DPG	<u>Ongoing investments:</u> -- Sustainable Natural Resource Management II <u>New investments:</u> -- Annual DPG <u>AAA:</u> -- Resource Corridor Analytic and TA work
2. Haiti	Discusses high vulnerability to natural disasters such as hurricanes, storms and earthquakes with a limited but improving capacity to prepare and react.		
3. Kyrgyz Republic	Discusses environmental sustainability and natural resources management including the risks from climate change to sustainability.		
4. Madagascar (FY12-13)	Discussion of vulnerability and resilience.	Reducing vulnerability and improving resilience in addressing the most urgent social impact of the political crisis and building resilience to external shocks High vulnerability and exposure to external shocks (cyclones,	

Country & CAS period	Country and climate change coverage	Adaptation related focus	Mitigation related focus
		<p>drought, floods, climate change, food prices)</p> <p>Sustainability of the national parks protection system</p> <p>Addressing disaster rehabilitation and likely climate change issues (GFDR)</p> <p><u>AAA Program</u></p> <p>Environment Country Analysis</p> <p><u>Possible New Lending</u></p> <p>Emergency rehabilitation (natural disasters)</p>	
5. Nepal	Discusses climate change and disaster Management. The second pillar of the strategy is targeted towards reducing food insecurity and improving resilience from exogenous shocks like climate change effects and natural disasters.	<p>Ongoing multi-donor funded <i>SAWI</i> will focus on strengthening water resources management within and between the countries of South Asia, with an emphasis on regional cooperation and adaptation to climate change</p> <p>Climate proofing vulnerable infrastructure, mainly hydropower stations</p> <p>IFC is planning to promote sustainable energy finance with a few financial institutions which are primarily focusing on energy efficiency products. Nepal also has PPCR funded activities included in the above.</p>	
6. Togo	It addresses vulnerability and resilience issues through support to climate change and adaptation and social protection and inclusion (including gender)	Integrated Disaster and Land Management Project (FY12) funded by GFDRR, GEF/LDCF and TerrAfrica	

Annex 3: Analytical and Advisory Work Related to Climate Change in IDA Countries

<i>Country</i>	<i>Project name</i>	<i>Country eligibility</i>	<i>Instrument</i>	<i>Project number</i>
<i>Analytical work - Economic sector work (ESW) and technical assistance in individual countries in FY12</i>				
1. Cameroon	Piloting intensification of livestock	IDA	TA Non-Lend	P117899
2. Kenya	KE Post Disaster Needs Assessment (PDNA)	IDA	TA Non-Lend	P130823
3. Mozambique	MZ-GFDRR Mainstreaming Disaster (FY12)	IDA	TA Non-Lend	P104447
4. Nigeria	Enhancing the Climate Resilience of Grow	IDA	ESW	P117818
5. Lao People's Democratic Republic	Lao PDR: Post Disaster Needs Assessment	IDA	TA Non-Lend	P111149
6. Mongolia	Mongolia - Air Quality Management	IDA	ESW	P111452
7. Vietnam	PSIA in Support of Vietnam CC DPO	Blend	ESW	P125598
8. Vietnam	Developing Robust Flood Defenses in HCMC	Blend	TA Non-Lend	P126041
9. Bangladesh	BD: New Generation Issues in Growth	IDA	ESW	P123703
10. Bangladesh	Climate Change Variability & Growth Bangladesh	IDA	ESW	P127277
11. India	IN: CB in Disaster Risk Reduction GFDRR	Blend	TA Non-Lend	P112003
12. India	Sundarbans Climate Change Adaptation & DRM	Blend	TA Non-Lend	P112693
13. India	IN: Disaster Risk Mitigation Implementation Support	Blend	TA Non-Lend	P114040
14. India	IN: Bihar Immediate Relief & DRM	Blend	TA Non-Lend	P114137
15. India	IN: Climate Investment Plan	Blend	TA Non-Lend	P127752
16. Sri Lanka	LK: Disaster Reduction and Recovery	Blend	TA Non-Lend	P110745
17. Nepal	NP: GFDRR	IDA	ESW	P105077
18. Nepal	NP: Support to Strategic Energy Sector De	IDA	TA Non-Lend	P122960
19. Pakistan	PK: Climate Change Ag & Water Adaptation	Blend	ESW	P112910
20. Pakistan	Greening Freight Transport PSIA & SEA	Blend	ESW	P115051
21. Pakistan	Inclusive Green Industrial Growth	Blend	TA Non-Lend	P115048
22. Pakistan	Sindh Climate Change & Env. Priorities	Blend	TA Non-Lend	P116142
23. Georgia	GREEN TRANSPORTATION	Blend	ESW	P127210
24. Bolivia	BO Integr. Gender into Sust. Development Pillar	Blend	TA Non-Lend	P125266
25. Cameroon	Piloting intensification of livestock	IDA	TA	
26. Uganda	Uganda Growth and Environment CEA	IDA	EW	P118240
27. Rwanda	RW: Review of RW Eng. Generation Investment	IDA	TA	P126043

<i>Country</i>	<i>Project name</i>	<i>Country eligibility</i>	<i>Instrument</i>	<i>Project number</i>
<i>Global/regional Analytical work - Economic sector work (ESW) and technical assistance of relevance to IDA countries in FY12</i>				
1. World	GHG Analysis - EW Report	Not assigned	ESW	P116417
2. World	GCMNB- Low-Cost Green Housing	Not assigned	ESW	P118295
3. World	Private and Public Sector Roles	Not assigned	ESW	P120423
4. World	Climate and Finance Issues Briefs	Not assigned	ESW	P121896
5. World	Measuring Soil Carbon	Not assigned	ESW	P124234
6. World	Gender in Climate Change Adaptation	Not assigned	ESW	P125705
7. World	Green Growth Report	Not assigned	ESW	P126082
8. World	Energy Subsidy Reforms	Not assigned	ESW	P126480
9. World	DRM-Global Program	Not assigned	TA Non-Lend	P108822
10. World	DREAMIS	Not assigned	TA Non-Lend	P110797
11. World	Mitigation-Innovation in Carbon Finance	Not assigned	TA Non-Lend	P110876
12. World	GFDRR: Recovery Financing (Aid Tracking)	Not assigned	TA Non-Lend	P114335
13. World	Cities and Climate Change	Not assigned	TA Non-Lend	P115868
14. World	LCCS Knowledge Products	Not assigned	TA Non-Lend	P117056
15. World	Supporting Cities to Reduce Methane	Not assigned	TA Non-Lend	P127077
16. AFR	3A-EN Strategic Basin Assessment (FY12)	Not assigned	EW	P108859
17. Africa	Forestry in the Sub-Saharan Africa	Not assigned	ESW	P116320
18. Africa	Africa Integrated Urban Water Management Ph1	Not assigned	ESW	P124010
19. Africa	3W:Fisheries Co-Management and Community Dev	Not assigned	TA Non-Lend	P113130
20. Africa	Agricultural Carbon Project Develop.	Not assigned	TA Non-Lend	P121368
21. Eastern Africa	Charcoal Consumption East Africa	Not assigned	ESW	P118947
22. Pacific Islands	Pacific Cat. Risk Financing TA - Phase II	Not assigned	TA Non-Lend	P122344
23. Pacific Islands	4P-Catastrophe Risk Assessment Geonode I TA	Not assigned	TA Non-Lend	P125720
24. South Asia	REG: Ganges River Groundwater Study	Not assigned	ESW	P121555
25. South Asia	REG: Social Dimensions of Climate Change	Not assigned	TA Non-Lend	P119795
26. EU Accession Countries	Climate Change Knowledge Exchange	Not assigned	TA Non-Lend	P131597
27. South Eastern Europe and Balkans	SEE Disaster Risk Mitigation and Adaptation	Not assigned	TA Non-Lend	P110737

28. Europe and Central Asia	Pilot Prog - Climate Adaptation	Not assigned	ESW	P096390
29. Europe and Central Asia	Energy Efficiency and District Heating	Not assigned	ESW	P112576
30. Europe and Central Asia	Climate Change - Rural Livelihoods	Not assigned	ESW	P113336
31. Europe and Central Asia	Climate Change - Energy Vulnerability	Not assigned	ESW	P113712
32. Europe and Central Asia	CF Assist-Emission Grid Factor Study for ECCU2	Not assigned	TA Non-Lend	P115204
33. Middle East and North Africa	5M-Improving Food Import Supply Chains	Not assigned	ESW	P117357
34. Middle East and North Africa	5M-Adaptation to a Changing Climate	Not assigned	ESW	P124241
35. Middle East and North Africa	CMI: 2012 MED Report	Not assigned	ESW	P124803
36. Middle East and North Africa	MNA- WP Agreement for Carbon Finance	Not assigned	TA Non-Lend	P110425
37. Middle East and North Africa	CMI:5M Marseille Center Urban Programs	Not assigned	TA Non-Lend	P117603
38. Middle East and North Africa	5M-Climate Change in Agricultural System	Not assigned	TA Non-Lend	P121674
39. Central America	CA Prog. Study V: Promoting Geothermal	Not assigned	ESW	P118280
40. Latin America	LCR Disaster Risk Reduction Mainstreaming	Not assigned	TA Non-Lend	P115988
41. Latin America	6L Tierramérica	Not assigned	TA Non-Lend	P121106