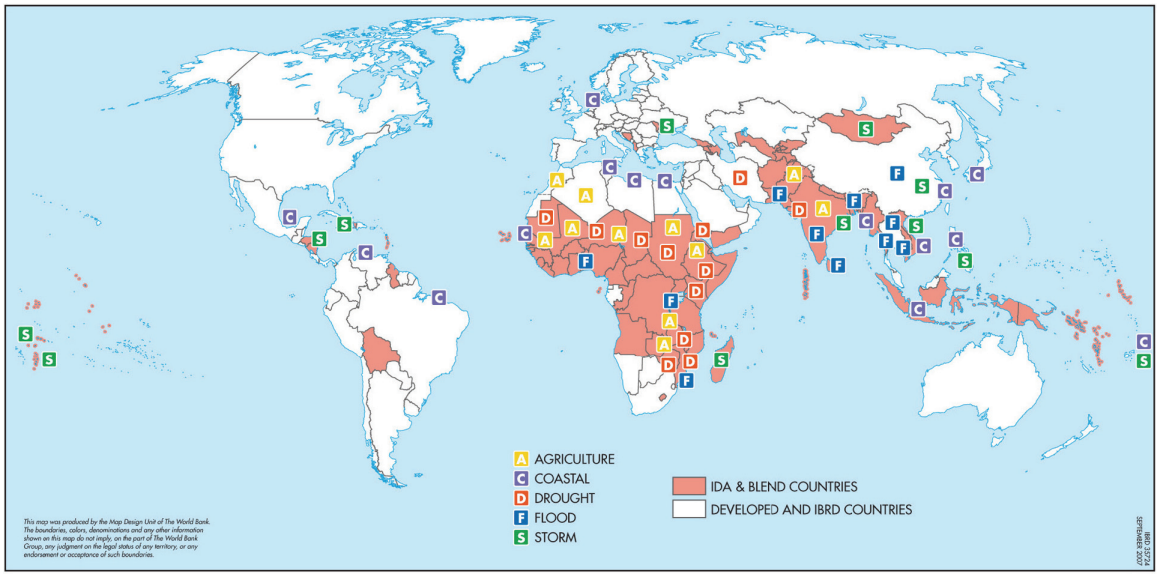
IDA AT WORK

Climate Change and Development

There is now strong consensus that climate change presents an urgent challenge to all countries' well-being, and that effective climate action requires a two-pronged response—adaptation to manage the unavoidable, and mitigation to avoid the unmanageable.

The poorest countries and communities are likely to suffer the most from the effects of climate change because of their geographical location, low incomes and weak institutions, and their greater reliance on climate-sensitive sectors like agriculture. IDA countries are the most vulnerable to risks associated with droughts, floods, coastal storms and changes in agricultural productivity. Adaptation to build up resilience to these risks is the most significant climate challenge facing these countries today. Support to IDA countries in creating climate-resilient poverty reduction and development paths has become an imperative in the IDA agenda.

Climate Risks Are Higher For Poor Countries



IDA'S CONTRIBUTION

Bearing in mind this reality, and with the added resources available through its most recent replenishment, IDA management in 2008 recognized the need to offer financial and technical support to borrowing countries on a wider scale to carry out their development mandate in a changing climate. IDA's focus on poverty reduction and its strengths in directly supporting countries makes it uniquely positioned to help countries most at risk from climate change. In particular, it supports their efforts to address these risks in their development strategies by serving as a platform for applying new climate financing and emerging knowledge most effectively. Importantly, IDA can leverage sorely needed financial resources from an array of sources for climate change, and can help countries use those resources effectively.

IDA's current response to climate change challenges in a development context is laid out in the Strategic Framework on Development and Climate Change , adopted by the World Bank Group in 2008. It aims to maintain the World Bank's effectiveness in assisting client countries with poverty reduction while taking into account the added costs and risks posed by climate change and evolutions in global climate policies. The Framework is designed to enhance collaboration with developing countries, tailoring financial and technical support to their unique challenges in tackling climate change, while still strengthening communities and their overall economy.

The Strategic Framework on Development and Climate Change also recognizes the extent to which IDA can support climate change action drawing on the availability of new and additional financing. In particular,

At a glance

- Low-income countries are likely to suffer most from climate change impacts because of their location, low incomes, low institutional capacity, and greater reliance on climate-sensitive sectors like agriculture.
- IDA recognizes that climate change is a development issue and that its impact must be tackled through a general development framework. Progress in IDA support to countries to address climate change in a development context has particularly focused on adaptation and on access to clean and renewable energy. Sustainable land and natural resources management is also a critical emerging focus.
- To support adaptation efforts, IDA investment in agriculture, flood protection, water supply and health has gone from 31 percent of IDA's core portfolio between 2005-2007 to 35 percent in 2008, with a 17 percent increase in disbursements in these sectors.
- To support energy efficiency and renewable energy efforts, IDA investment for the three year period from July 2009 to June 2011 increased allocations from an annual average of US$103 million to US$233 million, accounting for 3 percent of total current IDA lending and nearly 20 percent of the energy portfolio.
- IDA has also increased analytic efforts to understand and tackle climate change risks in IDA countries, and to ensure consideration of these risks in World Bank Country Assistance Strategies.
- Looking ahead, IDA is building upon the growing knowledge base and systematically integrate adaptation intervention in its portfolio, while continuing to play a key role in financing climate interventions that are clearly development-related.

the World Bank is working with other development banks to provide greater resources for the very poorest countries for programs to adapt to or mitigate aspects of climate change. IDA also is drawing upon resources available through funds administered by the Global Environment Facility, and is helping countries broaden their response to climate change in development planning, budgeting, and finance on country and regional levels.

TWO DIMENSIONS FOR CHANGE

Since 2008, momentum has built in two key areas: leveraging investments; and building strategy and knowledge. In Sub-Saharan Africa, for instance, the region's climate change strategy is built on strong support for both priorities, and it also has provisions for the monitoring and measuring of IDA's impact for climate action.

Supporting Climate Resilience Through Core Financing and Leveraging Funds

In IDA's portfolio, climate change progress has taken place across two major areas: adaptation, and access to clean and renewable energy.

Adaptation. The additional investment required in developing countries to adapt to climate change has been estimated by the UN to be US$28 billion–US$67 billion per year by 2030. With the initial support of the Netherlands and UK, the World Bank is leading a Global Economics of Adaptation study in IDA countries to "understand how to identify and prioritize adaptation measures and to estimate the financial costs of ensuring national development plans are climate resilient." The study focuses on several countries and is led by the World Bank in cooperation with several research organizations in both developed and developing countries.

Since fiscal 2008, investment in climate sensitive sectors has been rising. Core lending to sectors such as agriculture, flood protection, water supply and health has gone from 31 percent of IDA's core portfolio between fiscal 2005–2007 to 35 percent in fiscal 2008. Benefitting from new analysis and technical assistance, IDA has increased lending to these sectors by 17 percent to US$3.3 billion over the same period.

Access to clean and renewable energy. IDA is playing a pivotal role in improving energy access and efficiency, particularly in electricity distribution and transmission improvements. People in Africa face the greatest challenges. In response, the World Bank has drafted an Africa Energy Access Plan to provide for a new and credible way to expand access in Sub-Saharan Africa to 47 percent by 2030. This approach is based on: increasing coverage for enterprises and households; connecting public facilities, while using a cost-effective mix of grid extensions and decentralized solutions; and equipping households with affordable, modern lighting and boosting the use of improved stoves, increasing access to cleaner fuels, and making biomass fuels sustainable.

As of March 2009, projects promoting energy efficiency and renewable energy amounted to US$233 million in IDA countries, up from an annual average of US$103 million between 2005–07. Particularly noteworthy is Vietnam's Renewable Energy Development Project, approved by the World Bank Board of Directors in May 2009, which aims to increase the supply of electricity to the national grid from renewable energy sources. The project provides a refinancing facility to participat-

Box 1. Making development climate resilient—World Bank support for Sub-Saharan Africa

Climate change is a major development challenge for Sub-Sarahan Africa. Present development strategies in Africa include adaptations to climate risk by the poor, but climate change introduces new challenges, particularly in agriculture, water management, and infrastructure. Africa has the lowest electrification rate of all regions and improving access to affordable energy is a top priority. Improving land productivity, land and water management, reducing vegetative cover loss, and deforestation and forest degradation can all deliver results for easing poverty, and fostering climate change adaptation and mitigation. The World Bank response to climate change in Sub-Saharan Africa is designed to support its Africa Action Plan along the following four pillars:

- *Make adaptation and climate risk management a core component of development*, particularly in energy, disaster risk reduction, sustainable land, water, and forest management, coastal and urban development, increased agricultural productivity, and health and social issues.
- *Take advantage of development opportunities that also offer potential for mitigating changes in climate*. Most of Sub-Saharan Africa's mitigation opportunities are linked to more sustainable land and forest management, energy use and development, and urban transport systems.
- *Focus on knowledge and capacity development*. To ensure Africa has access to appropriate information and capacity to prepare for changes in climate the Bank Group will invest in improving weather forecasting.
- *Expand financing opportunities*. Development assistance such as IDA financing will remain the main platform for helping African countries strengthen resilience to climate risks. Additional support must come from existing sources of climate finance and new instruments, such as the United Nations Framework Convention on Climate Change's Adaptation Fund, and the Pilot Program for Climate Resilience. The World Bank Group will also work to help Africa access additional resources from its funds and facilities for activities with mitigation benefits.

The Bank is supporting the Ethiopian government's efforts to reduce vulnerability to extreme weather events; promoting community-driven sustainable land and watershed management; and preparing an integrated framework for addressing climate variability and change. The Kenyan authorities are also pursuing an approach to addressing climate risks that focuses on drought management in the arid north, flood management in the west, and watershed management in the southwest and center. And the South African authorities have prepared a framework for addressing climate mitigation with the long-term objective of moving to a low-carbon growth path while supporting equitable growth and access to key services for citizens.

ing commercial banks for loans to eligible renewable-based projects not exceeding 30 megawatts developed by private sponsors. The project also provides technical assistance for developing the regulatory infrastructure and building the requisite capacities of the electricity regulatory authority of Vietnam and other relevant government agencies.

Enhanced energy efficiency offers a unique opportunity to address multiple challenges facing the world today, including the challenge of addressing rising energy prices and of enhancing energy security. IDA has played a pivotal role in energy efficiency, particularly in electricity distribution and transmission improvements.

Improved forest and land management. One of IDA's comparative advantages lies in combining mitigation and development through the strengthening of land and natural

resource management practices. Mitigation efforts in IDA countries often coincide with income-generating opportunities, including the promotion of clearly defined property rights, the adoption of sustainable land use and agricultural practices, and the use of local indigenous renewable resources for rural development.

IDA also serves as a platform to leverage new climate financing, such as from the Adaptation Fund for strengthening resilience of the development processes to climate risks.

Adapting to the impacts of climate change is not the only imperative developing countries face at the nexus of climate and development. These countries are also faced with the need to service the energy needs of their citizens. In the developing world today, more than 1.5 billion people live without electricity and other basic energy services, most of them in countries supported by the World Bank and IDA. To address this, under a business-as-usual scenario low income countries' use of energy will rise considerably, increasing to about 30 percent of global greenhouse gas emissions by 2030.

An effective solution will require a shift to low carbon sources of energy such as wind, geothermal, biomass, hydro, and solar. Developing countries, including low income countries, will need to consider how they respond to future risks and opportunities, with renewable energy being one of many solutions to address multiple objectives: poverty reduction, energy security, and low carbon, climate resilient development. In addition, many IDA countries have a high, mostly untapped potential for renewable energy resources and can contribute to shifting critical energy patterns, particularly with a strong potential to develop renewable resources.

To engage in activities that also provide corresponding development benefits, IDA countries can draw from sources of funding that enhance or complement IDA funding. For example, the Climate Investment Funds established by donors and administered via the multilateral development banks offer support to IDA countries through:

- The Program for Scaling-Up Renewable Energy in Low Income Countries. This will assist low income countries as they seek to explore renewable energy options to fossil and biomass fuels.
- The Forest Investment Program. This program is designed to support developing countries' efforts to reduce greenhouse gas emissions from deforestation and forest degradation, providing bridge financing for reforms and investments. It also helpings countries adapt to the impacts of climate change on forests, and encourage biodiversity conservation and improvements in the lives of rural families.
- The Clean Technology Fund, which provides financing to contribute to demonstration, deployment, and transfer of low-carbon technologies with a significant potential for long-term greenhouse gas emissions savings. The Fund has prioritized investments in middle-income countries, which have higher emissions levels. However, over time, as some IDA countries increase their energy use, there may be important opportunities for drawing on the resources available through the Clean Technology Fund.

Carbon markets have the potential to become instruments of a much broader-scale response to climate change, as they can operate at the project, sector, and national levels. As such, they can encourage a shift to low-carbon alternatives in fast-growing, low-income countries. Over the past two years, the carbon market has continued to grow, each year doubling in value and reaching about US$120 billion in 2008[1] (over 12 times its 2005 value). By June 30, 2009, 10 World Bank-managed carbon funds had been established, purchasing emission reductions from 208 projects with an estimated carbon asset value of US$2.5 billion; in addition, two new facilities are in the process of being set up—the Forest Carbon Partnership Facility and the Carbon Partnership Facility.

Challenges and opportunities for expanding carbon finance are very different depending on the region. By taking advantage of carbon credits, Africa will be able to maximize its natural resource endowments as it can leverage its vast potential to contribute to clean development. In South Asia, the likelihood of further growth in emissions is enormous. However, in 2008 only six percent of the carbon finance portfolio was concentrated in Africa and five percent in South Asia respectively. While increasing energy access remains a key priority in IDA countries, more needs to be done to raise awareness and build capacity for carbon finance opportunities. In 2008, the World Bank's flagship Carbon Finance Assist Program substantially expanded its reach, launching innovative initiatives in technical assistance in Mauritania, Tanzania, Sierra Leone, The Gambia, Vietnam, and Yemen.

1. Source: Carbon Finance for Sustainable Development 2008. This report on the carbon funds and facilities managed by the World Bank covers the period from October 1, 2007 through December 31, 2008. Hence it covers part of IDA 14 and part of IDA 15.

The Community Development Carbon Fund supports projects for energy efficiency, conversion of solid waste to energy, and renewable energy. At the same time, it provides significant and measurable development benefits to poor communities. This Fund has currently committed 50 percent of its funds to buy emission reductions from small-scale projects located in the least-developed countries and in IDA countries, with a majority of projects in Africa and South Asia. One of the latest emission reductions purchase agreements was created in Senegal (Box 2).

The Forest Carbon Partnership Facility became operational in June 2008, and provides the opportunity to use carbon finance to help address the enormous challenges in the field of climate change and land use, particularly crucial in many IDA countries that greatly depend on agriculture. It will build the capacity of developing countries in tropical and subtropical regions across Africa, East Asia and the Pacific, South Asia, and Latin America and the Caribbean to reduce emissions from deforestation and forest degradation and to tap into any future incentives.

Box 2. Senegal: Efficient Lighting Program in Rural Areas

The Senegalese Rural Electrification Agency (ASER) Rural Area Energy Efficient Lighting Program is a component of a rural electrification plan that will provide affordable access to power for Senegal's rural communities, comprising about 365,000 rural households in five years. It includes about 1.5 million energy efficient compact fluorescent lamps to be provided at the time of electricity connection. ASER will sell 120,000 tons of carbon dioxide equivalent emission reductions to the Community Development Carbon Fund.

Box 3. IDA supports knowledge products to answer essential questions such as:

- What are the likely damages at the country, sector, and local levels for a set of climate change scenarios?
- How will adaptation unfold at the grassroots level, and how can the process be supported by national policies?
- What will be the main social impacts?
- How will migration within and across borders take place, and to what extent will climate change exacerbate conflicts?
- How to link and scale up existing disaster preparedness measures to respond to increasing climate risks?

Sixteen IDA countries will be assisted in their efforts to reduce emissions from deforestation and forest degradation by providing value to standing forests.

Building Strategy and Knowledge

One of IDA's most critical contributions to climate solutions has been a growing body of work to narrow the persistent gaps in knowledge about the impact of climate change in IDA countries. This knowledge base is essential to help countries better understand how to integrate climate risks into development initiatives and major infrastructure investments (see Box 3). Strengthening the knowledge base for better climate adaptation and climate risk management has been honed and enhanced in three ways: through analytic and advisory activities; by addressing adaptation in World Bank Country Assistance Strategies; and by piloting climate risk screening tools.

Analytic and advisory activities dealing with adaptation and vulnerability to climate change

Since July 2008, analytic and advisory activities dealing with climate change, adaptation, and climate change vulnerability have exponentially increased from an average of about 2 a year during 2005-07 to a total of 20 through 2010. All in all, analytical and advisory projects in sectors vulnerable to climate change stresses have increased from 8 percent (110 over 1168 projects) to 12 percent (112 over 927 projects).

Addressing adaptation needs in World Bank Country Assistance Strategies

Because countries vary widely in their development priorities and climate risks, considering climate change risks in a Country Assistance Strategy is a key element in building up a well-tailored climate-resilient development program. Consideration of climate change risks in these Strategies has improved over the past year, most strongly in identification of risk and in the quality of underlying analysis. Acting on client demand, responses to those risks have mostly focused on disaster management, flood protection, or natural hazard response mechanisms.

Guyana serves as a good practice in this regard, given its analytical and advisory work on agricultural risk insurance to farmers against climate change impacts on their crops. Moving ahead, this area will be an expanding focus to ensure that future Country Assistance Strategies are able to incorporate specific climate change adaptation responses in support of the findings through risk identification and underlying analysis, and improved access of IDA countries to additional finance.

Piloting climate risk screening tools

The Climate Change Data Portal (http://sdwebx.worldbank.org/climateportal) provides an open source platform, designed for development practitioners and policy makers, to access comprehensive global and country data information on climate change and development. In addition, the World Bank screening tool ADAPT (Assessment and Design for Adaptation to Climate Change: A Planning Tool), available through the Climate Change Data Portal, assists in climate risk management and identification of activities sensitive to climate change effects of climate change and offers advice on possible adaptation options.

In addition to the tools described above, regional departments at the World Bank have customized the climate change portal and undertaken portfolio screening exercises. Particularly noteworthy and relevant for IDA is the Sub-Saharan Africa portfolio screening exercise described in Box 4.

The analytical tools and Country Assistance Strategy-based assessments are providing a foundation that will guide IDA as it helps countries confront climate change and development challenges through technical assistance and appropriate financing. Application of climate screening tools will provide the necessary knowledge base to better combine adaptation and development project outcomes.

The Haiti Emergency School Reconstruction Project (Box 5) provides a good example of how a specific adaptation component can go along with traditional development efforts such as building infrastructure for education.

LOOKING FORWARD

IDA has built a considerable amount of knowledge on how to deal with climate change in the development arena:

- IDA operates under a fast-evolving climate change financing landscape, exemplified

Box 4. Portfolio risk screening: The Africa Department's experience

In June 2008 the Africa department within the World Bank released a "Portfolio Screening for Climate Risk" to identify measures to improve climate resilience based on assessment of exposure to climate vulnerability, and to estimate costs of incorporating climate change adaptation and mitigation measures into their programs for African countries.

The report concluded that factors contributing to Africa's vulnerability to climate variability are largely the same as in its development agenda:

- Low capacity to plan and invest in adaptation to climate variability
- Limited knowledge base (weak hydrologic and meteorological monitoring, lack of human resources to use data)
- Low resilience due to limited infrastructure and deteriorated assets from frequent extreme climatic events
- High dependence on climate variability (rainfall patterns, low extent of irrigation, low water security, limited access to technology)
- Low levels of energy access, and low energy efficiency
- Little or no fiscal resources available

Box 5. Haiti Emergency School Reconstruction Project (ESRP)

A US$5 million grant was recently provided to the Government of Haiti in March 2009 for an Emergency School Reconstruction Project as part of the Bank's response to an emergency situation caused by Tropical Storm Fay and Hurricanes Gustav, Hanna and Ike. The project aimed to respond quickly to damage to the education sector infrastructure and enhance preparedness for future emergencies. The project's main contribution has not only been rebuilding the 15 damaged primary schools, which remain a relatively low number compared to the overall education need of the country, but also increasing resilience to natural disasters by investing in prevention, preparedness and overall school building maintenance, including adding a new facility in some of the rebuilt schools to serve as a temporary emergency shelter for victims and evacuees during a natural disaster and ensuring that schools will have access to potable water and/or energy sources.

in the recent creation of the Climate Investment Funds by several development banks. The Funds are now major vehicles for learning-by-doing while relying on the country-based platform of IDA.

- Progress has been made on lending to sectors most vulnerable to climate change impacts. In addition, IDA has played a pivotal role in energy access and efficiency, particularly in electricity distribution and transmission improvements.
- Mitigation opportunities in IDA countries will require increased attention and will be able to benefit from additional financing coming from emerging carbon funds. In addition, the Climate Investment Funds will provide new opportunities over the coming years.
- In response to the emphasis on climate change that emerged during its most recent refinancing, IDA has greatly increased its analytic efforts to understand and tackle climate change risks in IDA countries.
- The consideration of climate change risks in Country Assistance Strategies has improved in the past four years. A recent review shows that both climate risks identification and the quality of the underlying analysis in Country Assistance Strategies have improved.
- Monitoring financial flows towards climate change actions is challenging, particularly if programs have to be built into core development efforts. This challenge is being addressed through the design of a monitoring strategy under the World Bank Group's Strategic Framework on Development and Climate Change.

Looking forward, a main challenge for IDA is to continue to build upon the growing knowledge base and systematically integrate climate change activities in its development portfolio. IDA can play a key role in financing programs that are clearly development-related as opposed to those that simply offer incremental benefits.

July 2009.
http://www.worldbank.org/ida