

# ADDRESSING CLIMATE RISK

## FINANCIAL INSTITUTIONS IN EMERGING MARKETS

*A Best Practices Report*

September 2009



Commissioned by



A Ceres Report



Authored by RiskMetrics Group



DEG commissioned this report from Ceres and RiskMetrics Group.

DEG - Deutsche Investitions- und Entwicklungsgesellschaft mbH (DEG), a member of KfW Bankengruppe (KfW banking group), finances investments of private companies in developing and transition countries. As one of Europe's largest development finance institutions, it promotes private business structures to contribute to sustainable economic growth and improved living conditions.

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Ceres is a national coalition of investors, environmental groups and other public interest organizations working with companies to address sustainability challenges such as global climate change. Ceres directs the Investor Network on Climate Risk, a group of more than 80 institutional investors from the US and Europe managing approximately \$7 trillion in assets.

RiskMetrics Group (RMG) is a leading provider of risk management and corporate governance products and services to financial market participants. By bringing transparency, expertise and access to financial markets, RMG's Sustainability Solutions offer investors insight into the financial impact of sustainability factors such as climate change, environmental risks and human and stakeholder capital.

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# Message from the Chairman

At DEG we consider climate change to be one of the fundamental challenges of our times. Climate change will affect people and their lives in established and in emerging markets. Our partners in the developing world will be hit especially hard by its consequences. Massive efforts will have to be initiated to adapt lifestyles and economies quickly to these changes in order to be able to at least alleviate these impacts. Development finance institutions such as DEG can support the private sector to rise to this challenge. At the same time, developing economies have significant potential for reducing greenhouse gas emissions, again providing huge opportunities to the private sector.

The promotion of ecological, economic and social development forms a keystone of our mandate. Consequently, DEG has elevated climate protection and adaptation to be a strategic goal. Projects with a positive climate effect are given a high priority. We have formulated clear investment targets and defined focus sectors, where we see specific growth potential. One investment example is the financing of Olkaria III, a geothermal power station in Kenya. This was elected the “Best EMEA Sustainability Deal 2008”. We are proud to have arranged the complete debt financing required for the extension of the power station.

Private enterprise in developing and transition countries calls for an efficient financial sector. This is why the development of this key economic sector plays a special role for DEG. We aim to support the establishment of functioning and diversified financial sectors in our partner countries. Therefore, we work on the development and institutional strengthening of private finance institutions as well as improving access to long-term lending for local private enterprises, above all for small and medium-sized enterprises.

As climate change is emerging as one of the top-tier concerns for companies, investors and governments, it continuously grows in importance for financial institutions all over the world. Therefore DEG decided to undertake the first systematic international evaluation of how banks in emerging markets are addressing climate risk. In partnership with Ceres and RiskMetrics Group, we wanted to establish a baseline for banks’ responses to climate change in these countries.

This survey is a direct extension of our commitment. It will allow DEG to better understand how it can develop climate change-related guidance, services, and training potentially to be offered as tailor-made solutions for our partner institutions. And it will hopefully provide many financial institutions with concrete examples of how to manage and adapt to the great challenge of climate change that we are facing.

A handwritten signature in black ink, appearing to read 'W. Polte', is positioned above the printed name.

Dr. Winfried Polte  
*Chairman of the Board of Management*  
DEG - Deutsche Investitions- und Entwicklungsgesellschaft mbH



# Foreword

In 2008, Ceres and RiskMetrics released a report evaluating 40 of the world's largest banks on their governance practices concerning the risks and opportunities from global climate change. The report found a range of responses from significant to minimal to non-existent. Now, as climate change impacts become more severe and developing countries are increasingly being called upon to reduce pollution contributing to the problem, we are partnering with DEG, one of Europe's largest development finance institutions, to release the first study of climate governance practices of banks in emerging markets.

Last year's report employed the Ceres/RiskMetrics "Climate Change Governance Framework" to evaluate the world's largest banks. The same framework is used in this report to survey and evaluate how 64 banks in Eastern Europe, Central Asia, Africa, Latin America and South Asia are responding to climate change.

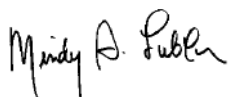
The results of the survey show that emerging market banks recognize the challenges from climate change and are beginning to position themselves for its wide-ranging risks and opportunities, whether from carbon-reducing regulations, international carbon trading schemes or far-reaching physical impacts. Nearly two-thirds of respondents acknowledge that climate change will impact their business, 65 percent have policies to guide practices on environmental and sustainability issues and nearly a third have specific climate change policies.

The banks' burgeoning attention to climate change is encouraging, but far more attention will be needed as emerging markets come under increasing international pressure to address pressing societal issues like climate change. More than ever before, concerned investor groups and NGOs are looking closely at the sustainability practices of banks and corporations in emerging markets. International financial institutions are setting higher environmental standards, and coalitions of global investors – including members of the Ceres-coordinated Investor Network on Climate Risk – are beginning to set sustainable investment objectives for their own portfolios.

In addition, banks are starting to create innovative products and services to respond to global concerns like climate change. Perhaps most important, market-based mechanisms are increasingly being used to stimulate sustainable investment projects.

As one of the world's largest economic sectors, and as one that reaches virtually every consumer and business, the banking industry must be involved in spurring the necessary lending and financing that will help governments and businesses mitigate climate change and its impacts. This pivotal role must be seen, not as a societal obligation, but as an immense financial opportunity to enter new markets and develop more efficient industries that will benefit the bottom line and society alike.

Banks, both small and large, have the reach, influence and access to capital required to lead the changes needed to expeditiously address global warming. We hope this report will help catalyze such activity.



Mindy S. Lubber

*President, Ceres*

*Director, Investor Network on Climate Risk*

# Executive Summary

While developing countries face the most serious threats of any nations from the physical, economic and social impacts of climate change, there also exist enormous opportunities for these countries to adopt new technologies and sustainable development frameworks that will significantly reduce global greenhouse gas (GHG) emissions. The predominant view of developing nations is that a successor to the Kyoto Protocol, to be negotiated this December in Copenhagen, should include financial and technology transfers from industrialized to non-industrialized countries to support this effort. While government support will be critical, the private sector will realistically have to carry the largest burden, placing emerging market financial institutions (FIs) and their capabilities to manage climate risks and opportunities in the spotlight.

This report reviews key findings of a climate change risk survey undertaken by the German development bank DEG (Deutsche Investitions- und Entwicklungsgesellschaft mbH). It examines FIs in emerging markets across the globe, highlighting their best practices in addressing climate risk. With the consultation of risk and governance research firm RiskMetrics Group and investor coalition Ceres, DEG surveyed 154 emerging market FIs from their portfolio on initiatives to integrate climate change into their corporate governance and risk management systems as well as take advantage of growing climate change opportunities.

Given that even among major multinational banks climate change is still developing as an area of focus, the encouraging news is that a number of emerging markets' FIs are already taking steps to integrate climate risk considerations into the due diligence of project financing and investments. Commercial banks and investment funds are also growing increasingly interested in climate-related opportunities, such as Clean Development Mechanism (CDM) project financing and energy efficiency loans.

However, there is much more to be done. The next step will be for FIs in developing countries to not only pursue investment growth areas, such as renewable energy and energy efficiency, but also to systematically account for climate change risk in all lending and investment decisions and where possible mitigate the indirect GHG emissions associated with their traditional portfolios.

## Key Findings

Of the 154 FIs surveyed, 64 – or roughly 42 percent – provided a complete response to the survey. Responses were received from Africa, Asia Pacific, Eurasia, Latin America and South Asia, with the largest proportion coming from Eastern European and Central Asian countries. The surveyed FIs represent several types of institutions, including commercial banks, credit institutions, development banks, investment banks and funds and leasing institutions. Nearly one half of all respondents were commercial banks.

Surveyed FIs also represent a wide range of institution size, from mostly second tier banks in mid to large-sized markets to some first tier banks in smaller markets. Almost all respondents are local, regional or national institutions without international branch networks. However, some respondents are local divisions of larger international banks, such as Rabo Equity Advisors, the Indian private equity arm of the Netherlands' Rabobank. In addition, the survey included a small number of investment funds based in the US and UK, but focused on developing markets, such as Conduit Capital Partners focused on Latin America and Frontier Markets Fund Managers focused on Africa.

## CLIMATE CHANGE GOVERNANCE

- The majority of respondents – 67 percent – have established an environmental or sustainability policy to guide business practice. Almost a third of these FIs have policies that address climate change issues specifically, and two of 64 respondents have a stand-alone climate change policy.
- The majority of FIs report that the implementation of their climate change and/or sustainability initiatives has been assigned to senior staff (42 respondents, or 68 percent). Furthermore, almost half of the FIs report that the board of directors is involved in reviewing the sustainability policy, and 28 percent of respondents say the board is directly involved with climate change initiatives.

## GREENHOUSE GAS EMISSIONS MANAGEMENT

- Some respondents (8 percent) are already measuring an aspect of their GHG emissions footprint.
- While nearly all of the GHG emissions from the financial sector are associated with institutions' lending and investment portfolios, only two respondents at this point consider GHG emissions in their financing decisions and none of the institutions surveyed are measuring emissions resulting from those decisions yet.

## RISK MANAGEMENT

- Fifty-three of the respondents have established a risk management system that incorporates sustainability elements. Five of these explicitly incorporate climate change considerations.
- Twenty-two institutions, led by respondents in Eurasia and Latin America, report incorporating climate change considerations into their lending and investment decisions, and 24 respondents consider climate change impacts as part of their project environmental assessments.

## COMMERCIAL OPPORTUNITY

- Nearly two-thirds of FIs responding to the survey acknowledge that climate change will impact their business; 55 percent forecast both positive and negative climate change impacts, 40 percent foresee negative impacts only and two predict climate change will have only positive impacts on business.
- For institutions offering specialized financing products or targeted investments in climate-related areas, renewable energy (20 respondents), industrial energy efficiency (18 respondents) and waste management (18 respondents) lead in investment activity.
- Involvement with Clean Development Mechanism (CDM) and Joint Implementation (JI) projects under the Kyoto Protocol is surprisingly low, with only three respondents indicating direct involvement.

- Other participation in carbon trading markets is also low, with only a small number of respondents from Latin America and South Asia indicating any involvement, either through direct trading or carbon credit funds/trusts.
- However, seven respondents report plans to become involved in these areas over the next three years.

## Best Practices

Several FIs surveyed are moving beyond their peers in integrating environmental and social issues into core business practice. This report highlights some of these "best practice" examples identified by survey responses and follow-up interviews.

- **Center-invest Bank**, based in Russia, has taken a lead in addressing energy efficiency. The company uses an energy efficiency calculator to assess potential energy and cost savings of a project upfront. Once a project is implemented, the bank tracks energy savings as well as reduced carbon dioxide (CO<sub>2</sub>) emissions.
- **DLJ South American Partners**, an Argentine firm, has conserved 15,000 acres of natural forest to help offset the carbon impact of its investment in an Argentinean paper mill, which uses 56,000 acres of land for wood supply. Furthermore, DLJ has financed a project to buy waste from sawmills to supply a biomass plant. The firm calculated the GHG emissions avoided through re-using the sawmill waste in place of the standard practice of burning it.
- **Frontier Markets Fund Managers**, a division of Standard Bank plc and headquartered in London, has provided USD 15 million in financing for a geothermal power plant in Kenya together with DEG. This is the first privately owned geothermal plant in Africa.
- Each of the **Global Environment Fund's (GEF)** portfolio companies reports annually to GEF on environmental and social issues. The firm manages over USD 1 billion in private equity investments for institutional investors investing in clean technology, energy efficiency and timberland in emerging markets. GEF also assists

portfolio companies in measuring their carbon footprint and with the design, implementation, and marketing of CDM carbon credit projects.

- **Grupo Finterra S.A. de C.V.**, based in Mexico, has developed an environmental and social rating system tailored to clients' specific business activities. The company's environmental and social policy is overseen by the board of directors, with a specific board member responsible for monitoring compliance and progress.
- **Rabo Equity Advisors**, an India-based subsidiary of Rabobank focusing on food and agriculture, has invested in two CDM projects and expects the company's investments in this area to continue to grow.
- The Romanian American Enterprise Fund (RAEF), a managed fund of **Axxess Capital**, has established a project company, Romanian Industrial Energy Efficiency Company (RIEEC), which develops and operates on-site co-generation power systems for industrial consumers. RAEF is also exploring smaller projects using alternative fuel sources. In 2008, RAEF approved financing for a start-up developing wood waste as a fuel source for central heating furnaces.
- India's **YES Bank** has established a dedicated Sustainable Investment Banking group, which provides specialist advisory services for alternative energy and other environmentally focused sectors. A Private Equity group has also been set up to address growing investor interest in early-stage clean technology opportunities in India.

## Recommendations

While this report finds that several emerging market FIs have begun to take key first steps to address environmental and climate change issues in their lending and investments, it is critical that these institutions strengthen their climate risk management systems to be prepared for increasing regulatory, financial and physical risks posed by climate change. The results of this survey and our earlier banking study suggest that emerging market FIs consider the following recommendations:

- Elevate climate change as a governance priority for board members and CEOs;
- Start to measure emissions resulting from financing and investment;

- Begin factoring carbon costs into their financing and investment decisions, especially for energy-intensive projects that pose financial risks as carbon-reducing regulations take hold worldwide;
- Set progressively higher targets to shrink the carbon footprint of their lending and investment portfolios, and be more transparent about how they intend to meet these objectives, and
- Provide better disclosure about the financial and material risks posed by climate change as well as their own emissions reduction strategies.

International and national development banks also have an excellent opportunity to harness initial progress in this area and contribute to the formation of best practices on managing climate risk in the financial sector. These institutions can act as key partners with emerging market FIs by:

- Developing more robust climate change training offerings in the areas of project risk assessment and technical assistance on low-carbon project design and implementation;
- Expanding training resources on measuring the GHG emissions of investment and lending portfolios;
- Targeting energy efficiency and renewable energy as focus areas for additional credit facility offerings;
- Integrating adaptation issues, particularly related to sustainable agriculture and water supply, more thoroughly into overall climate risk assessments of emerging markets and due diligence of lending activities;
- Requiring emerging market FIs that receive financial support to establish an institution-wide climate change policy and disclose this policy to the public.



# Overview

Emerging and transition economies are now on the front lines of the global climate change challenge. Not only is population growth, and therefore growth in natural resource use, projected to be concentrated in the developing world over the next several decades, but increases in energy use and GHG emissions will also be dramatic. According to the International Energy Agency (IEA), world primary energy demand and related carbon dioxide emissions are forecast to grow by 45 percent to 2030 with non-OECD countries expected to account for more than 90 percent of this increase.<sup>1</sup> With expectations high for the climate change negotiations in Copenhagen at year-end, the spotlight is on the developing world and its role in cutting global GHG emissions.

The physical, economic and social impacts of climate change will likely be felt most severely in developing countries and among the world's poorest populations with the least capacity to address such impacts. Examples are already apparent. Andean glaciers are already receding, with many estimated to disappear entirely within the next two decades – resulting in water shortages for 77 million people. The prospects look as bad if not worse for the Himalayas: by 2050, more than a billion people could face severe water stress from the recession of the glaciers that feed seven large rivers in the region. Severe droughts are altering agriculture patterns and crop production in Africa, and in South Asia, climate change could lead to a 30 percent decline in crop yields, according to the Intergovernmental Panel on Climate Change (IPCC).

The combination of more floods and heat waves along with rising sea levels are expected to pose especially serious challenges to geographically vulnerable countries like Bangladesh, where 70 percent of the country lies in floodplains. Massive emigration from these zones poses a major humanitarian and security challenge affecting global capital markets. Concern over these dramatic impacts has even prompted recent consideration by the US Pentagon of the national security implications of global climate change.

Still, current funding for climate change adaptation is a small fraction of the USD 28–67 billion in funds that developing countries will require annually through 2030, according to the United Nations Framework Convention on Climate Change (UNFCCC) secretariat.<sup>2</sup> In addition, a 2009 report by the International Institute for Environment and Development and the Grantham Institute for Climate Change at Imperial College London suggests that the UNFCCC estimates for adaptation costs are unrealistically low; the authors estimate that global costs will be several hundred billion dollars per year to 2030 with developing nations facing as much as two-thirds of all costs.<sup>3</sup>

Yet while much of the risk associated with climate change is concentrated in the developing world, so too are the opportunities to develop climate change mitigation

**Current funding for climate change adaptation is a small fraction of the USD 28–67 billion in funds that developing countries will require annually through 2030.**

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1. International Energy Agency, *World Energy Outlook 2008*, November 2008.

2. UNFCCC, *Climate Change: Impacts, Vulnerabilities and Adaptation in Developing Countries*, December 2007.

3. Martin Parry, Nigel Arnell, Pam Berry, David Dodman, Samuel Fankhauser, Chris Hope, Sari Kovats, Robert Nicholls, David Satterthwaite, Richard Tiffin, Tim Wheeler. *Assessing the Costs of Adaptation to Climate Change: A Review of the UNFCCC and Other Recent Estimates*, International Institute for Environment and Development and Grantham Institute for Climate Change, London, 2009.

*The global shift away from carbon-based fuels will create enormous opportunity for financial institutions in developing countries to invest in carbon trading, energy efficiency, renewable energy, and adaptation services.*

and adaptation solutions. Much of this opportunity is concentrated in the finance sector. In developing markets where new, low-carbon technologies can often leapfrog more carbon-intensive infrastructure, banks and other investors will ultimately be responsible for directing capital towards climate-friendly solutions. The global shift away from carbon-based fuels will create enormous opportunities for financial institutions in developing countries to invest in carbon trading, energy efficiency, renewable energy, and adaptation services. According to the IEA, this shift will require up to USD 45 trillion in renewable energy investments by 2050.<sup>4</sup>

Most developing countries have yet to set their own national GHG emissions reduction targets, but the commitments made by developed nations through international agreements such as the Kyoto Protocol have created opportunities for the developing world to participate in GHG emissions trading, sustainable forestry projects and renewable energy development. For example, through the CDM provision of the Kyoto Protocol, FIs in developing countries can finance emissions-reducing infrastructure projects that generate tradable carbon credits. At the close of 2008, there were 3,000 CDM projects in the pipeline, with the primary CDM market valued at approximately USD 6.5 billion.<sup>5</sup>

Furthermore, the next iteration of the Kyoto Protocol is likely to include financial incentives to mitigate deforestation of tropical forests in developing countries through the purchase of forestry-based carbon credits by developed nations. Increasing focus by local governments on sustainable development has also opened opportunities for financing of large-scale renewables-based rural electrification programs and micro-lending to community-based renewable energy projects.

Pressure is also mounting on developing countries to begin to adopt climate change regulations that will necessitate shifts in capital toward low-carbon and energy efficiency technology and away from fossil fuel-based infrastructure. Although developing countries were not required to adopt emissions reduction targets under the Kyoto Protocol, a key focus of the upcoming UNFCCC Copenhagen negotiations in December will be for heavy-emitting developing countries to take part in a successor international agreement. With China now the world's largest emitter of GHGs, and India soon to come into third place, the United States (which did not ratify the Kyoto treaty) and other developed nations want the new agreement to involve commitments from developed and developing countries alike.

How can FIs in emerging economies prepare for these rising climate-related risks and opportunities? A key first step is to establish a sustainability or environmental policy and ensure that senior management actively participates in policy development and implementation. Many smaller FIs are utilizing the investment and lending guidelines put forth by international initiatives, such as the United Nations Environmental Program Finance Initiative (UNEP FI), the Equator Principles or the Performance Standards of the International Finance Corporation (IFC) or the Performance Requirements of the European Bank for Reconstruction and Development (EBRD). In addition, both local and

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4. Deutsche Bank, *Investing in Climate Change 2009: Necessity and Opportunity in Turbulent Times*, October 2008.

5. Deutsche Bank, *Investing in Climate Change 2009: Necessity and Opportunity in Turbulent Times*, October 2008.

global FIs are introducing sustainability standards into their risk management systems. The process is being driven in large part by global fund managers seeking diversification by investing in emerging economies, according to a March 2009 report by consulting firm Mercer.<sup>6</sup> One of the most direct ways for local FIs to become involved is to be a partner or facilitator of investments in renewable technologies and energy efficiency projects.

Measuring and managing GHG emissions is also an important component of evaluating long-term climate risk for FIs, particularly in light of existing and emerging climate regulations that put a price on carbon emissions. It is critical that banks focus not only on their direct emissions from office operations and employee travel, but that they take into account the vast pool of indirect emissions attributable to their investment and lending portfolios. As Rana Kapoor, Managing Director and CEO of YES Bank in India has noted, “Financial institutions do not have a major ecological footprint but they are in a unique position to channel capital towards clean development and play a catalytic role in the transition towards sustainability.”

*“Financial institutions do not have a major ecological footprint but they are in a unique position to channel capital towards clean development and play a catalytic role in the transition towards sustainability.”*

— RANA KAPOOR, MANAGING DIRECTOR AND CEO, YES BANK

## 1.1 Purpose of the Study

With the consultation of risk and governance research firm RiskMetrics Group and investor coalition Ceres, DEG surveyed their portfolio of emerging market FIs in the first quarter of 2009 about their initiatives to integrate climate change into their corporate governance and risk management systems and take advantage of emerging climate change opportunities. This study aims to provide a benchmarking overview of mainly locally-based, regional and national FIs in the early stages of developing climate-related policies and strategies as well as highlight examples of best practices.

## 1.2 Methodology

Data were collected via an electronic survey sent in February 2009 to DEG client contacts at 154 FIs from a wide range of geographic regions. Survey recipients were given a total of five weeks to complete the survey and were also contacted by telephone when possible to encourage participation.

RiskMetrics designed the online questionnaire in consultation with DEG and Ceres to cover key areas related to climate risk management practices. The forty-question survey covers a range of issues across four broad areas.

- Environmental/Climate Change Policy (including governance and management of climate change issues, as well as policy disclosure)
- Climate Change Activities (including GHG emissions management, research and employee training)
- Sustainability Management (including environmental risk management policies and procedures, specialized financing products and investments and carbon trading)
- Collaboration (including interest in additional tools/resources and DEG engagement)

6. Birgden, Helga, Guyatt, Dr. Danyelle and Jia, Dr. Xinting, *Gaining ground: Integrating environmental, social and governance (ESG) factors into investment processes in emerging markets*, March 2009.

These focus areas are modeled on the *Climate Change Governance Framework*, developed by RiskMetrics Group in consultation with Ceres and the Investor Network on Climate Risk, a coalition of 80 institutional investors with USD 7 trillion in assets under management. The framework offers a systematic way to evaluate companies on their governance and strategic approaches to climate risks and opportunities and was used to study 40 of the largest global banks in *Corporate Governance and Climate Change: The Banking Sector*, a January 2008 report authored by RiskMetrics and commissioned by Ceres. While the broad areas of the framework are meant to apply across all industry sectors, the underlying indicators and weightings are adjusted to fit the most effective climate governance strategies in specific sectors.

Survey results were collected and analyzed by RiskMetrics in March and April 2009. FIs with more comprehensive strategies for addressing climate risk were selected for follow-up interviews. Thirteen survey respondents were contacted, and eight companies were interviewed to discuss details of their climate change practices. These best practice examples are highlighted throughout this report.

## CERES/RISKMETRICS CLIMATE CHANGE GOVERNANCE FRAMEWORK (BANKING SECTOR)

### BOARD OVERSIGHT

1	Board is actively engaged in climate change policy and has assigned oversight responsibility to board member, board committee or full board.	16%
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### MANAGEMENT EXECUTION

2	Chairman/CEO assumes leadership role in articulating and executing climate change policy.	
3	Top executives and/or executive committees assigned to manage climate change strategies.	
4	Climate change initiatives are integrated into risk management and mainstream business activities.	22%
5	Executive officers' compensation is linked to attainment of environmental goals and GHG targets.	

### PUBLIC DISCLOSURE

6	Securities filings disclose material risks and opportunities posed by climate change.	
7	Public communications offer comprehensive, transparent presentation of response measures.	18%

### EMISSIONS ACCOUNTING

8	Company calculates and registers GHG emissions savings and offsets from operations.	
9	Company conducts annual inventory of GHG emissions and publicly reports results.	
10	Company has set an emissions baseline by which to gauge future GHG emissions trends.	14%
11	Company has third party verification process for GHG emissions data.	

### STRATEGIC PLANNING

12	Company sets absolute GHG emission reduction targets for facilities, energy use, business travel, and other operations (including indirect emissions).	
13	Company participates in greenhouse gas trading programs.	30%
14	Company pursues business strategies to reduce GHG emissions, minimize exposure to regulatory and physical risks, and maximize opportunities from changing market forces and emerging controls.	



### 1.3 Response Rates

A total of 64 FIs, or 42 percent of the survey recipients, provided a complete response to the questionnaire, and another 14 provided a partial response but did not complete the survey by deadline (incomplete responses are not included in the analysis). Exactly half of all survey respondents provided public responses, and the remainder requested that their responses be kept confidential. Respondents represent a diverse range of geographic regions and institution types:

- The largest number of respondents comes from Eastern Europe and Central Asia (categorized as Eurasia). Africa and Latin America followed in terms of total number of respondents, with Asia Pacific and South Asia trailing only slightly behind.
- About half the respondents were commercial banks (31 respondents) followed by investment funds and development banks. Comparatively few credit institutions, leasing institutions, and investment banks participated in the survey.

RiskMetrics also analyzed the seniority of the staff assigned to complete the survey questionnaire. The positions of the survey respondents varied significantly. Interestingly, a number of FIs provided responses from top-level executives, indicating attention to the issue from senior management. Such respondents included three Chief Executive Officers, a Chief Investor Officer, a member of the Executive Board, and a Chief Financial Officer.

Furthermore, seven FIs responded through the risk department – including two Chief Risk Officers and several directors of Risk Management – a strong signal that climate disclosure is viewed as a risk management issue rather than a public relations or marketing effort. Only three environmental managers/officers responded to the survey.

FIGURE 1 RESPONSE RATE

42% completed survey

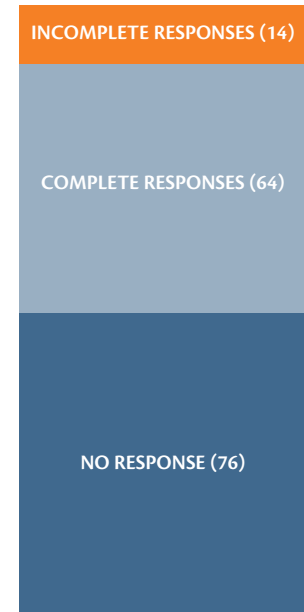


FIGURE 2 REGIONAL BREAKDOWN

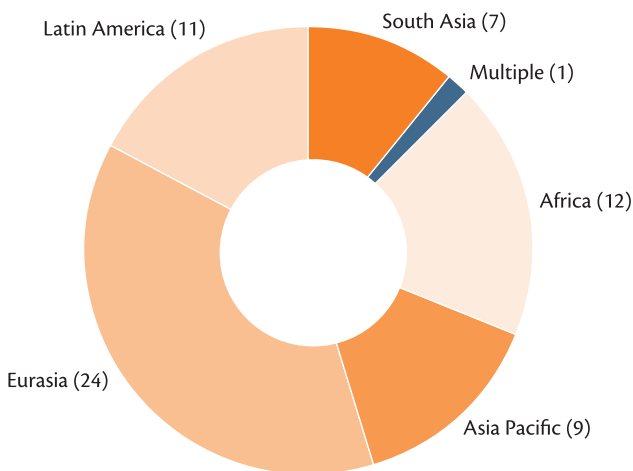
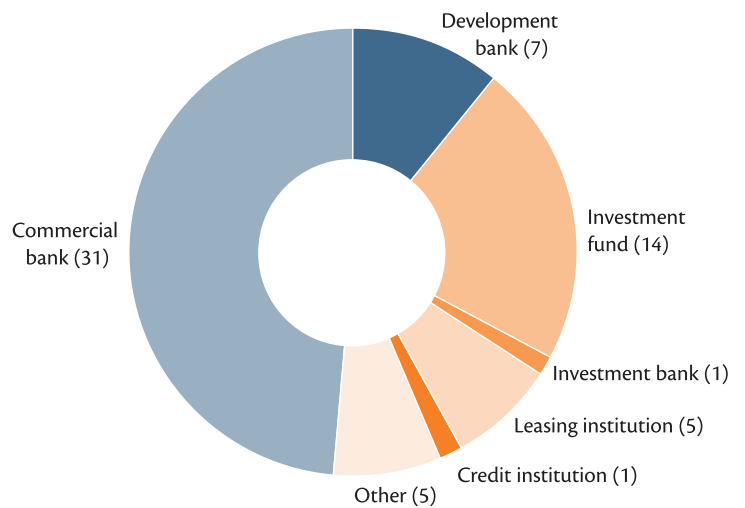


FIGURE 3 TYPE OF FI



#### **1.4 Limitations of the Study**

While this study identifies emerging trends in how developing country FIs are addressing climate risks and opportunities, there are several limitations to conclusions that can be drawn from the study. First, all data are based on a voluntary survey sent to a select group of DEG clients. The study sample therefore excludes a number of relevant emerging market FIs. Second, because survey respondents answered the questionnaire voluntarily, there may have been self-selection among recipients, resulting in a bias towards those with stronger climate change performance or interest. In other words, the FIs who chose to respond to the survey are more likely to be taking action on climate change, or interested in climate change services/training, than those who did not. Such biases should be taken into account when evaluating the study's results and its conclusions.

# Evolving Climate Change Standards for the Financial Sector

According to the most recent baseline outlook released by the International Energy Agency, USD 26 trillion of investment will be required through 2030 to maintain global energy infrastructure and meet growing energy demand, mainly in the developing world. However, in order to limit growth in the atmospheric concentration of CO<sub>2</sub> emissions to 450 parts per million (ppm) — an 18 percent increase above current levels — an additional USD 10 trillion would be required over the period for greater investments in renewables, energy efficiency and carbon capture and storage. Much of this investment, too, would take place in the developing world. In fact, even if developed countries were to cut their emissions to zero, projected emissions from the developing world would still put the atmospheric concentration above 450 ppm under the business as usual forecast. Accordingly, the financial sector in the developing world faces a critical challenge of acquiring and allocating the necessary capital to achieve desired CO<sub>2</sub> reductions.<sup>7</sup>

While the financial sector itself does not produce a significant amount of GHG emissions, the projects it funds do. Therefore, investment and financing decisions have the potential to profoundly alter the world's global GHG emissions footprint. Exactly *how* FIs will amend their policies to account for climate change is yet to be determined. For example, how will banks integrate prices for carbon into lending and investment decisions? Should FIs limit or halt financing of carbon-intensive projects?

In the past few years, a variety of stakeholders – including intergovernmental organizations, NGOs and coalitions of FIs – have wrestled with these questions to evaluate the role of the financial sector in climate change mitigation and adaptation and develop global performance standards for the sector. While none of these efforts have yet produced a widely accepted global standard, they offer concrete guidance for FIs for developing effective climate change strategies and addressing the GHG emissions embedded in their business activities.

## 2.1 Leading Initiatives on Integrating ESG and Climate Risks

Banks operating in emerging markets have faced increasing scrutiny of the social and environmental impacts of their financing decisions. In 2003, four large commercial banks (ABN AMRO, Barclays, Citigroup and WestLB) and the World Bank's International Finance Corporation (IFC) launched the **Equator Principles**. These principles are intended to help banks assess, mitigate, document and monitor the credit and reputation risks associated with financing development projects, and through collaboration establish industry best practices. Although the Principles do not address climate change explicitly, they are a first step at integrating environmental considerations into project finance, and signatory banks may be more likely to develop robust climate change governance policies going forward. To date, more than 70 banks have signed on to the Equator Principles, including four of the developing country FIs in this report.

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7. International Energy Agency, *World Energy Outlook 2008*, November 2008.

## FIDUCIARY OBLIGATIONS TO CONSIDER ESG ISSUES

In July 2009, the UNEP-FI Asset Management Working Group released a new report entitled “Fiduciary Responsibility: Legal and Practical Aspects of Integrating Environmental, Social and Governance Issues into Institutional Investment.” The report builds on a 2005 legal analysis by the law firm Freshfields Bruckhaus Deringer of the duty of fiduciaries in nine major capital market jurisdictions to examine ESG issues when making investments.

The “Fiduciary II” report concluded that in order to achieve the vision of the original Freshfields Report, where trustees

integrate ESG issues into their decision-making, these issues should be embedded in the legal contract between asset owners and asset managers, with the implementation of this framework being governed by the trustees via client reporting.

The report also states that professional investment advisors and service providers—such as investment consultants and asset managers—may have a far greater legal obligation to incorporate ESG issues into their investment services or face “a very real risk that they will be sued for negligence” if they do not.

In 2006 the **Principles for Responsible Investment (PRI)** was launched by the United Nations Secretary-General, and is now coordinated by the UN Environmental Programme Finance Initiative (UNEP FI) and the UN Global Compact. The PRI provides a framework through which institutional investors can publicly commit to incorporating Environmental, Social & Governance (ESG) issues into mainstream decision-making and ownership practices. The PRI now has over 575 signatories collectively representing more than USD 18 trillion in assets under management. UNEP FI is also leading a two-year program to promote the PRI in emerging markets. During the first year of the project the number of investors from emerging markets that signed up to the PRI as well as their assets under management has nearly doubled. Now the PRI has around 70 signatories from 10 emerging markets with assets under management of around USD 440 billion.

The **UNEP FI Climate Change Working Group (CCWG)**, a diverse group of financial institutions ranging from banks to re-insurers, is also collecting and sharing innovative approaches to managing climate change risk in the global financial sector. In December 2007, the CCWG released its overview of the financial sector’s climate change initiatives to date, identifying best practices and offering a number of recommendations for improved performance.<sup>8</sup> The group found that while on average the sector had a long way to go to in addressing climate change, leading companies had made progress in key areas such as:

- Participating in GHG emission trading markets and providing investment vehicles for carbon funds;
- Facilitating investment in renewable energy projects and energy efficiency;
- Developing other innovative climate change-oriented financial products.

8. UNEP-FI, “Carbon Crunch: Meeting the Cost,” December 2007.



The UNEP FI CCWG concluded its study with several recommendations to guide the finance sector in mobilizing investment and directing financial flows toward climate change solutions. The group urged FIs to “integrate climate change risks and opportunities into core operations” by:

- Considering climate change risk in lending decisions;
- Providing products and services that improve the client’s related risk management practices;
- Engaging with policymakers to promote climate change legislation that will drive innovation and technological development for a low-carbon economy.

In addition to these recommendations, the CCWG emphasized that building knowledge around climate risk management will be critical to achieving significant progress in the financial sector. The review cautioned that there continues to be “a lack of climate change capacity and knowledge within FIs, especially in developing countries.” Moving forward, it stressed, leading FIs in developed nations can play a key role in building capacity on carbon financing, renewable energy investment, climate risk assessment, and other climate change strategies among FIs in emerging markets.

*Building knowledge around climate risk management will be critical to achieving significant progress in the financial sector.*

## INVESTOR NETWORK ON CLIMATE RISK

Investor collaboration has been pivotal to advancing an understanding of climate risks and opportunities for the financial sector. Coordinated by Ceres, the Investor Network on Climate Risk (INCR) is a network of investors working to address the financial risks and opportunities posed by climate change. INCR also leverages the collective power of these investors to promote improved corporate and government policies on climate change. Since its launch in November 2003 at the first Investor Summit on Climate Risk at the United Nations, INCR has grown to include more than 80 investors managing over USD 7 trillion in assets. Key achievements of INCR include:

- Mobilized a Call to Action, in March 2007 by 65 corporations and institutional investors managing \$4 trillion in assets urging Congress to enact strong federal legislation to curb greenhouse gas emissions and requesting the US Securities and Exchange Commission (SEC) to clarify what companies should disclose to investors on climate change in their regular financial reporting.
- Organized more than two-dozen institutional investors to file a petition in September 2007 calling on the SEC to require publicly-traded companies to disclose the financial risks of global warming in their securities filings. In June 2009, organized 41 investors with approximately \$1.4 trillion in assets who wrote the SEC Chair to ask for guidance on improving corporate disclosure of climate change and other material environmental, social, and governance (ESG) risks in securities filings.
- Brought together over 450 investor, financial and corporate leaders at the United Nations in February 2008 to address the growing financial risks and opportunities posed by climate change. Nearly 50 leading U.S. and European institutional investors managing over \$1.75 trillion in assets released a 9-point climate change action plan that will boost investments in energy efficiency and clean energy technologies and require tougher scrutiny of carbon-intensive investments that may pose long-term financial risks.
- Established the Global Framework for Climate Risk Disclosure, a standardized set of guidelines for improving corporate disclosure on the risks and opportunities for climate change, in collaboration with IIGCC and the Investor Group on Climate Change (Australia/New Zealand IGCC).
- Called on the top 500 global asset managers to respond to an INCR survey on how they are evaluating climate risks and opportunities. Results will be analyzed to develop a set of ‘best practices’ with respect to manager selection, investment analyses and investment policies.

## 2.2 Best Practices of Global Financial Institutions

In January 2008 Ceres and RiskMetrics Group released a report reviewing the climate change governance strategies of 40 of the world's largest global banks. While in many ways emerging market FIs face far greater obstacles in addressing climate risk than the multinational banks reviewed in 2008, making comparisons difficult, the best practices of leading companies offer a useful benchmarking tool. A sample of key best practices identified in the 2008 report includes:

- **HSBC** has assigned climate change oversight to its board's Corporate Responsibility Committee, and Group Chairman Stephen Green is ultimately responsible for the company's climate change activities. Furthermore, HSBC has developed several climate change investment products, such as the Global Climate Change Benchmark Index.
- **Goldman Sachs** has assigned top-level management responsibility of climate change issues. The company's Head of Environmental Strategy Group reports directly to the CEO.
- **Royal Bank of Canada** established an Environmental Risk Management Group in 1992 (the group is now incorporated into Corporate Environmental Affairs). RBC utilizes a suite of environmental credit risk policies, and in 2002 launched a Carbon Risk Management Project. The project includes a carbon risk profile of the firm's lending portfolio and review of the potential physical impacts of climate change to North American business sectors and regions.
- **Citigroup** has calculated its emissions associated with power plant financing and emissions savings associated with renewable energy purchases.
- **Bank of America** announced in March 2007 a \$20 billion ten-year climate change initiative to encourage development of environmentally sustainable business practices through lending, investing, philanthropy and the creation of new products and services. The firm also set a goal to reduce indirect emissions from its energy and utility lending portfolio by 7 percent by the end of 2008.

In general, the report found that many global banks are responding to climate change through equity research and new product offerings, with European banks being in the forefront and many U.S. banks following closely behind. Many of the positive actions have come recently - especially in regard to disclosure, internal emissions management and financial support for clean energy. Among the highlights:

- The 40 banks issued nearly 100 research reports on climate change and related investment and regulatory strategies, more than half of them in 2007 alone;
- 34 of the 40 banks responded to the latest climate disclosure annual survey conducted by the Carbon Disclosure Project, a nonprofit group that seeks information on climate risks and opportunities from companies on behalf of investors;
- 28 of the banks calculated and disclosed their GHG emissions from operations and 24 had set some type of internal reduction target;
- 29 of the banks reported their financial support of alternative energy, eight of which alone had provided more than USD 12 billion of direct financing and investments in renewable energy and other clean energy projects.

*Emerging market FIs are already beginning to take the important first steps of integrating environmental issues into their risk management systems and developing governance strategies to address environmental issues in core business practices.*

These findings paint a useful backdrop on which to consider the climate change performance of the emerging market FIs included in this report. With climate change still a developing area of focus for the world's largest FIs, it is a positive sign that emerging market FIs are already beginning to take the important first steps of integrating environmental issues into their risk management systems and developing governance strategies to address environmental issues in core business practices.

## 2.3 Recent Industry Initiatives

In response to growing expectations for FIs to address the climate change impact of their lending and investment activities, a number of major firms have made headway in developing industry standards for climate risk management. In February 2008, Citigroup, JPMorgan Chase and Morgan Stanley launched the Carbon Principles, a voluntary framework aimed at addressing climate risks associated with financing carbon-intensive projects in the US power sector. Bank of America, Credit Suisse and Wells Fargo also endorsed the principles later that year. By signing on to the Carbon Principles, banks commit to using an enhanced due diligence process when financing carbon-intensive projects, such as coal-fired power plants. While these standards do not exclude such projects from the banks' lending portfolios, they do ensure a more rigorous evaluation process that acknowledges the regulatory and environmental risks associated with financing carbon-intensive projects.

In December 2008, a second group of global FIs – including Credit Agricole, HSBC, Munich Re, Standard Chartered and Swiss Re– announced their adoption of the Climate Principles, a set of commitments on climate business strategies developed by The Climate Group, a UK-based climate advocacy group. The Climate Principles offer a broader set of best practices for engaging with clients and customers across different financial businesses – from equity research and asset management to insurance and investment banking. Key elements of the best practice guidelines include:

- Developing financial products and services to help clients manage climate risk and opportunity;
- Incorporating climate change issues into research activities;
- Considering “practical ways to assess the carbon and climate risks” of lending and investment activities.

Also of note is the commitment in the Climate Principles to request that project finance clients disclose GHG emissions and seek emissions reductions for projects that release 100,000 tons CO<sub>2</sub>-equivalent or more per year. To put this in perspective, the largest coal-fired power plants have annual emissions of about 20 million tons CO<sub>2</sub>.

## 2.4 Next Steps

The Carbon Principles and the Climate Principles both mark important steps forward for developing standards for climate risk management in the financial sector. The next tests for these sectors include how many more institutions sign on to these voluntary frameworks, whether the signatories deliver on their commitments, and how deeply the guidelines affect portfolio composition and financing decisions.

## AXXESS CAPITAL

Axxess Capital manages over EUR 220 million in private equity investments in southern and eastern Europe through two managed funds: the Romanian American Enterprise Fund (RAEF) and the Balkan Accession Fund (BAF). RAEF was established in 1995 by the U.S. Congress to support the development of the private sector in Romania through direct equity investments and loans and maintains a special focus on the financial services sector. BAF is a regional fund launched in 2005 to take advantage of investment opportunities offered by the EU accession of Romania and Bulgaria in 2007, but also targets selected transactions in the Western Balkans, Moldova and Ukraine.

While both funds have maintained a long-term policy for managing the environmental risks of investments, recently RAEF has seen increased potential in the developing energy efficiency and renewable energy sectors locally. In 2004, RAEF established a project company, Romanian Industrial Energy Efficiency Company (RIEEC), which develops and operates on-site co-generation power systems for industrial consumers. This cleaner power has not only demonstrated environmental benefits but has also enabled clients to reduce energy production expenses by as much as 60 percent.

The RIEEC investments have demonstrated to Axxess Capital the potential for additional growth in the area of low-carbon power generation. In fact, more than 30 percent of Romania's electrical generating capacity is more than 25 years old and only 20 percent is less than 15 years old. The investment required to upgrade the country's generation capacity is estimated at USD 4–5 billion over the long-term, with USD 900 million for modernization of transmission and distribution systems alone. While much of this investment is likely to be in large-scale infrastructure, RAEF is also exploring smaller projects using alternative fuel sources. In 2008, RAEF approved financing for a start-up developing wood waste as a fuel source for central heating furnaces.

Some NGOs and other stakeholders are calling for banks to significantly strengthen these initiatives. In response to the Carbon Principles and Climate Principles announcements, BankTrack, a global advocacy group based in the Netherlands, released a position paper calling both sets of principles “deeply disappointing” for failing to address climate change risks with the “rigor, urgency, or ambition that the challenge at hand plainly requires” and representing “at best, a modest departure from business as usual.” BankTrack proposes instead that FIs adopt the Kiribati Principles, which include commitments to:

- Phase out support for all new coal-fired power plants;
- Assess and report on all GHG emissions associated with banks' lending portfolios;
- Establish portfolio emissions reduction targets.

Other advocacy groups, such as Rainforest Action Network, have made similar calls for banks to cut financing of fossil fuel-intensive industries entirely. While the financial sector is still long way from making this type of commitment, a key next step for FIs in emerging markets will be to weigh adoption of best practices laid out by the Climate Principles, the Carbon Principles and other emerging frameworks for climate risk management.

In addition, in the lead up to the Copenhagen UNFCCC negotiations in December, there have been numerous industry initiatives for investors to demonstrate support for a comprehensive global climate treaty. In 2008 over 150 investors signed a statement in support of a global climate agreement; a 2009 investor statement will be sent to heads of state and key policy negotiators in mid-September. The 2009 *Investor Statement on the Urgent Need for a Global Agreement on Climate Change* was coordinated by the Investor Network on Climate Risk (INCR), the Institutional Investors Group on Climate Change (IIGCC), the Investor Group on Climate Change Australia/New Zealand (IGCC) and UNEP FI and concludes:

“Clear, credible long-term policies are critical for investors to integrate climate change considerations into their decision-making processes and to support investment flows into a low-carbon economy and into measures for adaptation. A timely post-2012 climate change agreement involving all countries and containing appropriate long- and medium-term emission reduction targets is essential to supporting investor confidence. The global agreement must facilitate and encourage strong national action plans in order for us to help meet the climate challenge.”



# Regional Trends

For this report, survey responses were collected from several developing regions around the world and categorized according to the following groups: Africa, Asia Pacific, Eurasia, Latin America, Multiple, and South Asia. The Global Environment Fund, which invests in several emerging markets, was categorized as “Multiple.”

Of course, FIs in these regions have had different levels of exposure to climate change issues through varying degrees of public awareness, regulatory responses, physical impacts and commercial opportunities. In most emerging markets the consideration of environmental factors in investment and lending practices remains foremost a compliance issue. Many survey respondents, for example, mention compliance with local environmental regulations or particular investment restrictions that prohibit involvement in certain sectors or industries, such as trade in wildlife products or radioactive materials.

Integrating sustainability considerations more broadly into investment strategies has been a more gradual development in these markets. Global initiatives such as the United Nations Principles for Responsible Investment (PRI) and the United Nations Global Compact have brought more attention to these issues. Sustainability issues have also gained exposure through the launch of responsible investment indices, such as the S&P ESG India Index, BOVESPA's Special Corporate Governance Stock Index and Corporate Sustainability Index in Brazil, and the Johannesburg Stock Exchange's Socially Responsible Investment Index.

To a large extent specific attention to climate change issues – and recognition that climate change can present investment opportunities as well as risks – are correlated with local regulatory action to control carbon emissions and provide incentives for new technologies. For example, Kyoto Protocol signatories in non-Annex 1 countries can take advantage of the Clean Development Mechanism/Joint Implementation (CDM/JI) provisions to generate tradable carbon credits through emission reduction projects. This has supported the financing of small-scale renewable energy and industrial emissions reduction projects, particularly in China, India and Brazil. National regulations and incentives for biofuels, energy efficiency and forestry protection have also helped to drive investment. Below is a brief overview of the broader climate change context for each region covered in this report.

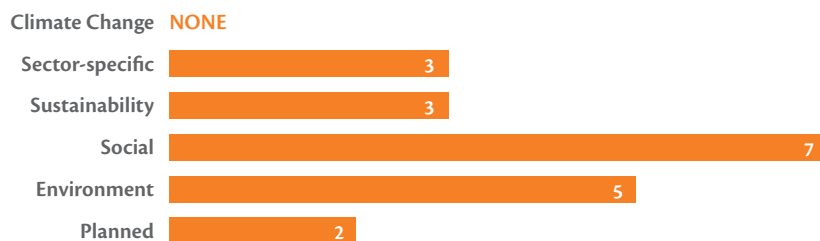
## 3.1 Asia Pacific

Climate change issues have gained significant traction in the Asia Pacific region over the last several years. With Indonesia's hosting of the December 2007 UNFCCC meetings in Bali and China's key role in ongoing post-2012 Kyoto negotiations, climate change is rising higher on the public and investor agenda. Southeast Asia is also considered one of the most vulnerable regions to the physical impacts of climate change. The Asian Development Bank (ADB) has predicted that the region could face conflict over falling crop yields, chronic water shortages and devastating tropical storms that force huge migrations of climate-induced refugees. A recent ADB report

*To a large extent specific attention to climate change issues — and recognition that climate change can present investment opportunities as well as risks — are correlated with local regulatory action to control carbon emissions and provide incentives for new technologies.*

FIGURE 4 ASIA PACIFIC (9 respondents)

Respondents with risk management systems covering sustainability issues



estimates that the region could lose as much as 6.7 percent of combined GDP yearly by 2100, more than twice the global average loss.<sup>9</sup>

China could be especially hard hit by water shortages and other climate change effects. The Chinese government has already begun a project to divert water running from the Tibetan Plateau into its western regions through a 300-mile network of tunnels. The project will cost more than the USD 25 billion Three Gorges Dam and is considered one of China's most technically challenging infrastructure projects.

Meanwhile, the ADB has set up a new Future Carbon Fund that will use carbon credits to finance clean energy projects in Asia. Governments in the region are also ramping up efforts to counter climate change:

- In November 2008, China released an economic stimulus package with 12 percent of funds targeted towards energy efficiency and environmental protection efforts. China has passed a series of laws, due to come into force at the end of 2009, to support reducing energy consumption per unit of GDP by 20 percent while doubling renewable energy capacity. The country has also launched its first Carbon Trading Exchange in Beijing; Hong Kong is considering carbon credit trading as well.
- In May 2009, Indonesia became the first nation to formally enact regulations for generating forest preservation carbon credits through the UN Reducing Emissions from Deforestation and Degradation (REDD) scheme.
- Thailand has also begun to certify forest conservation projects so that credits can be claimed under the Kyoto Protocol. In addition, the government has announced a USD 440 million package to support renewable energy development through 2022.

In addition, China's Green Credit Policy, launched in 2007, aims to restrict access to commercial credit for companies that fail environmental assessments or pollution checks. While the policy is aimed at the country's large state-owned banks, the Chinese Banking Regulatory Commission (CBRC) is cooperating with the IFC to promote the IFC Performance Standards and the World Bank Environmental, Health, and Safety Guidelines to smaller Chinese banks as well. China's Ministry of Environmental Protection is working with a group of signatories to the Equator Principles, DEG, and the WWF to provide practical training materials to private sector institutions.

Meanwhile, private investment funds in the region have been targeting emissions reduction projects and growth in renewable energy, with much influence coming from players in the West. Investors see the potential of alternative energy and energy efficiency in burgeoning Asia markets. For example, Olympus Capital Holdings Asia, a private equity firm based in New York, is creating a USD 250 million fund to focus on environment-related projects in China and India.

9. Asian Development Bank, *The Economics of Climate Change in Southeast Asia: A Regional Review*, April 2009.

**Survey responses:** In the Asia Pacific survey sample, responses were received from ten FIs, comprised of five investment funds or banks and the remainder commercial banks or leasing institutions. Generally, performance was fairly varied on integrating environmental and climate change factors into investment and lending practices.

Half of the respondents say they have a general environmental or sustainability policy, with one FI indicating that this policy addresses climate change specifically. In addition, one respondent – **Development Principles Group**, a fund manager in China – has a specific climate policy. No respondents from the region are currently measuring their GHG footprint, although one plans to do so within the next three years. Similarly, half of the respondents have a risk management system addressing environmental issues and four include climate change impact as part of the environmental assessment of projects and investments. Most are not involved in CDM/JI project development or carbon trading.

### 3.2 Latin America

Brazil was an early leader in developing biofuels from sugarcane, and private equity/asset finance activity continues to be dominated by ethanol. In addition, preserving Brazil's vast rainforests to sequester carbon is a critical issue for upcoming global climate treaty negotiations. Mexico is also becoming more vocal on climate change issues as the United States and Canada discuss options for national carbon trading schemes. Investment in wind energy is picking up across the region.

While Latin America contributes only about 6 percent of global energy-related GHG emissions (12 percent when including emissions from deforestation and agriculture), the region is particularly susceptible to climate change impacts. Many Andean glaciers will disappear within the next 20 years, placing 77 million people under severe water stress by 2020, according to a recent report from the World Bank.<sup>10</sup> Much of Brazil's rainfall is cycled locally through the Amazon rainforest; its deforestation is contributing to chronic drought conditions in northeastern Brazil and could eventually turn the rainforest itself into a much drier savannah. Mexico, whose water situation is already marginal, faces the specter of less rainfall, more droughts and more severe ocean storms. Temperature changes are also expected to cause large biodiversity losses and increased risks of infectious diseases. Dengue, a primarily urban tropical disease, has reemerged in Brazil and spread to Mexico, where the number of cases has risen 600 percent since 2001.

Governments in the region have increased their focus on mitigation opportunities that also offer wider economic development benefits.

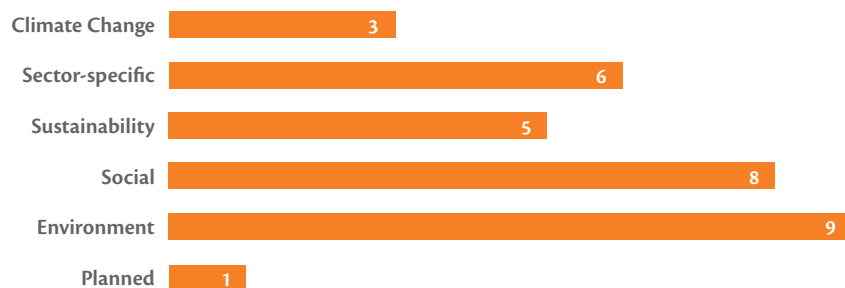
- Brazil unveiled a climate change plan in November 2008 that aims to cut deforestation by 70 percent over the next ten years and reduce electricity consumption by 10 percent by 2030.
- Mexico has announced a voluntary goal to reduce emissions by 50 percent by 2050 using a 2002 baseline. In addition, the government plans to invest USD 670 million in energy conservation and renewable energy projects over the next three years and is exploring a national carbon trading scheme.

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10. The World Bank Group, *Low Carbon, High Growth: Latin American Responses to Climate Change*, December 2008.

FIGURE 5 LATIN AMERICA (11 respondents)

Respondents with risk management systems covering sustainability issues



*A large percentage of Latin America respondents — nine of the 11 — have implemented a risk management system that covers environmental issues.*

- Efforts in other countries vary, from Argentina’s investments in renewable energy in rural areas to Costa Rica’s work on ecosystem preservation. Several cities in the region have developed environmentally friendly public transportation policies.

The European Investment Bank (EIB) and the Inter-American Development Bank (IADB) have been cooperating with local governments and banks to co-finance renewable energy and energy efficiency projects. The interest of private

firms in CDM project development has also been growing, especially in Brazil. Carbon credit aggregators, such as EcoSecurities and Econergy, have entered the Brazilian market, while the Brazil Mercantile and Futures Exchange began auctions of carbon credits in 2007. Larger commercial banks are also committing to the integration of sustainability into business practices. Banco Real, which was acquired by Grupo Santander Brazil in 2007, has been a leader in systematically incorporating environmental and social risk factors into credit analysis.

**Survey responses:** The DEG survey sample for Latin America included 11 financial institutions, mostly commercial banks and investment funds. Overall, the respondents are further along compared to other regions in their attention to climate risks and opportunities.

The majority of respondents said that they have a general environmental or sustainability policy in place with many addressing climate change issues specifically. One respondent, private equity investment firm **Conduit Capital Partners**, says it is measuring its direct GHG emissions footprint. Meanwhile, a large percentage of Latin America respondents — nine of the 11 — have implemented a risk management system that covers environmental issues. Three FIs, including **DLJ South American Partners** and **Corporacion Interamericana (CIFI)**, also include climate change factors in their risk analysis. Conduit Capital Partners is also involved in CDM projects through carbon credit funds.

### 3.3 South Asia

The South Asia region is especially vulnerable to climate change. According to the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report, crop yields could decrease up to 30 percent in the region by the mid-21<sup>st</sup> century. Sea level rise and more severe typhoons pose major threats to coastal areas with high population densities. By 2050, more than a billion people could be adversely affected by loss of Himalayan glaciers that feed seven large rivers in the region. One in five people in the region already lack access to safe drinking water.

India is in an especially precarious geographic position. The country already faces mass emigration from flooding and famine along its porous border with Bangladesh. Its own water supplies are also under threat from weakening monsoons and melting glaciers. Of particular concern are rivers that flow through Kashmir, western India and into Pakistan. Melting ice accounts for about 80 percent of their flow, and 80 percent of Pakistan’s agriculture in turn



depends on these rivers that originate in Kashmir — setting up another potential flashpoint in one of the world’s most volatile regions.

Key policy developments in South Asia include:

- At UN preparatory talks in Bonn in April, India’s representative indicated that discussions on financing support from the developed world should precede commitments from developing countries on specific emission reduction targets.
- Previously, India launched a National Action Plan on Climate Change in June 2008. While the plan does not include mandatory reductions in carbon emissions, there is support for solar power and a requirement for utilities to source a portion of their power from renewable sources. The government has also approved a National Biofuel Policy.
- The Indian government has established a Bureau of Energy Efficiency under its Energy Conservation Act to institutionalize energy efficiency services, enable delivery mechanisms and provide leadership to key players in the energy conservation movement.

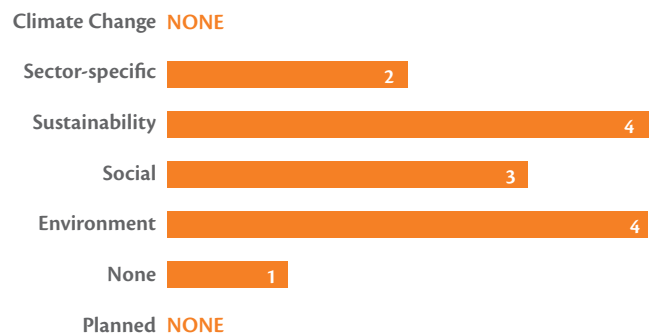
In the financial sector, five of India’s largest banks have developed energy efficiency lending programs targeting small and medium enterprises. Template-type loans are being developed to support batches of similar projects. **YES Bank**, an entrepreneurial commercial bank in India, has become a thought leader in responsible banking and sustainability integration. The bank is the first Indian signatory to the Carbon Disclosure Project, a non-profit organization that collects corporate climate change information on behalf of institutional investors. YES Bank is also the first privately-held Indian bank to become a signatory to the UNEP Statement by Financial Institutions on the Environment and Sustainable Development.

**Survey responses:** The South Asia survey sample is the smallest of all regions with five total respondents, including two from India and the remainder from Pakistan, Sri Lanka and Lebanon (included in this region because of proximity to the area, as the only Middle East respondent in the survey). Clearly, each of these countries faces very different circumstances regarding climate change risks, opportunities and regulatory policies. For example, **DFCC Bank** notes in its response that in the context of Sri Lanka borrowers will need to see specific and tangible financial benefits for them to embrace consideration of the climate change impact of projects.

Three of the five South Asian respondents state they have established a general environmental or sustainability policy without specifically addressing climate change. Meanwhile, **Rabo Equity Advisors**, the private equity arm of Rabobank, has formulated a specific climate change policy. **YES Bank** even measures its direct GHG emissions footprint, a rare practice for FIs across all emerging markets. In addition, four of the five respondents have implemented a risk management system that addresses environmental issues and three are involved in CDM/JI project development and/or carbon trading.

FIGURE 6 SOUTH ASIA (7 respondents)

Respondents with risk management systems covering sustainability issues



### 3.4 Eurasia

When Russia ratified the Kyoto Protocol in late 2004, the condition of ratification by Annex 1 parties responsible for 55 percent of 1990 GHG emissions was met and the Protocol entered into force 90 days later. Although its commitment was pivotal, Russia – and other economies in transition such as the Ukraine – effectively have an emissions reduction target of zero since their emissions, post the collapse of the Soviet Union, were already well below 1990 levels. Other Eastern European and Central Asian nations also have binding targets. New EU members Bulgaria and Romania must meet the same 8 percent reduction target as the original 15 European Union members, Croatia has a 5 percent reduction target, and Kazakhstan, although not an Annex I nation, decided to submit itself to the commitments that Annex I parties must meet.

Eurasia is not as exposed to some of the physical impacts of climate change as other regions in this report. Still, it is not immune. The southern Mediterranean region is forecast to become hotter and drier in coming decades, creating major water shortages and new challenges for the tourism industry. Wildfires, which burned 2 percent of the land area of Greece in the summer of 2007, are expected to spread. Eurasia also faces an invasion of tropical-borne diseases and potentially millions of immigrants fleeing even more climate-troubled regions in Africa and Asia.

Recent advances in national climate planning in Eurasia include:

- In June 2008 the government of Kazakhstan submitted legislation on biofuel regulation and incentives to the parliament for review. A second bill under consideration will provide incentives for renewable energy investment.
- Ukraine announced in October 2008 that it will lower GHG emissions by 20 percent by 2020 relative to 1990 levels.
- Russia plans to improve energy intensity per unit of GDP by a minimum of 40 percent relative to 2007 intensity by 2020. President Medvedev has asked officials to draft legislation providing incentives for energy efficiency and clean technology development. A January 2009 decree also set a 4.5 percent target for renewable energy generation by 2020.

Most recently, in April 2009, the Russian Natural Resources Minister Yuri Truntyev announced a new climate change doctrine expected to be the basis for a national climate policy, which drew criticism for its focus on adaptation to climatic change. Truntyev said that sea level rise could flood major cities like St. Petersburg. The country's polar and forested regions are vulnerable as well. Still, as an oil exporter and the country with the most gas flaring globally, Russia's mitigation efforts will be critical. To reduce flaring, the country has mandated that oil companies must increase their petroleum utilization rate to 95 percent by 2012.

The cost of achieving reductions is still an overriding issue for countries in this region, as evidenced by strenuous objections to the European Commission's post-Kyoto climate policy proposals by eight central and eastern EU members last fall. Bulgaria, Estonia, Latvia, Hungary, Lithuania, Poland, Romania, and Slovakia also opposed using 2005 as the baseline year for new emissions cuts as proposed by the Commission.

Public financing from Kyoto mechanisms, national governments and development banks will be critical for developing economies and economies in transition. The European Bank for Reconstruction and Development is a major source of such financing for Eastern Europe. Its Sustainable Energy Initiative (SEI), begun in 2006, has now been extended with EUR 3–5 billion in phase II financing intended to leverage an additional EUR 9-15 billion from the private sector. SEI phase II focuses on industrial and municipal energy efficiency and renewable energy projects, a loan facility for on-lending and the development of a carbon market. EBRD also announced it will provide an additional EUR 15 million to the existing Bulgarian Energy Efficiency and Renewable Energy Credit Line, and up to EUR 90 million to Irkutsk Oil Company, in which it has an 8.15 percent stake, in part to reduce gas flaring at its East Siberian oil fields.

**Survey responses:** Twenty-four FIs from this region – mostly commercial banks - responded to the survey. Most anticipate little or no impact of climate change on business, noting that climate change awareness is still very low. Still, nearly all regional respondents have environmental policies and about half indicate the policy includes climate change. Ten respondents extend these policies to risk management and include climate change impacts in lending and investment decisions. Most apply EBRD performance standards when evaluating client projects.

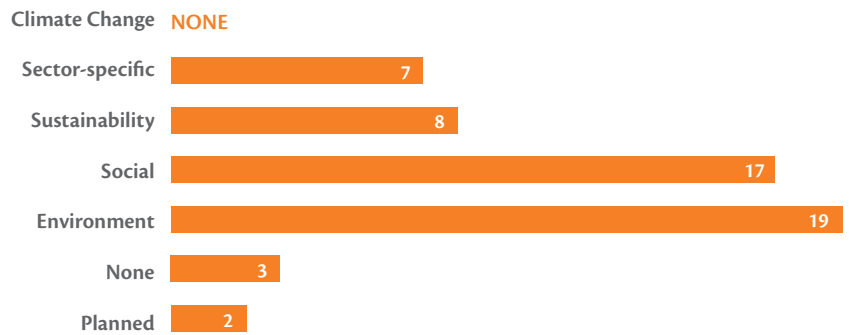
### 3.5 Africa

The African continent is particularly vulnerable to physical climate change impacts, especially on agriculture and water systems, which is compounded by limited adaptive capacity. British insurer Lloyds warns that water shortages could induce conflict within nations along the Nile River, even as its massive agricultural delta is inundated by sea level rise. Rising sea surface temperatures and changing ocean currents also appear to be affecting the African monsoon. The ensuing drought has exacerbated the conflict between farmers and nomadic tribes in the Sudan, Chad and Central African Republic. Nomads from Sudan are also pushing further into the Congolese rainforest. At the same time, a shift away from oil could destabilize oil-producing African nations such as Nigeria and Angola.<sup>11</sup> Political stability is an important precursor for attracting private capital, so parts of Africa tend to rely more on multilateral financing for climate change mitigation and adaptation than do other global regions.

Noting that Africa is expected to experience higher than average warming and decreased rainfall in most areas significantly impacting development planning, the African Union has urged the African Development Bank (AfDB) as well as the private sector to take climate impacts into consideration. In April 2009, the AfDB approved a Climate Risk Management and Adaptation Strategy. The strategy focuses on “climate proofing”

FIGURE 7 EURASIA (24 respondents)

Respondents with risk management systems covering sustainability issues

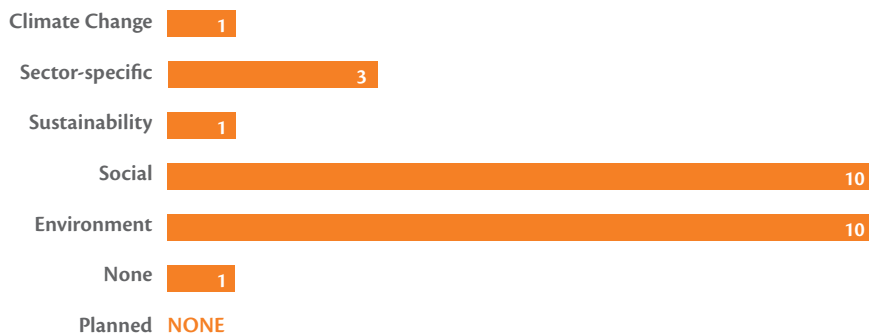


*The African continent is particularly vulnerable to physical climate change impacts, especially on agriculture and water systems, which is compounded by limited adaptive capacity.*

11. Dyer, Gwynne, Lloyds & IISS, *Climate Change and Security: Risks and Opportunities for Business*, 2009.

FIGURE 8 AFRICA (12 respondents)

Respondents with risk management systems covering sustainability issues



*Most of the 12 African financial institutions that responded to this survey forecast negative impacts of climate change on their business . . . , but four also cited anticipated growth in investments such as renewable energy and forestry projects.*

investments, policy, legal and regulatory reform, and education and capacity building. AfDB plans to leverage private sector financing to help advance the strategy, which will be integrated into all bank operations.

Private sector financing for projects in Africa is relatively low. Businesses seeking Carbon Emission Reduction (CER) credits through CDM projects are generally not turning to Africa. In fact, UNFCCC researchers report that about 3 percent of the 1,000 plus CDM projects globally are in Africa, and South Africa is the beneficiary of half of these projects.<sup>12</sup>

**Survey responses:** Most of the 12 African financial institutions that responded to this survey forecast negative impacts of climate change on their business (especially greater risk to agricultural projects), but four also cited anticipated growth in investments such as renewable energy and forestry projects. Ten out of 12 respondents have risk management systems covering environmental issues, but specific attention to climate change is still limited. Only one respondent considers climate change when making lending and investment decisions. Three other respondents, all development banks, evaluate climate risks when conducting project environmental assessments.

Currently, the **Rwandan Development Bank, Banque Ouest Africaine de Développement, IPS West Africa** and **Frontier Markets Fund** are the only FIs that have developed specialized financing for renewable energy, biofuels, sustainable agriculture and real estate energy efficiency projects. In addition, **Banque Ouest Africaine de Développement** notes that as part of a carbon credit purchase it has absorbed costs for CDM project development.

12. Fleshman, Michael, *Africa seeks fair share of "green cash,"* Africa Renewal, United Nations. Volume 22, #22, July 2008.

# Key Findings

## 4.1 Climate Change Governance

Although a focus on climate risk management is still relatively new to the financial sector in emerging markets, FIs are increasingly examining the material financial risks associated with climate change. Nearly two-thirds of FIs responding to the survey acknowledge that climate change will impact their business; of these respondents, 55 percent forecast both positive and negative climate change impacts, 40 percent foresee negative impacts only and two predict climate change will have only positive impacts on business. The primary concern for those companies predicting negative impacts is the physical effects of climate change on the agricultural sector, a key area of financing for a number of the FIs surveyed.

FIs with leading governance structures for addressing climate change have a climate change policy, board oversight and senior management responsibility for the issue, employee training, and some level of public disclosure of their efforts. These FIs are at an advantage for effectively implementing a strategic approach in addressing growing climate risks. Sound corporate governance practices also position FIs to take early action on emerging opportunities related to climate change. To stay ahead of the curve, banks and investment funds will need to combine practical considerations of managing their own GHG emissions with broader implications of how climate change affects the competitive marketplace, lending and investment strategies, and ultimately, their financial bottom lines.

The broad reach of climate change issues necessitates a holistic and forward-looking management approach that integrates climate change issues into fundamental governance practices. To benchmark corporate performance on climate change governance, RiskMetrics, in consultation with Ceres and the Investor Network on Climate Risk, has developed a *Climate Change Governance Framework* to analyze corporate strategies on climate change. While elements of this framework are discussed throughout this report, five key best practices are reviewed in this section.

**Climate Change Policy:** Developing institution-wide policies to guide environmental and climate change practices is a key aspect of a strong governance approach to climate change. Because climate change can have diverse impacts across an institution's business activities, integrated policies are important for coordinating strategies and managing long-term risks. Furthermore, sustainability policies are an effective way for FIs to communicate commitment to addressing climate change to clients, investors, and other stakeholders.

The majority of survey respondents – 67 percent – have established a specific policy to guide practice on environmental/sustainability issues. Thirteen FIs specifically address climate change in their sustainability policies, but just two respondents report that they have stand-alone public climate change policies. Investment funds have the highest percentage of respondents with sustainability policies that cover climate change issues specifically.

*Nearly two-thirds of FIs responding to the survey acknowledge that climate change will impact their business.*

FIGURE 9 SUSTAINABILITY POLICIES

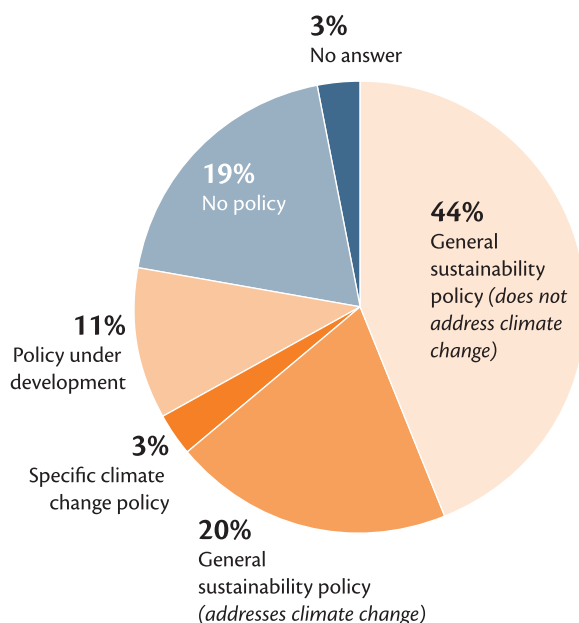
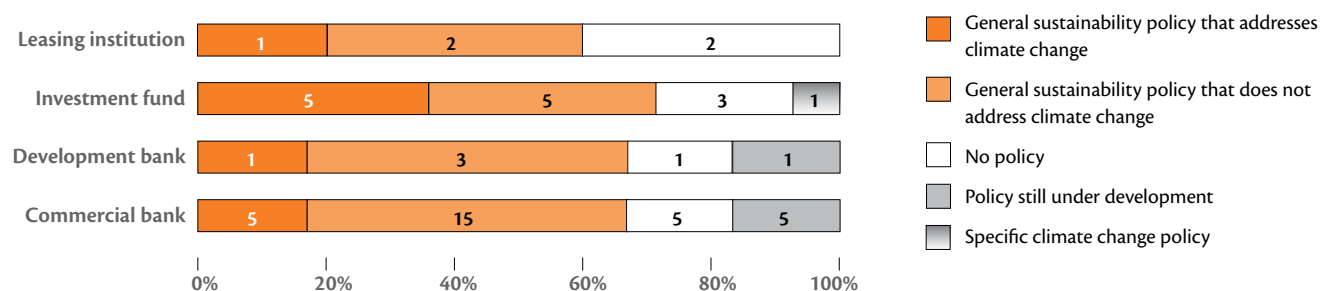




FIGURE 10 SUSTAINABILITY POLICIES – TYPE OF FI



**Board of Director Oversight:** Assigning a board member or committee to oversee climate change risks and strategies also signals a strong commitment to addressing climate issues and increases the likelihood of a top-down, proactive response to the potential regulatory, financial, reputational and legal risks as well as potential business opportunities.

While many of the FIs surveyed by DEG involve the board of directors (or a similar governing body) in environmental issues to some degree, direct board-level involvement in climate change initiatives has further growth potential.

*Roughly 48 percent of survey respondents report that the board of directors is involved in reviewing sustainability policies, and another 20 percent plan to conduct such a review within the next one to three years.*

- Roughly 48 percent of survey respondents report that the board of directors is involved in reviewing sustainability policies, and another 20 percent plan to conduct such a review within the next one to three years.
- Furthermore, 17 respondents report that the board of directors is directly involved in oversight of climate change policies and initiatives, although for the most part this is limited to oversight of regulatory compliance issues and policy reviews. No respondents have established a specific committee or board member with direct responsibility for climate change performance, although one does list an executive board member in describing the responsibilities of senior management in implementing general environmental policies.
- Latin American companies have the highest rate of board-level involvement in sustainability strategies (72 percent of respondents), followed by African companies. Investment funds were most likely to report board-level engagement (64 percent).

**Senior Management Responsibility:** An effective climate change strategy must include leadership from the top – either the CEO or another member of senior management with responsibility for implementing strategies across business lines. A number of FIs in emerging markets are beginning to integrate environmental/climate change issues into the responsibilities of senior-level management.

- Sixty-seven percent of survey respondents have assigned senior staff to the implementation of corporate sustainability policies, and another 11 percent plan to do so in the next one to three years.
- The CEOs (or similar senior executives) of 26 responding institutions, or 42 percent, have publicly endorsed sustainability policies. Examples of such endorsements

include the CEO's signature to an environmental policy, a statement in the annual shareholder report, or an email to all clients describing the institution's sustainability policy.

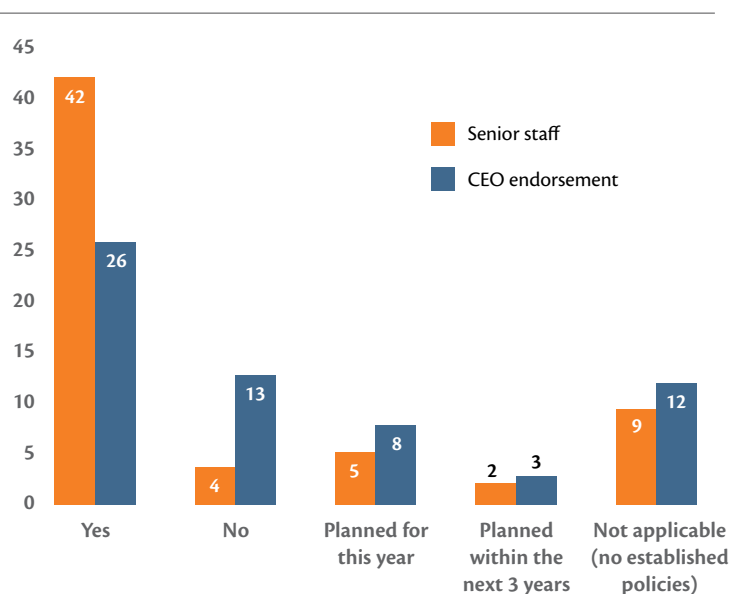
**Employee Training:** Financial institutions that encourage climate-conscious behavior in employees can tap into the innovative ideas that come from employee talent pools. For the financial sector, employee training on integrating climate risks into credit analysis and due diligence tools is also critical.

- An impressive 20 percent of respondents, or 13 FIs, conduct employee training on climate change issues. Another 20 percent plan to conduct such trainings within the next one to three years.
- Examples of trainings conducted by respondents include attendance at conferences on carbon financing, training in energy efficiency, or seminars conducted by experts in environmental or climate change issues. None of the respondents reported having conducted company-wide employee trainings; nearly all trainings described by the survey respondents were limited to one or two employees with relevant environmental responsibilities.

**Public Disclosure:** As a growing number of FIs recognize the materiality of climate change risks, disclosure of these risks is becoming an important element of strong climate change governance. Investors and other stakeholders are asking FIs to report on the climate-related risks they face and also disclose the steps they are taking to manage these risks. While most of the FIs surveyed are not yet at the point of disclosing information specific to climate change risks, a number of respondents are beginning to use public reporting mechanisms to discuss policies related to environmental issues.

- A greater number of respondents (15 FIs) are disclosing their environmental policies through mainstream financial documents such as the annual shareholder report or securities filing, rather than a sustainability or corporate social responsibility report (just seven respondents issue sustainability reports in which environmental/sustainability policies are discussed).
- The majority of respondents reporting on climate risk are from Eurasia and Latin America, and are primarily commercial banks. Just two African and two South Asian respondents publicly disclose their environmental policies.
- Despite these signs of progress, nearly half of the respondents (31 FIs) report that their sustainability policies are distributed internally only, and are not disclosed to the public.

FIGURE 11 SENIOR MANAGEMENT INVOLVEMENT IN SUSTAINABILITY STRATEGIES



## CENTER-INVEST BANK

Center-invest Bank, a commercial bank founded in 1992 focused on serving corporations and SMEs in southern Russia, was the first bank in Russia to offer specialized financing for energy efficiency projects. Since 2005, under a program developed together with IFC, Center-invest has provided numerous loans for businesses to obtain new, more efficient industrial, agricultural and food processing equipment. The program has enabled companies not only to reduce production costs, but also to significantly reduce CO<sub>2</sub> emissions, on average between 30-50 percent in 2008. Energy efficiency loans totaled approximately 420 million rubles (or USD 12.6 million using current exchange rates) in 2008.

Center-invest uses an energy efficiency calculator developed by IFC (on the basis of work done by the French AfD) to assess potential energy and cost savings of a project upfront. Once a project is implemented, the bank tracks energy savings as well as reduced CO<sub>2</sub> emissions. Two particularly innovative approaches include Center-invest's revamping of the district heating company in Taganrog, Teploenergo and inviting leading Danish equipment manufacturers and engineering companies to meet with Center-Invest customers and the heads of Rostov region's water and wastewater service providers to discuss energy efficiency opportunities.

Center-invest's Chairman of the Board of Directors, Dr. Vasily Vysokov, has said, "The time for your company to introduce energy efficiency technologies is right now, because it will mean that tomorrow, in the post-crisis economy, when tariffs go up, it will be much easier for you to be competitive...Bank finance, international financial institutions, and leading export agencies are helping Center-invest's customers obtain energy efficiency equipment on advantageous terms. Our customers' experience shows that energy costs can be cut by as much as 80 percent."

## 4.2 GHG Emissions Management

Like any business, FIs can reduce their direct climate change impact by cutting GHG emissions from operations, especially office and data center energy use and employee travel. Emissions management and target setting first requires a GHG inventory to establish an emissions baseline. Five survey respondents – including banks such as **YES Bank**, **ICS Total Leasing**, **Conduit Capital Partners**, and the **Global Environment Fund** – have taken this critical first step. Four of these FIs measure indirect emissions from purchased energy and employee travel, while Conduit Capital Partners measures direct emissions.

In addition, **YES Bank**, **Conduit Capital**, **ICS Total Leasing** and the **Global Environment Fund** have moved beyond measuring their emissions and made further commitments to reduce the GHG emissions associated with their operations. The four FIs do not provide specific reduction targets, but two provided details. Conduit Capital expresses a commitment to renewable energy, while YES Bank is working on an institution-wide emissions reduction plan that calls for installing energy efficient lighting, teleconferencing to reduce employee travel and revising procurement guidelines.

While limiting operational emissions is a good first step, a much larger climate footprint of FIs is derived from their lending and investment portfolios. Moreover, it is in the interest of banks and other lenders to understand their indirect climate impact. Measuring and reducing portfolio emissions can reduce adverse exposure to climate regulations and minimize credit risk. Select global financial institutions are already calculating the carbon emissions represented by their loan portfolios, according to the 2008 Ceres banking sector study authored by RiskMetrics Group. They include Citigroup, Mitsubishi UFJ Financial Group, Mizuho Financial Group, Royal Bank of Canada and Wells Fargo. Several other global banks dedicate funding to low-carbon investments, but only Bank of America has set a specific loan portfolio emissions reduction target.

Emerging market FIs can enhance their risk management practices by following the example of their global peers. Some already provide favorable terms to low-carbon projects, such as **Center-invest**, which provides energy efficiency loans and considers the resulting emissions reductions in determining the loan attributes. The bank uses an energy efficiency calculator to estimate emissions reductions. **Axxess Capital**, the investment manager for the Romanian-American Enterprise Fund (RAEF), assesses the GHG impact for RAEF-financed energy efficiency and renewable energy projects.

## 4.3 Risk Management

Financial sector exposure to environmental risks, especially climate change, will likely increase with growing global investment in emerging market economies. While global climate regulation is not the most immediate climate risk for emerging economies, national-level climate planning is already underway in countries like Brazil, Russia, the Ukraine and South Africa.<sup>13</sup> FIs that fund long-lived assets in these countries need to be cognizant of evolving regulation which may reduce an asset's value or open up attractive new markets for investment. In addition, physical climate impacts on water and weather systems have the potential to be severe and socially transformative – especially in key sectors such as agriculture. In fact, several respondents voiced concern over the impact of climate change on agriculture and the agro-industrial sector, specifically mentioning sugar, cotton, fruit and vegetables.

According to the survey findings, FIs across all regions recognize that sustainability is an important component of risk management. Most incorporate sustainability standards to some degree in their risk management systems, including project environmental assessments and lending and investment decisions. These findings are similar to those of the March 2009 Mercer/IFC survey of asset managers, which found that asset managers located in emerging markets generally consider environmental, social and governance issues a risk management tool, if not yet a source of long-term investment value.<sup>14</sup>

**Risk Management System:** Nearly all survey respondents indicate that their institutions have established a risk management system that addresses at least one of the following: climate change, environment, social, sustainability or sector-specific issues. Specifically:

- Fifty-three respondents across all regions have established a risk management system that addresses at least one of these issues.
- Forty-eight of these respondents indicate that the risk management system covers environmental risks.
- Five of the 48 explicitly include climate change in their risk management system (**Global Environment Fund**, one Africa-based bank, and three Latin American firms – **CIFI**, **Conduit Capital Partners**, and **DLJ South American Partners**).
- Four additional respondents plan to incorporate these into their risk management systems within one to three years.

13. For more details see DB Advisors, *Global Climate Change Regulation Policy Developments: July 2008-February 2009*, February 2009.

14. Birgden, Helga, Guyatt, Dr. Danyelle and Jia, Dr. Xinting, *Gaining ground: Integrating environmental, social and governance (ESG) factors into investment processes in emerging markets*, March 2009.

## BEST PRACTICE

# DLJ SOUTH AMERICAN PARTNERS

DLJ SAP is a small private equity firm based in Argentina. The firm, launched in December 2006, focuses primarily on growth equity investments in Argentina, Brazil, and Chile.

According to Carlos Garcia, Managing Partner, the company's social and environmental management system is "overseen at the highest level of the firm." The firm has developed a specific manual outlining its policies and procedures for the Social and Environmental Management System (SEMS), which are based on the IFC Performance Standards. All employees of the firm must review the SEMS manual and certify their understanding and willingness to comply. This process is renewed annually for all employees.

Environmental and social issues are reviewed at every stage of the firm's transactions. The firm uses a rating system to assess the level of environmental risk associated with each project and high-risk projects require third-party environmental risk assessments. Portfolio companies are also required to report on their environmental performance.

DLJ is monitoring climate change policy developments, and while the firm does not expect regulatory changes to significantly impact its existing portfolio, it is calculating the carbon emissions associated with certain climate-relevant projects. For example, DLJ has conserved 15,000 acres of natural forest to help offset the carbon impact of its investment in an Argentine paper mill, which uses 56,000 acres of land for wood supply. Furthermore, DLJ has financed a project to buy waste from saw mills to supply a biomass plant. The firm calculated the GHG emissions avoided by re-using the saw mill waste in place of the standard practice of burning it.

**BEST PRACTICE**

# FRONTIER MARKETS FUND MANAGERS

Frontier Markets Fund Managers (FMFM), a division of Standard Bank plc, acts as an advisor to the Emerging Africa Infrastructure Fund (EAIF), a debt fund that aims to address the insufficient availability of long-term foreign exchange debt finance in sub-Saharan Africa, and to GuarantCo, a provider of local currency guarantees in low income countries.

While EAIF invests mainly in traditional infrastructure sectors (energy, telecommunications, transport, and mining), one prominent climate change-related investment provides USD 15 million in financing for the Olkaria III geothermal power plant owned and operated by Orpower 4 Inc in Kenya. This is the first privately owned geothermal plant in Africa. The financing, which was arranged by DEG, won an award from the journal *emeafinance* for the “Best EMEA Sustainability Deal 2008.”

The Rift Valley has significant potential for further development of geothermal power, potentially displacing more carbon-intensive power sources in the region, and this project can act as a model for similar investments. The Olkaria III power plant is expected to replace 120,000 tons of imported oil and mitigate approximately 200,000 tons of CO<sub>2</sub> emissions per year. In addition, the cost of power to the end user will be less than that generated from fuel oil or other alternative energy sources, demonstrating to the Africa market that low-carbon power sources can also satisfy development priorities, such as affordable and accessible power.

**TABLE 1 PARTICIPATION IN VOLUNTARY CLIMATE-RELATED INITIATIVES**

VOLUNTARY INITIATIVES	
Equator Principles	Rabo Equity Advisors CIF
UN PRI	BICIGUI
UN GC	YES Bank Banco General ICS “Total Leasing”
UNEP FI	YES Bank

**External Project Standards:** Ongoing review of sustainability performance throughout the lifetime of an investment is an important component of risk management. Most surveyed institutions – nearly 89 percent – monitor clients’ project compliance with one or more external standard such as the International Finance Corporation (IFC) Performance Standards, the European Bank for Reconstruction and Development (EBRD) Performance Requirements or the Equator Principles. These results are not surprising, as DEG requires its clients to comply with all local and national environmental and social standards, as well as international standards for high risk projects.

- More than 75 percent (47 respondents) apply local and national standards in monitoring clients’ project compliance.
- Nearly half (30 respondents) benchmark compliance against the IFC Performance Standards and an additional 34 percent of respondents (21 FIs) employ the EBRD Performance Requirements. Only four FIs use the Equator Principles as a standard for monitoring clients’ projects.
- Two respondents added that they monitor project compliance against DEG’s own standards.

Application of external standards is strong across all regions, with only two South Asian FIs, one African FI and one Asia Pacific FI indicating that they do not apply any external standards in monitoring clients’ project compliance. Eight respondents also apply other standards relevant to their region of operation including those of the Asian Development Bank, the European Investment Bank or the Inter-American Development Bank.

**Voluntary Initiatives:** Only eight responding FIs indicate that they have become signatories to voluntary external environmental initiatives such as the Equator Principles, the UN Global Compact or the UN Principles for Responsible Investment. One, YES Bank, is a signatory to the UN Global Compact and a member of the United Nations Environment Programme Finance Initiative. Seven of the eight institutions participating in voluntary initiatives indicate that their participation helps them implement their climate change policies.

There does not appear to be a strong regional trend with respect to participation in voluntary initiatives; no institutions in the Asia Pacific region participate in voluntary initiatives, while Latin American respondents are the most active.



**Lending and Investment Decisions:** Survey respondents stated that climate considerations are an increasingly important part of creditor assessment and due diligence prior to investments. One Africa-based bank, stated in its survey response: “As we are a credit institution which also provides credit to the agricultural sector, we have had to implement a system to mitigate any climate change [impact] that may have an adverse impact on our clients/debtors.” Similarly, **Grupo FinTerra S.A. de C.V.**, based in Mexico, identifies uncertainty as a result of climate change as a source of credit risk: “Due to climate change higher volatility in crops and cattle productivity and prices [is] creating a larger credit risk.”

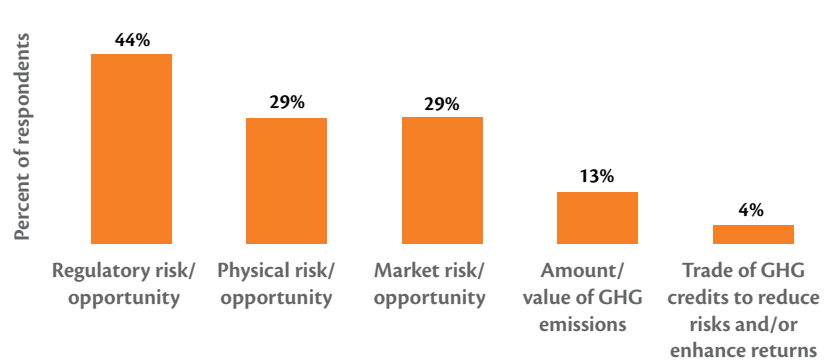
Respondents are evenly divided among those who include climate change considerations into their risk management decisions for lending and investments and those who do not:

- Twenty-two respondents include climate change considerations in lending and investment decisions, whereas 24 respondents say that they do not. Nineteen of these FIs plan to do so within one to three years.
- Investment funds lead with 57 percent reporting that they consider climate risks among other environmental risks prior to selecting companies for inclusion in their funds.
- Three development banks plan on adding climate risks to their due diligence in the future, although none do so currently.

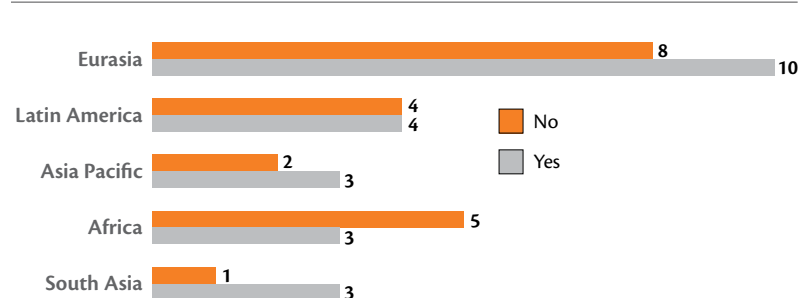
Respondents were asked to explain how climate considerations are incorporated in decision-making, but few described specific processes for integrating climate change issues into in lending and investment activities. **Center-invest Bank**, however, reports that it offers longer-term loans and low interest rates for energy efficiency projects. **YES Bank** reports that climate change is a primary consideration in lending and investment decisions: “The ESP [Environmental and Social Policy] includes Climate Change as an important section, and is THE guideline to evaluate risks on [the] socio-environment front before making investment decisions.” **Axxess Capital** and **Quadriga Capital Russia** also explicitly reference climate change or energy in their responses to this question. Several other respondents noted that they consider other environmental issues, such as pollution prevention and protection of wetlands, which can impact climate change.

**Project Environmental Assessment:** Responses to questions regarding the integration of climate change issues into environmental impact assessments were similar to responses about lending and investment risk management

**FIGURE 12 TYPE OF CLIMATE IMPACT ADDRESSED IN PROJECT ENVIRONMENTAL ASSESMENT**



**FIGURE 13 CLIMATE IMPACTS INCLUDED IN PROJECT ENVIRONMENTAL ASSESSMENTS**



## GLOBAL ENVIRONMENT FUND

Global Environment Fund (GEF), a US-based private equity firm founded in 1990, invests in clean technology, energy efficiency and timberland in emerging markets. The firm manages over USD 1 billion in private equity investments for institutional investors and was named the 2009 Sustainable Investor of the Year by the Financial Times.

Nearly all of GEF's investments have either a direct or indirect effect on climate change mitigation or adaptation. For example, investments have included integrated waste management in Hungary and Mexico; clean water infrastructure in China; cleanenergy production in Eastern Europe; as well as manufacture, installation and service of renewable energyinfrastructure in North America.

In addition, GEF's top-down approach to investment sourcing includes an explicit consideration of positive environmental impacts, regardless of the sector or company, and GEF tracks this impact over time. GEF has established an internal governance process to formalize ESG due diligence, which is overseen by a dedicated Environment and Corporate Governance Officer. In cases where a target company does not already meet the environmental and socialstandards developed for a project, the ESG Officer works with the project team and the company to develop an Environmentaland Social Action Plan which is incorporated into deal documentation.

Each of the firm's portfolio companies reports annually to GEF on ESG issues. In addition, a number ofcompanies have asked for GEF's assistance in measuring their carbon footprint. GEF's teams have also helped companies with the design, implementation, and marketing of CDM carbon credit projects.

processes. Twenty-four respondents include climate change impacts, such as regulatory, physical and market risks, as part of project environmental assessments, and another 16 plan to do so within one to three years.

There were no major regional differences with respect to project environmental assessment; however African respondents were the least likely to incorporate climate change impacts into these assessments.

**Specific Climate Risks:** Respondents were asked to identify which climate impacts are addressed in environmental assessments. Most responding FIs focused on climate change regulatory risk and opportunities, and the majority of FIs consider more than one type of climate risk or opportunity as part of project evaluations.

### 4.4 Commercial Opportunities

FIs in emerging markets are beginning to recognize commercial opportunities related to climate change, in addition to longer term risks. Commercial banks, leasing companies and investment funds are realizing new opportunities to finance growth in renewable energy infrastructure and increase funding for energy efficiency projects. Less common for DEG's financial sector partners is involvement in global carbon markets through either CDM/JI project development or direct trading of carbon credits, with the Latin American region showing the most activity.

While these are promising opportunities, the current financial downturn is having an effect on climate-related markets. Private sector funding for renewable energy projects has fallen sharply over the last year as credit markets have frozen. At the same time, energy efficiency, water and waste management projects funded by national governments or international development banks may face additional financial constraints, with the exception of green projects that can be linked to the national economic stimulus packages.

FIs surveyed by DEG were asked to comment on the effect of the current financial crisis on global climate markets and their engagement in this area:

- Fifty-two percent of respondents said they expect the financial downturn to have a negative effect on climate markets, while 44 percent expect a neutral or positive effect.
- Some FIs expected a positive effect because the current financial crisis is linked to the need for an increased focus on long-term, sustainable investing and improved risk management practices. Several FIs believe that economic

stimulus packages may encourage investment in environmentally sustainable projects.

- In addition, only 16 percent of respondents stated that the financial downturn will delay their own engagement with climate markets. Forty-two percent said it will have no effect on their engagement.

**Specialized Climate Financing & Investments:** The growth of renewable energy projects in developing countries has sped up over the last several years, particularly in major markets such as China and India. While Latin America already sources a significant share of its electricity from hydropower, China now ranks fifth in the world in total installed wind capacity and India ranks sixth.<sup>15</sup> China and India have also established national renewable energy targets that will drive investment. The Indian government has announced a new plan to require power utilities to buy 5 percent of their power from renewable energy sources by the end of 2010. This minimum purchase requirement will increase 1 percent each year for the next 10 years, reaching 15 percent by 2020.

While overall renewable energy has been slow to take off in Africa – partly due to the complexity and cost of extending and upgrading electricity grids – there has been some traction in solar energy and biofuels. In March 2009, South Africa introduced feed-in tariffs for wind and concentrated solar energy that should encourage the uptake of these technologies.

Meanwhile, the financial downturn's effects on renewable energy markets became apparent in late 2008. Investment flows were down 23 percent globally in the second half of 2008 as compared to a year earlier, and first quarter 2009 investment fell to USD 13.3 billion, the lowest quarterly value since Q1 2006.<sup>16</sup> Some state-owned banks in emerging markets have stepped in to fill the financing gap left by private sector banks. Despite this, local FIs have a role to play in financing the development of these nascent markets. Commercial banks or leasing institutions may offer targeted loans, preferential interest rates or project management support services to clients. Investment funds are also altering their portfolios to take advantage of growth opportunities.

The survey found:

- For respondents offering specialized financing products or targeted investments in climate-related areas, renewable

15. Global Wind Energy Council, <http://www.gwec.net>

16. United Nations Environmental Programme, New Energy Finance and Frankfurt School of Finance & Management, *The global financial crisis and its impact on renewable energy finance*, April 2009.

## BEST PRACTICE

### GRUPO FINTERRA S.A. DE C.V.

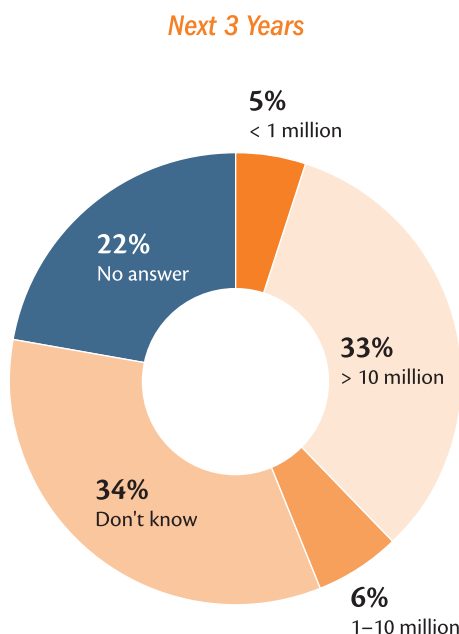
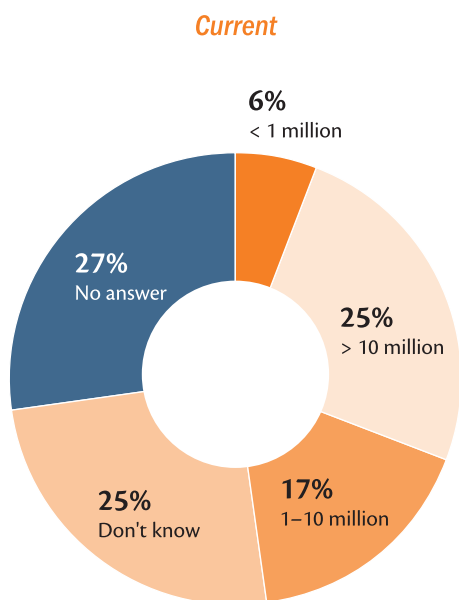
Grupo Finterra is a Mexico-based financial institution specialized in lending to small and medium sized enterprises (SMEs) in the agricultural/agribusiness sectors. The company has been operating since 2004.

Grupo Finterra's Social and Environmental System was approved by the company's Board of Directors. Jose Luis Martinez Orejas is the point-person on the board of directors responsible for oversight of the company's sustainability policies. Mr. Martinez regularly reports on environmental and social issues to the board. In addition, Grupo Finterra's credit group is responsible for ensuring compliance with the company's sustainability policies in all transactions.

Grupo Finterra has designed an environmental and social risk rating system with assistance from DEG to assess all potential clients and the rating process is conducted by each client's relationship manager. The rating system assigns clients a grade of A, B, C according to their compliance with a range of environmental and social standards. Ratings are tailored to the specific project and agricultural activity to capture key risks relevant to the client's business. The company also provides recommendations to help clients increase their scores and comply with the company's standards. These recommendations are tailored to address specific risks to a client's business activities. Low-scoring clients will not receive financing unless these requirements are met.

Grupo Finterra recognizes that climate change may have a significant impact on its business in the agriculture sector. The company is pursuing climate-related opportunities to help mitigate this impact. It is ramping up its investment in the area of water management, including projects to help farmers reduce water use such as lower-demand irrigation systems in Northern Mexico. Grupo Finterra is also considering investment in new forms of biofuels, and sees significant opportunity to invest in climate-related waste management practices such as methane capture from livestock.

**FIGURES 14, 15 RESPONDENTS' CURRENT AND PROJECTED INVESTMENT TOTALS IN CLIMATE-RELATED AREAS (USD)**



energy (20 respondents or 31 percent), industrial energy efficiency (18 respondents) and waste management (18 respondents) lead in activity.

- The least active area is adaptation-related services (2 respondents), an area that over time will require substantially increased investment in developing countries.
- The most common investment area for commercial banks surveyed is industrial energy efficiency, while development banks are focused on waste management and investment funds are focused on renewable energy projects.

This level of activity compares favorably to that in developed markets, as represented by the RiskMetrics Group and Ceres study covering 40 major global banks published in January 2008. That study found 73 percent of major global banks disclosed information on financing renewable energy projects. In addition, half of the global banks offered climate-related investment or retail products, such as carbon-balanced stock indices or preferred rate “green” mortgages and car loans.

Several FIs who responded to the DEG survey also indicated that climate-related financing and investment is currently under consideration, with industrial energy efficiency, biofuels and sustainable forestry/agriculture leading in interest.

- Among respondents from Eurasia and Africa, the most common areas under consideration for further development are biofuels and industrial energy efficiency.
- Respondents from Asia Pacific expressed the most interest in sustainable forestry/agriculture and water management, similar to Latin American respondent interest in adaptation-related services and water management. Notably, many regions of Latin America are already seeing increased vulnerability to climate impacts due to dependency on glacial water resources and rain fed from the Amazon basin. Only one respondent from South Asia – **DFCC Bank** – mentioned new products under consideration in the area of water management to respond to rising risks posed by shortages.
- Of special note is that 11 respondents indicated the intent to pursue investment in climate change adaptation-related services, an area in which even global FIs are just beginning to become involved.

The current size of respondent investments in climate-related areas (average per project) is most commonly greater than USD 1 million (21 respondents), while eight respondents report projects of less than USD 500,000. In terms of total investment levels, 16 respondents report over USD 10 million and 11 respondents report total investments between USD 1–10 million. The proportion of those with larger investments is also

expected to grow, with 33 percent of respondents expecting investments of USD 10 million within the next three years.

Interestingly, the same number of respondents stated that they view climate-related products as a major and minor growth area (22 respondents each). The distribution of those that view climate as a major growth opportunity is fairly evenly spread across all regions. However, investment funds and leasing institutions have the highest proportion of respondents expecting a major growth opportunity.

**Global Carbon Markets:** The Kyoto Protocol has established several incentive mechanisms to support emissions reduction projects that generate tradable offset credits. Projects in developing countries through the Clean Development Mechanism (CDM) generate Certified Emission Reductions (CERs), while projects in industrialized countries generate Emission Reduction Units (ERUs) for transfer through Joint Implementation (JI). There is also a growing market for voluntary emissions reduction credits that have been certified outside of the United Nations system.

CDM projects have seen particularly strong growth since Kyoto's official start in 2005. By the end of 2008, over 4,000 CDM projects had been submitted to the UN's CDM Executive Board for approval and approximately 1,000 registered projects are estimated to have the potential to save around 1.4 billion tonnes of carbon dioxide-equivalent (CO<sub>2</sub>-e) emissions to 2012.<sup>17</sup> While early projects were led by relatively low cost reductions in industrial hydrofluorocarbon-23 (HFC-23) and nitrous oxide (N<sub>2</sub>O), more recently methane reduction, energy efficiency and renewable energy projects have increased.

The geographic distribution of CDM projects has been uneven, with China accounting for half of all projected savings in emissions by 2007. India, Brazil and South Korea have also been active in registering projects. As one goal of CDM has been to transfer funds for cleaner development to those most in need, there continues to be a concern about the lack of projects in Africa.

Among survey respondents, involvement with CDM/JI project development is low, with only three FIs indicating direct involvement. This could be attributable to the regional distribution of respondents with only four from China, two from India and one from Brazil. While there were 25 survey respondents from Eurasia, Joint Implementation projects have had a slower uptake than CDM projects. The formal crediting period for JI projects is aligned with the first commitment period of the Kyoto Protocol, and therefore did not start until January 2008. Given this delayed start

## BEST PRACTICE

### RABO EQUITY ADVISORS

Rabo Equity Advisors, a subsidiary of the Dutch company Rabobank Group, is an India-based private equity firm focused on the food and agribusiness sectors. The firm currently manages one USD 100 million fund, the India Agri Business Fund.

Rabo views the due diligence process to assess environmental risk "as important as legal and financial due diligence," says Rajesh Srivastava, Chairman and Managing Director. Rabo has designed its own company manual to ensure proper implementation of IFC Performance Standards in project evaluations. Employees are instructed to assess all IFC Standards and flag any high risk areas. Projects with exceptionally heightened environmental and social risks are not pursued. Dr. C. Prabhu, Principal and Senior Vice President, oversees all due diligence on environmental and social issues to ensure compliance with the company's climate change and other environmental policies.

Rabo views climate change opportunities as a major growth area for the firm. The firm is already actively investing in CDM projects and is planning to grow its investments in this area. CDM investment is centrally coordinated through a specialized unit within Rabo's parent company, Rabobank Group, located in the Netherlands. This unit is responsible for monitoring CDM activity in all Rabobank branch offices around the world and ensuring all branches are "fully equipped" to seek out investment opportunities in CDM projects, according to Mr. Srivastava. Rabo Equity Advisors in India has invested in two CDM projects so far, including one project in agri-biotechnology and another related to cooking fuels.

17. The Carbon Trust, "Global Carbon Mechanisms: Emerging lessons and implications." April 2009.



## YES BANK

YES Bank is a full-service commercial bank in India that has been a long-term champion of responsible, sustainable banking. It is the first privately-held Indian bank to become a signatory to the United Nations Environment Programme Finance Initiative (UNEP FI) and the first Indian signatory to the Carbon Disclosure Project.

YES Bank has integrated its sustainability strategy throughout the bank by forming two Responsible Banking departments that work closely together on policy development and implementation. *Responsible Banking in Thought* provides cutting-edge thought leadership in the sustainability space and *Responsible Banking in Action* develops specialized products and services. In addition, YES Bank has established a dedicated Sustainable Investment Banking (SIB) group, which provides specialist advisory services for alternative energy and environmentally-focused sectors. A Private Equity group has also been developed to address growing investor interest in early-stage clean technology opportunities in India.

One recent project of the SIB group, completed in cooperation with the bank's Agribusiness, Rural & Social Banking team, is a structured transaction to provide bundled small loans to farmers for energy efficient drip irrigation equipment. The 1 billion rupee (approximately Euro 15 million) project will support the purchase of advanced drip irrigation systems from Jain Irrigation Systems Limited (JISL) by approximately 25,000 farmers. Due to the high initial cost of the systems and the complexity of evaluating and monitoring numerous individual loans, a unique approach was needed. JISL will act as YES Bank's managing and collection agent to aggregate farmer information for credit assessment and facilitate disbursement and collection of the loans. YES Bank also trained field staff and JISL dealers to develop reporting and monitoring standards.

The climate change mitigation impacts are impressive with overall energy demand expected to be reduced 480–600 million kWh over the 4–5 year life of the systems. Energy demand is reduced because the drip irrigations systems required substantially less water to be pumped from wells. Each irrigation system saves about 10 kWh of power per day per acre over flood irrigation systems used previously. YES Bank also hopes to replicate this bundled transaction structure for other renewable energy and energy efficiency projects as part of a larger cooperation with partners EnvironmentEnergy and Enterprise Ventures, the Global Environmental Institute – Americas and the RenewableEnergy and Energy Efficiency Partnership (REEEP).

compared to CDM, Russia accounts for nearly two thirds of projected emissions savings to 2012.

As these markets grow, depending to a large extent on the outcome of post-2012 Kyoto negotiations, it is likely that more FIs may require assistance in CDM/JI technical training or deal structuring. Project contracts can be complicated due to the current UN registration process, country and project completion risks, as well as evolving carbon market dynamics. However, this represents a promising long-term opportunity for emerging market FIs to participate in the financing, generation and sale of carbon reduction credits, which are likely to see increased global demand particularly if a cap-and-trade scheme is passed by the US Congress. The value of the primary CDM market was approximately USD 6.5 billion in 2008, and this actually represents a 12 percent decline over the 2007 market due to regulatory delays in project registration and the financial crisis.<sup>18</sup>

Over the longer term, it is possible that US and European climate legislation could create significant additional demand for credits allowing developing countries to scale-up their investment in projects. The American Clean Energy and Security Act (ACES) recently passed by the House of Representatives and awaiting approval by the Senate allows for two billion tons annually of domestic and international offsets. The EU has also said that if a sufficiently stringent global climate agreement is reached, then it will adopt a stronger emissions reduction target of 30 percent below 1990 levels by 2020, creating an additional demand for credits.

Survey recipients were also asked if they are involved in either direct carbon trading or trading services for clients. Demand for emissions credits mainly comes today from companies under the European Union Emissions Trading Scheme (EU ETS) and Japanese companies, as well as some purchases from Kyoto signatory governments that

18. The World Bank, "State and Trends of the Carbon Market 2009," Washington, D.C., May 2009.

are falling short of their agreed targets. Trading has been dominated by mainstream brokerage houses, mostly in Europe.

Therefore, it is not surprising that participation in carbon trading markets among survey respondents is particularly low. Only **Rabo Equity Advisors** and **Conduit Capital Partners** indicate current involvement either through direct trading or carbon credit funds/trusts. However, seven respondents report plans to become involved in carbon markets in the next three years.

# Conclusion

This report finds that several FIs in emerging markets have begun to take key first steps to address environmental and climate change issues in their lending and investments. Nearly two-thirds of those surveyed acknowledge that climate change will impact their business and the majority of respondents – 65 percent – have established a specific policy to guide practice on environmental and sustainability issues. This is to be commended given that climate change may not be at the top of the public or investor agenda in many of these markets, and because smaller, regionally-focused FIs likely have fewer internal resources to establish dedicated teams and policies for managing climate risks.

Leading FIs – such as Axxess Capital, Center-invest Bank, DLJ South American Partners, Global Environment Fund, Grupo Finterra, Frontier Markets, Rabo Equity Advisors and YES Bank – are beginning to move beyond general environmental policies to integrate climate and environmental issues into core business practice. These institutions are also seeking opportunities to invest in CDM/JI projects, carbon trading markets and burgeoning renewable energy markets.

Despite these encouraging results, it is clear that FIs in emerging markets have a long way to go in implementing strong climate change governance practices. Five survey respondents have conducted an inventory of GHG emissions associated with their operations, and no respondent measures emissions associated with its lending portfolio. The results of this survey and our earlier banking study lead us to propose the following recommendations for emerging market FIs:

- Elevate climate change as a governance priority for board members and CEOs;
- Start measuring emissions resulting from financing and investment;
- Begin factoring carbon costs into their financing and investment decisions, especially for energy-intensive projects that pose financial risks as carbon-reducing regulations take hold worldwide;
- Set progressively higher targets to shrink the carbon footprint of their lending and investment portfolios, and be more transparent about how they intend to meet these objectives, and
- Discuss disclosure about the financial and material risks posed by climate change as well as their own emissions reduction strategies.

International and national development banks also have an excellent opportunity to contribute to the formation of best practices on managing climate risk in the financial sector. These institutions can act as key partners with emerging market FIs by:

- Developing more robust climate change training offerings in the areas of project risk assessment and technical assistance on low-carbon project design and implementation;
- Expanding training resources on measuring the GHG emissions of investment and lending portfolios;

- Targeting energy efficiency and renewable energy as focus areas for additional credit facility offerings;
- Integrating adaptation issues, particularly related to sustainable agriculture and water supply, more thoroughly into overall climate risk assessments of emerging markets and due diligence of lending activities;
- Supporting emerging market FIs that receive financial support to establish an institution-wide climate change policy and disclose this policy to the public.

The upcoming Copenhagen summit could set new terms for incentives and financial support offered to developing countries to cope with climate change impacts. The introduction of international offset programs, such as the proposed Reducing Emissions from Deforestation and Forest Degradation (REDD) program, will help shape how capital flows are directed from developed countries to developing countries. Furthermore, as more developed countries firm up their own GHG emissions reduction targets and implement cap-and-trade systems to meet these goals, clarity around carbon pricing will help global investors size up the opportunities in emerging markets to invest in renewable energy and other carbon offset projects. The carbon trading market is expected to grow from USD 128 billion in 2007 to more than USD 3 trillion by 2020 if cap-and-trade schemes are introduced in the US and other markets, with most of the activity focused in emerging markets.<sup>19</sup> Locally based FIs will be key partners in many of these deals.

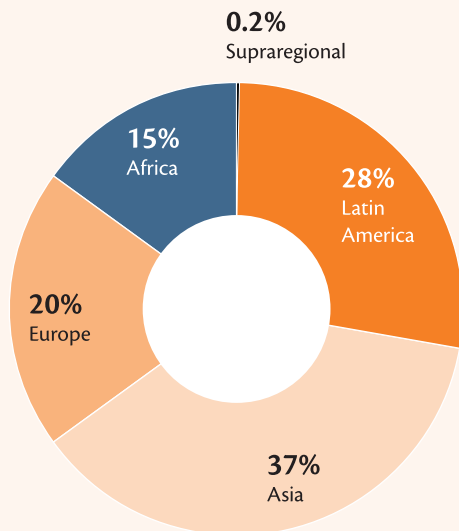
Combined with efforts in developing countries to strengthen their own climate-related regulation, the opportunity for emerging market FIs to engage in climate change business activities is set to only grow. Those institutions that now take an early and proactive approach to establishing climate change governance and risk management practices will find themselves competitively positioned to thrive in an increasingly carbon-constrained world.

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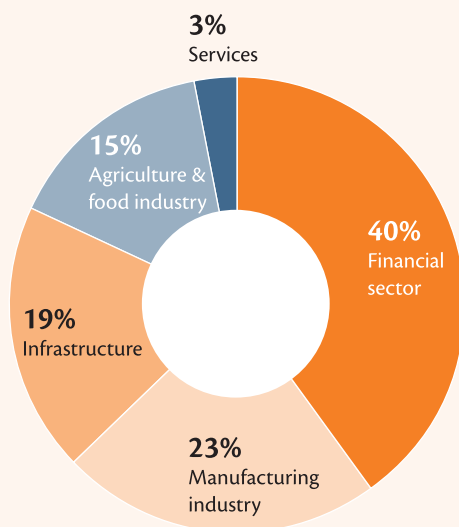
19. New Energy Finance, Carbon Market Roundup Q3 2008, October 2008.

# Background on DEG

**FIGURE 16 DEG NEW BUSINESS 2008 – BREAKDOWN BY REGION**



**FIGURE 17 DEG NEW BUSINESS 2008 – BREAKDOWN BY INDUSTRY**



DEG, a member of KfW Bankengruppe (KfW banking group), finances investments of private companies in developing and transition countries. As one of Europe’s largest development finance institutions, DEG promotes private business structures to contribute to sustainable economic growth and improved living conditions in developing countries.

DEG is committed to maintaining high environmental and social standards for both itself and its clients. For this reason, DEG contractually requires all projects to meet the local and European Union or World Bank/IFC environmental and social performance standards. Projects must also comply with International Labor Organization standards. Clients must regularly provide evidence that their plants, processes, products and services currently meet these standards or that they are implementing measures to achieve them.

In the case of financial sector clients, DEG evaluates the environmental and social risk profile of their portfolio and requires FIs to implement an adequate system to manage these risks. DEG also provides assistance to build such capacity where needed. Within its strategic assistance program for the financial sector, DEG hosts workshops and provides in-depth training sessions for its FI clients. DEG has also partnered with other institutions on several initiatives, including working with UNEP FI on the Environmental and Social Risk Analysis E-learning program, as well as with the World Wildlife Fund and a group of Equator Principles signatories on an Outreach Training Initiative for Chinese banks.

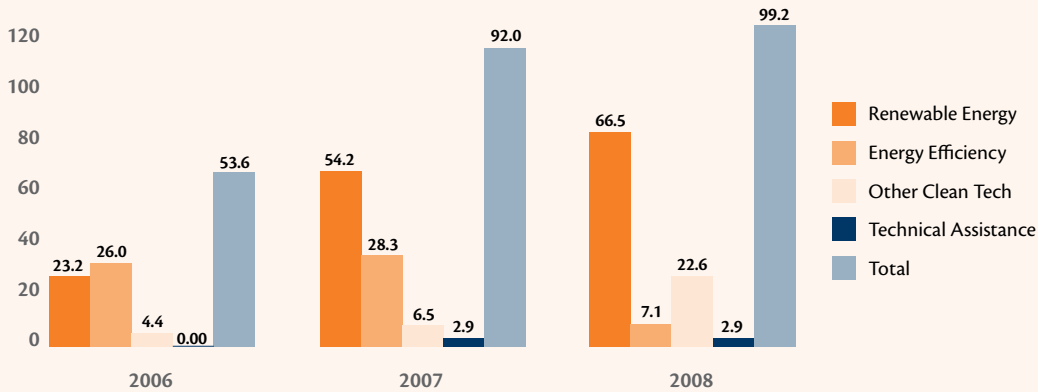
Climate change is a strategic focus area for DEG. KfW Bankengruppe is one of the largest investors in renewable energy worldwide. DEG has committed EUR 240 million for climate-related private sector investments in the period from 2006 to 2008 alone. The EUR 96 million invested in 2008 accounted for 8 percent of total new investments.

Targets and basic conditions for investments are defined in DEG’s Climate Strategy, which identifies renewable energy, renewable resources, energy efficiency and CDM/JI projects as core areas of focus. DEG has also extended its climate commitment to address its own activities. Not only has the institute become carbon neutral, DEG’s new office building in Cologne, Germany was also built to comply to the highest sustainability standards, winning a gold medal from the German Society for Sustainable Building.

DEG plans to expand its involvement in climate change areas even further in the coming years. For example, the institute plans to expand its services to identify highly carbon intensive projects and work with clients to reduce these emissions. DEG already offers several key services to its clients in this area.



FIGURE 18 DEG'S CLIMATE-RELATED INVESTMENTS (EUR MILLION)



**CDM Investment.** As an important component of its climate change-related services, DEG finances carbon credit-generating projects under the Clean Development Mechanism (CDM) of the Kyoto Protocol. DEG advises clients on the potential of proposed CDM projects and can also assist in up-front financing of CDM transaction costs. These instruments complement KfW Bankengruppe's other key CDM services, such as the KfW Carbon Fund, which buys Certified Emissions Reductions (CERs) from CDM projects.

**Renewable Investment.** In 2008, 57 percent of DEG's investments in infrastructure and power generation were directed at renewable energy, energy efficiency, and clean technology components manufacturing. In addition to standard structures and support schemes for stand-alone projects and development holdings, DEG acts as private equity investor with developers in the field. Financial instruments offered to support renewable energy activities and project finance include risk capital for developers, equity capital, long-term debt, mezzanine finance and guarantees.

As the financial sector forms a large segment of DEG's portfolio, DEG also aims to assist its financial sector clients in their approach to climate change-related matters. This study is one step in this direction. DEG sees the financial sector as a pivotal player in mobilizing private sector engagement to combat climate change and mitigate its impacts.

## About DEG

DEG, member of KfW Bankengruppe (KfW banking group), is one of the largest European development finance institutions. For more than 45 years, DEG has been financing and structuring the investments of private companies in developing and emerging market countries. DEG invests in profitable projects that contribute to sustainable development in all sectors of the economy, from agribusiness to infrastructure and manufacturing to services. A special focus is on the financial sector in order to facilitate reliable access to investment capital locally. DEG's aim is to establish and expand private enterprise structures in developing and emerging countries, and thus create the basis for sustainable economic growth and a lasting improvement in the living conditions of the local population. Environmental and social responsibility is a cornerstone of DEG's engagement, climate change risks being one of the strategic priorities.

## About Ceres

Ceres is a national coalition of investors, environmental groups, and other public interest organizations working with companies to address sustainability challenges such as climate change. Ceres also directs the Investor Network on Climate Risk, a group of more than 80 institutional investors from the US and Europe managing approximately \$7 trillion of assets. The purpose of INCR is to promote better understanding of the risks of climate change among institutional investors. For more information, please visit [www.ceres.org](http://www.ceres.org) and [www.incr.com](http://www.incr.com).

## About RiskMetrics Group

RiskMetrics Group (RMG) is a leading provider of risk management and corporate governance products and services to financial market participants. By bringing transparency, expertise and access to financial markets, RMG helps investors better understand and manage the risks inherent in their financial portfolios. Our solutions address a broad spectrum of risk across our clients' financial assets. RMG's Sustainability Solutions offer investors insight into the financial impact of sustainability factors such as climate change, environmental risks and human and stakeholder capital, as well as comprehensive data on the sustainability performance of over 2000 companies worldwide. For more information, please visit [www.riskmetrics.com](http://www.riskmetrics.com).

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