

Mexican Dialogues

Financing green growth¹

Summary

- Estimates of financial needs indicate that only through private sector investment will the needed mitigation efforts be implemented
- About half of the mitigation investment will be needed in developing countries, but their share of the investment is currently much lower
- Private clean energy investments in developing country in 2009 tripled the amount channeled through public finance
- Many developing countries are failing to unlock private investment at sufficient scale because investment risks remain unaddressed. In the short term, international support could help address these risks effectively
- Bilateral and multilateral financial institutions should focus their efforts in leveraging private capital rather than funding directly investments that often crowds out private investors.

1 Disclaimer:

This document was prepared by the WBCSD Secretariat as a background paper for this Mexican Dialogue. This document has not been approved and signed off by WBCSD member companies.

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Introduction

Climate change and more sustainable energy solutions require unprecedented action from governments in terms of the scale needed and the urgency for action. Private sector investment will be crucial to scaling-up mitigation action - the reduction of greenhouse gas emissions and enhancement of carbon sinks.

Private investors focus investment towards opportunities that generate a return commensurate with the risk. At present most mitigation actions do not provide attractive returns, particularly in developing countries where modest returns on investments do not justify high investment risks. Mitigation actions can be made more attractive with market mechanisms, regulations and financial incentives that reduce investment risks for a given level of return.

This dialogue focuses on financial incentives and public finance mechanisms. Market mechanisms and regulations will be addressed under future dialogues.

Investment needed for mitigation

Estimates of investment needs for mitigation vary substantially depending on assumptions (costs, mitigation measures, exchange rates, interest rates, etc.).

The IEA estimates that average annual investment of c\$936 billion will be needed over the period 2021-2030 for CO₂ mitigation measures in the energy sector.² If other measures to reduce GHG and to increase carbon sequestration by forests and agricultural soils are considered, annual investment needed between 2026-2030 could be c\$1.215 billion, according to McKinsey.³

Around half of the investment will be needed in developing countries. Energy efficiency measures range between 60% (IEA) and 73% (McKinsey). Many energy efficiency technologies have higher capital costs and lower operating costs than emitting technologies they replace. Consequent energy savings result in a net lifetime cost substantially lower than the investment needed.⁴

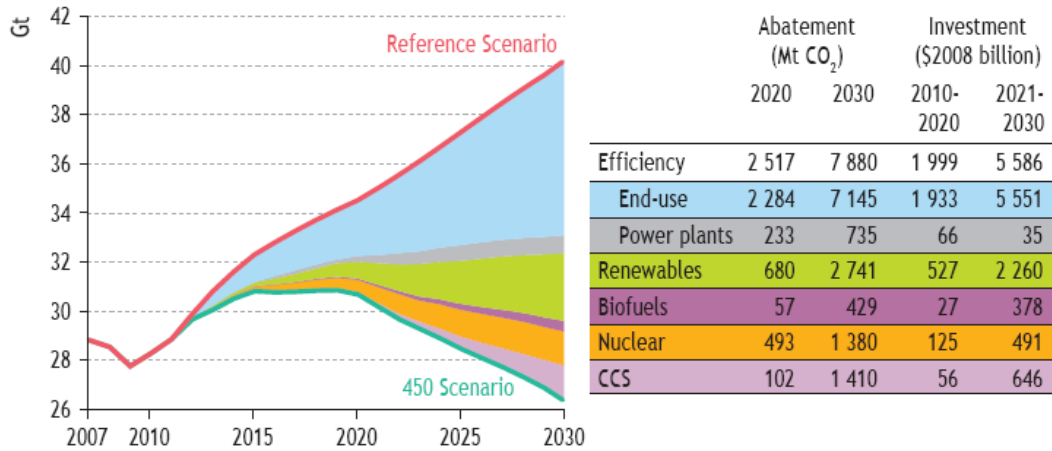
In addition to the investment needed to implement mitigation measures, investment in research, development and demonstration (RD&D) of mitigation technologies needs to be increased significantly. Governments and industry fund roughly 30% and 65% respectively of RD&D. Increased private RD&D funding for mitigation technologies depends upon a growing market for these products.

² International Energy Agency, World Energy Outlook, 2009. IEA estimates energy related CO₂ emissions, which are around 70% of total emissions. The investment needed rises exponentially; the average for 2010-2020 is \$248 billion per year. The figures do not reflect reduced investment needs for fossil fuel supply and transmission and distribution.

³ *Pathways to a Low-Carbon Economy. Global Greenhouse Gas Abatement Cost Curve (V2)*. McKinsey uses a €1,5 per \$1 exchange rate.

⁴ World Development Report 2010: Development and Climate Change, Table 6.2.

Figure 1: World energy related CO2 emissions abatement and investment



Source: IEA World Energy Outlook, 2009

Private investment for mitigation

Comprehensive data on private investment in mitigation measures is not available, but data on investment in clean energy (mainly renewables and biofuels) are available. Investment in clean energy has grown rapidly from 2004 through 2007, and since then has been roughly stable at c\$160 billion per annum due to the financial crisis and economic downturn.⁵ Substantially less than half of the investment occurs in developing countries, mainly in China.

The IEA estimates \$264 billion annual investment is needed between 2021-2030 for renewables and biofuels to achieve its 450ppm scenario. New Energy Finance predicts asset finance for these technologies to continue to grow rapidly to over \$500 billion per year by 2030 (Figure 3).

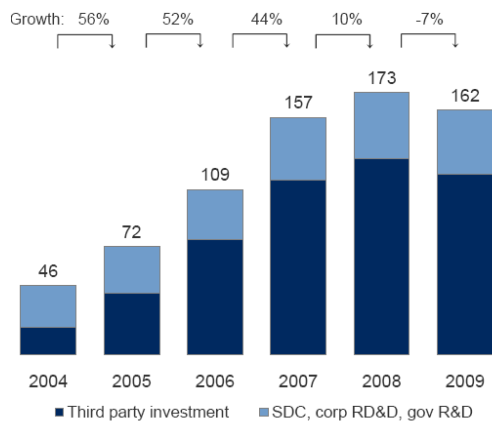
Regardless of which estimate turns out to be more accurate, it is clear that only through private investment will needed mitigation efforts be implemented.

The rapid growth of clean energy investment has been driven mainly by supportive policies and incentives, mostly in developed countries. Continued growth to meet projected mitigation needs will require expansion of such policies and incentives to more countries.

About half of the investment will be needed in developing countries, but their share of the investment is currently much lower. Increasing the investment in mitigation measures in developing countries will require more international financial support.

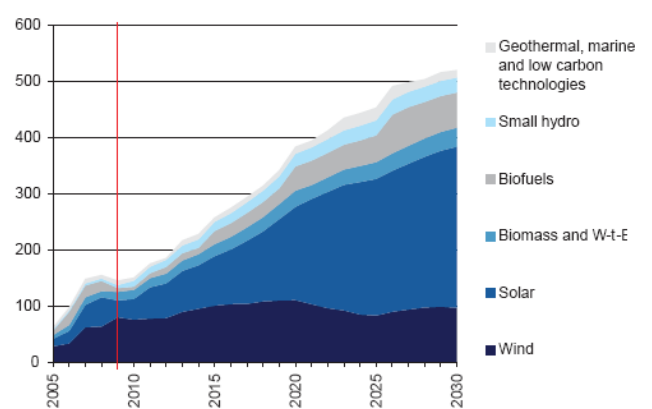
⁵ The figures represent the value of “deals” where some or all of the funds are raised from external sources. An investment funded entirely by a company’s internal cash flow is not included.

Figure 2. Total annual investment in clean energy (\$US billions)



Source: UNEP, *Global Trends in Sustainable Energy Investment, 2010*.

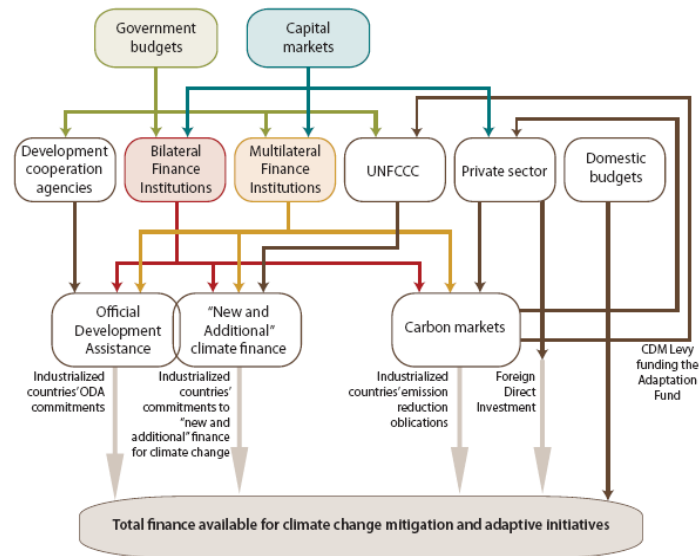
Figure 3. Expected annual clean energy investment (\$US billion)



Financing climate change in developing countries

Developed countries have promised to help finance mitigation and adaptation in developing countries, as well as associated capacity-building and technology transfer. This financial support is channeled through a complex system of bilateral, multilateral, public and private mechanisms as shown in Figure 4.

Figure 4. Financial and investment flows for climate action in developing countries



Source: World Bank, *Monitoring climate finance and ODA, May 2010*

Estimates show that between \$10 and \$15 billion per year is currently provided to developing countries for climate purposes, mostly for mitigation (ranging from 70% to 90%). This funding is a mix of grants, concessional loans and revenue from the sale of

emission reduction credits.⁶ A comparison of these figures with private clean energy investments in developing countries, which were \$50 billion in 2009, indicates that private investments were triple the amount channeled through public finance.

Developed countries recognize the need to increase the funding available and, in the Copenhagen Accord, committed to a goal of mobilizing \$100 billion per year by 2020 to support mitigation and adaptation. This amount falls well short if we compare to the projections outlined in figure 3.

BOX 1. The issue of private funding as a component of international finance for mitigation and adaptation in developing countries

The High Level Advisory Group on Climate Change Financing, established by the UN Secretary General, is assessing proposals on how to scale-up long-term financing for mitigation and adaptation strategies in developing countries from public as well as private sources. Private finance would be funding from private sources in developed countries that complements public funding to support adaptation and mitigation measures in developing countries, as distinct from foreign direct investment that may have an adaptation or mitigation component. However, any private funding will follow a commercial logic and would only be available if it earns an appropriate return. These funds would need to be leveraged using public funds through a variety of incentives, guarantees and other instruments.

Private investment in mitigation measures

Financial incentives and regulations are needed to spur private investment in mitigation measures in developing countries because these measures are generally more costly than the current alternatives so they do not, on their own, generate an attractive return.⁷

Financial incentives offered for investments in developing countries are likely to come mainly from the international climate funds. The limited resources available will need to address adaptation, mitigation, capacity-building and technology cooperation needs of developing countries. Adaptation and capacity-building will rely mostly on funds from public sources.

Based on current capital ownership, the IEA estimates that 49% of the incremental investment for mitigation in 2030 will come from businesses, 37% from households and 14% from governments.⁸ Thus for mitigation and technology cooperation in developing countries the best use of the limited international funds will be to leverage private investment. \$1 of public finance can leverage \$3 to \$15 of private investment.⁹

⁶ The grants and concessional loans are provided by bilateral and multilateral agencies and are generally reported as official development assistance (ODA). The Clean Development Mechanism (CDM) issues tradable credits for emission reductions in developing countries. These credits are sold to firms and governments in developed countries.

⁷ Energy efficiency often have a short payback period, but are not adopted to their full potential due to a variety of barriers so regulations and/or incentives are needed to encourage their adoption.

⁸ IEA, World Energy Outlook 2009, Figure 8.8.

⁹ UNEP, 2010 Investor Statement on Catalyzing Investment in a Low-Carbon Economy

Attractive opportunities for the private investors

A fundamental requirement for private investors is the expectation that funds will be repaid together with a return commensurate with the risk. Any mitigation project must be able to generate sufficient cash flow to repay the funds.¹⁰

Some investments will be more attractive to private investors than others. Clean energy technologies generate a cash flow through the sale of electricity or fuel as well as, ideally, through the generation of carbon credits, so are good candidates for private investment. To be attractive opportunities they need supportive domestic policies or regulations (e.g. access to the grid; feed-in tariffs) and financial incentives (e.g. loans with preferential conditions).

Energy efficiency measures generate cash flow through lower energy bills and often generate an attractive return on investment. However, many efficiency measures are untapped due to market, regulatory and information barriers. Achieving the economic potential of energy efficiency measures requires market barriers to be addressed through regulation and financial incentives.

A new mechanism to support mitigation in developing countries – nationally appropriate mitigation actions (NAMAs) – is under consideration in the negotiations. A NAMA would be eligible for international financial support. Given that international financial support will be limited and that private investment will be needed to finance a large share of the mitigation actions, it will be important that rules for NAMAs facilitate private investment.

RD&D of new products and services can improve the performance and reduce the cost of mitigation measures over time. Businesses fund most RD&D. Government support for RD&D in the form of financial incentives, such as grants and tax credits, and in the form of markets for the products, such as increasingly stringent performance standards, is essential.

Appropriate risk sharing for private investors

Financing mitigation, especially in developing countries, is challenging. The investment, on its own, is rarely commercially attractive and often some form of subsidy is needed, either domestically (e.g. feed-in tariffs) or internationally (e.g. CDM).

Many developing countries are making efforts to enhance the return of low-carbon investments, but are failing to unlock private investment at sufficient scale because fundamental investment risks remain unaddressed (mainly country, regulatory and currency risks). In the long term, developing countries would probably be able to reduce such risks on their own. However, in the short and medium term the support of the international community is required to mitigate such risks effectively.

An investment in a mitigation measure faces a variety of risks, including, political and regulatory risk, technology risk, performance risk, operations risk, accounting and fiscal risks. These risks apply to any investment in a developed or developing country. The relative importance of the risks varies with by project and country, and the investor perception of the significance of each risk.

Foreign currency risk is an important risk in developing countries. This risk would not apply to domestic investors leading some to suggest that to stimulate investment in mitigation measures in developing countries it may be more cost effective to provide financial support to domestic investors. A key issue to consider is whether a recipient local investor has sufficient capacity to use those funds and deliver a project.

¹⁰ One way for mitigation measures to generate cash flow is to issue tradable credits for the emission reductions achieved. The credits can then be sold to generate cash. This is a market mechanism that will be discussed in a future dialogue and so is not explored further here.

Risks can be mitigated using a variety of instruments including insurance, guarantees and agreements with the host country government. For example, an equipment supplier may provide a warranty that covers its operating performance; policy risk insurance can provide protection against adverse changes to specified policies; a reduced tax rate may be incorporated into a license agreement; and sovereign risk insurance covers risks faced by foreign investors.

Most risk mitigation instruments will have a cost and investors must decide whether the protection provided justifies the cost. These instruments may not be available in all developing countries and institutions that provide international financial support should adjust their actions accordingly.

Public resources spent on risk-mitigation (in the form of guarantees, insurance and risk-hedging instruments) appear to have much greater impact by leveraging private sector investment than resources spent on direct financing (e.g. grants, concessional loans, etc.).

Important questions that need to be addressed include: Which are the most effective risk mitigation instruments in developing countries? How can the international community provide these instruments in developing countries?

Effective institutions to encourage private investment in mitigation

Direct international funding for mitigation and adaptation is currently channeled through a number of entities. Much of the funding is disbursed by bilateral and multilateral financial institutions, which provide grants, concessional loans, risk guarantee, corporate finance, etc.

The Monterrey Consensus in 2002 confirmed that bilateral and multilateral financial institutions should focus their efforts on leveraging private capital rather than funding directly investments that could crowd out private investors. This is a more smart and strategic use of scarce public resources that can increase the impact and provide temporary finance until investors, market forces and private financial institutions can fully cover the investments.

Several bilateral aid agencies and development banks have established climate change mitigation funds; Australia's International Forest Carbon Initiative, the EU's Global Climate Change Alliance, Germany's International Climate Initiative, Japan's Cool Earth Partnership and the Climate Investment Funds of the multilateral development banks are examples. Most of these funds are just becoming operational. In the negotiations most countries support the creation of a new fund to operate under the guidance of and be accountable to the Conference of the Parties.

In the negotiations developing countries have pressed for "direct access" by developing country entities to international funding as a way to speed up the decision making process and reduce administrative costs. This has been agreed for the Adaptation Fund. A developing country ministry of finance, which is accredited as meeting international fiduciary standards, can submit proposed projects to the Fund. To-date only one project has been awarded to a developing country, so it is not yet possible to assess the effectiveness of direct access.

Can the bilateral aid agencies and development banks effectively leverage private investment for mitigation where the opportunity exists or would a different institutional structure be more effective?

How can the institutions that provide international finance for mitigation be organized to most effectively leverage private investment?
