



Fact sheet: Financing climate change action Investment and financial flows for a strengthened response to climate change

In 2007, a review entitled *Report on the analysis of existing and potential investment and financial flows relevant to the development of an effective and appropriate international response to climate change* was conducted by the secretariat of the UNFCCC. An update was made in 2008, in which the projections were not fundamentally changed. The review provides an analysis and assessment of investment and financial flows in 2030 that will be needed to meet worldwide mitigation and adaptation requirements. The results should be seen as **indicative** only. They should be seen as broad contours of what would be needed rather than exact figures. Further work in assessing investment and financial flows is needed.

Financing climate change

One of the key findings of the review is that the additional investment and financial flows in 2030 to address climate change amounts to **0.3 to 0.5% of global domestic product in 2030 and 1.1 - 1.7% of global investment in 2030**.

This is a small amount in overall global figures but large compared to the currently available public and private financial resources for climate change (including the ones available under the UNFCCC and its Kyoto Protocol). Current levels of funding will be **insufficient** to address the future financial flows estimated to be needed for adaptation and mitigation under a strengthened future climate change deal post 2012.

a. For mitigation

Mitigation measures needed to return global greenhouse gas emissions to current levels by 2030, require a small increase in global investments and financial flows: between USD **200-210 billion per annum in 2030**.

In many sectors, such as the power generation sector or industry, the lifetime of capital stock can be thirty years or even more. Total investment in new physical assets is projected to triple between 2000 and 2030. Due to rapid economic growth, a large share of these investments will occur in developing countries. Investments should focus on new facilities in many of these sectors.

Particularly in the energy sector, huge investment flows are needed. **For energy supply**: USD **432 billion is projected to be invested annually into the power sector**. Of this amount, USD **148 billion needs to be shifted to renewables, Carbon Dioxide Capture and Storage (CCS), nuclear and hydro**. Investment into fossil fuel supply is expected to continue to grow, but at a reduced rate.



Investment flows to developing countries are estimated at about 46% of the total needed in 2030. The resulting emission reductions achieved by these countries in 2030 would amount to 68% of global emission reductions.

Failure to achieve changes in investment and financial flows for mitigation will lead to unsustainable development paths and “lock-in” effects for the next 20-30 years. This will lead to higher emissions, more climate change impacts, and larger investment and financial flows needs for adaptation in the longer-term.

b. For adaptation

The review found that for adaptation, additional investment and financial flows needed for in 2030 amount to **several billions of USD**. No precise global figure is available at present and further analysis on this needs to be conducted. These figures are indicative and may represent the lower bound of the amount actually required.

Particular attention for developing countries

Particular attention will need to be given to developing countries, as, while only 20-25 per cent of investment currently occurs in developing countries, due to expected rapid economic growth, a large share of investment and financial flows will be needed in developing countries:

- Because of their economic growth, the **energy demand** in developing countries will hugely increase;
- **Investment flows** to developing countries is estimated at about 46% of the total needed in 2030. The resulting emission reductions achieved by those countries in 2030 would amount to 68% of global emission reductions;
- Additional investment and financial flows for **adaptation** in developing countries is estimated between USD 28 to 67 billion.

Current financial mechanisms of United Nations Framework Convention on Climate Change (UNFCCC) are insufficient

- The **Global Environment Facility (GEF)** operates the financial mechanism under the Convention on an on-going basis, subject to review every four years.

: A **Special Climate Change Fund**, which complements other funding mechanisms and exists to finance projects relating to:

- capacity-building
- adaptation



- technology transfer
- climate change mitigation and economic diversification for countries highly dependent on income from fossil fuels.
- **A Least Developed Countries Fund** intended to support a special work programme to assist the LDCs.
- An **Adaptation Fund** became operational with the first commitment period of the Kyoto Protocol in 2008:
 - To finance practical adaptation projects and programmes in developing countries and support capacity-building activities.
 - Funded from an adaptation levy (2%) on Clean Development Mechanism (CDM) projects.

How to finance the response to climate change

With **appropriate policies and/or incentives**, a substantial part of the additional investment and financial flows needed could be covered by the currently available sources. However, **improvement in, and an optimal combination of, mechanisms**, such as the carbon markets, the financial mechanism of the Convention, ODA, national policies and, in some cases, **new and additional resources**, will be needed to mobilize the necessary investment and financial flows to address climate change.

Financial issues under a future climate change regime with increased effectiveness will require:

- **Shifts** in investment and financial flows to more climate-friendly and climate-proof investments
- **Scaling up** international and public capital dedicated to climate-friendly and climate-proof investments
- **Optimizing** the allocation of the funds available by spreading the risks across private and public investors, for example by providing incentives for private investment in the early deployment of new technologies.

Private sector investments constitute up to 86% of investment and financial flows and are thus another important means to enhance investment and financial flows to address climate change in the future.

Policy certainty is important for investors. A longer-term international agreement on climate change broadens the range of mitigation measures that are attractive investments.

Additional external public funding for climate change mitigation and adaptation will be needed particularly for sectors in developing countries that depend on public investment and financial flows.



Particular attention will need to be given to developing countries, because although they currently account for only 20–25 per cent of global investments, their expected rapid economic growth means that they will require a large share of investment and financial flows.

a. Potential of the carbon markets

One way of enabling increased funding is by means of the **carbon markets**.

The Kyoto Protocol's Clean Development Mechanism (CDM), which permits industrialized countries to invest in sustainable development projects in developing countries and thereby generate tradable emission credits, **already shows a significant potential to leverage domestic and international investments**.

A high post-2012 demand for emission reduction credits could allow the **expansion of the carbon market**, which would in turn stimulate additional supply of credits. Emission caps, emission trading and project based mechanisms can thus play an important role in promoting the cost-effectiveness of fighting climate change.

Funding for the **Adaptation Fund** post-2012 depends on the continuation of the Clean Development Mechanism (CDM) and the level of demand in the carbon market.

Assuming that the adaptation levy of 2% on CDM projects applies post 2012, the level of funding could be:

- **USD 100–500 million** for a low demand for credits from non-Annex I Parties
USD 1–5 billion in 2030 for high demand.

The level of funding available to the Adaptation Fund would be small compared with the estimated needs for adaptation (several billions worldwide). The Adaptation Fund could be further expanded with additional sources of funding.

b. Potential of ODA

Official Development Assistance (ODA) funds are currently less than 1 per cent of investment globally. **Least developed countries**, such as Sub-Saharan Africa, and smaller developing countries, still attract very limited private sector investment and continue to rely on ODA and soft loans from international financial institutions.

c. Potential of national policies

Policies are needed both in developed and developing countries.



In terms of private funds, governments set the rules for the markets in which investors seek profits. If current market rules are failing to attract or drive private investors into lower-carbon, more climate-proof alternatives, governments can introduce policies or incentives to help address these market failures. This includes:

- Regulations and standards to overcome policy-based barriers to entry
- Taxes and charges to make the polluter pay
- Subsidies and incentives to pay the innovator

Governments also need to shift the focus of their own investments. Governments are responsible for 10–25 per cent of the investment in new physical assets. Currently most of those investments are driven by local development priorities. In developing countries in particular, shifting funding to climate change related investments has to take social and development priorities into account.

d. Potential of international coordination of policies

Governments set the rules for the markets in which investors seek profits. Relevant policies are needed both in developed and developing countries.

International coordination of policies by Parties in an appropriate forum will be most effective. Areas where international coordination would be beneficial include technology R&D and deployment, and energy efficiency standards for internationally traded appliances and equipment.

The major reductions in emissions between the reference and the mitigation scenarios rely on the increased energy efficiency and shifts in the energy supply from fossil fuels to renewable, nuclear and hydro and large-scale deployment of CCS. Much of the shift will need to occur in developing countries where energy demand is projected to grow most rapidly.

Multilateral and bilateral funding is a significant source of investment in developing countries (1 to 7%).

For a summary of *Report on the analysis of existing and potential investment and financial flows relevant to the development of an effective and appropriate international response to climate change* or the full report, please visit

http://unfccc.int/cooperation_and_support/financial_mechanism/items/4053.php