Climate finance involves flow of funds from developed to developing countries to help them cut their emissions and adapt to climate change. The finance is necessary to fund activities responding to impacts such as flooding, cyclones, coastal erosion, droughts and increased variability of precipitation. Developing countries are the most vulnerable to climate change and have limited resources to ensure an effective response. The need to mitigate the effects of climate change grows more urgent by the year, particularly since progress in making ambitious emission reductions has been slow. Climate finance can also play a crucial role in assisting developing countries in making the transition to more environmentally sustainable systems of energy production and use, while addressing developmental priorities of energy security and energy poverty.

**Costs of climate change**
- The World Economic Forum projects that by 2020, about US $5.7 trillion will be needed annually for green infrastructure investments in the developing world.
- Green infrastructure facilitates climate change adaptation, sustainable energy production and consumption, improved biodiversity, better food production, enhanced air quality, less heat stress, clean water, efficient storm water management and healthy soils.
- The proposed US $5.7 trillion investment will require shifting the world’s US $5 trillion in business-as-usual (BAU) investments into green investments, as well as mobilising an additional US $700 billion to ensure this shift actually happens.¹
- Over US $70–100 billion per year will be required by developing countries for climate change adaptation between 2010–50
- Africa would require US $52–68 billion per year until 2030.²
- In Asia and the Pacific, adapting to climate change is expected to cost US $40 billion per year until 2020, increasing thereafter.
- Carbon Brief analysis shows that, as of 23 October 2015, developing countries have said they will need a total of around US $3,534 billion to implement their Intended Nationally Determined Contributions (INDCs).
- Of this, US $81 billion will come from domestic sources, and US $407 billion has been requested from international donors. The remainder is made up of costs that have not been specifically assigned to domestic or international funds.³
- Climate Policy Initiative estimates that the available climate finance totals approximately US $331 billion annually in public and private climate investments. The share of public investments is US $137 billion, with developed countries providing somewhere between US $10–20 billion per year.⁴ (See Figure 1).
- Traditionally, climate mitigation has received a disproportionately large portion of the available funding. Of the US $35 billion raised by the contributor countries between 2010–12 only 17 percent went to adaptation.⁵ This is illustrated in Figure 2 which includes special climate funds (including adaptation fund, least developed countries fund, special climate change fund and climate investment fund) and select multilateral and bilateral funds.

**Domestic finance**
Developing countries are pushing developed countries to increase their contributions to climate finance as a major portion of it is still sourced domestically. Many of these countries have indigenous climate finance...
mechanisms. Examples of such mechanisms in India are given below.

INDIA

As reported in its INDC in October, 2015, India would need around US $206 billion (at 2014–15 prices) between 2015 and 2030 for implementing adaptation actions in agriculture, forestry, fisheries infrastructure, water resources and ecosystems. Apart from this, additional investment will be needed for strengthening resilience and disaster management. An Asian Development Bank study on assessing the costs of climate change adaptation in South Asia indicates that the approximate adaptation cost in India in the energy sector alone would roughly be about US $7.7 billion in 2030s. The report also projects the economic damage and losses in India from climate change to be around 1.8 per cent of its GDP annually by 2050.

Government of India has set up dedicated funds and initiatives at the national level for mobilising financing for mitigation and adaptation.

- **Cess on coal**: India imposed a Rs. 50 (US $0.8) per tonne cess on coal in 2010. This has now been quadrupled. The cess translates into a carbon tax equivalent, using the emission factor for coal, of around US $2 per tonne. This forms the corpus for the national clean environment fund, used for financing clean energy and technology related projects. The total collection of Rs. 170.84 billion (US $2.7 billion) till 2014–15 is being used for 46 clean energy projects worth Rs. 165.11 billion (US $2.6 billion).

- India has set up a national adaptation fund with an initial allocation of Rs. 3,500 million (US $55.6 million) to combat the adaptation needs in sectors like agriculture, water, forestry etc. in addition to sector-wise spending by the respective ministries.

- India has cut subsidies and increased taxes on fossil fuels (petrol and diesel) turning a carbon subsidy regime into one of carbon taxation. Further, in its effort to rationalise and target subsidies, India has launched the direct benefit transfer scheme for cooking gas, where subsidy will be transferred directly into the bank accounts of the targeted beneficiaries. In fact, over the past one year India has cut its petroleum subsidy by almost 26 per cent.

- **Tax free infrastructure bonds** of Rs. 50 billion (US $794 million) are being introduced for funding of renewable energy projects during the year 2015–16.6

Global landscape of climate finance

There are several bilateral and multilateral funding mechanisms operated by public and private sector donors mostly from developed countries. These funds target the developing countries that are most vulnerable to climate change. The most prominent among them is the Green Climate Fund (GCF) which is the operating entity of the financial mechanism under the United Nations Framework Convention on Climate Change (UNFCCC).
Multilateral funds
The GCF along with the Climate Investment Fund (CIF) makes up the major share of multilateral aid available for climate change (See Table 1).

Green climate fund
The GCF is a part of the UNFCCC. It is expected to be the world’s premier multilateral climate fund for financing adaptation and mitigation activities in developing countries. The fund aims to add US $100 billion a year by 2020. Annex 1 countries are the major contributors to this fund. The current pledges to the GCF total US $10.2 billion out of which US $4 billion has been already monetised7.

Funding priorities
All developing countries are eligible to receive GCF funds. Adaptation and mitigation are both supposed to receive equal share of GCF funds. From the adaptation fund’s share, half is supposed to go towards particularly vulnerable countries, which include African countries, small island developing states and least developed states. The GCF, however, does not limit funding for fossil fuel based projects/programmes even though there are a number of objections on this issue from government and non-government organisations.

GCF readiness programme
The GCF also constituted a readiness and preparatory support programme. It seeks to maximise the effectiveness of the fund by empowering developing countries to engage stakeholders, develop strategic frameworks for engagement with the fund and increase capacity of regional/national/sub-national institutions to access GCF resources. The programme is driven by recipient-country governments through their National Designated Authorities (NDAs) or focal points. It seeks to build on ongoing initiatives to strengthen the capacity of developing countries to make effective use of climate finance.

Table 1: Cumulative pledges for major multilateral funds for climate change

<table>
<thead>
<tr>
<th>Fund</th>
<th>Cumulative pledges (Million USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green climate fund</td>
<td>10,200</td>
</tr>
<tr>
<td>Adaptation fund</td>
<td>485</td>
</tr>
<tr>
<td>Least developed countries fund</td>
<td>934</td>
</tr>
<tr>
<td>Special climate change fund</td>
<td>85</td>
</tr>
<tr>
<td>Climate investment fund</td>
<td>8,100</td>
</tr>
</tbody>
</table>

Source: Climate Finance Update, 2015

Accredited entities
The GCF will likely operate through accredited entities. These implementing entities or intermediaries may be multinational, regional, national, or sub-national. Furthermore, they may be public or private, including NGOs. Implementing entities and intermediaries may be accredited to undertake various activities such as implementing projects and on-lending, and can submit funding proposals directly to the GCF. Other non-accredited entities must submit funding proposals to or work with these accredited entities/intermediaries.8

Private sector facility
In addition to public funds from developed countries, private sector entities also contribute to the fund. The GCF board has constituted a private sector facility in order to address barriers to private sector investment in adaptation and mitigation activities, such as market failures, insufficient capacity and lack of awareness, in order to mobilise private capital and expertise at scale in accordance with national plans and priorities. This will include facilitating and enhancing the participation of national, regional and international private sector actors in developing countries.9

Adaptation fund
Launched in 2007, the adaptation fund was established in 2001 at COP7 (Marrakech) to finance concrete adaptation projects and programmes that reduce the adverse effects of climate change in developing countries. When conceived, the adaptation fund was to be financed by the proceeds from the Clean Development Mechanism. As the markets for certified emissions reductions plunged, other sources of funding became critical for the adaptation fund. These funds came primarily from Annex 1 countries. The cumulative pledges totalled US $485 million in 2015, out of which, US $471 million has been deposited and projects worth US $318 million have been approved so far.

The activities funded include:
- Water resources management, land management, improving agricultural productivity, strengthening healthcare, infrastructure development and management of fragile ecosystems.
- Improving the monitoring of diseases and vectors affected by climate change and related forecasting and early warning systems and, in this context, improving disease control and prevention.
- Supporting capacity building, including institutional capacity, for preventive measures, planning, preparedness and management of disasters relating to climate change.
• Strengthening existing and, where needed, establishing national and regional centres and information networks for rapid response to extreme weather events, utilising information technology as much as possible.10

Least developed countries fund
The least developed countries fund (LDCF) was established to support a work programme to assist least developed country Parties (LDGs) carry out, inter alia, the preparation and implementation of national adaptation programmes of action (NAPAs). The Conference of the Parties (COP), at its eleventh session, agreed on provisions to operationalise the LDCF to support the implementation of NAPAs, providing guidance with regards to priority areas, and provisions on full-cost funding and a co-financing scale. The global environment facility (GEF), as an operating entity of the financial mechanism of the Convention, has been entrusted to operate this fund.

The LDCF has financed the preparation of 51 NAPAs, of which 50 have been completed, and has approved the funding for 159 NAPA implementation projects and programmes in 48 LDCs.11 Cumulative pledges totalled US $934 million in 2015. Of the total resources pledged, US $929 million or 99 per cent had been paid. However there were no pledges in the last meeting of the LDCF in June, 2015. To date, there are 29 projects approved projects for which the fund does not have the necessary resources.

Special climate change fund
The special climate change fund (SCCF) was established under the Convention in 2001 to finance projects relating to: adaptation, technology transfer and capacity building, energy, transport, industry, agriculture, forestry and waste management and economic diversification. The GEF, as an operating entity of the financial mechanism, has been entrusted to operate the SCCF.

As of September 2014, 76 countries had accessed a total of US $296.47 million for 67 projects under the SCCF. Of the total resources approved, US $240.99 million were for 57 projects under the SCCF adaptation program, while 11 projects had been approved under the SCCF program for technology transfer with the total grant of US $55.48 million. Cumulative pledges to the SCCF amounted to US $347.71 million in 2014. Of the total resources pledged, US $333.75 million or 96 per cent had been paid.12

Climate investment funds
The CIFs were designed by developed and developing countries and are implemented with multilateral development banks (including World Bank, African Development Bank and Asian Development Bank) to bridge the financing and learning gap between now and the next international climate change agreement.

Launched in 2008, the CIF facilitates innovative country-led investments in clean technology, renewable energy, sustainable management of forests, and climate-resilient development. Fourteen contributor countries have pledged a total of US $8.1 billion to the CIF, which is expected to leverage an additional US $57 billion from other sources. The CIF allocates financing through four funding windows:

• The US $5.3 billion clean technology fund provides middle-income countries with highly concessional resources to scale up the demonstration, deployment, and transfer of low carbon technologies in renewable energy, energy efficiency and sustainable transport.
• The US $785 million forest investment program supports efforts of developing countries to reduce deforestation and forest degradation and promote sustainable forest management that leads to emissions’ reductions and enhancement of forest carbon stocks (REDD+).
• The US $1.2 billion pilot program for climate resilience is helping developing countries integrate climate resilience into development planning and offers additional funding to support public and private sector investments for implementation.
• The US $796 million scaling up renewable energy in low income countries programme is helping to deploy renewable energy solutions for increased energy access and economic growth in the world’s poorest countries.13

Regional and bilateral funds
In addition to the funds described above, international climate aid is also routed through regional and bilateral organisations. The most prominent among them include international climate fund (UK), global climate change alliance (EU) and the international climate initiative (Germany).

Traditional vs. New aid
In 1992, the UNFCCC reached an agreement that developed countries shall provide “new and additional financial resources” to developing countries. Organisation for Economic Cooperation and Development (OECD) member countries provide development assistance under their ODA (official development assistance) framework. Under this framework OECD countries have to spend 0.7 per cent of their gross national income on ODA activities. Some
of these activities target climate change related projects. However this framework was put into place in 1970, when the climate change threat was not yet prominent. Therefore, OECD member states cannot count ODA activities as climate change finance contributions as these are not “new”/“additional”.

Climate finance and climate change negotiations
Climate finance has been a central element of the international climate change agreements, including UNFCCC (as explained in the previous section). Since COP15 (Copenhagen, 2009), the sources and governance of climate finance has been widely debated. Industrialised countries have committed to giving US $100 billion a year in additional climate finance from 2020 onwards from public and private sources to support climate action in developing countries. The Parties endorsed US $100 billion goal at COP16 in Cancun, and the next year, at COP17 in Durban, they established a work programme to analyse options for scaling up the mobilisation of climate finance. In 2012, COP18 in Doha called on developed country Parties to identify pathways for mobilising the scaling up of climate finance.

Challenges of climate finance
- There is no universally accepted definition of “climate finance”. Recently, based on its review of climate finance definitions, the UNFCCC’s standing committee on finance suggested a possible point of convergence: “Climate finance aims at reducing emissions, and enhancing sinks of greenhouse gases and aims at reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts.” However, the Parties have not yet collectively endorsed this definition.
- The donor countries have met their initial commitment on fast-start finance. Over US $30 billion in additional climate finance has been provided since Copenhagen. But globally, there is no clear path to ramp up support to the target US $100 billion by the end of the decade—which is a concern given that rich countries have a history of not living up to aid promises.
- The climate finance target so far has involved the reclassification of some existing aid flows. Classification will always be a problem, particularly when it comes to dealing with the impacts of climate change.
- Many developing countries and NGOs argue that climate finance, especially adaptation finance, should be delivered primarily as grants. It accords with the view that climate finance should compensate developing countries for costs attributable to the historical greenhouse gas emissions of developed countries and thus should not be subject to repayment.
- Developed countries pledged to provide US $30 billion in new and additional finance during the fast-start finance period, the debate continues on whether the US $100 billion goal should be new and additional funding, and about how “new and additional” should be defined. Various proposed definitions have emerged, including only finance above 0.7 percent of a developed country’s gross national income, non-ODA climate finance, new and innovative sources, or money channelled through the Green Climate Fund.14
- The recent negotiations in Bonn (before the Paris conference) yielded no clear financial roadmap for how the target of US $100 billion of annual climate change finance (by 2020) will be achieved. Developed countries seemed to favour plans to deal with climate finance outside the Paris agreement.

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