ZAKIR HOSSAIN CHOWDHURY/BARCROFT MEDIA/GETTY

A damaged temporary home near the Meghna River in Bangladesh, in a coastal area threatened by erosion and rising saltwater levels in soil.

HOW TO FIX THE BROKEN PROMISES OF CLIMATE FINANCE

More money is needed to help less wealthy countries mitigate and adapt to the effects of climate change. **By Jocelyn Timperley**

Twelve years ago, at a United Nations climate summit in Copenhagen, rich nations made a significant pledge. They promised to channel US$100 billion a year to less wealthy nations by 2020, to help them adapt to climate change and mitigate further rises in temperature.

That promise was broken. Figures for 2020 are not yet in, and those who negotiated the pledge don't agree on accounting methods, but a report last year for the UN[1] concluded that "the only realistic scenarios" showed the $100-billion target was out of reach. "We are not there yet," conceded UN secretary-general António Guterres.

Frustrations at this failure are contributing to rising tensions ahead of next month's crucial COP26 climate summit in Glasgow, UK. "By the time we get to Glasgow, if they haven't given us another $100 billion [for 2021], then they are completely unable to meet their obligations," says Saleemul Huq, director of the International Centre for Climate Change and Development in Dhaka.

Compared with the investment required to avoid dangerous levels of climate change, the $100-billion pledge is minuscule. Trillions of dollars will be needed each year to meet the 2015 Paris agreement goal of restricting global warming to "well below" 2 °C, if not 1.5 °C, above pre-industrial temperatures. And developing nations (as they are termed in the Copenhagen pledge) will need hundreds of billions of dollars annually to adapt to the warming that is already inevitable. "But the $100 billion is iconic in terms of the good faith of the countries that promised it," Huq says.

A flurry of pledges just before the Glasgow meeting have led to hopes that, by 2022, rich nations will manage to transfer $100 billion annually. But negotiators are already looking further ahead: at COP26, discussions will begin on a new climate-finance pledge for the mid-2020s. *Nature* lays out how the $100-billion pledge failed, which countries are most to blame — and how climate finance might be transformed in the future.

How badly did rich countries fall short?

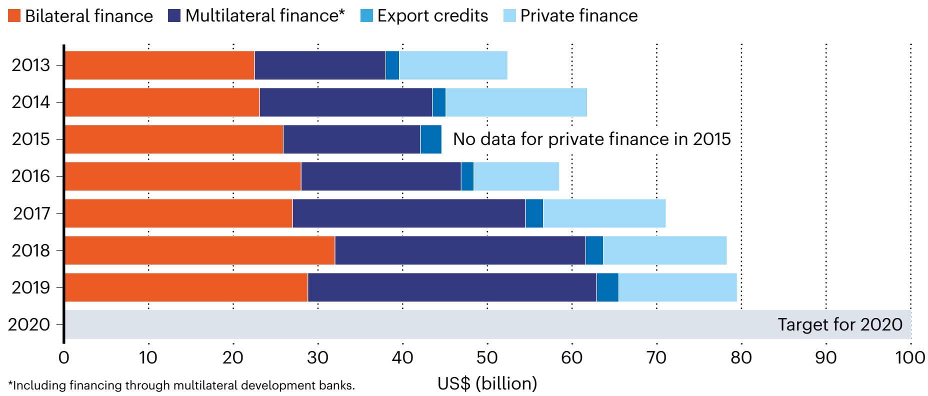
Negotiators never agreed on precisely how to measure countries' pledges. The Organisation for Economic Co-operation and Development (OECD), an intergovernmental body made up mostly of rich countries, bases its assessment on reports from the wealthy nations themselves. They contributed $80 billion in climate finance to developing countries in 2019, it announced in September[2], up from $78 billion in 2018. Most of this money came from public grants or loans, transferred either from one country to another directly, or through funds from multilateral development banks (MDBs). A smaller amount is private finance that the public money is said to have mobilized, such as loan guarantees and loans given alongside public funds (see 'Missed target').

The figures are unlikely to have risen much in 2020: a June 2021 report from MDBs[3] suggests that the climate finance they provided to developing countries fell last year. "It isn't a great sign," says Joe Thwaites, who specializes in climate finance at the World Resources Institute (WRI) in Washington DC. International climate finance has probably stalled, he says, in part owing to the COVID-19 pandemic.

But some analysts say the OECD's numbers are vastly inflated. In a 2020 report[4], the international-aid charity Oxfam estimated public climate financing at only $19 billion–$22.5 billion in 2017–18, around one-third of the OECD's estimate. That is largely because Oxfam argues that, besides grants, only the benefit accrued from lending at below-market rates should be counted, not the full value of loans. It also says that some countries incorrectly count development aid as going towards climate projects. Japan,

MISSED TARGET

Rich countries promised developing nations US$100 billion a year in climate finance by 2020.



*Including financing through multilateral development banks.

SOURCE: REF. 2

for instance, treats the full value of some aid projects as 'climate relevant' even when they don't exclusively target climate action, says Tracy Carty, a senior policy adviser on climate change at Oxfam. As another example, some road construction projects are reported as climate aid, with most or all of their costs included in OECD estimates, says Romain Weikmans, a climate-finance specialist at the Finnish Institute of International Affairs in Helsinki.

Many low- and middle-income countries agree with Oxfam, and some go further: in 2015, India's ministry of finance disputed the OECD's estimate of $62 billion of climate finance in 2014, saying that the real figure was $1 billion. Diann Black-Layne, Antigua and Barbuda's climate-change ambassador and formerly the lead climate negotiator for a group of low-lying coastal and island nations called the Alliance of Small Island States, says rich nations have intentionally inflated their climate aid.

Who is not paying enough?

Although rich nations collectively agreed to the $100-billion goal, they made no formal deal on what each should pay. Instead, countries announce pledges in the hope that others will follow. Multiple analyses of a notional fair share for these payments reach the same conclusion: the United States has fallen far short.

An October report from the WRI[5] reckoned that the US should contribute 40–47% of the $100 billion, depending on whether the calculation takes into account wealth, past emissions or population. But its average annual contribution from 2016 to 2018 was only around $7.6 billion, the WRI estimates. Australia, Canada and Greece also fell far short of what they should have contributed. Japan and France, on the other hand, have transferred more than their fair share — although almost all of their funding came in the form of repayable loans, not grants (see 'Fair share').

Where has the money gone?

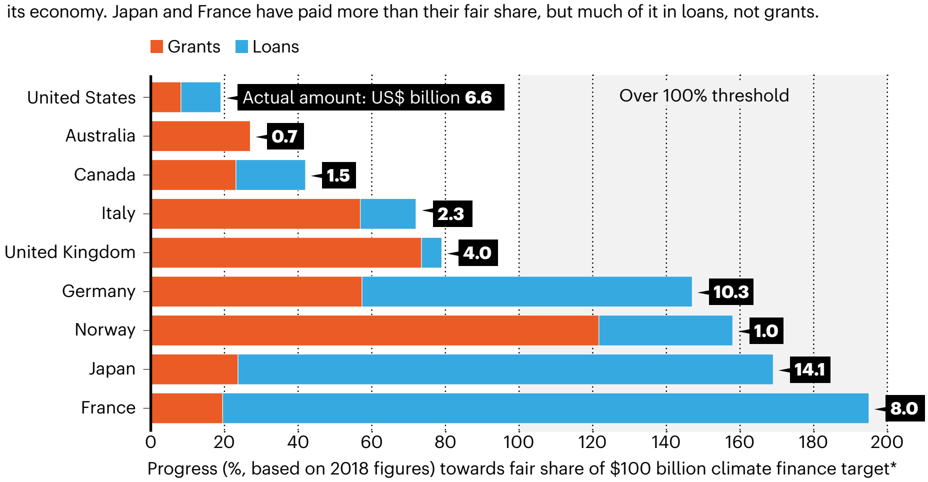
Most of the climate finance has gone to projects to reduce greenhouse-gas emissions. The Paris agreement aimed for a balance between these 'mitigation' projects and those that help people adapt to the effects of climate change. But just $20 billion went to adaptation projects in 2019, less than half of the funds for mitigation projects, the OECD found[2]. The UN estimates[6] that developing countries already need $70 billion per year to cover adaptation costs, and will need $140 billion–$300 billion in 2030.

Donors might favour mitigation projects because success is clear and measurable — it can be quantified by the avoided or captured carbon emissions — whereas it's less easy to define successful adaptation, says climate-finance researcher Jessica Omukuti at the University of Oxford, UK, who works on equitable ways for the world to reach net zero carbon emissions. "A person or group is never fully adapted to climate change, because new climate risks and vulnerabilities emerge," she says. Politicians in developed countries also perceive that they get more praise from other nations, and from domestic voters, for spending to reduce emissions, she adds, whereas adaptation aid is seen as only helping specific recipient countries.

Another reason for the imbalance between

FAIR SHARE

The United States has not paid enough in climate finance to developing nations, considering the size of its economy. Japan and France have paid more than their fair share, but much of it in loans, not grants.

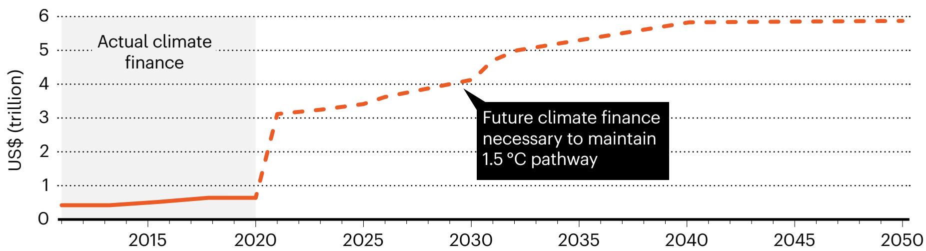


*Estimates include both bilateral and multilateral development bank financing, and incorporates European Union climate financing, apportioned to relevant nations

SOURCE: REF. 5

THE CLIMATE-FINANCE UNIVERSE

Climate financing already exceeds US$600 billion, but a steep rise is needed to avoid warming in excess of 1.5 °C.



SOURCE: REF. 7

mitigation and adaptation is that money is increasingly provided as loans rather than grants. "Adaptation almost never is a loan-giving situation," says Huq. "If you're giving poor people money to help them deal with the impacts of climate change, that doesn't generate money." Private finance, in particular, almost always seems to go to mitigation projects that can generate returns on investment, such as solar farms and electric cars.

Most of the climate finance is also going to middle-income countries, not the poorest, most-vulnerable countries. "Many, many African countries are lamenting that they are not able to jump through the hoops [to access climate finance] because of the complexity and the technicality," says Chukwumerije Okereke, an economist at Alex-Ekwueme Federal University Ndufu-Alike in Ikwo, Nigeria. "And they're not receiving sufficient capacity-building exercises and training in this."

Even the money that does go to the neediest countries might not be reaching its target. In July, the International Institute for Environment and Development in London reported that it had tried to track funding for adaptation projects in the UN's 46 'least developed countries', and could account for only $5.9 billion between 2014 and 2018, less than 20% of the amount developed countries said they had given. "How much actually goes to the most vulnerable people on the planet?" asks Huq.

What do developing countries want now?

The $100 billion pledge has long been seen as a minimum, to increase over time. But some recipient countries have said they are willing to accept a static target for now, if wealthy countries clearly set out how it will be met.

"The demand at the moment is since you failed to deliver the $100 billion in 2020, give us a plan for $500 billion over five years," says Huq. In July, the 'V20', a group of finance ministers from 48 climate-vulnerable countries, called for that plan, including more grant-based finance, and at least 50% of funding to go to adaptation. Huq notes that countries are allocating their own budgets to climate change, too. Bangladesh's government, for instance, says its climate-related spending totals about $3 billion: that's some 7% of the government's overall budget, or 0.73% of the country's gross domestic product (GDP). And poor families in rural Bangladesh spend $2 billion a year themselves on preventing climate-related disasters or repairing the damage they cause, notes an Oxfam analysis (see go.nature.com/2yuycvn).

New pledges have been pouring in: Canada, Japan and Germany announced theirs at a meeting of the G7 group of wealthy nations in June, at which countries also reaffirmed their commitment to contribute $100 billion annually through to 2025. In September, the European Union pledged an extra $5 billion by 2027, and US President Joe Biden promised that the United States would provide $11.4 billion in annual financing by 2024, which would make it the largest single climate-finance contributor. But much of that funding requires US Congressional approval, and many other

> **"Every dollar spent is climate money spent. You either spend it wisely or you spend it unwisely."**

countries will be contributing much more as a proportion of their economy. "The EU and its member states are already providing roughly double the amount the US has pledged, even with a combined economy just three-quarters the size of America's," says Thwaites.

The question remains of whether rich nations can convince less wealthy ones that they are serious about meeting their pledges. Some people argue that promises should exclude private finance, to avoid confusion. Still, the extra pledges should enable wealthy nations to reach the $100 billion target for 2022, according to climate economist Nicholas Stern at the London School of Economics.

Some governments are addressing the call for more adaptation funding. In August, Denmark said it would allocate 60% of its climate finance to adaptation, and other countries, including the Netherlands and the United Kingdom, have committed to ramping up adaptation finance.

At COP26, formal negotiations will also begin on a post-2025 goal. A specific climate-finance target is unlikely to be set this year, although in July, South African environment minister Barbara Creecy suggested a figure of $750 billion a year by 2030. Many countries also want extra finance for 'loss and damage', to help people experiencing irreversible climate-related losses that cannot be adapted to.

How much climate finance is enough?

Increasingly, the concept of climate finance is becoming redundant, Huq argues. "Every dollar spent is climate money spent," he says. "You either spend it wisely or you spend it unwisely."

However, the Climate Policy Initiative (CPI), a non-profit research group based in San Francisco, California, estimates[7] that flows of climate-related finance in and between countries amounted to $632 billion per year in 2019–20, or about 0.7% of the world's GDP. Around half of this was private funding, much of it for renewable-energy generation (see 'The climate-finance universe').

That is far below the UN Intergovernmental Panel on Climate Change's estimate that $1.6 trillion–$3.8 trillion is required annually to avoid warming exceeding 1.5 °C. Frustratingly, fossil fuels are still being subsidized, receiving some $554 billion per year between 2017 and 2019, by one estimate (see page 403). And in 2020, annual global military spending reached $2 trillion.

The CPI warns that the pandemic and its economic effects have put an emphasis on spending in areas such as public health (developed nations spent trillions last year to deal with the COVID-19 pandemic), making the mid-to-long-term prospects of climate finance uncertain. The real challenge now is how to ensure that the wider universe of private finance is spent on projects that address the problems of climate change, says Sarah Colenbrander, director of the climate and sustainability programme at the Overseas Development Institute, a think tank based in London. "If we don't do that, we are going to fail on climate even more catastrophically than we've already done," she says.

Jocelyn Timperley is a freelance climate journalist in San José, Costa Rica.

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