

‘Loss and damage’ – the most divisive words in climate finance today

The COP28 climate summit must solve how poorer countries should be compensated for the effects of climate change.

“It’s in the bag,” said Saleemul Huq, who could not hide his excitement during the final hours of the COP27 climate summit last November in Egypt. Talks to create a fund to finance ‘loss and damage’ caused by climate change were on a knife-edge. But Huq, the founding director of the International Centre for Climate Change and Development in Dhaka, had had advance notice from climate negotiators at the meeting that the idea would get over the line. It did – with an agreement that countries would flesh out how the fund should work and who should contribute to it ahead of the COP28 summit, which kicks off next week in Dubai.

Questions relating to climate finance have been central to decades of painstaking climate negotiations, as Huq wrote a decade ago (S. Huq *et al. Nature Clim. Change*, **33**, 947–949; 2013). Finance has been a major sticking point between lower-income countries, which disproportionately bear the burden of climate impacts, and higher-income countries, which are responsible for a disproportionate amount of the emissions behind those impacts. Last week, it was announced that higher-income countries had finally come good, more than two years late, on a commitment originally made in 2009 to provide lower-income countries with US\$100 billion of climate financing each year from 2020. This money was intended to cover some of the costs of climate mitigation (limiting the severity of global warming by reducing emissions) and adaptation (building infrastructure more resilient to its effects).

But loss-and-damage funding takes climate finance into a new arena. It is intended to support recovery from the losses – of jobs, for example – and damage, such as that caused to infrastructure, that occur when climate-vulnerable countries are hit by more frequent and more ferocious extreme-weather events as a result of climate change.

As COP28 approaches, talks on putting the loss-and-damage fund to work have moved forward – but only just. After five meetings, the countries tasked with making progress have agreed on a few things. The main achievement is the decision that the fund will be hosted by the World Bank in Washington DC for an interim period. It is sensible to make the bank only a stopgap solution. The bank, whose president is conventionally appointed by the United States,

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has come late to taking climate change seriously under its current president, Ajay Banga. There’s no guarantee that progress could not be reversed under a future leader. For this reason, climate-vulnerable countries are calling for the loss-and-damage fund to be associated with the United Nations on a permanent basis, reducing the risk of one country’s politics having an excessive influence on how the fund operates.

Questions of who will pay and how much, and who will be eligible to receive funding and on what grounds, are yet to be answered. The higher-income countries do not want to be legally bound to contribute, with many seeing that as a slippery slope to reparations. Yet, that is precisely what many climate-vulnerable countries want. Higher-income countries would also prefer that only the lowest-income countries be eligible for funding – but that would rule out middle-income countries such as Libya and Pakistan, both of which have needed international help to deal with the effects of devastating climate-related flooding.

Teams of researchers all over the world are working night and day, searching for ideas to break the log-jam. In this week’s *Nature*, Huq is a co-author of two commentaries intended to do just that.

Both sets of authors, in their different ways, present solutions, or partial solutions, to one of the greatest challenges in running a loss-and-damage fund: speed. Loss-and-damage finance will need to be released at the pace of humanitarian assistance, within days or ideally hours of an extreme weather event. This is another reason why there is nervousness about the World Bank’s involvement – the bank’s main experience is in giving out loans, which can take years to negotiate.

Laura Kuhl, a public-policy researcher, and her co-authors analyse the workings of the Green Climate Fund (GCF), headquartered in Incheon, South Korea, to see what lessons it has to offer (see page 693). Established in 2010 and funded by higher-income countries, this is the world’s largest fund for climate mitigation and adaptation projects in low- and middle-income countries. The researchers found that its processes are anything but fast: the average length of time taken to approve a project is two years. One-fifth of projects take between three and five years. It has allocated \$13.5 billion in grants and loans, but managed to get only \$3.6 billion out of the door.

The GCF was set up partly as an antidote to the typical means of providing international development finance. Half of the 24 members of its governing board come from low- and middle-income countries. Adaptation and mitigation projects are funded equally, and it is meant to support cities and community groups, as well as national governments. But the researchers found that three-quarters of its projects are in fact led by big bodies – notably UN agencies and the World Bank. The researchers say that a loss-and-damage fund also needs to focus on smaller grants (say, between \$50,000 and \$100,000) for grassroots community organizations, with simpler rules of access – all to get funding to the people who need it as quickly as possible.

Richard Clarke, a climate-risk specialist, and his colleagues propose a complementary way for a fund to be more

agile (see page 689). Their idea is to use weather and climate data and models to predict the vulnerability of individual countries, regions and cities to climate events, and pre-emptively apportion funding accordingly. This is the opposite of an insurance-type approach – in which eligible countries apply for funding after an event – and would cut out delays in accessing funding. This approach would help the most vulnerable to be better prepared for shocks.

The authors recognize that this idea would need good data, which, in turn, would require a much better network of weather monitoring stations in the right places: there are only 37 for all of Africa. These monitoring stations are also a priority for UN secretary-general António Guterres – and will need much more international support to get off the ground.

Countries meeting at COP28 would do well to study these and other ideas emerging from the research community, on the design of the fund and ways to speed up money transfer. There are many unsolved questions – notably, on who should shoulder the responsibility of paying into the fund – and some of the ideas being presented this week could also go some way to addressing them.

Huq died, unexpectedly, last month, at the age of 71. Throughout his life, he was committed to advocating for environmental policy decisions to be built on science. He helped to create institutions in Bangladesh and other climate-vulnerable countries where people who are not scientists work hand-in-hand with researchers in the search for answers to their problems.

If his work helps to bring to an end the 30-year quest for a loss-and-damage fund, it will be a fitting final achievement.

There is still time to stop the global spread of deserts

The latest United Nations data on land degradation paint a grim picture. But countries that are getting restoration measures right provide some hope.

Last week, Samarkand in Uzbekistan hosted an important intergovernmental conference on how to halt the creeping spread of degraded land. The country was aptly chosen: only about 800 kilometres from the meeting, the Aral Sea spans the border between Uzbekistan and Kazakhstan. Once the world's fourth-largest lake, it has almost completely dried up because of excessive extraction of water for irrigation during the twentieth century. Its exposed, highly polluted lake bed is a large source of blinding sandstorms and emits more than

100 million tonnes of dust and toxic chemicals every year.

Between 2015 and 2019, the world lost at least 100 million hectares of healthy and productive land a year, according to an analysis for the United Nations Convention to Combat Desertification (UNCCD), which organized the meeting. Human activities – including deforestation and agricultural practices – and climate change are among the main causes.

As part of tracking progress towards the 15th UN Sustainable Development Goal, 'life on land', 115 countries reported ahead of the meeting on three measures for restoring degraded land and soil (see go.nature.com/3sqzxm2): the area used for agriculture or covered by forests, grassland or wetlands; productivity, the ability of land to support and sustain life; and above- and below-ground stocks of carbon. Reaching the target of 'land degradation neutrality' by 2030 means reversing a negative trend. The global share of land that is degraded increased from 14.7% in 2015 to 18.9% in 2019, the last year for which comprehensive data were available. In Mexico, more than 71.9% of land was classed as degraded in 2019, up from 56.7% in 2015. During the same period, India's fraction of degraded land more than doubled to 9.5%. And many countries in Africa reported considerable increases – in Ethiopia, Madagascar, Mauritania, Eritrea and Somalia, the area of degraded land was between two and eight times larger in 2019 than in 2015.

Yet there are some important signs of hope amid a mostly bleak outlook. The analysis enables countries to understand land degradation at a more-granular level than before. And the UNCCD's science teams did not perform the study: they helped to train researchers in some of the most-affected countries, so that local scientists and policy-makers could do the work themselves, including monitoring progress on a continuous basis, using open sources.

This work is crucial for altering course. And some countries are moving in the right direction. In Ecuador, for example, the area of land classed as degraded went from 21.9% to 12.8% between 2015 and 2019. During the same period, the degraded area in Botswana decreased from 36.3% to 17.1%, and in Burkina Faso from 34.6% to 8.2%. In Africa, Latin America and the Caribbean, improvements are made mainly by restoring tree cover; in Asia, gains also came from improvements in soil fertility.

Land degradation is not a priority on the world's environmental agenda. Although the UNCCD has the same status as the UN conventions on climate change and biodiversity, unlike them it does not have an autonomous body that provides independent scientific advice. Restoration projects also receive much less international funding – they attracted around US\$5 billion between 2015 and 2019 – than do climate projects, which have yearly funds of close to \$100 billion, and biodiversity programmes, which attract around \$154 billion a year.

This funding disparity illustrates just how little priority is given to restoring land and preventing further degradation. Yet the latest analysis shows what can be done even with limited resources. But not all countries are providing data. These nations, especially high-income countries, should start reporting their plans and actions, to raise the profile of land degradation and help reverse the trend.

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