


Market solutions to **help climate victims** fail human rights test

Finance through innovative and public sources must be raised to address loss & damage and protect human rights

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Kakoli with her youngest son Tawhid, 4, live in southern Bangladesh. Kakoli faces regular flooding and storms and has survived three major cyclones - Sidr, Aiala and Mahasen.
PHOTO: NATASHA MULDER/ACTIONAID

Author: Harpreet Kaur Paul

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COVER PHOTO: Community members sort through the rubble and damage left by Cyclone Idai in Ngunu township, Chimanimani, Zimbabwe. 23 March 2019. CREDIT: ZINYANGE AUNTONY/ACTIONAID

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Agricultural land is becoming increasingly flooded and more saline because of higher tides, cyclones and crumbling embankments.

PHOTO: NATASHA MULDER/ACTIONAID



1. Executive Summary

Rising global temperatures are wreaking havoc around the world, leaving a trail of destruction from Kyoto to Kerala. But those least responsible for greenhouse gas (GHG¹) emissions are also those most struggling to survive the harmful impacts of climate change.

While the full impact of Cyclone Idai is still unknown, the death toll from drowning, dehydration, hunger and cholera will be in the many thousands. One million people in Mozambique, Malawi and Zimbabwe are thought to have been displaced. Entire neighbourhoods of victims have been left homeless after the city of Beira was wiped out.

Devastation caused by floods, droughts, wildfires, cyclones, typhoons and hurricanes will continue worsening as rising global temperatures increase the frequency and intensity of such extreme weather events. Food systems in Latin America and the Caribbean are threatened and vector-borne diseases also increase.

Families are being forced from their ancestral homes in the Carteret Islands of Papua New Guinea, as sea water rises around them. Some 20 million people living in the coastal areas of Bangladesh can no longer sustain their livelihoods as a result of decreasing agricultural yields due to salinity and the collapse of coastal infrastructure.

It is not only the historic cities of Karachi and Kolkata that face scorching temperatures, Europe is also seeing deadly heat waves costing thousands of lives. From Portugal to California, wildfires – unprecedented in scope and scale – are becoming more prevalent. Individuals, families, communities and countries are already experiencing the devastating impacts of climate change, known as ‘loss and damage.’

Our collective task is to avoid the unmanageable, manage the unavoidable, and repair the unavowed, unmanageable and inevitable impacts associated with climate change. This involves mitigation efforts that – at a minimum – aim to meet the 2015 Paris Agreement goal to limit global temperature rise to well below 2°C above pre-industrial levels, and to pursue efforts to limit warming to 1.5°C, recognising that this would significantly reduce the adverse impacts of climate change. It also involves funding adaptation initiatives, as well as addressing loss and damage that has already been locked-in as a result of historic GHG emissions.

The United Nations Human Rights Council has recognised that climate change “poses an immediate and far-reaching threat to people and communities around the world and has implications for the full enjoyment of human rights.” In the Paris Agreement, parties to the UN Framework Convention on Climate Change (UNFCCC) acknowledged that they should – when taking action to address climate change – respect, promote and consider their respective obligations with regard to human rights. This includes the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, the empowerment of women and intergenerational equity.

The UNFCCC has mandated the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (WIM) to facilitate financing to address the harms caused by climate change. These harms are occurring and deepening. When the ninth meeting of the Executive Committee (ExCom) of the WIM takes place in Bonn, Germany (9-11 April 2019), it must make concrete proposals for how states can raise the funds necessary to repair the devastation already being caused by climate change and prepare to cover the costs of future inevitable turmoil as a result of our continuing GHG emissions.

Natural disasters or weather-related events (whether or not attributed to climate change) already cause losses of more than USD\$300 billion per year. It is estimated that by 2030, global loss and damage specifically associated with climate change will amount to at least USD\$300 billion, increasing to USD\$1.2 trillion per year by 2060.

Financial damages do not account for the loss of connections to ancestral lands, where traditional ways of life were preserved. Those impacted by such losses cannot turn the clock back. But their rights to compensation must be protected and those who have lost everything to climate change must be given the opportunity to flourish in new communities.

This report evaluates whether market, state and innovative financing proposals for repairing the harmful impacts of climate change comply with the following five key human rights principles:

1. ensuring a safe, clean, healthy and sustainable environment in order to respect, protect and fulfil human rights of current and future generations;
2. enabling transparency in decision making and the extent of public participation in decision making relating to how loss and damage associated with climate change will be repaired and redressed, with specific attention being paid to the participation and protection of particularly vulnerable groups, and – crucially – victims of climate change harms themselves;
3. providing access to effective remedies for loss and damage associated with climate change harm recognising that climate change will be felt most acutely by those segments of the population who are already in vulnerable situations owing to factors such as geography, poverty, gender, age, indigenous or minority status and disability, national or social origin, birth or other status;
4. ensuring differentiated responsibility, evaluating the extent to which those with larger responsibility for climate change harms contribute to remedying, redressing and repairing loss and damage associated with climate change; and
5. respecting, protecting and fulfilling human rights in the actions they take to address environmental challenges and pursue sustainable development.

Over the years, rich countries have spent most of their time and resources in establishing and promoting market mechanisms such as catastrophe risk insurance, risk pooling and transfer, and catastrophe bonds to respond to humanitarian crises, regardless of whether they are caused by climate change.

We find that no market mechanisms are compliant with a human rights-centred approach to achieving the financing needed to address loss and damage associated with the adverse impacts of climate change. On the contrary, most put the financial burden back on developing countries, who are least responsible for causing the climate crisis. Market mechanisms also fail to enable transparency, accountability and participatory decision-making that meaningfully includes the most vulnerable communities impacted by climate change.

The clear winners of our human rights test are:

- better state budgeting that shifts state subsidies away from fossil fuels and towards addressing the impacts of climate change and funding a Just Transition; and
- progressive taxes such as the Climate Damages Tax (on oil, gas and coal extraction) and the Financial Transaction Tax (a small levy to raise revenue from the trading of financial instruments).

A Climate Damages Tax on the fossil fuel industry could raise the funds necessary to repair the financial costs of loss and damage and would also fund programmes to help communities sustainably move towards a low carbon economy. It would raise revenues of between USD\$75-150 billion (at a rate of USD\$6 per tonne of CO₂) and USD\$500-1,000 billion (at a rate of USD\$40 per tonne of CO₂) a year. It puts the onus on those responsible for the root causes of climate change impacts and introduces a regulatory incentive on the fossil fuel giants.

A Financial Transaction Tax (FTT) covering the European Union putting a levy on shares and bonds at 0.1% and derivative agreements at 0.01% has the potential to raise USD\$63billion, and a similar global FTT could raise significantly more, given the scale of financial instrument trading internationally.

Reducing the ongoing state subsidies for fossil fuels could raise USD\$300 billion, increasing to USD \$5.3 trillion when indirect subsidies are included. This would end the paradox of governments continuing to lower the cost of fossil fuel energy production while claiming to be committed to mitigation, adaptation and redressing the loss and damage associated with the adverse effects of climate change.

Key Acronyms

ARC	African Risk Capacity
CAT bond	Catastrophe bond
CBDR-RC	Common but Differentiated Responsibilities and Respective Capabilities
CCRIF	Caribbean Catastrophe Risk Insurance Facility
CDT	Climate Damages Tax
COP	Conference of the Parties to the UNFCCC
ExCom	Executive Committee of the WIM
FFT	Financial Transaction Tax
IAPL	International Airline Passenger Levy
SBI	Subsidiary Body for Implementation
TCIP	Turkish Catastrophe Insurance Pool
UNFCCC	UN Framework Convention on Climate Change
WIM	Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts

2. Introduction

The UNFCCC has mandated the WIM to facilitate financing to address the harms caused by climate change. The ninth WIM ExCom (Bonn, 9-11 April 2019), must make concrete proposals for how states can raise the funds necessary to repair occurring and prospective climate change harms in a way that protects victims' human rights. Financial losses associated with the adverse impacts of climate change are estimated to reach at least USD\$300 billion by 2030, growing to USD\$1.2 trillion per year by 2060.

Article 8 of the Paris Agreement, agreed at the twenty-first Conference of the Parties (COP) to the UNFCCC in December 2015, specifically recognised “the importance of averting, minimising and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events.”² As a result of the United States’ intervention in behind-the-scenes negotiations, the Paris 2015 decision document (although declaratory only, and not legally binding) specifically states that “Article 8 of the [Paris] Agreement does not involve or provide a basis for any liability or compensation”.³ In this report, we consider non-liability financing options and evaluate them against a human rights framework.

We:

- discuss the WIM’s mandate, UN financing mechanisms on climate change, and propose a human rights-centred approach to evaluating proposals for financing;
- evaluate popularly promoted recommendations for loss and damage financing against our human rights framework. These recommendations are split into two sections:
 - market and state mechanisms (catastrophe risk insurance, climate-themed bonds and their certification, catastrophe bonds, and contingency finance);
 - innovative mechanisms (Financial Transaction Tax, the International Airline Passenger Levy, Solidarity Levy, Bunker Fuels Levy and Climate Damages Tax); and
- propose how the WIM can be operationalised to protect human rights in a transformative way that seeks to address the fact that climate change harms exacerbate existing vulnerabilities.

The UN Human Rights Council recognises that climate change “poses an immediate and far-reaching threat to people and communities around the world and has implications for the full enjoyment of human rights”.⁴ Similar findings have been made by the Office of the High Commissioner for Human Rights, the Special Rapporteur on the right of everyone to the enjoyment of the highest attainable standard of physical and mental health, and the Independent Expert on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment.⁵ An increase in global average surface temperature 2°C will adversely affect human rights to life, health, food, and water, among many others.⁶

The need to repair the current adverse effects of climate change and prevent increasingly severe impacts into the future is urgent, and the WIM must respond accordingly.



Bineta Fall, 72 stands by the remains of a rice store on Baout Island. She was the last person to get a rice harvest, decades ago, before salinisation of the soil led to total crop failure.

PHOTO: CLÉMENT TARDIF/ACTIONAID

3. Climate change induced loss and damage

The world is already experiencing severe consequences of climate change. Currently, average global surface temperatures have increased approximately 1°C to 1.2°C above pre-industrial levels.⁷ As a result of this temperature increase, the world's communities who are least responsible for GHG emissions are now struggling to survive. This is apparent when we look at the victims of floods, droughts, wildfires, cyclones, typhoons and hurricanes that are wreaking havoc across the globe. At this time of writing, the full impact of Cyclone Idai is still unknown, however the death toll from drowning, dehydration, hunger and cholera will be in the many thousands, and one million people in Mozambique, Malawi and Zimbabwe are thought to be displaced and homeless as whole neighbourhoods and an entire city have been lost. The latest scientific opinion suggests that these events are made more likely and severe by climate change.⁸ We see the struggle in the families forced from their ancestral homes in the Carteret Islands of Papua New Guinea, as sea water rises around them.⁹ It is present in the lives of approximately 20 million people currently living in coastal areas of Bangladesh, who cannot sustain their livelihoods as a result of decreasing agricultural yields due to salinity and collapse of coastal infrastructure.¹⁰

Case study: Noor Alam

Noor Alam is a fisherman from Noyakata, Bangladesh whose family has lost 13 hectares of land to river erosion over the last seven years. They used to farm wheat, chillies, pulses and nuts. Now he relies on fishing and day labouring to support his family.

“My land and housing have been destroyed. Every year there is flooding. The Ramnabad river tears apart and the river banks break up. Two years go by and flooding occurs, one year goes by and another flood happens. There are sometimes even two floods in a year. The frequency of floods is increasing not decreasing” says Alam. Floods on the south coast are linked with high tides or cyclones.

He cannot afford to move to Dhaka but says many families are migrating because of the worsening conditions in the village where many are facing extreme poverty due to the impacts of climate change and are struggling to feed themselves and their families.



The land
where his
home once
stood is
now **fully**
submerged

TOP PHOTO: NOOR ALAM/ACTIONAID
BOTTOM PHOTO: NATASHA MULDER/
ACTIONAID



Natural disasters (whether or not attributed to climate change) already cause losses of more than USD\$200-300 billion annually¹¹ Climate Action Network (CAN) estimates that by 2030 global loss and damage associated with climate change impact specifically will amount to at least USD\$300 billion, reaching to USD\$1.2 trillion per year by 2060.¹² While significant, these estimations were based on historic models of climate change that have since

been updated to anticipate deeper adverse impacts. Additionally, GDP based calculations of financial loss and damage have tendencies to underestimate the human consequences of loss of agriculture yields and – of course – do not account for the loss of connections to ancestral lands, where families are buried and traditional ways of life are pursued, where a common language is expressed, and ways of participating in diverse and plural lives are enacted. Those impacted by such losses cannot turn the clock back – restitution is not possible. But their rights to compensation must be protected, and opportunities to flourish in new communities of their choosing enabled. Victims must obtain rights-based reparation, and financing initiatives must enable this. This includes having binding and compulsory forms of retrieving financing, and participatory forms of allocating funds received.

Case study: Bineta Fall, 72, Senegal compares her life now with how it was in her childhood:

She stands in the field her family used to cultivate. “It’s more than 30 years since we grew anything here. When we harvested we used to bring the crops here, and it would last for a year until the next rainy season. We fed ourselves well. Rice was abundant; we had no problem with food. We used to have 20 rice stores in the village, but we no longer have one. Once upon a time everything was abundant, but now to get much from the sea is really hard. Before we would go fishing, gather oysters and all the sea products and we would sell them in Foundiougne and elsewhere in the towns. But we can’t now, because even to get a bowl of shellfish is tough, we can’t do it any longer. The sea is no longer producing much fish, so we can’t depend on the sea. That’s why there’s hard poverty here on the island. To eat now is a problem.”



There was once no need to buy food. Women grew rice and gathered shellfish, men fished the river and the open sea. PHOTOS: CLÉMENT TARDIF/ACTIONAID

There was a surplus to sell in the mainland markets to meet their needs. But nothing is reliable anymore. ‘Artisanal’ sea fishing by men in open pirogue boats has been hit hard by foreign industrial trawlers fishing close to the shore, and the river fishing and shellfish economy has also been damaged by the salt. Waterside mangrove trees are the breeding grounds for fish and shellfish, but depend on a delicate balance of brackish water - that mixes freshwater from the river with salt water from the sea. But as rainfall reduces upstream and sea levels have risen, the freshwater component has reduced and the levels of saltwater in the river have increased. Mangrove dieback has left vast infertile mudflats, so gathering oysters and other shellfish has become much harder.

From: <https://actionaid.exposure.co/on-the-edge>

Climate change harms magnify existing patterns of social, material, economic and political inequity and exclusion.¹³ Groups and peoples already experiencing social, material, political and economic exclusion are disproportionately negatively impacted by climate change harms.¹⁴ Responses aimed at repairing these harms – including (but not limited to) – through loss and damage financing can have a transformative impact if the root causes of exclusion are redressed.

Countries that underwent early industrialisation are responsible for producing more than three times as many GHG emissions between 1850 and 2002 than developing countries,¹⁵ even though developing countries host a much larger proportion of humanity (approximately 85 per cent).¹⁶ Early industrialised nations have, and continue to benefit from, economic growth, infrastructure, high standards of living, technology and strong adaptive capacities compared to the rest of the world. Those most impacted are least responsible.

In addition, while communities in the global south currently struggle in the face of occurring climate change harms, our rising GHG emissions increase the inevitability of prospective and unmanageable climate harms for future generations. We have failed to keep fossil fuels in the ground. Our insufficient mitigation efforts have locked-in prospective harms for our children's generation. Failure to keep global average warming to between 1.5°C and 2°C will increase the costs of adaptation, and the likelihood of experiencing more severe forms of loss and damage, including multiplying security threats, into the future. The following generations will experience the worst effects of our GHG emitting activities, while we are currently experiencing the impacts of the early industrialisers.¹⁷

The Paris Agreement aims to limit global average surface temperature rise to well below 2°C above pre-industrial levels, and to pursue efforts to limit the temperature increase to 1.5°C, recognising that this would significantly reduce the risks and impacts of climate change. However, we are on track for between 3-5°C warming.

“You are stealing our future,” said 16-year-old Swedish climate activist Greta Thunberg as she addressed world leaders at the 2018 United Nations Climate Change Conference in Katowice, Poland (COP24). And indeed, that would be the result of 3-5°C warming. Thunberg urges leaders to recognise and respond to the scale of our climate emergency with new ideas, and swiftly.¹⁸

This report explores how we can innovatively, creatively and urgently raise funds for those already experiencing the negative impacts associated with climate change harms in a way that protects, respects and promotes the human rights of victims of climate change.¹⁹ It also explores whether the same mechanisms can prevent incalculable harms occurring in the future, consistent with the principle of intergenerational equity.



4. Addressing loss and damage under the Paris Agreement and Warsaw International Mechanism (WIM)

Article 8 of the Paris Agreement, agreed at COP21 in December 2015, specifically recognised “the importance of averting, minimising and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events.”²⁰ This acknowledged that some regions and communities have already reached the biophysical and social boundaries of adaptation to climate change.²¹ While the Paris Decision calls for financial responses to loss and damage to be provided on a cooperative and facilitative basis,²² the Paris Agreement itself makes reference to human rights consistent climate change policy. This is important because, as we describe below, a human rights approach requires effective remedies for climate change harms.

The UNFCCC WIM’s guiding definition of loss and damage describes climate **losses** as “negative impacts in relation to which reparation or restoration is impossible” and climate **damage** as “negative impacts in relation to which reparation or restoration is possible.”²³

CAN, in which ActionAid is an active member, suggests three criteria, or guiding questions, to help determine whether an impact counts as climate-induced loss and damage:

1. Was the impact likely caused, or made worse or more pronounced, by climate change? One measure would be if some or all impacts fall outside of normal, historical parameters or if they can be attributed either wholly or partially to climate change based on established science.
2. Does it involve losses, including livelihood assets, loss of something the community values and depends on, such as loss of fishing resource, loss of ancestral land, loss of culture associated with traditional activities and loss of the ability to undertake an activity, like the inability to herd cattle?
3. Does the impact require a significant change in traditional or existing livelihoods or way of life, going beyond adaptation adjustments and instead require an altogether different reaction outside of the realm of traditional approaches?²⁴

Understanding what constitutes loss and damage can enable the calculation of how much funding is necessary to repair climate change harms, monitoring of amounts received, and the fair allocation of financing to relevant projects.²⁵

The WIM has been tasked with working to enhance understanding of, and cooperation and facilitation in relation to the challenges relating to climate-induced loss and damage, including identifying finance and risk management tools and addressing climate-induced displacement and migration.²⁶

States Parties to the UNFCCC have requested the Secretariat, under the guidance of the ExCom of the WIM and the Chair of the Subsidiary Body for Implementation (SBI), to explore ways to facilitate, mobilise and secure support for financing loss and damage, technology transfer and capacity-building with a view to preparing a technical paper.²⁷ The technical paper will serve as an input to the review of the WIM scheduled to take place at COP25 in 2019. The paper – to be prepared by June 2019 – will consider both loss and damage financing options available under the existing financial mechanisms (Global Environment Facility, Green Climate Fund, Special Climate Change Fund, Least Developed Countries Fund and Adaptation Fund), and additional measures. It must also elaborate the sources of financial support for addressing loss and damage as well as modalities for accessing such support both under and outside the financial mechanism.

Despite the WIM's important and broad ranging mandate, it has missed key opportunities to protect individuals **impacted by and** at risk of **experiencing** climate change harms. The Suva Expert Dialogue on 'Loss and Damage' in May 2018, was intended to be focussed primarily on loss and damage finance. However, it failed to be productive when discussions focused on framing risk, instead of mobilising financing support.²⁸

The WIM is still no closer to delivering finance to address loss and damage to vulnerable people and countries, than it was in 2013, when the WIM was first set up.²⁹

The role of finance in addressing loss and damage

Loss and damage financing could support a number of initiatives that would go some way towards repairing climate change harms. These might include:

- responding to the immediate needs of victims in emergency situations, such as providing humanitarian assistance and rehabilitation support;
- wherever in situ rehabilitation is not feasible, successfully relocating at-risk populations while respecting free, prior and informed consent and enabling their rights to flourish in a new location; and

- post-disaster transition, empowering community level financing and co-design in responses to climate change harms, including setting up social funds that build up community assets, facilities, infrastructure or services and livelihood programmes to build back better.

Financing may also contribute to developing state reserve funds, supporting the development of regional agreements on resource management, e.g. regional river basins or human mobility agreements, research and innovation, and responding to loss and damage in the natural world, such as restoring and rehabilitating coral reefs, mangroves and other ecological safeguards, crop switching, and enabling water security.³⁰ It may also include financial measures such as psychosocial care, training, compensation etc to address non-economic losses.

Financing to address loss and damage will need to be new and additional to the baseline requirement for mitigation and adaptation climate finance, which is currently set at USD\$100 billion per year from 2020 to 2025. At COP15 in Denmark (2009) developed countries collectively promised to provide “new and additional” financial resources approaching USD\$30 billion during 2010-2012 with balanced allocation between mitigation and adaptation and to jointly “mobilize” USD\$100 billion per year by 2020 to address the needs of developing countries. Those financial commitments were reiterated in various COP decisions and during the Paris Climate Conference in December 2015 when developed countries committed to continuing (but not increasing) the USD\$ 100 billion goal through to 2025.³¹ These needs were defined through a political process, and so are not based on scientific assessments of the likely requirements. The reality is that financing needs are likely to be far greater.

Oxfam estimate that in 2015-2016, developed countries mobilised between USD\$16 billion and USD\$21 billion of public climate-specific financial assistance, of which between just USD\$5 billion and USD\$7 billion per year was for adaptation. In contrast, donors put the amount at USD\$48 billion. Oxfam cite several reasons for the discrepancy, including non-grant instruments (loans), and bilateral funding being over-reported, as well as climate components of official development assistance being over-reported too. In addition, countries are increasingly counting the mobilisation of private finance, without a common and transparent accounting methodology.³²

In response to such criticisms, new modalities for climate finance accounting were agreed at COP24 as part of the “Paris Rulebook,” a set of guidelines for how countries will implement the Paris Agreement. The aim of these new modalities was to improve the integrity of reporting on climate finance. The WIM’s financial reporting will be based on the Paris Rulebook. Unfortunately, the Rulebook’s climate finance accounting modalities fail to ensure that the figures reported by contributor countries will accurately reflect amounts of money flowing from developed to developing countries. For example, developed countries will be allowed to count the face value of commercial loans – money that must be repaid, with interest – towards their contributions. This means that a net flow of wealth from poor to rich countries can be counted as climate finance – quite the opposite of the original intent of the idea of climate finance as a tool for wealthy industrialised countries to repay an ecological debt they have incurred.

In addition to these persistent failures in finance negotiations under the UNFCCC, civil society groups argue that the Suva Expert Dialogue process has so far failed in its role of mobilising finance to address loss and damage. It has failed to consider foundational issues that would enable meaningful financing, including the consideration of:

- finance gaps in addressing loss and damage. It is estimated that by 2060 residual damage after adaptation and mitigation will amount to between approximately USD\$1.2 trillion and USD\$2.8 trillion.³³ While many losses are and will be financially irreparable,³⁴ the WIM ExCom has not made any meaningful progress on agreeing processes and means for providing finance to developing countries to address loss and damage.
- social and innovative financial instruments beyond market-based insurance. While market-based insurance and risk management options are preferred by developed countries, insurance options fail to address slow-onset events, and are insufficient. Other more cogent options are available.
- who will pay for addressing loss and damage? Early industrialising nations are responsible for more than three times as many GHG emissions between 1850 and 2002 than developing countries.³⁵ As a result, early

industrialised nations have, and continue to benefit from, economic growth, infrastructure, high standards of living, technology and strong adaptive capacities compared to the rest of the world. They have a unique ability and responsibility to contribute to our collective task. We are currently experiencing the impacts of GHG emissions of early industrialisers. It is also worth remembering that future generations will experience the impacts of our own generation's current GHGs emissions. While developing country emissions have since increased, these also host a much larger proportion of humanity (approximately 85 per cent).



Hinda is living with her three young children and extended family in makeshift shelters. They have been forced to leave their home, in search of food and water because of the drought in Somaliland. PHOTO: ASHLEY HAMER /ACTIONAID

5. Human rights considerations

The UN Human Rights Council has recognised that climate change “poses an immediate and far-reaching threat to people and communities around the world and has implications for the full enjoyment of human rights.”³⁶ The preamble to the 2015 Paris Agreement acknowledged that Parties should, when taking action to address climate change, respect, promote and consider their respective obligations with regard to human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, the empowerment of women and intergenerational equity.³⁷

This report evaluates whether market, state and innovative financing proposals for repairing climate change harms comply with five key human rights principles. Mechanisms for raising funds to repair climate change harms are assessed to find out whether they:

- ensure a safe, clean, healthy and sustainable environment in order to respect, protect and fulfil human rights of current and future generations;
- enable transparency in decision making and the extent of public participation in decision making relating to how loss and damage associated with climate change will be repaired and redressed, with specific attention being paid to the participation and protection of particularly vulnerable groups (who may be vulnerable on account of their geography, poverty, gender, age, indigenous or minority status and disability, national or social origin, birth or other status);
- provide access to effective remedies for loss and damage associated with climate change harm recognising that climate change will be felt most acutely by those segments of the population who are already in vulnerable situations owing to the factors already outlined in the point above;

- ensure differentiated responsibility, evaluating the extent to which those with larger responsibility for climate change harms contribute to remedying, redressing and repairing loss and damage associated with climate change; and
- respect, protect and fulfil human rights in the actions they take to address environmental challenges and pursue sustainable development.

In this report, the fifth provision is interpreted broadly to inform an intersectional approach to policy design and implementation that seeks to address the root causes of barriers to sustainable development. The purpose of an intersectional analysis is to allocate loss and damage financing in a way that repairs the root causes of multiple vulnerabilities to climate change, transforming the exposure of groups and peoples currently experiencing social, political and economic exclusion.

In articulating the appropriate human rights framework, this report draws from the:

1. Framework Principles on Human Rights and the Environment;
2. emerging rights of future generations;
3. REDD+ safeguards; and
4. International Environmental Law.

These frameworks are described in further detail.

a) Framework principles on human rights

The Office of the High Commissioner on Human Rights Framework Principles on Human Rights and the Environment recognise a number of human rights principles that are relevant to redressing loss and damage, particularly the need to:

- ensure a safe, clean, healthy and sustainable environment in order to respect, protect and fulfil human rights (Principle 1);
- avoid undertaking or authorising actions with environmental impacts that interfere with the full enjoyment of human rights (Principle 8);
- provide for and facilitate public participation in decision making related to the environment (Principle 9);
- provide access to effective remedies for violations of human rights and domestic laws relating to the environment (Principle 10);
- protect the rights of those who are most vulnerable to, or at particular risk from, environmental harm, taking into account their needs, risks and capacities (Principle 14);
- uphold their obligations towards indigenous peoples and members of traditional communities (Principle 15); and
- respect, protect and fulfil human rights in the actions they take to address environmental challenges and pursue sustainable development (Principle 16).³⁸

Principle 1 is particularly important as climate change will adversely affect human rights to life, health, food, and water, among many others.³⁹ It also adversely impacts already vulnerable groups which requires an intersectional approach to human rights protection to reduce the multiple harms faced by particular groups on the basis of their gender, race, indigenous or other status, for example.

The Intergovernmental Panel on Climate Change's Fifth Assessment Report (IPCC Fifth Assessment Report) states that by the end of the twenty-first century, it is *very likely* (90-100 per cent certain) that sea level rise will occur in 95 per cent of the world's ocean area, with 70 per cent of the coastlines worldwide experiencing sea level rise.⁴⁰

In practice, the 44 states that make up the Alliance of Small Island States (AOSIS⁴¹) are currently, or will soon be, threatened by inundation from sea level rise, with the consequential salinisation of groundwater impacting food security. Each member of AOSIS has less than 1 per cent of the world's territory, population and gross domestic product (GDP), and accounts for approximately 0.003 per cent of global GHG emissions.⁴² Yet, AOSIS member states are experiencing some of the most severe impacts of climate change.

Over the next decade, rising sea levels and more intense cyclones and storm surges will likely intensify the contamination of groundwater and surface water, causing more diarrhoea outbreaks.⁴³ There will be a negative impact on wheat and maize production and marine fisheries will migrate as seas warm threatening food security.⁴⁴ Food insecurity combined with distorted and unjust economic development, and poor adaptation efforts will deepen the prospects of social and political unrest.⁴⁵ The World Bank anticipates that by 2050 over 143 million people in Sub-Saharan Africa, South Asia, and Latin America could be forced to move within their own countries to escape the slow-onset impacts of climate change.⁴⁶ Financing for loss and damage must repair these adverse impacts.

Principle 10 refers to effective remedies for violations of human rights. According to Article 42 of the International Law Commission's Draft Articles on State Responsibility, an injured State is entitled to reparation in the form of restitution in kind, compensation, satisfaction and assurances and guarantees of non-repetition, either singly or in combination.⁴⁷

The UN General Assembly's Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Gross Violations of International Human Rights Law and Serious Violations of International Humanitarian Law inform appropriate remedies for genocide, torture and crimes against humanity. Although the guidelines do not apply to loss and damage associated with the adverse impacts of climate change, it is worth noting that they do seek to ensure compensation, restitution, rehabilitation, satisfaction and guarantees of non-repetition.⁴⁸

Guarantees of non-repetition in a climate context may require taking steps to stop continuing violations, public acknowledgment and enhanced mitigation efforts to prevent prospectively severe adverse climate change impacts, among other measures. Restitution seeks to restore a victim to their original situation – before the violations occurred (such as restoring citizenship or property, where possible) – while compensation is often considered in monetary terms particularly when restitution is not possible or desirable.

b) Future generations

In addition to the Framework Principles, we must consider intergenerational equity.⁴⁹ Climate change poses discrete problems for future generations. According to scientist James Hansen et al, it takes 100 years to see 60-90 per cent of the warming response from GHG emissions.⁵⁰ Future generations will experience the worst effects of our GHG emitting activities, while we are experiencing the impacts of the early industrialisers. An intergenerational approach to justice is necessary, therefore.

On 1 March 2015 the non-binding Oslo Principles on Global Obligations to Reduce Climate Change (Oslo Principles) were prepared by an expert group of judges and legal practitioners and academics in recognition that climate change poses grave risks of “irreversible harm to humanity, including present and future generations, to the environment, including other living species and the entire natural habitat, and to the global economy.” In this context, the precautionary principle of International Environmental Law may be interpreted as requiring that: 1) GHG emissions be reduced to the extent, and at a pace, necessary to protect against the threats of climate change that can still be avoided; and 2) the level of reductions of GHG emissions required to achieve this should be based on any credible and realistic worst-case scenario accepted by a substantial number of eminent climate change experts.⁵¹

The IPCC's 6 October 2018 Special Report on the impacts of global warming of 1.5°C highlighted the significant advantages of limiting global average surface temperature warming to 1.5°C, rather than allowing it to rise to 2°C. Up to 10 million fewer people would be exposed to sea level rise-related loss and damage. 50 per cent fewer people would experience climate change-induced water stress. 420 million fewer people would be subjected to frequent heat waves. Limiting global warming to 1.5°C above global average surface temperature, compared with 2°C, could also likely reduce the number of people both exposed to climate-related risks and susceptible to poverty by up to several hundred million by 2050.⁵² At 1.5°C of warming, forest fires and loss of ocean and biodiversity will increase significantly compared to the levels experienced today; but these levels will be far more severe at 2°C of global warming.⁵³ Reforestation and a radical – but attainable – shift to renewable energy, sustainable food and transport systems would be required. The technology exists, and the cost of such a transformation would come to about 35 per cent of the current expenditure by global governments on fossil fuel subsidies (USD\$1.7 trillion per year in comparison to the estimated \$5 trillion per year of fossil fuel subsidies).⁵⁴ Carbon pollution would need to be cut by 45 per cent by 2030.

The IPCC's report highlights both the benefits of attempting to limit global average surface temperature rise to 1.5°C, and the sobering recognition of the impact of that rise – a further 0.3 to 0.5°C from where we currently are – is a reality in which millions are and will continue to go hungry and be displaced. In this context, it is shocking that current Paris Agreement mitigation commitments put us on track for a rise of at least 3°C global average surface temperature and is based on both mitigation commitments and reliance on currently elusive efficient carbon capture, storage and sequestration technology.⁵⁵ This requires a commitment to encouraging state mitigation efforts to limit future loss and damage in a way that promotes intergenerational equity.

c) REDD+ safeguards

Under the UNFCCC's mechanism for Reducing Emissions from Deforestation and Forest Degradation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries (REDD+), states have been encouraged to implement safeguarding mechanisms when pursuing environmental policies consistent with the objectives of the Convention on Biological Diversity (1992). Relevant safeguards⁵⁶ could also be adopted in a rights-based approach to climate change harms. They include responsibilities to:

- implement programmes in a way that is consistent with relevant international conventions and agreements;⁵⁷
- have transparent and effective government structures, including right of access to information, accountability, appropriate institutional and legal frameworks, participation in decision making processes for those affected, and adequate access to justice (from fair trial rights to the right to an effective remedy);⁵⁸
- respect the knowledge and rights of indigenous peoples and members of local communities;⁵⁹
- ensure full and effective participation of relevant stakeholders, in particular, indigenous peoples and local communities.⁶⁰

d) International Environmental Law

The five key principles of international environmental law add important dimensions to developing a rights and responsibilities approach to repairing climate change harms. The principles include Common but Differentiated Responsibilities and Respective Capabilities,⁶¹ Polluter Pays,⁶² No Harm,⁶³ Precautionary Principle⁶⁴ and Sustainable Development.

The principles of Common but Differentiated Responsibilities and Respective Capabilities (CBDR-RC) recognises the varying contributions to climate change made by different states, and that states least responsible for the

problem are also least equipped to respond to the impacts.⁶⁵ The Polluter Pays principle has been interpreted as both an economic principle (to ensure environmental externalities are internalised by polluters) and a legal principle imposing liability on polluters to repair and redress the harms that they cause.

The no harm principle binds states to prevent, reduce and control the risk of environmental harm to other states, and to provide compensation to the victims of harms. The Precautionary Principle approach encourages action to prevent likely, although not necessarily inevitable, harms – which is particularly relevant in the protection of the rights of future generations.

We draw from these sources of international human rights and environmental law, norms, principles to assess a number of market, state and innovative financing sources and mechanisms proposed for redressing loss and damage associated with the adverse effects of climate change.



Shahanz Begum lives in the Jatrabari district of Dhaka with her family. They were forced to leave their village in southern Bangladesh after losing everything to the devastating impacts of climate change.
PHOTO: NATASHA MULDER/ACTIONAID



Cows feeding on flooded fields in southern Bangladesh. There are sometimes two major floods in a year, their frequency is increasing.
PHOTO: NATASHA MULDER/ACTIONAID

6. Recommended finance sources for addressing loss and damage

The task is to raise the funds required for rights-based reparation of climate change harms. CAN estimates that this will equate to at least USD\$300 billion within the next decade, reaching to USD\$1.2 trillion per year by 2060. This is likely to be under-estimated but provides a helpful yard-stick against which to evaluate proposed market, state and innovative financing mechanisms for raising the funds required to repair climate change harms.

Our key findings are that:

- i) No market mechanisms analysed are compliant with a human rights-centred approach for financing to address loss and damage associated with the adverse impacts of climate change.**

Market based initiatives are unable to:

- cover full rights-based reparation for loss and damage suffered as a result of sudden onset events;
- provide redress for slow-onset events;
- enable participatory decision making by the communities most vulnerable to climate change harms;

- require differentiated responsibility among those most responsible for GHG emissions to date;
- make connections with the other pillars of the climate change regime – mitigation and adaptation – in order to reduce the propensity of increasingly severe loss and damage in the future and proactively work towards ensuring a safe, clean, healthy and sustainable environment. While green climate bonds could assist in this respect, such bonds do not currently provide financing to address loss and damage.

In addition, market-based mechanisms (such as catastrophe risk insurance and catastrophe bonds) require vulnerable states to pay for premiums, spread the risk of catastrophic events in a for-profit market place, or issue bonds that will only be purchased by entities who calculate that the risk of crisis events occurring is low. In March 2019, commenting on the availability of insurance to individuals (rather than states or regional blocs of states) the chief climatologist of the world’s largest reinsurance firm – *Munich Re* – blamed climate change for making insurance unaffordable to many impacted by wildfires in California.⁶⁶ Climate-themed bonds and their certification, and the cap and trade global carbon pricing system – as currently designed – do not assist in the raising financing required to ensure rights-based reparation for the victims of loss and damage.

Insurance mechanisms do not offer cover victims of slow-onset events. As it is possible to discern that sea level rise, increasing temperatures, ocean acidification, glacial retreat, salinisation, land and forest degradation, loss of biodiversity and desertification will occur in specific regions, slow-onset events are uninsurable. For-profit companies will not insure inevitable impacts which will cause inevitable financial losses.

Where extreme-weather related impacts are insurable, payouts are inadequate. In November 2013, Typhoon Haiyan devastated the Tacloban region of the Philippines. A range of geographical vulnerabilities and insufficient storm defences led to 7,354 deaths, damage or destruction to one million homes, and four million people displaced.⁶⁷ Of the approximately USD\$10 billion of damages caused, only a small fraction was covered by insurance (between USD \$300-700 million).⁶⁸

Putting the cost of purchasing insurance premiums on the vulnerable, limiting payouts from these premiums such that they do not cover the full costs of climate change harms, and excluding slow-onset events entirely, significantly limits the efficacy of market-based mechanisms. Victims of regularly occurring events and slow-onset events find themselves unable to purchase insurance, while those that are protected will not receive the redress required to fully repair the loss and damage suffered.

ii) Innovative funding mechanisms such as a progressive Financial Transaction Tax and a Climate Damages Tax can raise the funds necessary to repair currently occurring climate change harms consistently with human rights principles.

A modest Financial Transaction Tax (FTT) has the potential to raise more than USD\$60 billion per year (with more ambitious global taxes raising considerably higher amounts), while the Climate Damages Tax (CDT) has the potential to raise between USD\$75 and USD\$1,000 billion per year. The scale of the financing would enable states to repair the adverse impacts of climate change, including redressing rights to health, food, and water, among many others. In relation to the right to life, the financing would enable states to budget for mitigation and adaptation measures that may prevent future losses of life, while also compensating the families of survivors lost to the adverse impacts of climate change.

The FTT is proposed as a “a tiny fraction of a percentage” levy on financial instruments. Given the scale of financial instrument trading internationally, one of its greatest advantages is its potential “to generate substantial revenues.”⁶⁹ The European Commission’s proposal for a harmonised FTT taxing shares and bonds at 0.1 per cent and derivative agreements at 0.01 per cent could raise USD\$63 billion annually within the European region alone.

Resources allocated through a FTT would need to be designated to repair the rights of victims of climate change harms specifically.

A March 2019 report (by BankTrack, Rainforest Action Network, Indigenous Environmental Network and others) revealed that 33 global banks have provided \$1.9 trillion in funding to fossil fuel companies since the Paris Agreement was adopted in December 2015. Over the past two years, banks have provided annually increasing amounts of financing.⁷⁰ If the FTT was designed to include fossil fuel financing banks, the UNFCCC principle to promote CBDR-RC would be operationalised. However, it would not be possible to attribute each financial transaction subject to the FTT to a fossil fuel or shale gas project. Regardless, financial institutions would be required to pay an FTT based on their ability (rather than necessarily direct responsibility) to contribute towards repairing the rights of those victim to climate change harms.

The CDT is a proposed tax on oil, gas and coal companies. It can, alone, raise between USD\$75-150 billion per year (at a rate of USD\$6 per tonne of CO₂) and USD\$500-1,000 billion per year (at USD\$40 per ton of CO₂) to finance reparation for the victims of climate change harms and a Just Transition. In compliance with our human rights test, the tax is expected to operationalise the CBDR-RC principle as well as the Polluter Pays rule of International Environmental Law. With careful design, it can be implemented in a way that is progressive and does not unfairly penalise poorer people, enables participatory decision making of a variety of stakeholders including the victims of climate change harms, incentivises financing and innovation in non-GHG emitting energies (in compliance with the Precautionary Principle), and raises the funds necessary to ensure a Just Transition that addresses the root causes of vulnerabilities, where possible.

Other innovative mechanisms can raise significant additional sums, which could go some way to supporting mitigation, adaptation, or sustainable development policy implementation. An international airline passenger levy that is calculated as a proportion of ticket price could potentially raise between \$5-10 billion a year. Similar amounts could be raised through a modest solidarity levy, while a bunker fuels levy has the potential to raise more than double those amounts. All these mechanisms aim to operationalise the CBDR-RC and Polluter Pays principles and could be designed to ensure the participation of all relevant stakeholders and an allocation that is sensitive to intersectional vulnerabilities, including through the building or strengthening of social safety nets.

Innovative mechanisms must be progressive and designed in a way that ensures those with most responsibility for GHG emissions (Polluter Pays) or with the greatest ability to pay are contributing the most. For example, whereas a flat fee levied as a proportion of an airline flight would disproportionately affect people with lower incomes, a levy based on class of travel or “frequent flyer” miles would affect individuals/households with higher incomes the greatest. Similarly, a CDT must ensure that the fossil fuel companies profiting from our crisis cannot pass on the cost of the tax to consumers. This would have a regressive impact. The richest 10 per cent of people produce half of the earth’s climate-harming fossil fuel emissions, while the poorest half contribute a mere 10 per cent.⁷¹ Progressive taxation approaches require both wealthy countries and people to contribute most to the crisis of their making.

This is particularly important in our current economic and political climate. In the United States, since 1973, wages have stagnated while productivity has increased.⁷² In the UK, the proportion of household budgets going towards rent, mortgage, interest payments, council tax, repairs and maintenance has doubled over the last 60 years, from 9 per cent in 1957 to 18 per cent in 2017.⁷³ As a result, there is a growing population of working homeless people, child poverty, and it is increasingly difficult for families to escape poverty and destitution.⁷⁴

In this context, regressive taxes exacerbate existing inequalities and may result in popular unrest. In France, President Emmanuel Macron is experiencing the consequences of this unrest. On the one hand, Macron has abolished a progressive tax,⁷⁵ strengthened a tax cut and exemption programme for French companies and

multinationals,⁷⁶ and lowered taxation on capital. At the same time, the government has increased tax responsibilities for pensioners and proposed a carbon tax that would impact lower-and middle-income households five times more than the wealthiest. As a result, this carbon tax – seen in the context of all the other regressive taxation policies the Macron government has already implemented – has created pushback from the general public triggering the “Gilets Jaunes” protests in France. This is a clear lesson that climate policy must not create additional burdens for the poorest and most vulnerable in any country – not only for the obvious ethical reasons, but also for reasons for political viability.

The current innovative proposals can be carefully designed, implemented and regulated to prevent regressive impacts, and ensure that the richest individuals and companies in the wealthiest countries are paying the most to repair currently occurring climate change harms. To prevent prospective climate change harms, wealthy companies and individuals globally must reduce their GHG emissions.

Further improvements to innovative financing mechanisms may seek to internalise a number of the other harmful impacts of fossil fuel companies. So, where for example, Shell continues policies of climate injustice, innovative approaches to climate financing could seek to address the resulting climate pollution, the increased vulnerability of individuals subjected to the local impacts of environmental pollution (such as oil spills, gas flaring, water contamination), human rights abuses and destruction, as well as loss and damage associated with the adverse impacts of climate change. Currently, such policies are pursued through public interest litigation such as *The People vs. Shell*, but such a tax could internalise these impacts.⁷⁷

Finally, initiatives to raise the funding necessary to repair climate change harms through taxation must sit alongside other initiatives to limit growing inequities globally. A 2012 estimate conservatively considered that USD\$21-32 trillion in financial assets were hidden by corporations in offshore, largely untaxed, conditions of secrecy.⁷⁸ Democratic control of these funds through effective taxation could play a significant role in reducing the inequities that exacerbate climate change harms.

iii) Countries must stop providing state-aid to the fossil fuel industry, and instead re-direct trillions of dollars’ worth of fossil fuel subsidies to addressing loss and damage and supporting positive climate solutions (including decentralised and ethical renewable energy development, a Just Transition, and effective and co-designed adaptation measures).

Globally, a small fraction (\$150 billion) is spent on subsidies for renewable energy projects in comparison to fossil fuel investments.⁷⁹ The total amount attributable to fossil fuel subsidies amounts to USD\$5.3 trillion (including indirect subsidies that support fossil fuel extraction projects).⁸⁰ Fossil fuel subsidies must cease, a Just Transition to renewables enabled, and savings allocated to addressing loss and damage associated with climate change impacts.

Renewable technology exists, and the cost is estimated to be approximately 35 per cent of the current expenditure by global governments on fossil fuel subsidies.⁸¹ Indeed, better state budgeting (allocating currently available resources to sustainable renewable sources) and retrieving new sources of income from taxation policy to increasing the money in supply, such as during the 2008 bank bailouts) is a key way to ensuring human rights centred reparation for climate change harms. State based mechanisms also allow for higher degrees of transparency and public accountability in comparison to market alternatives.

In order to ensure a safe, clean, healthy and sustainable environment for current and future generations, a number of policies will need to be implemented which intersect with one another, and which relate to the mitigation and

adaptation pillars of the climate regime. These policies will include removal of carbon subsidies, higher investments in public transportation infrastructure and efficient urban planning for low carbon cities, adaptation to inevitable and locked-in climate impacts, aggressively promoting democratised renewable-based power generation and distribution through a Just Transition or a Green New Deal (occupational re-training, fair labour and working conditions for those previously employed in the GHG industry while promoting sustainable renewable energy development internationally to ensure supply chain justice from mining to manufacturing and final assembly of renewable energy infrastructure), introducing or raising energy efficiency standards to reduce wasted energy consumption, land and community based forest management to protect rather than lose important carbon sinks, investing in relevant research and design initiatives, deepening or creating better social security systems to address the inequities that are compounded by climate change harms, and working to protect our natural world. With its joint ambition of raising revenues to repair the rights of victims of climate change harms and fund Just Transition programmes to help communities move to a fossil free economy, a progressive CDT would help us move to a safe future for our children. The FTT could also be operationalised to enable this. These actions would meet any of the diverse demands of children participating in the Youth Climate Strikes.

Given that pledges for climate action by governments under the Paris Agreement currently put the world on track for a catastrophic 3°C or more of global warming, the continued subsidisation of the fossil fuel industry undermines efforts to urgently scale up climate action and transition to greener pathways, and locks-in unmanageable prospective climate change harms.



Over the past five years Piara Begum has watched as her two sons and daughter have been forced to move from their village in southern Bangladesh to the capital Dhaka in search of jobs to feed their families.
PHOTO: NATASHA MULDER/ACTIONAID



Flooding in Kerala, India.
PHOTO: E. J. THOMAS/ACTIONAID

7. Market and contingency financing mechanisms

The first workplan of the WIM specifically cited the following risk-management and pooling mechanisms as appropriate financing tools for climate change harms:

- catastrophe risk insurance;
- contingency finance;
- climate-themed bonds and their certification;
- catastrophe bonds; and
- financing approaches to making development climate resilient.

With the exception of contingency finance, which can be state or market-based, each of the tools are market-mechanisms. We evaluate these proposed financing options against the five key international environmental and human rights norms described in the “Human rights considerations” section above.

i) Catastrophe risk insurance

- **Summary:** Insurance coverage for low probability, high cost disasters, which can be made available for individuals and communities. Unlike risk pooling more generally, catastrophe risk insurance coverage

necessitates high quality (and usually expensive) catastrophe risk models.⁸² Investors are betting on insured events not occurring within a specified time in order to make a profit.

- **Impacts covered:** Sudden-onset events only. No coverage for slow onset events.

Catastrophe risk insurance was included as a potential financing mechanism in the WIM's first workplan. However, as pointed out by Richards and Schalatek, insurance is not a source of finance, but rather an instrument that requires a source of finance.⁸³

▶▶ **Lessons from practice**

Caribbean catastrophe risk insurance facility:

The Caribbean Catastrophe Risk Insurance Facility (CCRIF) is the world's first regional fund utilising parametric insurance. It is a segregated portfolio company that gives member governments the opportunity to purchase earthquake, hurricane and excess rainfall catastrophe coverage.⁸⁴

Participating countries receive funds within 14 days of a triggering event and the funds usually represent the first injection of liquidity to countries affected. While CCRIF's payouts are relatively small compared to the overwhelming cost of rebuilding, all recipient governments have expressed appreciation for the rapid infusion of liquidity following a catastrophic event. Funds are invariably applied to address immediate priorities.

Since its inception, the public private regional pool facility has made 36 payouts to 13 member-governments on their tropical cyclone, earthquake and excess rainfall policies totalling nearly USD\$139 million. In 2017 it paid out USD\$30.8 million for Hurricane Irma and USD\$23.6 million for Hurricane Maria. Hurricane Maria caused devastating loss and damage in Dominica. The financial loss is estimated to have been USD\$1.37 billion.⁸⁵ The CCRIF provided just USD\$19.3 million or 1.5 percent of the cost of loss and damage incurred.⁸⁶

The CCRIF uses parametric measures but covers a range of losses and geographical areas. Parametric insurance is a type of insurance that does not indemnify all losses but agrees to make a payment on the occurrence of a very specifically defined and described triggering event, i.e. only if the case falls within certain parameters. The CCRIF is also working to develop parametric insurance for the fisheries sector, together with the United States Department of State, World Bank and the Food and Agriculture Organization.⁸⁷

However, the CCRIF has also made seven payments totalling almost USD\$700,000 under member governments' Aggregated Deductible Cover (ADC). Introduced in the 2017-2018 policy year, the ADC was designed to be akin to a dedicated reserve fund providing a minimum payment for events that are objectively not sufficient to trigger a CCRIF policy, because the modelled loss is below a pre-determined triggering (or attachment) point. Artemis reports that in 2017, the CCRIF was able to payout approximately USD\$50 million in emergency funds.⁸⁸

Turkish catastrophe insurance pool:

Turkey is prone to earthquakes. While unrelated to climate change harms, this insurance pool provides a case study example of how insurance and catastrophe bonds (mirroring reinsurance) work together to provide coverage and with the aim of minimising financial risk. Founded in 2000, the Turkish Catastrophe Insurance Pool (TCIP) is a public-private partnership with the board of directors including government representatives, earthquake experts and insurance company representatives. The TCIP sells a compulsory earthquake insurance which provides compensation for the material damage to dwellings caused by earthquakes as well as the damage from fires, explosions, tsunami and landslides triggered by the earthquake.⁸⁹

The TCIP includes an insurance element (protection of specific dwellings at risk of earthquakes) and a reinsurance element. The TCIP retains the first USD\$80 million of losses through its reserves (initially complemented by a USD\$100 million World Bank contingent loan facility) and transfers other losses to the international reinsurance markets through catastrophe bonds (considered further in the relevant section below).

In relation to the insurance coverage, in 2008, approximately 21 per cent of the eligible building stock was considered to be covered, despite having a compulsory insurance element.⁹⁰ In January 2009, insurance covered only residential property damage up to the value of approximately USD\$92,000.00 per policy and the annual premium was approximately USD\$62 per homeowner, depending on the construction type and location.⁹¹

In 2015, Artemis reported that for an earthquake to qualify as a triggering event and cause a loss (enabling the TCIP to claim funds under their catastrophe bond) it must result in spectral acceleration (a gravity-based measure of ground movement and shaking from earthquakes) above 0.1g for at least 10 per cent of the defined measurement locations and be confirmed by the calculation agent. This is an example of a typical parametric insurance measure. The Turkish Government still aims to cover losses that would exceed the overall claims paying capacity of the TCIP.⁹²



African Risk Capacity

The African Risk Capacity (ARC) is composed of two entities: The Specialized Agency and a financial affiliate, ARC Insurance Company Limited (the Company). The Specialized Agency oversees the development of the ARC capacity, whilst offering capacity building to individual countries by approving contingency plans and overseeing its implementation. It is a treaty-based organisation governed by member states to the African Union (AU). The Company undertakes commercial insurance functions, risk assessments and transfers in accordance with various regulations.⁹³ It consists of both AU participating governments⁹⁴ and capital contributors.⁹⁵ The ARC currently offers a maximum coverage of USD\$30 million per country per season for drought events that occur with a frequency of 1 in 5 years or less.⁹⁶ A triggering drought is defined in very specific terms. As the ARC website says, “as an insurance-based proposition, ARC is not appropriate for managing risks that happen every year. Countries that participate in ARC will be participating in an index-based insurance mechanism for infrequent, severe drought events.”⁹⁷ To date, countries have taken out coverage of approximately USD\$500 million, and paid USD\$60 million in premiums periodically. Since 2014, USD\$36 million has been paid out to countries affected by drought. Most recently, payouts have been received by Malawi (2017, USD\$8.1 million) and Mauritania (2018, USD\$2.4 million).

Notably, the ARC payment fell significantly short of the estimated total financial loss of USD\$365.9 caused by the drought.⁹⁸ ActionAid has raised a number of concerns about how ARC responded to the 2016 drought in Malawi. Lack of accountability in decision-making,⁹⁹ problems in modelling the numbers of affected people resulting in a significant underestimation of loss and damage, and lack of transparency about the value of the policy at the point that it was sold were all concerns.¹⁰⁰ The model was not set up to consider the effects of previous droughts, floods or other factors contributing to vulnerability to shocks. This meant that the insurance policy had least value when people were the most vulnerable and in need. Fluctuations in food prices during poor harvests did not feature in the modelling. Further, the choice to calculate total rainfall and water requirements over a ten-day period rather than daily basis resulted in a significant delay in identifying the unfolding crisis as a drought.¹⁰¹ These problems resulted in a delayed and insufficient payout to Malawi. Malawi is one of the poorest countries in the world and is experiencing some of the severest climate change impacts.

Despite these failures, the ARC has continued to be held up as a model for repairing a variety of climate change harms. Most recently, the African Union Commissioner for Rural Economy and Agriculture H.E. Sacko Josefa Leonel Correa, has stated that the ARC – as an “effective climate risk financing mechanism” – can address the root causes of climate-induced migration and displacement in the continent.¹⁰²

The impacts of climate change certainly include migration. Each day, more than 1300 individuals move from rural parts of Bangladesh to Dhaka, the capital – whether it is following a cyclone, or due to slow-onset climate impacts such as salt water intrusion or reduced fish stocks. However, parametric insurance schemes will certainly not provide payouts for the consequences of slow-onset climate impacts and would therefore not be an appropriate financing mechanism to address such significant root causes of migration and displacement.

Correa’s claims must also be tested against the realities facing different geographic regions within and between countries, and among vulnerable groups who will be differently impacted. For example, while the experience of drought in a country such as Malawi can cause young people and farmers from better-off households to migrate, acute shocks erode both the migration aspirations and capabilities of many of Malawi’s rural poor. Many need to sell assets and take out loans to meet their basic needs following a catastrophic event. Such steps can reduce capabilities and further isolate Malawians, 71 per cent of whom are already living in conditions of extreme poverty.¹⁰³ This isolation can deepen the likelihood of experiencing further loss and damage in subsequent droughts or extreme weather events.¹⁰⁴

Compatibility with environmental and human rights laws, norms and principles

<p>A safe, clean, healthy and sustainable environment for current and future generations</p>	<p>There is no direct link between obtaining insurance and undertaking mitigation efforts to ensure the right to life, food, clean water or other basic human rights for current generations, or to prevent prospective climate change harms of increasing severity. Insurance mechanisms are also grossly inadequate in repairing loss and damage and therefore do little to enable crisis responses to focus on the most vulnerable segments of society, enabling them to receive the redress that they need.</p>
<p>Reparation for loss and damage</p>	<p>The way in which the insurance schemes are established will indicate the extent to which harms will be repaired, if at all. Whether specific events (such as earthquakes or droughts) are “triggering” events for the purposes of a payout will be assessed by insurers (using a variety of different indicators). The TCIP example shows that coverage also tends not to be universal. The amounts payable are capped and often insufficient to repair the actual loss and damage suffered. Generally, climate insurance will only cover 1.5-2 per cent of the actual loss and damage suffered.¹⁰⁵ All the practical examples outlined above highlight that in addition to the insurance mechanism, state or further support is required. The CCRIF has the ADC for events that do not fit the parametric definition, in Turkey the government will provide support additional to the TCIP, and in Malawi, the funds provided by ARC were important from an initial liquidity perspective but gravely inadequate to repair the total loss and damage suffered. Further, that insurance is not available for events that are likely to occur regularly or for slow-onset events, means that reparation is not available as a right, but only where the market dictates. As there is no profit to be made from events that are likely to occur every year, or which are slowly unfolding, and for which there is a growing sense of inevitability, insurance is not available. This means that those most impacted are likely to be excluded from receiving the benefits of such mechanisms.</p>
<p>Transparent decision making and public participation, particularly of those most vulnerable</p>	<p>The failures of the ARC in responding to Malawi’s 2016 drought example above highlights quite clearly the lack of transparency inherent within market mechanisms. In addition, insurance mechanisms are mostly agreements between sovereign countries or pools of countries and insurance companies or other capital investors, resulting in an inherent lack of participation by those impacted by climate change harms, and in particular those most vulnerable.</p>
<p>Differentiated responsibility or polluter pays</p>	<p>Insurance mechanisms require those experiencing climate change harms to pay for premiums, whether it is individuals as in the case of the TCIP, or vulnerable governments as in the case of CCRIF and ARC. Richards points that insurance mechanisms have a gender bias which benefits men, they are more likely to own higher value assets.¹⁰⁶ While some developed countries may – on a voluntary basis – contribute towards the initial cost of premiums, the ongoing responsibility for protection rests on the countries experiencing climate change impacts, many of whom are least responsible for causing those impacts. In addition, where developing countries at risk of climate change impacts take out loans to purchase insurance premiums, these loans need to be repaid with interest. The cost of this falls on the countries most vulnerable to climate harms and in need of protection. Many countries disproportionately impacted by catastrophic events need to take out loans to meet these premium payments. The cost of premiums may otherwise have been spent on building contingency reserves while spending on risk reduction and providing social safety nets.¹⁰⁷ A cost-benefit analysis of applying state funds in this way – rather than building contingency reserves or creating or promoting social safety nets – would need to be undertaken.</p>
<p>Human rights and sustainable policy formation in response</p>	<p>Given that insurance mechanisms do not repair the full extent of currently occurring loss and damage, it would not be possible to design policy responses that addressed the root causes of multiple vulnerabilities through these financing mechanisms.</p>

ii) Contingency finance

- **Summary:** Allows governments to reserve (or stockpile) funds today for the possibility of future project cost overruns or emergency situations.
 - **Impacts covered:** All impacts potentially covered, provided that the mandate of the national reserve agency enables fund distribution for a variety of climate impacts.
-

▶▶ *Lessons from practice*

The Bangladesh Climate Change Trust Fund, maintained by the Bangladeshi government to finance climate related projects, sets aside 34 per cent of its annual endowment for unforeseen circumstances.

Ethiopia's Productive Safety Net Programme continually provides basic aid to the chronically food insecure but includes contingency funds in its budget for extending coverage to the temporarily food insecure in the event of a shock damaging agricultural productivity. Academics and policy experts have said that: "by tying funds to specific types of impacts and response efforts, contingency finance may reduce flexibility in responses to unpredictable disasters."¹⁰⁸

Contingency finance ensures that funds will be promptly available in the event of a climate disaster, but puts the onus of making funds available on already vulnerable states who must allow for adequate fund reserves in the face of uncertainty about the types, frequencies and intensities of climate disasters, and while millions experience extreme poverty.¹⁰⁹

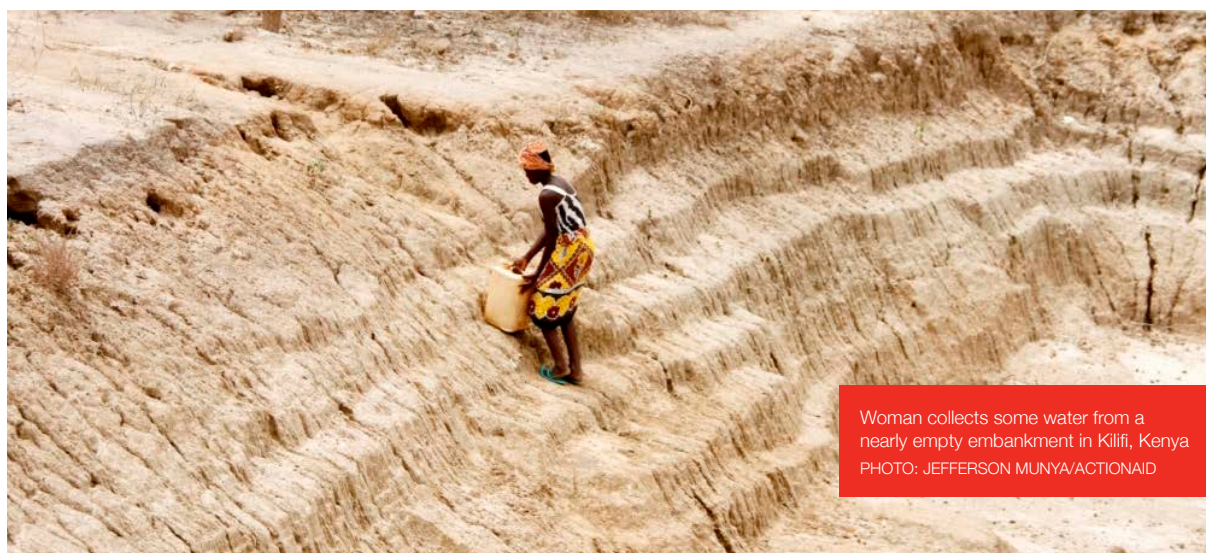
While most contingency reserves will be state-based, the CCRIF's dedicated reserve fund (the ADC) is also a form of contingency finance, albeit market-based. It is designed to provide a minimum payment for events that are objectively insufficient to trigger a CCRIF policy, because the modelled loss is below the attachment point. Since it was introduced in 2017, it has made seven payments totalling almost USD\$700,000.00, focused on three events:

- Tropical Cyclone Irma, September 2017 (payments to Haiti and the Bahamas). In addition to a payment under the ADC, the Bahamas also received a payout under their Excess Rainfall policy;
- Tropical Cyclone Maria, September 2017 (payments to Anguilla, Antigua and Barbuda, St Kitts and Nevis and Saint Lucia). In addition to a payment under the ADC, Saint Lucia also received a payout under their Excess Rainfall policy;
- Earthquake, 7 October, 2018 in Haiti.

Private sector contingency finance is more likely to cover specific events, whereas public finance is likely to be better poised to address the scope and scale of the broader systemic risks associated with climate change.¹¹⁰ In Turkey, the state steps-in when the TCIP fails to meet the needs of individuals.

Compatibility with environmental and human rights laws and principles

<p>A safe, clean, healthy and sustainable environment for current and future generations</p>	<p>Contingency finance could potentially support initiatives to provide access to clean water and sustainable food, and to rebuild healthy environments and sustainable economic, social, political and physical infrastructure following a catastrophic event, or series of events, thereby meeting basic needs immediately but also rebuilding more resilience going forward. Such an approach could help countries impacted adapt better to future catastrophic events. However, there is no link to preventing prospective harms through undertaking the urgently required mitigation efforts.</p>
<p>Reparation for loss and damage</p>	<p>States could potentially allocate elements of yearly endowments to repair loss and damage experienced by individuals and communities in a way that was sensitive to the needs of particularly vulnerable groups.</p>
<p>Transparent decision making and public participation, particularly of those most vulnerable</p>	<p>One benefit of state-provided contingency finance is that it is accountable to democratic rules of governance. Such rules could be encouraged to include meaningful stakeholder dialogue on the allocation of funds, including the victims of climate change harms.</p>
<p>Differentiated responsibility or polluter pays</p>	<p>This mechanism requires countries at the frontline of experiencing climate change harms to set aside funds to pay for prospective damage, even if they have done little to contribute to climate change. Often, these are countries that might otherwise use these funds to provide for basic needs of already vulnerable peoples.</p>
<p>Human rights and sustainable policy formation in response</p>	<p>Where states are led by data and stakeholder engagement on the most appropriate allocation of contingency fund reserves, these reserves can provide assistance when most needed, and be focused on particularly vulnerable groups. However, given the many pressures on state reserves, contingency reserves are unlikely to be large enough to be able to repair the extent of loss and damage. It would be difficult, therefore, to apply contingency reserves in a way that rebuilt communities to limit the recurrence of preventable harms, building back, forward and better.</p>



Woman collects some water from a nearly empty embankment in Kilifi, Kenya
 PHOTO: JEFFERSON MUNYA/ACTIONAID

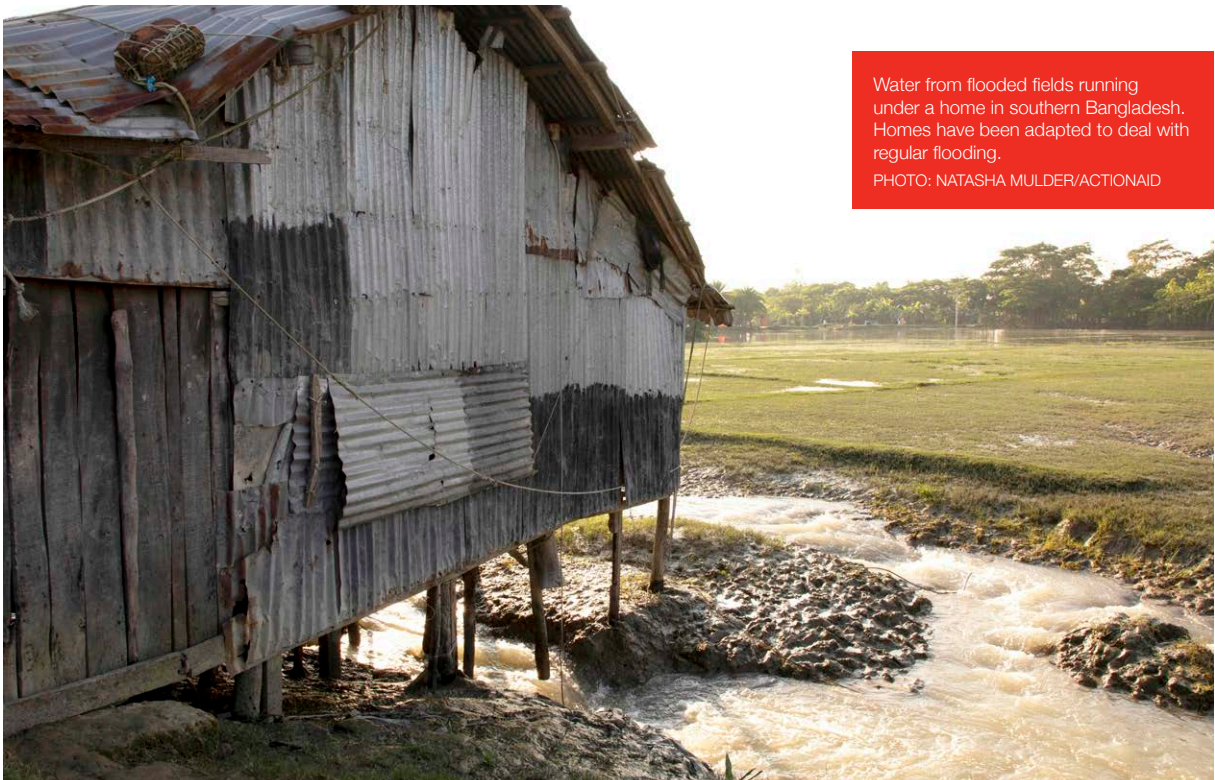
iii) Climate-themed bonds and their certification

- **Summary:** Climate themed bonds are often referred to as green bonds. These bonds raise funds for new and existing projects that deliver environmental benefits, and a more sustainable economy. ‘Green’ can include renewable energy, sustainable resource use, conservation, clean transportation and adaptation to climate change. They are regularly used by countries and regions to finance infrastructure projects, energy, transport, urban water and sewer systems.
- **Impacts covered:** None. Focus is on prevention, rather than repairing loss and damage.

▶▶ Lessons from practice

A September 2017 report anticipated that “in the next decade, bonds will need to be used as a tool to finance low carbon, climate resilient infrastructure.” It indicated that, currently, 61 per cent of green bonds are in the transport sector (e.g. financing rail infrastructure), 19 per cent in energy, 13 per cent in the multi-sector (issued predominantly by development banks for undisclosed projects), 3 per cent in water (for example, financing clean water and adaptation flood prevention initiatives), 2 per cent in buildings and industry, 1 per cent in water and pollution and 1 per cent in agriculture and forestry.¹¹¹

The environmental integrity of green bonds has been queried. Several different certification schemes exist (Green Bond Principles, Climate Bonds Standard and Certification, and standards promoted by professional service auditors, such as PricewaterhouseCoopers, Deloitte and others), with different approaches to defining ‘green’ integrity. This is considered further below. There has been little assessment about how green bonds could contribute to loss and damage specifically. It is more likely that they be leveraged for mitigation and adaptation projects that aim to prevent climate change harms.¹¹²



Water from flooded fields running under a home in southern Bangladesh. Homes have been adapted to deal with regular flooding.

PHOTO: NATASHA MULDER/ACTIONAID

Compatibility with environmental and human rights laws and principles

<p>A safe, clean, healthy and sustainable environment for current and future generations</p>	<p>Green bonds could be issued to fund clean water infrastructure for communities today, and potentially also to fund renewable energy, which would lead to reduced GHG emissions, mitigating the propensity of increasingly severe climate change harms into the future. However, green bond voluntary criteria promoted by the International Finance Corporation and the European Investment Bank Climate Awareness Bond does not necessarily exclude some fossil fuel projects and dams which could be damaging to the climate and environment. In contrast, the Climate Bonds Initiative (CBI) does exclude fossil fuels. The Green Bond Principles promoted by several banks do not define what qualifies as green or exclude specific categories. This means that, except for the CBI criteria, other green bonds could potentially be supporting hydraulic fracturing, biomass investments, or plantations with limited biodiversity in areas that were previously natural forests potentially inhabited by indigenous peoples. Although there have been no reported cases of this thus far, there is nothing in the definition of these bonds to prevent such investments.</p>
<p>Reparation for loss and damage</p>	<p>Given the typical focus on funding renewable and sustainable infrastructure and energy, this criterion is not met.</p>
<p>Transparent decision making and public participation, particularly of those most vulnerable</p>	<p>Concerns have been raised about the lack of public participation in issuing bonds. In 2008, the World Bank disbursed a USD\$600 million loan to the government of India to help fund the Rampur Hydropower Project, a dam. The environmental impact assessment failed to address potential landslides and erosion and lacked a disaster management plan. In addition, communities impacted voiced discontent about the lack of consultation associated with the approval of the project. Local communities faced water shortages due to water diversion, lower crop production, and increased asthma rates associated with dust from project construction. In addition, private bond issuers that are not publicly listed are also not required to report which specific projects are supported by green bond revenue, so bondholders do not know which projects are going to be funded.</p>
<p>Differentiated responsibility or polluter pays</p>	<p>Given that bond issuers and bond purchasers can be entirely unconnected to the areas receiving bond revenues, and the groups with differentiated responsibility to contribute towards loss and damage associated with climate impacts, this criterion is not met.</p>
<p>Human rights and sustainable policy formation in response</p>	<p>Green bonds should not finance projects that violate human rights or pollute air or water. It is unclear whether any of the existing criteria would sufficiently address social concerns. The criteria of 'green' should ensure that hydraulic fracturing, biomass investments, or plantations with limited biodiversity in areas that were previously natural forests inhabited by indigenous peoples are excluded.</p>

iv) Catastrophe bonds

- **Summary:** High yield debt instruments that enable investors in these bonds to bet on whether insurance companies, countries or regional governments (insurance risk carriers) will face claims from arising from specified large-scale disasters.
- **Impacts covered:** Sudden-onset only. No coverage for slow-onset events. Most appropriate for low probability (not high frequency or slow-onset events) and high cost disasters.

Bond issuers (insurance companies, countries or regional governments) seek funds if a catastrophic event occurs. The Catastrophe (CAT) bond investor provides capital that acts as a security for insurance related to specific disasters, and in return receives interest.¹¹³ In choosing to purchase such bonds, the CAT bond investors make a bet that disasters triggering a payout will not occur within a specified time frame (usually three years). The investor loses the bet if the disaster occurs, as the bond issuer's obligation to pay interest or repay the principal to the investors is forgiven or deferred. CAT bonds are typically issued for three years. If none of the specified disasters occur in that period, the bond investors receive a good payout. CAT bonds are often structured to mirror the terms of traditional reinsurance as closely as possible. However, while traditional reinsurance is subject to the ability of the reinsurer to pay the claim, CAT bonds are held in trust and invested in secure instruments so that they can be paid out following a specified triggering event. Most commonly, the bond holder is obligated to payout on a full indemnity basis (up to a pre-agreed amount), if a specified triggering events take place during the issue period.

Alternatively, payouts can be based on parametric measures, for example a disaster containing a specified air pressure or wind speed in a particular place. They are unrelated to the actual damage incurred. Industry claims index (an independent calculation of the insurance industry's losses following an event), and modelled losses (where a mathematical model is used to calculate how large the claims will be)¹¹⁴ are further alternatives to the parametric or indemnity-based triggers. Investopedia states that between 2006 and 2016, only 10 transactions resulted in a loss to investors.¹¹⁵ However, in 2017, Hurricanes Irma and Harvey, as well as Californian wildfires in the United States, caused record losses.¹¹⁶

The first CAT bonds were issued in the 1990s following losses of more than USD\$15 billion caused by Hurricane Andrew hitting the Bahamas and the United States (Florida) in 1992. They grew in popularity from 2006 and were restructured following the global financial crisis in 2008. In 2006, the primary actors were reinsurance companies and the size of the market was approximately USD\$8 billion.¹¹⁷ Today, the market is valued at over USD\$33 billion.¹¹⁸ They are primarily used by insurance companies to lower hurricane risk in the United States, and these accounted for the majority of CAT bonds issued in 2015, with the other issuances in 2014 and 2015 covering items such as Japanese typhoons and earthquakes, Canadian earthquakes, hurricanes in the Caribbean and health claims payments.¹¹⁹

CAT bonds tend to have stricter terms and conditions in contrast to traditional reinsurance and they also have higher fixed fees. CAT bonds experience price volatility, which is sensitive to economic conditions. As a market mechanism, investors will only purchase CAT bonds if they anticipate a sufficiently high return on investment. Where disasters are considered inevitable, investors will not purchase CAT bonds. Yet, these are precisely the occasions where assistance is required to help developing countries least responsible for climate change to repair harms incurred as a result of loss and damage.

New innovative bond instruments tailored to climate change impacts are being devised to address this. For example, Attribution Bonds would cover the component of a natural disaster attributable to climate change, and Sea Level Rise Bonds would provide dividends in the event mean sea level exceeded a predetermined threshold. These bonds require extremely advanced modelling and currently exist only at the conceptual stage. However, they could be future sources of loss and damage finance.¹²⁰

▶▶ **Lessons from practice**

Retaining risk?

When a company provides insurance, they are betting on the insured event not occurring within the insurance term, to protect their profit. When they are concerned about the event taking place, they may reinsure a specific amount of the risk or liability. The amount they do not reinsure is the amount they retain (the underlying retention). How much is retained will vary depending on the company's assessment of the risks involved in retaining part of the policy liability and the profitability of the insurance policy. An insurer will generally retain the most profitable policies or their lowest-risk components while reinsuring less profitable, higher-risk policies. Reinsurance is the practice of insurers transferring portions of risk portfolios to other parties by some form of agreement to reduce the likelihood of paying a large obligation resulting from an insurance claim. The party that diversifies its insurance portfolio is known as the ceding party. The party that accepts a portion of the potential obligation in exchange for a share of the insurance premium is known as the reinsurer.

Caribbean catastrophe risk insurance facility:

In 2016-2017 the CCRIF retained USD\$25 million and purchased an additional USD\$137.7 million of reinsurance capacity, for tropical cyclone and earthquake coverage. The reinsurance mechanism provided claims-paying capacity for aggregate annual losses with an approximately 1-in-625 chance of occurring. While most of these funds were secured through the traditional reinsurance market, a USD\$30 million capacity was provided by the World Bank's first ever CAT bond which was placed parallel to the traditional reinsurance programme.¹²¹

Turkish catastrophe insurance pool:

As mentioned above, the TCIP includes an insurance element (protection of specific dwellings at risk of earthquakes) and a reinsurance element. The TCIP retains the first USD\$80 million of losses through its reserves and transfers other losses to the international reinsurance markets through CAT bonds. In 2015, Artemis reported rumours that: "TCIP was looking to make its second CAT bond an indemnity trigger affair, but the lack of insurance adjusting expertise in Turkey, among other issues, likely made a parametric trigger the only option again."¹²² There are concerns that Turkey lacked the negotiating power to ensure that the TCIP was based on an indemnity trigger, thus losing out on the security it would have preferred. While the instances of indemnity based CAT bonds have increased (from 19 per cent in 2007 to 41 per cent in 2012) in the private sector, this has not been reflected in the TCIP.¹²³ Indemnity basis mechanisms give certainty as to the amount to be recouped in the event of a catastrophe, rather than the amount being open to assessment according to pre-agreed factors.

African risk capacity:

In January 2018 it was reported that ARC had entered into a partnership with the UN Economic Commission for Africa aiming to increase uptake and coverage of climate risk insurance in the region. The same article states that the ARC pools member country risks using its parametric insurance products, while also accessing the global reinsurance markets for risk transfer. However, it is unclear what proportion of funds are held by ARC for direct distribution in the event of a catastrophe, and which funds are transferred through the reinsurance market and whether CAT bonds have been issued.

Alternative proposals:

Richards and Schalatek have proposed that the risks under the ARC and the CCRIF are pooled so that the risks of drought in Africa and hurricanes and earthquakes in the Caribbean are spread, potentially lowering costs. They suggest that international finance for loss and damage could be used to establish such a global reinsurance facility, which could be run on a non-profit basis.¹²⁴

Compatibility with environmental and human rights laws and principles

<p>A safe, clean, healthy and sustainable environment for current and future generations</p>	<p>As CAT bonds are inherently about spreading risk, there is no requirement to proactively work towards ensuring a safe, clean, healthy and sustainable environment for current and future generations.</p>
<p>Reparation for loss and damage</p>	<p>Risk spreading does not itself allow for reparation. If a catastrophic event occurs, payouts will only be made if the events meet the definition of pre-agreed triggering event. Therefore, there is no universal right to have climate change harms repaired, and certainly zero coverage for slow onset events or regularly occurring events (i.e. likely to occur within the term of a typical CAT bond, such as three years).</p>
<p>Transparent decision making and public participation, particularly of those most vulnerable</p>	<p>Agreements between sovereign countries or pools of countries and bond issuers or reinsurance companies exclude participation from those impacted by climate change harms.</p>
<p>Differentiated responsibility or polluter pays</p>	<p>The entity or entities seeking to spread risk due to their vulnerability to climate change harms (whether sovereign countries or pools of countries) are responsible for doing so. The responsibility rests with the most vulnerable, who are simultaneously the least responsible for current climate change impacts. Countries who need insurance tend also to have less negotiating power, as seen in the TCIP example where a desire to obtain an indemnity-based CAT bond was usurped, leading to a parametric based bond being issued.</p>
<p>Human rights and sustainable policy formation in response</p>	<p>CAT bonds help entities spread the risk of a large payout if a triggering event occurs during the term that the bond has been issued for. In issuing CAT bonds, the ceding party (such as the CCRIF or the TCIP) spreads the risk of a payout with the reinsurance market investors who purchase the bonds. This does nothing to address the fact that climate change multiples existing vulnerabilities which are often based on factors such as geography, poverty, gender, age, indigenous or minority status and disability, national or social origin, birth or other status. In failing to do this, CAT bonds do not promote human rights and sustainable policy formation in response to loss and damage.</p>

After Typhoon Haiyan devastated the Philippines ActionAid worked with communities to build disaster resilient housing.

PHOTO: NATASHA MULDER/ACTIONAID



8. Innovative financing mechanisms

Globally, governments need to take innovative and meaningful action. In this section, we set out several creative and solutions-focused options, which explain how we can urgently raise funds for those already experiencing the negative impacts associated with climate change harms in a way that protects, respects and promotes human rights.

The initial workplan of the WIM specifically cited the state and market mechanisms considered in the previous section for developing a risk management approach to addressing loss and damage associated with the adverse effects of climate change. However, it also left room to consider “social” and “innovative financial instruments and tools.” In order to go beyond the existing commitment of USD\$100 billion per year for financing mitigation and adaptation efforts, to fund additional loss and damage associated with climate impacts in a way that repairs violations of human rights, the WIM must consider all innovative options meaningfully.

i) Financial transaction tax

- **Summary:** A small levy raising revenue from the trade of financial instruments such as bonds, stocks, options, and foreign currencies.¹²⁵
- **Impacts covered:** All, potentially also contributing to adaptation and sustainable development projects.

The Financial Transaction Tax (FTT) is proposed as a “a tiny fraction of a percentage” levy on financial instruments. However, given the scale of financial instrument trading internationally, one of its greatest advantages is its potential “to generate substantial revenues.”¹²⁶ The UN High-Level Advisory Group on Climate Change Financing, estimates that, with a very small tax rate, those revenues could reach between USD\$2 billion and USD\$27 billion globally.¹²⁷

In 2011, the EU estimated that USD\$63 billion could be raised through the European Commission’s proposal for a harmonised FTT taxing shares and bonds at 0.1 per cent and derivative agreements at 0.01 per cent. As well as generating revenues, the mechanism has the potential to reduce market volatility by slowing speculative transactions and encouraging long-term investment in the Global South.¹²⁸ However, the exact revenues are unknown due to the uncertainty and price elasticity of financial transactions should an FTT be imposed.¹²⁹

► Lessons from practice

EU FTT

France proposed the adoption of a region-wide FTT across Europe in 2011, however discussions have since stagnated.¹³⁰ French ministers had suggested that an EU-wide FTT would raise up to EUR€5 billion by 2020.¹³¹ However, although negotiations took place between ten EU member states, the talks ended as French President Emmanuel Macron ultimately feared that financial institutions would be dissuaded from moving headquarters to continental Europe in the wake of the UK’s planned exit from Europe (Brexit).¹³² Although Oxfam reported that 50 top European financiers dismissed “arguments that the FTT will make it harder for European countries to entice finance firms away from London following Brexit”,¹³³ this practical blockage speaks to a general criticism of FTT that some countries may be unwilling to impose the tax either due to risks to attracting capital or due to the costs of administration.¹³⁴

French Domestic FTT

France’s introduction of an FTT was partially used to finance environmental policies including climate action in the Global South.¹³⁵ After initially introducing a tax of 0.2 per cent on the purchase of shares in French companies, EUR€1.1 billion was raised in 2016 which led to the tax being increased to 0.3 per cent.¹³⁶ With ambitions of raising EUR€5 billion by 2020, EUR€1 billion was earmarked for climate adaptation, not loss and damage.¹³⁷



Campaigning for action on climate change, London
PHOTO: ACTIONAID

Compatibility with environmental and human rights laws and principles

<p>A safe, clean, healthy and sustainable environment for current and future generations</p>	<p>The FTT could be structured to have a dual function to both encourage investment in socially and environmentally responsible projects contributing to mitigation and adaptation efforts, and repair loss and damage ensuring rights to life, food and water among others are protected. If organised this way, this criterion would be met. There are no plans for this currently, however.</p>
<p>Reparation for loss and damage</p>	<p>The potential for raising significant funds through the FTT opens the possibility of enabling a rights-based approach to reparation for climate harms. An EU FTT taxing shares and bonds at 0.1% and derivative agreements at 0.01 per cent has the potential to raise USD\$63 billion, and a global FTT could raise significantly higher amounts, resulting in a significant contribution to the financing required to ensure rights-based reparation to the victims of climate change harms.</p>
<p>Transparent decision making and public participation, particularly of those most vulnerable</p>	<p>Under current proposals, there are no efforts to involve recipient countries in allocating accumulated funds.¹³⁸ There are also uncertainties about how the entity receiving funds would be structured to ensure transparency and accountability. If funds were channelled into the WIM, transparent and participatory processes could be instituted to ensure accountability, as well as the empowerment of groups and communities most impacted by climate harms through instituting their having a proportionate say in decision making.</p>
<p>Differentiated responsibility or polluter pays</p>	<p>A March 2019 report revealed that 33 global banks have provided \$1.9 trillion in funding to fossil fuel companies since the Paris Agreement was adopted in December 2015.¹³⁹ In some ways, therefore, the CBDR-RC principle would be operationalised through a FTT. However, it would not be possible to attribute each financial transaction subject to the FTT to a fossil fuel or shale gas project. Therefore, the FTT would be justified on the <i>ability</i> (rather than direct responsibility) of those buying shares, bonds and derivatives to contribute to a small tax.¹⁴⁰ This is distinct from the Polluter Pays principle.¹⁴¹</p>
<p>Human rights and sustainable policy formation in response</p>	<p>Allocating accumulated funds to both repair loss and damage and address the multiplier effect of climate change as loss and damage disproportionately impacts those already facing exclusion (due to poverty, gender, age, indigenous or minority status and disability, national or social origin, birth or other status) would have a transformative affect in the long-term promotion of numerous human rights.</p>

ii) International airline passenger levy

- **Summary:** The International Airline Passenger Levy (IAPL), as per Muller and Hepburn’s original proposal, would mean imposing a “modest flat fee of USD\$5-10 or EUR€5-10 on international airline tickets,”¹⁴² potentially raising between USD\$5-10 billion a year.¹⁴³ Alternatively, a progressive frequent-flyer based levy is possible.
- **Impacts covered:** All, potentially also contributing to adaptation and sustainable development projects.

Muller and Hepburn propose an “international instrument” to accrue the revenue and discrete agencies to focus on allocation of funds to avoid domestic policies impacting allocation awards.¹⁴⁴ The proposal specifically aims

to distribute income from aviation transport consumers (who disproportionately contribute to climate change) to those who are experiencing loss and damage.¹⁴⁵ Funds raised would be new and additional to those already raised for climate action.¹⁴⁶

It is estimated that the levy may impact less than a tenth of anticipated annual growth in passenger numbers, and this reduction in growth can be offset by the positive reparative impacts of the IAPL on those experiencing climate impacts.¹⁴⁷ It is anticipated that the long-term growth in demand for flying is largely unlikely to change.¹⁴⁸ Increases in oil prices generally do not deter tourists from visiting countries in the Global North or the Global South.¹⁴⁹ The IAPL can be organised to be a progressive tax – with a proportion of a ticket price going towards the levy – or regressively as a flat fee. A small flat fee is unlikely to raise inequality issues in the same way as a large flat fee, however.



Saloum Island, Senegal. Erratic rainfall, rising sea-levels and salinisation of the land has destroyed livelihoods with harsh social impacts. Rice cultivation ceased decades ago, fishing and shell-fish collection are in decline. ActionAid's Agroecology and Resilience Project has introduced adaptation strategies to improve livelihoods.
PHOTO: CLÉMENT TARDIF/ACTIONAID

▶▶ **Lessons from practice**

There is currently no local or regional IAPL operating in practice. However, given that several airline passenger taxation schemes are already in place globally, it would not be programmatically difficult to implement.¹⁵⁰

Compatibility with environmental and human rights laws and principles

<p>A safe, clean, healthy and sustainable environment for current and future generations</p>	<p>An IAPL levy may be sufficient to address immediate needs in a humanitarian crisis, but may not be sufficient to repair rights to food and water. In relation to inter-generational equity, current articulations of the proposal do not promote a mitigation element. The aim of the IAPL is not to change flying behaviour. If a frequent-flyer based proposal was pursued, it could be designed to increase the proportional of a levy with each additional flight. Although, this is unlikely to act as a deterrent other than to less wealthy people whose occasional flights are not the cause of the bulk of aviation emissions.</p>
<p>Reparation for loss and damage</p>	<p>Whether or not an IAPL could raise funds that would be sufficient to repair loss and damage associated with climate change would depend on the levy. The very small amounts currently proposed would only raise 3.33 per cent of the USD\$300 billion estimated to be required by 2030. However, this levy in combination with several other initiatives would make a positive contribution towards meeting the aim of financing to repair the harms experienced by victims at the front-line of experiencing the adverse effects of climate change.</p>
<p>Transparent decision making and public participation, particularly of those most vulnerable</p>	<p>An entity within the UNFCCC, such as the WIM, could accrue the funds obtained via the universally applied levy.¹⁵¹ However, participation by victims of climate change would be necessary in allocating the funds accrued in order to meet this criterion.</p>
<p>Differentiated responsibility or polluter pays</p>	<p>In one respect, the IAPL is very consistent with the polluter pays principle of international environmental law given that, in effect, a proportion of personal emissions are taxed.¹⁵² In another respect, however, it is problematic. As Kreikamp and Vanhala point out, “many SIDS and LDCs are heavily reliant on air travel and their economies could be disproportionately affected by an international airline passenger levy.”¹⁵³ While a flat fee on airline tickets may have a regressive impact, with those from lower incomes paying a disproportionate amount, the modest level proposed may alleviate the impacts. Alternatively, organising the IAPL so that travellers pay a proportion of the ticket price may enable payment according to differentiated ability to pay. The richest 10 per cent of people produce approximately half of the earth’s climate-harming fossil-fuel emissions, while the poorest half contribute a mere 10 per cent.¹⁵⁴ An IAPL with a higher level of payment for the most expensive flights would be one mechanism with which to obtain funds from those 10 per cent of people more responsible for climate change and its impacts. Further, approximately 22 per cent of global CO2 emissions stem from the production of goods that are, ultimately, consumed in a different country. Yet, the interpretation of the General Agreement on Tariffs and Trade, the General Agreement on Trade in Services and Agreement on Technical Barriers to Trade by the World Trade Organization’s Dispute Settlement Body may prohibit the application of an IAPL to industries.¹⁵⁵ The International Bar Association in its <i>Achieving Justice and Human Rights in an Era of Climate Disruption: Climate Change Justice and Human Rights</i> Task Force Report recommended that states be permitted to pursue national policies designed to mitigate climate change without fear that such policies will be challenged under WTO rules.¹⁵⁶ Arguably the same would apply to policies attempted at implementing adaptation strategies and addressing loss and damage.</p>
<p>Human rights and sustainable policy formation in response</p>	<p>Allocating accumulated funds to both repair loss and damage and address the multiplier effect of climate change as loss and damage disproportionately impacts those already facing exclusion (due to poverty, gender, age, indigenous or minority status and disability, national or social origin, birth or other status) would have a transformative affect in the long-term promotion of numerous human rights.</p>

iii) Solidarity levy

- **Summary:** “A fee assigned to all passengers departing from a particular nation’s airports based on destination and class of travel.”¹⁵⁷
- **Impacts covered:** All, potentially also contributing to adaptation and sustainable development projects.

The solidarity levy differs to the IAPL because it is proposed to be imposed domestically by countries rather than administered and collected by an international actor.¹⁵⁸ Funds raised could, nonetheless, be used to fund a common cause – such as loss and damage – if agreed between participating states who act in a coordinated fashion.¹⁵⁹

▶▶ **Lessons from practice**

Solidarity levies have been implemented in ten countries, acting collectively.¹⁶⁰ Among the participating countries, France is the only “developed” country, having introduced the levy in 2006.¹⁶¹ The tax imposed is between EUR€1 and EUR€40 depending on class and destination.¹⁶² While a significant increase in the taxation of aviation, it only represented a marginal increase in costs to the passenger. It was never intended to change behaviour and therefore reduce demand for flights.¹⁶³ Instead, the revenue generated is directed to UNITAID “to finance health improvements in low income countries” providing 70 per cent of UNITAID’s funding to combat HIV/AIDS, malaria and tuberculosis.¹⁶⁴ In 2007, France reported that the revenue was EUR€180 million with an additional EUR€22 million from the other participating countries.¹⁶⁵

The levy is paid by passengers when purchasing tickets. Passengers in transit are exempt. Countries can set their own rates depending on their “level of development” and countries can choose to levy it only on certain flights or classes.¹⁶⁶

We know that it is practically possible to implement the levy without negative impacts on the domestic economy of France or the participating countries from the Global South (Cameroon, Chile, Congo, Guinea, Madagascar, Mali, Mauritius, Niger, and the Republic of Korea). It is cheap and easy to set up and administer.¹⁶⁷ In addition, countries including the US, UK and Ireland already implement ticket taxes which could easily be raised or redirected to include ringfencing for addressing loss and damage.¹⁶⁸

The solidarity levy could raise between USD\$5-10 billion a year, is highly feasible, puts the onus of payment on those that fly most, and has “no observed effects” on domestic economies.¹⁶⁹ While universal application would be preferable, the solidarity levy has been shown to work with participation from only a few countries acting cooperatively. Revenue collection can begin “without waiting for universal participation” as with the case of funding UNITAID.¹⁷⁰

It is unclear whether a modest charge on air travel has the potential to meet the demands from loss and damage as a result of climate change harms.¹⁷¹ The modest charge is designed to ensure that airline competitiveness and airlines’ profitability is not affected, some countries may still fear this potential impact and thus be reluctant to implement it thus harming its chance of success.¹⁷²

Compatibility with environmental and human rights laws and principles

<p>A safe, clean, healthy and sustainable environment for current and future generations</p>	<p>A solidarity levy may be sufficient to address immediate needs in a humanitarian crisis, but may not be sufficient to repair rights to food and water. In relation to inter-generational equity, current articulations of the proposal do not promote a mitigation element. Changes in flying behaviour is not an aim of the solidarity levy.</p>
<p>Reparation for loss and damage</p>	<p>The small amounts per flight, or as a proportion of the ticket price that have been proposed would alone not be enough to raise the funds required for rights-based reparation for loss and damage associated with the adverse effects of climate change. However, this levy in combination with several other initiatives would make a positive contribution towards meeting the aim.</p>
<p>Transparent decision making and public participation, particularly of those most vulnerable</p>	<p>In the event of universal adoption, countries at the frontline of experiencing climate change harms and individual victims as representatives of communities would need to participate in discussions on the best allocation of funds. In the event of regional or country specific adoption, there would need to be clear transparency safeguards to ensure that those most vulnerable were receiving funds accumulated and had decision making say over the allocation of the funds received.</p>
<p>Differentiated responsibility or polluter pays</p>	<p>A solidarity levy that was based on class of travel would be a form of progressive taxation. A 2015 Oxfam report found that the richest 10 per cent of people produce half of the earth's climate-harming fossil-fuel emissions, while the poorest half contribute a mere 10 per cent. In this respect a solidarity levy calculated on the basis of class of travel would be consistent with the Polluter Pays principle of international environmental law given that the proportion of personal emissions taxed for wealthier people, who also have a higher ability to pay towards the levy, would be greater than those travelling economy class.¹⁷³</p>
<p>Human rights and sustainable policy formation in response</p>	<p>Allocating accumulated funds to both repair loss and damage and address the multiplier effect of climate change as loss and damage disproportionately impacts those already facing exclusion (due to poverty, gender, age, indigenous or minority status and disability, national or social origin, birth or other status) would have a transformative affect in the long-term promotion of numerous human rights.</p>

iv) Bunker fuels levy

- **Summary:** Tax on maritime and aviation transport fuel.¹⁷⁴
- **Impacts covered:** All, potentially also contributing to adaptation and sustainable development projects.

Maritime transport is primarily associated with the transfer of goods, and aviation primarily with the transport of passenger travel.¹⁷⁵ Between 1990 and 2010 maritime and aviation emissions increased by 70 per cent.¹⁷⁶ As of 2015, those emissions represented 3-4 per cent of GHG emissions, with an expected increase between two and six fold by 2050.¹⁷⁷ There is no current system of taxation.¹⁷⁸ Bunker fuels are also excluded from the Paris Agreement targets, and were also excluded from the Kyoto Protocol.¹⁷⁹ However, the International Maritime Organization has called on the shipping industry to reduce 50 per cent of its emissions by 2050 (compared to 2008 levels), which may illustrate and increasing recognition of the role that bunker fuels play in relation to climate change.¹⁸⁰

The proposed impacts of a bunker fuel levy vary. Revenues could be retrieved by the WIM and allocated to repair the loss and damage experienced by those communities experiencing climate change harms.¹⁸¹ There could also be a mitigation effect if there was a reduction in maritime transport.¹⁸² However, how this would be organised would depend on a number of factors, including whether the importing or exporting countries would be charged, the trade route, ship size, and the supply and demand, not only for the product, but also for cargo space on the ship.¹⁸³

There is also significant difficulty in assigning emissions to countries – an issue at the root of bunker fuel emissions’ omission from Kyoto.¹⁸⁴ While an intuitive solution may be to allocate equal responsibility to the country where the ship started its trip and the country where the ship arrived,¹⁸⁵ many ships fuel in multiple major and small ports. Unlike airlines, shipping companies don’t necessarily refuel at their destination. Some countries—hub ports like Singapore—disperse a disproportionately large amount of bunker fuel relative to their imports, while the converse applies in importing countries that supply little or no bunker fuel, including landlocked countries.¹⁸⁶ A generic levy would result in a disconnect between the points at which a charge is levied and the resulting economic impacts. Any levy would need to be implemented in a way that has no net incidence on poorer developing countries.¹⁸⁷ Additionally, the need to consider taxing countries receiving goods, rather than exporting or providing base for refilling tanks, would need to be considered in order to be consistent with the differentiated responsibility principle.

Further, proposals for the technicalities of implementation vary. One suggestion is that because the majority (80 per cent) of emissions for international maritime transport come from “around 17,300 vessels,” the bunker fuel levy could be leveraged on ships above a certain threshold in order to capture those responsible for the majority of emissions.¹⁸⁸ More proposals, reported by the UNFCCC, include various charges per tonne of carbon: USD\$5, USD\$25 and USD\$125 and methods of collection including: “based on sales of fuel from bunkers to ships, sales from oil companies to bunker dealers, fuel out of the refinery gate, etc.”¹⁸⁹

The IMF estimates that a USD\$30 per tonne of CO₂ tax would raise around USD\$25 billion based on 2014’s figures. The same report argued because of this that bunker fuel levy should be “front and centre” in revenue generation for climate action.¹⁹⁰

▶▶ **Lessons from practice**

In 1991, California (United States) attempted to implement a bunker fuels levy at a rate of 8.5 per cent on sales.¹⁹¹ Two months into the levy’s implementation, however, the levy was removed as California’s bunker market reduced by 70 per cent. Ships chose to fuel in nearby Panama or other states or countries that had not imposed a levy.¹⁹²

As this example shows, such a levy would only succeed if implemented globally in conjunction with a wider carbon tax imposed on other transport industries.¹⁹³ If the levy were to be agreed and implemented globally, the low elasticity of demand for freight services would mean the levy would have little impact on profitability for the industries and demand in any region.¹⁹⁴ However, given that the Paris Agreement specifically excludes emissions from bunker fuels, it is likely that such a universal scheme would receive significant resistance from “organised and powerful sectors” which could jeopardise a necessary global financing mechanism agreement.¹⁹⁵

Compatibility with environmental and human rights laws and principles

<p>A safe, clean, healthy and sustainable environment for current and future generations</p>	<p>A levy of bunker fuels may be sufficient to address immediate needs in a humanitarian crisis, but may not be sufficient to repair rights to food and water. In relation to inter-generational equity, a bunker fuel could incentivise innovation in the maritime transport business, for efficiency improvements in ship engines and ship design, changes in operating practices including load factors, routing and sailing speeds, switching to a different vessel type, switching to alternative energy sources, and reducing maritime traffic.¹⁹⁶ In the event that the levy does encourage technological innovation in environmentally friendly forms of transportation, this proposal could contribute towards mitigation efforts that would contribute toward protecting the rights of future generations from experiencing increasingly severe climate change harms.</p>
<p>Reparation for loss and damage</p>	<p>On its own, this proposal would be insufficient. However, this levy in combination with several other initiatives would make a positive contribution towards enabling rights-based reparation that took account of the specific needs of particularly vulnerable groups.</p>
<p>Transparent decision making and public participation, particularly of those most vulnerable</p>	<p>Fund accumulations would need to be allocated through transparent processes and include the meaningful participation of both recipient countries at the frontline of adverse climate impacts and victims of climate change harms representing their local communities.</p>
<p>Differentiated responsibility or polluter pays</p>	<p>Given the significant contribution of bunker fuels to global GHG emissions, this would be a significant contribution to the Polluter Pays and CBDR-RC provisions of International Environmental Law, given the contribution of aviation and maritime emissions to increasing the probability of loss and damage associated with climate change occurring.¹⁹⁷ The current under-pricing of fossil fuels and the lack of intentional attention is enabling and protecting an industry responsible for a significant proportion of GHG.¹⁹⁸ Any levy would need to be implemented in a way that has no net incidence on poorer developing countries.¹⁹⁹</p>
<p>Human rights and sustainable policy formation in response</p>	<p>Allocating accumulated funds to both repair loss and damage and address the multiplier effect of climate change as loss and damage disproportionately impacts those already facing exclusion (due to poverty, gender, age, indigenous or minority status and disability, national or social origin, birth or other status) would have a transformative affect in the long-term promotion of numerous human rights.</p>

v) Climate damages tax

- **Summary:** A tax on oil, gas and coal extraction.
- **Impacts covered:** All, potentially also contributing to adaptation and sustainable development projects.

The Climate Damages Tax (CDT) proposal was launched in April 2018, including with widespread support from those managing the recent impacts of climate change harms in Vanuatu and Dominica.

The 2017 Carbon Majors Study found that just 100 fossil fuel companies were responsible for 71 per cent of anthropogenic GHG emissions.²⁰⁰ The initial proposal has evolved from covering only those 100 companies to become universal across oil, gas and coal producers to “establish a level playing field and capture all relevant emissions in the scheme”.²⁰¹ The most significant concerns regarding the levy is whether it could inspire the participation required of states for it to be implemented.²⁰²

If universal participation was possible, CDT proponents contend that revenues from the tax on the fossil fuel industry would:

a) pay for the costs of loss and damage; and

b) fund Just Transition programmes to help communities move to a fossil free economy.²⁰³

It is proposed that a CDT would:

- result in revenues of between USD\$75-150 billion (at a rate of USD\$ 6 per tonne of CO₂) and USD\$500-1,000 billion (at USD\$40 per ton of CO₂) a year for international loss and damage finance and Just Transition.
- contribute to the phasing out of fossil fuels due to the co-benefit of placing a global price on carbon.
- impact on the industry’s profitability, incentivising it to diversify its activities; and
- increase each year both to contribute to the shift to renewables and to maintain the income stream for loss and damage spending as fossil fuels are increasingly phased out, and the impacts of climate change heighten over time.²⁰⁴

▶▶ **Lessons from practice**

In 1990, the UK implemented a levy to fund the decommissioning of nuclear power stations at a time when nuclear power was more expensive than fossil fuel energy.²⁰⁵ It raised GBP£7.8 billion over the 1990s at a top rate of 10 per cent before the levy dropped to 1 per cent.²⁰⁶ The levy was not paid for by the nuclear energy companies, however. It is estimated that the levy increased household bills by at least 11 per cent, having a regressive impact on those with the lowest incomes.

In India, a tax on coal (coal cess) is levied at RS400 per tonne (approximately USD\$5.5 per tonne). Over the past seven years, approximately USD\$8 billion has been levied from the coal cess but only 40 per cent has been transferred to the National Clean Energy Fund. The purpose of the tax is not to obtain revenue specifically to redress climate change harms. However, it provides a helpful example of how such a tax may work in practice. In addition to the National Clean Energy Fund, entities responsible for improving access to drinking water sanitation, river development and environment and forestry also receive funds retrieved from the coal cess.

Concerns have been raised about the potential misuse of funds, given the broad mandate and diversity of fund recipients. However, such concerns could be alleviated if the fund distributors had a transparent mandate, a responsibility to fund a range of mitigation, adaptation and sustainable development initiatives, in addition to repairing climate harms, and clear accountability processes in place which included the participation of a variety of stakeholders and individuals representing communities most impacted by climate change.

Compatibility with environmental and human rights laws and principles

<p>A safe, clean, healthy and sustainable environment for current and future generations</p>	<p>Rights to food and water could be protected with the scale of funding potentially available under a CDT. The tax would increase the cost of fossil fuel energy thus incentivising renewable and nuclear energy, which would contribute towards mitigation efforts through a sustainable Just Transition. Curtailed demand for fossil fuels would reduce GHG emissions overall, which would contribute towards preventing a deepening climate crisis resulting in the catastrophic and large-scale human rights abuses of future generations, putting us better position for meeting the Paris Agreement goals for average surface temperature rises to be kept between 1.5°C and 2°C above pre-industrial levels.²⁰⁷</p>
<p>Reparation for loss and damage</p>	<p>A CDT of USD\$40 per ton of CO2 with a clear mandate to apply funds for the purpose of repairing climate harms and the root causes of injustice multipliers would clearly be compatible with this human rights requirement.</p>
<p>Transparent decision making and public participation, particularly of those most vulnerable</p>	<p>Fund accumulations would need to be allocated through transparent processes and include the meaningful participation of both recipient countries at the frontline of adverse climate impacts and victims of climate change harms representing their local communities. CAN has suggested a that such a tax could enable ‘less developed’ countries to retain the revenue accrued in their national budgets and therefore enable localised participation in decision making on allocation with stakeholders and climate change victims.²⁰⁸</p>
<p>Differentiated responsibility or polluter pays</p>	<p>The CDT attempts to operationalise the CBDR-RC and Polluter Pays principles as companies directly profiting from and driving GHG emissions are required to pay for the impacts through a levy. However, where such companies seek to pass the cost of the tax onto consumers, the impact is regressive requiring already struggling households to pay a larger proportion of their income towards addressing collective needs. Any tax would need to be structured to prohibit companies from trickling its cost onto consumers to ensure that those with the greater ability to pay – who are also often more responsible for higher levels of GHG emissions – have differentiated responsibility.</p>
<p>Human rights and sustainable policy formation in response</p>	<p>The policy seeks to internalise the fossil fuel companies’ environmental and human externalities. In this way, it seeks to address the root cause climate change harms and implements a regulatory incentive for fossil fuel companies to re-envisage their business models so that they are sustainable. This will require careful negotiation, however, so as not to result in the promotion of aggressive mining, bio-fuel, solar, wind, or fracking measures that also result in human rights violations by dispossessing indigenous peoples or impacting our right to a healthy environment, for example. A CDT that protects and promotes human rights and environmental and climate justice through a considered Just Transition would help to mitigate against these risks. Additionally, a Just Transition that addresses the root causes of injustice multipliers by allocating accumulated funds to both repair climate change harms and address systemic exclusion (due to poverty, gender, age, indigenous or minority status and disability, national or social origin, birth or other status) would have a transformative affect in the long-term promotion of numerous human rights.</p>



Binta Fadera, 39 at a spillway on the Juffureh dyke. ActionAid partner ADWAC has built a dyke in the village of Juffureh in the North Bank region of The Gambia to control salt intrusion in rice fields that have been long abandoned.
PHOTO: JANE HAHN/ACTIONAID

9. Operationalising the WIM to retrieve, receive, and allocate finance

The WIM's April 2019 meeting must make clear proposals for COP25, being held in Santiago, Chile at the end of this year. Proposals must enable UNFCCC Parties to take practical steps to operationalise the WIM so that it can provide finance for addressing loss and damage.

The WIM mechanism must itself incorporate principles of climate justice, human rights, gender responsiveness, environmental law and sustainable development. This will include ensuring mechanisms for the meaningful participation of groups and peoples most impacted by climate induced loss and damage – climate change victims – in policy design, consultation and decision-making phases, and the allocation of funding which meets the intersectional analysis approach described below.

Climate change harms are being felt – and will continue to be felt – by groups and peoples already experiencing social, material, political and economic exclusion.²⁰⁹ Warmer temperatures make it harder to breathe our polluted air, and fine particles from coal power plants already kill an estimated 13,200 people each year in the United States alone, disproportionately impacting the elderly, children, those with respiratory disease, and poor and minority ethnic groups living in cheaper areas downwind of multiple power plants.²¹⁰

Vulnerabilities intersect. Poor women in small islands, riparian and low-lying coastal zones, arid regions face greater obstacles than women or men with greater access to resources in the same, or less, geographically vulnerable regions. The goal of intersectionality in policy analysis is to identify and address “the way specific acts and policies address the inequalities experienced by various social groups.”²¹¹ The human rights implications are that – through also seeking to address the exacerbating harms of climate change when allocating resources for loss and damage associated with the adverse effects of climate change – improvements can be made in reducing or removing gender, race, socio-economic or other discrimination. The WIM should lead intersectional policy formation that accounts for these intersecting vulnerabilities and intersectional implementation must be informed by a detailed knowledge of the:

- victims of climate change harms representing groups disproportionately impacted by loss and damage associated with the adverse effects of climate change, whether on account of their geography, poverty, gender, age, indigenous or minority status and disability, national or social origin, birth or other status;
- data and expertise (policy, equality and human rights) concerning current policies and practices, their limitations, as well as the views of stakeholders on the likely cause of any insufficiencies;
- road-testing proposed policy impacts on vulnerable groups, and those facing multiple vulnerabilities (for example a farmer with five children in Bangladesh, a disabled woman living in extreme poverty in rural Malawi, or a young fisher in Tuvalu or Senegal who is facing reduced fish stocks both due to changing climates and foreign industrial trawlers). Impact assessments should ask whether proposed changes in policy field structures will:
 - cause or perpetuate disadvantage;
 - promote values of dignity, respect, fairness and autonomy; and
 - protect, promote and respect human rights.
- solutions for transformative change that can benefit all strands of vulnerable groups;
- monitoring and evaluation that is informed by both data and the views of stakeholders, to measure tangible impacts once a policy field structure is adopted and implemented; and
- progressive taxation measures to avoid exacerbating inequality.

Data must be obtained about the winners and losers as a result of specific policies and financing mechanism, and policy makers must be willing to pivot quickly where the impacts are falling short of the desired outcomes. In its operation, the WIM must also ensure coherence between humanitarian agencies such as the UN Office for Coordination of Humanitarian Affairs and the United Nations High Commissioner for Refugees as well as other dimensions of climate financing, such as the Global Environment Facility, Green Climate Fund and Cancun Adaptation Framework, and enable the formation of transparent accounting, monitoring, reporting and verification procedures to ensure that loss and damage finance is additional to the already pledged USD\$100 billion per year of climate financing starting 2020. We echo the recommendation made by others that the WIM and the Standing Committee on Finance act together in order to enable this.²¹²

The WIM must be operationalised to require mandatory financing. Voluntary contributions are insufficient, and human rights mechanisms convey this clearly. For example, the UN Voluntary Fund for Victims of Torture provides direct assistance to victims of torture and their families, wherever torture occurs. While the United States has historically been a friendly contributor to the voluntary fund, it has also engaged in decades of illegal torture practices that continue to be litigated in global forums from Guantánamo Bay to Asia and Europe where the CIA ran a secret rendition and torture programmes.²¹³ Instead, compulsory payments to repair occurring and prospective climate change harms with preventative mitigation efforts as forms of guarantees of non-repetition are required.

10. Conclusion

If we continue allowing our governments to make inadequate commitments to reducing GHG emissions, while giving fossil fuel companies USD\$5.3 trillion in subsidies, we will rob the future of our planet from our children. Painfully, this is something that the Youth Climate Strike movement is unequivocally aware of, while our elected representatives and institutions are slow to initiate the required change, ignoring solutions that are already available.

Currently occurring and prospective climate change harms are in urgent need of reparation. Millions of people are experiencing the worst impacts of the GHG emissions of early industrialisers, and the ones suffering the most are the most vulnerable and least culpable. At the same time, our generation's GHG emissions exacerbate the propensity for increasingly severe loss and damage associated with the adverse impacts of climate change into the future. We must repair harms and halt reliance on GHG emitting energy for our activities. These are not just deadly, they are more costly in comparison to their sustainable alternatives. A Green New Deal that supports workers' rights and rolls out renewable energy could be funded at 35 per cent of the current expenditure by global governments on fossil fuel subsidies.

Climate change is an injustice multiplier. The injustices of climate change are felt disproportionately by those experiencing existing patterns of social, material, economic and political inequality and exclusion. The elderly who are isolated during heatwaves, mothers – like Piara Begum (page 25 above) from the village of Pashurbunia, Bangladesh, who can no longer cultivate rice and vegetables from her once fertile land – the outdoor labourers, poor and ethnic minorities disproportionately impacted by pollution, slum dwellers in the megacities of the developing world who lose everything to extreme weather events. If we can repair loss and damage associated with climate change in a way that alleviates the root causes of that multiplier effect, we can respond to the greatest challenge of our times in ways that lead to drastic improvements for the global majority, sustainably and in a way that promotes human rights.

Market mechanisms fail to do this, are not available for regular and slow-onset events, insufficient where they are available, and put the cost of attempting to repair extreme onset events on countries vulnerable to climate change impacts. However, some of the innovative solutions proposed in this text, coupled with public financing from the rich countries, not only have the potential to incentivise mitigation, and raise adaptation and loss and damage funds, but they also contain within them the potential to have a transformative impact through reducing global inequality and inequity. The innovative financing mechanisms such as the Financial Transaction Tax and Climate Damages Tax – if designed to enable those most impacted to meaningfully participate in, co-design and decide upon the allocation of reserves – and if implemented as a progressive tax, are important tools towards achieving this.

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<http://actionforglobaljustice.actionaid.org>

International Registration number: 27264198

Website: **www.actionaid.org**

Telephone: **+27 11 731 4500**

Fax: **+27 11 880 8082**

Email: **mailjhb@actionaid.org**

ActionAid International Secretariat,
Postnet Suite 248, Private Bag X31, Saxonwold 2132,
Johannesburg, South Africa.