10 October 2022

Literature Review - Loss and Damage

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This advice is provided in response to ***Query 41/22***

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1 Query

We have been instructed to prepare a literature review of publications on climate-related loss and damage (**L&D**). In particular, you have requested this literature review to:

(i) map out possible options/approaches for financial arrangements on L&D;

(ii) provide a brief explainer of the different approaches that have been proposed; and

(iii) provide reference to information on governance arrangements and finance sources where available, with links to the report/article.

We set out below background context to the literature review and an executive summary of the proposed L&D financing solutions proposed in the literature review.

Annexure 1 sets out the list of literature reviewed, with access links. Annexure 2 sets out a tabular summary of that literature in the form requested.

2 Background

Academics, NGOs and negotiators have struggled to settle on an agreed definition of climate change-related L&D. Part of the problem arises from how extensive and profound the damage caused by climate change has and will be, especially in developing countries.

Put simply, L&D refers to loss that would not have happened "but for" climate change, and that cannot (or has not) been avoided through mitigation or adaptation.[1] L&D represents the idea that high-emitting countries, particularly those with large historical carbon footprints, pay reparations to climate-vulnerable countries for the loss of lives and livelihoods caused by climate change.

Such loss is difficult to quantify in circumstances where it is intended to address not only immediately measurable monetary impacts (e.g. from sudden extreme weather events requiring repair and investment), but also slow-onset costs of climate change (e.g. from sea level rise, glacial

[1] SEI Briefing Paper, page 5 referencing Roberts, E. and Pelling, M. 'Climate change-related loss and damage: translating the global policy agenda for national policy processes', *Climate and Development* (2018) 10(1), 4-17 <https://doi.org/10.1080/17565529.2016.1184608>.

melt, drought, destruction of biodiversity), non-economic loss such as cultural impacts (e.g. loss of land, areas of significance and identity) and indirect loss (e.g. falling GDP, conflicts caused by drought, etc.).

Such loss will impact particular groups of persons differently. The poorest are the most vulnerable, as they have limited access to resources and assets, and there is evidence that suggests that women are more adversely affected by climate disasters.[2]

Under the UNFCCC there are currently no collective commitments by developed countries to provide finance to address L&D, as there are for mitigation and adaptation in the form of a $100bn per year goal.[3]

Some action to address L&D has been funded through humanitarian aid, development finance, social protection and insurance. However, insurance has been criticised as a solution due to unaffordable premiums, low pay outs and inaccessibility to vulnerable populations.[4] International obligations to provide aid have also been viewed as unsatisfactory as no responsibility by the aid provider is admitted, with the system relying on "*random acts of charity*".[5]

Despite this, since L&D first arose in international discourse, there have been a number of potential financial arrangements that have been proposed. Most of these proposals have been coordinated under the Warsaw International Mechanism (**WIM**) and its executive committee (**ExCom**).

At COP 26, ongoing calls for redressing L&D culminated in the G77 & China proposing a Loss and Damage Finance Facility (or **LDFF**) as a separate body in the WIM framework. Member states of the UNFCCC rejected the LDFF in favour of a three-year "Glasgow Dialogue" to further discuss funding arrangements.

3 Executive Summary: Proposed Loss and Damage Financial Instruments

We set out below the main forms of financial arrangements proposed to address L&D, as identified in our literature review.

The below proposals are not standalone solutions, but rather a "patchwork" of options which could be pursued, especially until a LDFF is formally agreed by UNFCCC parties (if at all). Each mechanism has advantages and disadvantages (as set out in **Annexure 2**), but a combined approach could establish appropriate funding for L&D.

Out of the options identified in our literature review, the Stockholm Environment Institute's (**SEI**) suggestion to establish an "International Solidarity Fund" as an interim step before the LDFF (or another mechanism) can be agreed appears to be a viable short-term option for redressing L&D. SEI also suggests countries set aside disaster mitigation costs in their budgets, which could be supplemented by the International Solidarity Fund. This approach could provide an immediate short-term option for redressing L&D without the need for consensus by UNFCCC parties.

3.1 Climate Funds

(a) **The LDFF**: It is proposed that the LDFF would be an entity under the WIM. It would act to mobilise funding and oversee the payment of such funding to address L&D in developing countries (similarly to how the Green Climate Fund works for mitigation and adaptation

[2] CAN International Discussion Paper, page 19.

[3] Oxfam Paper, page 19.

[4] SEI Briefing Paper, page 12 and Oxfam Paper, page 23.

[5] Quote from the Lead Negotiator of the Alliance for Small Island States at COP26, sourced from Oxfam Paper, page 4.

funding). The LDFF would provide funding primarily in the form of grants. It would provide both rapid onset finance (in response to disasters) and funds for slow onset effects (such as for relocation and just transition to alternative livelihoods). While it could be the "*gold standard*" of redressing L&D, it has been labelled "*politically infeasible*" in the short-term, due to the requirement to secure agreement of UNFCCC parties to establish it.[6]

(b) **Existing UNFCCC Funds:** This approach calls for mandating L&D payments under existing UNFCCC funds, such as the Adaptation Fund (**AF**), Global Environment Facility (**GEF**) and Green Climate Fund (**GCF**). As these funds are already established, this option would be more efficient than creating a whole new facility. However, these funds are focussed largely on adaptation and mitigation funding, so UNFCCC members would likely resist increasing their scope to addressing L&D. Further, L&D would likely not be formally integrated into the fund's objectives and principles.

(c) **Existing Multilateral Climate Funds (external to UNFCCC):** The UNFCCC Secretariat Technical Paper suggests an option that would see existing multilateral climate funds (external to UNFCCC funds), such as the International Fund for Agricultural Development's Adaptation for Smallholder Agriculture Programme (**IFAD**), the Global Climate Change Alliance (**GCCA**) and the Pilate Program for Climate Resilience (**PPCR**) under the Climate Investment Funds (**CIFs**) of the World Bank, include L&D financing. This would allow access to funds for L&D without a need to agree with UNFCCC members. However, as the funds would be external to the UNFCCC framework, countries would not be held accountable to commitments under the UNFCCC.

(d) **International Solidarity Fund:** This option is suggested by SEI.[7] Essentially, this would be a joint pool of funds, paid by wealthier countries, to be distributed on a needs basis to respond to climate disasters and effects. SEI suggests this as a short term solution until a facility under the UNFCCC (i.e. LDFF) can be agreed. SEI references current regional funds, such as the European Solidarity Fund and Caribbean Disaster Risk Fund as potential models to follow.

3.2 Insurance and Bonds

(a) **Insurance and Risk Transfer:** Insurance has been the "de facto" finance mechanism for L&D (although technically speaking it is not finance, but an instrument that requires finance).[8] While insurance schemes can be useful in some contexts, such as to cover crop losses due to extreme events, they have been widely criticised as unsuitable for addressing slow-onset climate change impacts or noneconomic losses and damage.[9] Further, as climate-related risks increase, premiums are rising, and in some instances previously insurable assets are becoming uninsurable.[10]

(b) **Regional Insurance:** There a number of regional insurance funds capitalised via participating governments, where pay outs are triggered by certain extreme weather events.[11] The SUVA Expert Dialogue identified these regional insurance funds as having a role in addressing L&D, as governments can use these schemes to eliminate delays to disaster response.[12] Examples

[6] SEI Briefing Paper, page 10.
[7] SEI Briefing Paper, page 8-11.
[8] Heinrich Paper, page 12.
[9] SEI Briefing Paper, page 12.
[10] Oxfam Paper, page 23.
[11] Secretariat Technical Paper, Section G.
[12] Secretariat Technical Paper, page 120.

include the Caribbean Catastrophe Risk Insurance Facility (**CCRIF**) and African Risk Capacity (**ARC**). These funds can be subsidised by developed countries.

(c) **Debt Finance – Bonds:** We have identified two main types of bonds in climate finance, both of which are used to fund the ARC regional insurance:

(i) First, bonds that could provide credits for addressing slow onset changes. Climate, resilience and green bonds are typical examples of this category. These bonds finance projects that reduce GHG emissions, mitigate climate risk and enhance resilient capacity.

(ii) Second, catastrophe bonds (**CAT**). A CAT is a high-yield debt instrument that is designed to raise money for companies in the insurance industry in the event of a natural disaster. Catastrophe bonds have attached conditions requiring that if the bond issuer suffers from a pre-defined disaster, the issuer's obligation to pay interest and/or repay the principal to investors is either deferred or completely forgiven.

3.3 National Disaster Finance

(a) **National disaster finance (or contingency finance) and social protection:** This option is suggested by SEI as a short-term solution for L&D, as follows:

(i) each climate vulnerable country periodically sets aside a proportion of the country's budget to address disasters and extreme weather events (such as those established by Mexico and Bangladesh);

(ii) the national fund would be supplemented by payment from a joint fund (a Solidarity Fund) paid into by wealthier countries

Examples of such schemes include the Thai National Disaster Fund, Mexico's former Fund for Natural Disasters and Bangladesh's Loss & Damage Reserve Fund.

3.4 Multilateral bank and other international financing

(a) **Disaster Risk Reduction Finance:**[13] The Sendai Framework lays out responsibilities, targets and priorities for reducing global disaster risk. Its goal is to reduce existing disaster risk and prevent new risks from arising. The implementation arm of the Sendai Framework is the Global Facility for Disaster Reduction and Recovery (**GFDRR**). GFDRR contributes to the implementation of the Sendai Framework by helping countries to integrate disaster risk management and climate change adaptation into development strategies and investment programmes to assist in recovery from disasters more quickly and effectively.

(b) **Special Drawing Rights (SDRs**): SDRs are an international reserve asset, created by the IMF to supplement member countries' official reserves. The IMF can create an SDR when mandated to do so by a majority of member states that hold 85% of IMF voting rights. SDRs are a potential claim on the freely usable currencies of IMF members. Countries that receive SDRs can either hold them as currency reserves, or exchange them into hard currencies and eventually use them for a wide range of fiscal purposes. In 2021, the largest ever SDR allocation of about US$650bn was approved. This was to address the long-term global need for reserves, and help countries cope with the impact of COVID-19. A share of SDRs could be allocated to addressing L&D.

[13] Secretariat Technical Paper, paragraph 128-133.

(c) **Multilateral Development Banks:** A group of six multilateral development banks (**MDBs**) have been reporting jointly since 2011 on their financing that supports climate change mitigation and adaption. The World Bank provided 63% of total MDB adaptation finance.[14] MDBs offer a wide range of instruments and support to financing actions that may explicitly or implicitly address L&D, including, but not limited to, investment loans, policy-based loans, grants, lines of credit, equities and technical support in establishing mechanisms like weather derivatives.

3.5 Bilateral Transfers and Aid

(a) **Bilateral Transfers/ ODA:** These are transfers of funds from country to country. Official Development Assistance (**ODA**) is the largest public fund transfer from developed to developing countries.[15] ODA often comes in the form humanitarian aid, some of which may be spent in the wake of disasters attributed to climate change and could be considered L&D finance. This option is less preferable for L&D financing because aid is tied to geopolitics and preference, and the donor "*calls the shots*",[16] such as by tying conditions to grants.

3.6 Private Sector/ Philanthropy

(a) **Private Sector:** To date, private sector interaction with L&D more frequently takes the form of facilitating the provision of insurance, such as index-based weather or parametric insurance programmes. In some cases, private companies provide risk assessments to help countries to identify, price and transfer some financial risks associated with climate change impacts. Private sector involvement is subject to some obvious limitations such as a lack of funding due to no incentivisation to invest in L&D.

(b) **Philanthropic Funds:** Philanthropic funds can have a place in addressing L&D.[17] A global philanthropic fund could be set up specifically to address L&D. However, CAN International identifies that over-reliance on philanthropic funds can lead to governance issues where charities (often set up by wealthy individuals) control the administration of funds.[18]

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[14] Secretariat Technical Paper, page 25, paragraph 100.

[15] Heinrich Paper, page 16.

[16] Heinrich Paper, page 23.

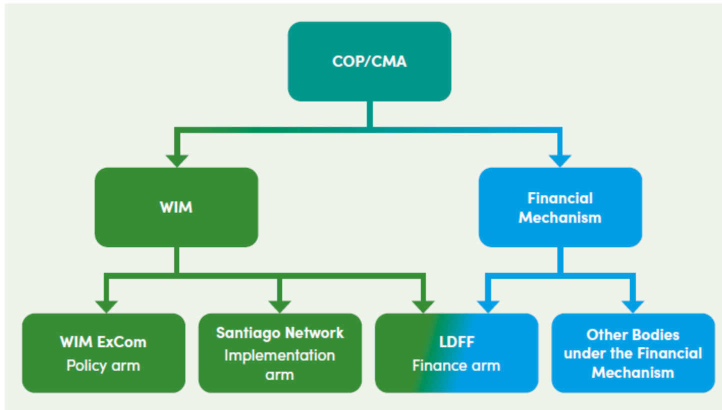
[17] Secretariat Technical Paper, page 35.

[18] CAN International Discussion Paper, page 24.

Annexure 1 Reference List

NO.	AUTHOR	REPORT	DATE	ACCESS LINK
1	Oxfam	Footing the bill - Fair finance for loss and damage in an era of escalating climate impacts (**Oxfam Paper**)	7 June 2022	https://www.oxfam.org/en/research/footing-bill-fair-finance-loss-and-damage-era-escalating-climate-impacts
2	CAN International, Christian Aid; Heinrich Böll Stiftung (Washington, DC); Practical Action & Stamp Out Poverty.	The Loss and Damage Finance Facility Why and How – Discussion Paper (**CAN International Paper**)	31 May 2022	https://us.boell.org/en/2022/05/31/loss-and-damage-finance-facility-why-and-how
3	Legal Response International	Potential outcomes for the Glasgow Dialogue on Loss & Damage? (**LRI Paper**)	19 May 2022	https://legalresponse.org/legaladvice/potential-outcomes-for-the-glasgow-dialogue-on-loss-damage/
4	The Loss and Damage Collaboration	Making Loss and Damage Finance the Third Pillar of the New Collective Quantified Goal on Climate Finance (**L&DC Paper**)	23 March 2022	https://www.lossanddamagecollaboration.org/publication/making-loss-and-damage-finance-the-third-pillar-of-the-new-collective-quantified-goal-on-climate-finance
5	Stockholm Environment Institute	Designing a fair and feasible loss and damage finance mechanism (**SEI Briefing Paper**)	27 October 2021	https://www.sei.org/publications/fair-feasible-loss-and-damage-finance-mechanism/
6	UNFCCC Secretariat	Elaboration of the sources of and modalities for accessing financial support for addressing loss and damage - Technical paper by the secretariat (**Secretariat Technical Paper**)	14 June 2019	https://unfccc.int/documents/196468
7	Heinrich Böll Stiftung North America	Financing Loss and Damage: A Look at Governance and Implementation Options (**Heinrich Paper**)	9 May 2017	https://us.boell.org/en/2017/05/09/financing-loss-and-damage-look-governance-and-implementation-options

Annexure 2 Summary of Financial Instruments and Approaches

INSTRUMENT	SUMMARY	GOVERNANCE	FUNDING	PROS/CONS	REPORT REFERENCES
Climate Funds					
Loss and Damage Finance Facility (LDFF)	At COP26, the G77 & China proposed the LDFF as a solution "*to provide new financial support under Article 9 of the Paris Agreement (PA), in addition to adaptation and mitigation finance, to developing countries to address loss and damage*". The LDFF would be an entity under the WIM. It would act to mobilise funding and oversee the payment of such funding to address L&D of developing countries (similarly to how the Green Climate Fund works for mitigation and adaptation costs). The LDFF would provide funding primarily in the form of grants. It would provide both rapid onset finance (in response to disasters) and funds for slow onset effects (such as for relocation and just transition to alternative livelihoods). Agreement at COP26 could not be secured to establish the LDFF or a process to do so. Instead, the Glasgow Dialogue (**GD**) was established which presently remains to be defined with clear milestones and outcomes. G77 & China are pushing for the LDFF to be agreed to at COP27 and established and operationalised over a three-year period.	G77 & China propose that the LDFF sits within the UNFCCC framework, under the UNFCCC Financial Mechanism. Set up similarly to other funds under the UNFCCC such as the GCF, AF and GEF. However, as the WIM is the core L&D mechanism, the LDFF would be a new additional arm of the WIM. Under the WIM there is a policy arm (the ExCom), an implementation arm (the Santiago Network) and the LDFF will be the finance arm:  The LDFF would be governed by a decision-making body (such as a board or trust fund committee) with equitable representation composed with a majority of members from developing country Parties.[19] Day-to-day operations of the LDFF would be run by a Secretariat with professional staff providing administrative, financial and technical expertise and serving and accountable to the decision-making body.	• Contributions from developed countries • Tax on international shipping emissions (bunkers)[20] • Re-allocation of SDRs • Reduction of fossil fuel subsidies • Financial transactions taxes • Climate damages taxes (i.e. charge on each tonne of coal, oil and gas) • Carbon markets, e.g. the EU ETS • Air passenger levy • Debt cancellation and relief [21]	**Advantages** Establishing a separate function within the UNFCCC framework for L&D would effectively formalise UNFCCC Parties' recognition that L&D funding is owed. It would allow a formal process for obtaining finance to redress L&D with concrete commitments. **Disadvantages** The LDFF is noted in the SEI Briefing Paper as "***highly politically infeasible*** *in the immediate term due to the institutional, structural and political barriers imposed by the climate finance architecture*."[22] Specifically, it will be difficult to establish within the current climate finance system as it will require consensus from UNFCCC Parties. However, given that large scale L&D will not be met by solidarity finance alone, SEI suggests working towards incorporating LDFF within the UNFCCC (such as under the WIM) as part of post 2025 climate finance targets.[23]	CAN International Discussion Paper, page 10-27 Oxfam Paper, Section 5, page 23-27 SEI Briefing Paper, page 10-15 L&DC Paper, page 4 -6
Existing UNFCCC Funds	New mandate for existing UNFCCC funds (set up for mitigation and adaptation funding) to finance L&D. These funds include: • **Adaptation Fund (AF)** The AF provides resources to countries through grants only. It is financed in part from a 2% share of proceeds of certified emission reductions issued under clean development mechanism projects, and through voluntary contributions from governments and private donors. The AF places an emphasis on direct access, which supports the resourcing of projects that address acute challenges facing countries, including L&D. The AF however has limited capacity both in terms of staff and financial resources; it is unfamiliar with other financial instruments other than grants	Governed by UNFCCC framework	• Funded by UNFCCC members	**Advantages** • As these funds are already established, could potentially be created faster than creating a whole new facility. GCF, which took five years to its first funding decision, shows that the path forward for a new global climate fund is lengthy and complex. • Easier access to finance through	Secretariat Technical Paper, paragraphs 73-94. Heinrich Paper, page 26-30. CAN International Discussion Paper, page 25-26.

[19] CAN International Discussion Paper, page 22.
[20] Oxfam Report, page 26.
[21] CAN International Discussion Paper, page 17-18.
[22] SEI Briefing Paper, page 10.
[23] SEI Briefing Paper, page 15.

INSTRUMENT	SUMMARY	GOVERNANCE	FUNDING	PROS/CONS	REPORT REFERENCES
	and does not have experience in engaging with the private sector or large programming amounts.[24] • **Global Environment Facility, which manages the Least Developed Counties Fund (LDCF) and Special Climate Change Fund (SCCF)** **LDCF:** The LDCF was established in 2001. It supports LDCs in their efforts to adapt to the effects of climate change. The LDCF provides resources to countries through grants only. It is capitalised through contributions from public sources. Similar to the AF, the LDCF aims to help countries to adapt to the impacts of climate change. It places an emphasis on country ownership and most vulnerable countries and requires all projects to be endorsed by the country/ countries where it will be implemented. As a grants-only mechanism, which eases access to resources for heavily indebted countries, it does not offer the rapid, large-scale financing that certain extreme events causing loss or damage incur. **SCCF:** The SCCF was created in 2001 to address the specific needs of developing countries. It covers the incremental costs of interventions to address climate change relative to a development baseline. Adaptation to climate change is the top priority of the SCCF, although it can also support technology transfer and its associated capacity-building activities. The SCCF is intended to catalyse and leverage additional finance from bilateral and multilateral sources. The SCCF is a grants-focused, dedicated climate fund. It has a broad mandate and knowledge to finance many of the actions that may be relevant to addressing L&D. The SCCF financed additional technical and regulatory assistance under the Southeast Europe and Caucasus Catastrophe Risk Insurance Facility to develop new weather risk insurance and reinsurance products and increase public awareness of weather risk in participating countries. • **Green Climate Fund** The GCF is intended to address both mitigation and adaptation – aiming for a balance between the two over time – as well as facilitating private sector financing with climate-related end goals. The Secretariat Technical Paper suggests the GCF would be well positioned to address the multifaceted nature of actions addressing L&D, owing to its range of financial instruments at its disposal and access to private sector funding. However, the GCF has been subject to criticism. CAN International notes "*GCF has already been criticised on a number of fronts. Many developing country recipients feel that the accreditation of national implementing entities (NIEs) is too slow and - like the approval of projects proposals -- bogged down in onerous "micro-scrutiny" that is tying countries up in paperwork considered by some as unnecessary and counter-productive*".[25] The Heinrich Paper suggests these funds would be well suited to tackle L&D. It suggests the GCF and GEF have the capacity to receive dedicated L&D financing for example under a separate trust fund, clearly delineating inputs and disbursals on L&D from other climate finance disbursements.[26]			already open channels and accredited financiers. • Within the framework of UNFCCC, so principles would be upheld. **Disadvantages** • These funds are largely focussed on adaptation and mitigation funding, so UNFCCC Parties would likely resist them addressing L&D. • Grant based system would not suit disaster response (but would suit slow-onset costs). • L&D mandate would likely not be formally integrated into the funds objectives and principles.[27] • The funds have been generally criticised by L&D advocates and negotiators. G77 negotiators at COP26 noted the GCF is "designed to be delayed".	

[24] CAN International Discussion Paper, page 26.
[25] Heinrich Paper, page 27.
[26] Heinrich Paper, page 2.
[27] CAN International Discussion Paper, page 16.

INSTRUMENT	SUMMARY	GOVERNANCE	FUNDING	PROS/CONS	REPORT REFERENCES
Existing Multilateral Climate Funds (external to UNFCCC)	The Secretariat Technical Paper suggests an option that existing multilateral climate funds (external to UNFCCC funds), such as IFAD, GCCA and PPCR under the CIFs of the World Bank, could include L&D financing.[28] The CIFs comprise two trust funds: the Clean Technology Fund and the Strategic Climate Fund, which are governed by a committee that oversees and decides on operations and activities. The Strategic Climate Fund oversees the PPCR. The Secretariat Technical Paper sees the PPCR as the window of most relevance to L&D: *"PPCR aims to pilot and demonstrate ways in which climate risk and resilience may be integrated into core development planning and implementation by providing incentives for scaled-up action and initiating transformational change, building upon NAPAs of LDCs.* *It focuses on five areas: agriculture, hydrometeorological services, climate information services, coastal zones and resilient infrastructure…* *In this regard, PPCR has the ability to leverage partnerships with financial intermediaries, guarantees and equity-based operations to potentially scale up financing for actions that are relevant to addressing loss and damage"* Grants account for 94% of adaptation finance from multilateral climate funds (i.e. AF, GCF and LDCF), and 62% of the value of bilateral adaptation finance as of 2019, and would likely be a dominant method of transfer for L&D funds.	• Multilateral bodies managed by representatives of member states (e.g. IFAD, GCCA) • CIFs managed by World Bank	• Funding commitment from member states • World Bank resources	**Advantages** • Access to funds without need to agree with UNFCCC members. **Disadvantages** • External to UNFCCC framework, so countries not held accountable to commitments under UNFCCC. • Grant based system would not suit disaster response (but would suit slow-onset costs). • Likely outcome based (i.e. financing mitigation and adaptation) rather than compensating for L&D.	Secretariat Technical Paper, paragraph 95-99
International Solidarity Fund	This option is suggested by SEI. Essentially, this would be a joint pool of funds, paid by wealthier countries, to be distributed on a needs basis to respond to climate disasters and effects. SEI suggests this as a short term solution until a facility under the UNFCCC can be agreed. SEI references current regional funds, such as the EU Solidarity Fund and Caribbean Disaster Risk Fund. The International Solidarity Fund would be external to the UNFCCC. This would mean it would not need consensus to set up.	• External to UNFCCC, managed presumably by a treaty between countries with an entity governed by representatives.	• Transfers from developed countries	**Advantages** Sidestep bureaucracy of UNFCCC negotiations and avoid delays. Greater autonomy for individual countries to develop their own approaches. Potential consistency with human rights principles. **Disadvantages** Countries not held accountable to commitments under the UNFCCC. Structure dependent on goodwill of developed countries to take action. Greater challenges in ensuring climate justice principles are respected.	SEI Briefing Paper, page 8-11 LRI Paper, Section 2.6
Insurance and Bonds					
Insurance and risk transfer	Insurance has been the "*de facto*" finance mechanism for L&D (although technically speaking it is not finance, but an instrument that requires finance).[29] In 2015, the G7 agreed a target to provide climate risk insurance for 400 million more poor and vulnerable people in developing countries by 2020, and this has now developed into the InsuResilience Global Partnership (**IGP**). While insurance schemes can be useful in some contexts, such as to cover crop	Market or international organisations who facilitate insurance such as the InsuResilience Global Partnership	• Premiums subsidised by developing countries (i.e. IGP) • Market	**Advantages** Can play a role in countries and persons responding quickly to disasters through the injection of cash. **Disadvantages**	CAN International Discussion Paper, page 15-17 Oxfam Paper, page 22-23 SEI Briefing Paper, page 12 Heinrich Paper, page 12-13

[28] Secretariat Technical Paper, page 24-25.
[29] Heinrich Paper, page 12.

INSTRUMENT	SUMMARY	GOVERNANCE	FUNDING	PROS/CONS	REPORT REFERENCES
	losses due to extreme events, they have been widely criticised as unsuitable for addressing slow-onset climate change impacts or noneconomic losses and damages. One analysis at the Suva Expert Dialogue concluded that insurance could be acceptable form of compensation if two conditions are met: funded by premium support from developed countries, and it is new and additional to existing disaster risk insurance.[30]			The insurance solution has been widely criticised.[31] Insurance does not deal with slow-onset costs. As climate-related risks increase, premiums are rising, in some instances previously insurable assets are becoming uninsurable.[32] At present it is typically developing countries or communities that pay such premiums. Finance from a L&D facility should support the costs of insurance.	Secretariat Technical Paper, paragraphs 52-53, 58 LRI Paper, page 2-3
Regional Insurance	There a number of regional insuring funds capitalised via participating governments where pay outs are triggered on certain extreme weather events.[33] The SUVA Expert Dialogue identified these regional insuring funds as having a role in addressing L&D, as governments can use these schemes to eliminate delays in disaster response.[34] These insuring funds can be supported by bilateral transfers from developed countries. Examples: • **CCRIF:** This is a regional fund, capitalised via multi-donor trust fund and membership fees by participating governments. It provides short term liquidity and is triggered by earthquake or hurricane catastrophes.[35] • **ARC:** Funded by a green bond to finance adaptation measures and a catastrophe bond to provide insurance for extreme events. Parametric insurance, meaning it is based on modelled rather than actual losses, enabling a quick pay out of claims (10 Business Days). Provides automatic pay outs on occurrence of drought, dependent on contingency plans being in place prior to the disaster. ARC has received bilateral transfers government including Canada, France and Sweden.[36] Can be funded by global re-insurance. This is effectively a scheme where regional insurers (such as the ARC and the CCRIF) re-insure by taking out their own insurance, thus spreading their own risk. The Heinrich Paper mentions an approach where these regional insurers could insure each other. So for example, as the ARC covers drought in Africa, and the CCRIF covers earthquakes and hurricanes in the Caribbean, and these climate risks arise at different times, the risks are spread and the costs can be lowered.[37]	Governed by multilateral insurance fund with representatives from each country.	• Pooled funds from bloc of countries • Bilateral transfers • Green bonds • Re-insurance	**Advantages** Can provide quick relief for loss (i.e. 10 Business Days for ARC), and automatic pay outs when certain events are triggered (where the insurer agrees such events were triggered). **Disadvantages** Unaffordable premiums. Poorer populations may not have access to insurance. Does not address long term effects (i.e. building back). Low payments: • Hurricane Maria in Dominica cost USD$1.37 billion USD, CCRIF insurance coverage was USD$19.3 million.[38] • Malawi Drought - ARC paid out just USD$8.1 million 9 months after emergency.[39]	CAN International Discussion Paper, page 15-17 Oxfam Paper, page 22-23 Heinrich Paper, page 12-13 Secretariat Technical Paper – paragraph 119-125, Annex 1, paragraph 14

[30] CAN International Discussion Paper, page 16.
[31] SEI Briefing Paper, page 12.
[32] Oxfam Paper, page 23.
[33] Secretariat Technical Paper, Section G.
[34] Secretariat Technical Paper, page 120.
[35] Heinrich Paper, page 12.
[36] Secretariat Technical Paper, page 30, paragraph 120.
[37] Heinrich Paper, page 13.
[38] CAN International Discussion Paper, page 16

INSTRUMENT	SUMMARY	GOVERNANCE	FUNDING	PROS/CONS	REPORT REFERENCES
Debt Finance – Bonds	There are two main types of bonds in climate finance: • First, the bonds that could provide credits for addressing slow onset changes. Climate, resilience and green bonds are typical examples of this category. These bonds finance projects for reducing GHG emissions, mitigating climate risk and enhancing the resilient capacity.[40] • Second, CAT bonds. A CAT is a high-yield debt instrument that is designed to raise money for companies in the insurance industry in the event of a natural disaster. Catastrophe bonds have attached conditions requiring that if the bond issuer suffers from a pre-defined disaster, the issuer's obligation to pay interest and/or repay the principal to investors is either deferred or completely forgiven. CAT bonds tend to come with stricter terms and conditions than traditional insurance. They generally have a higher fixed cost than traditional insurance and are usually available only to institutional investors.[41] There have been proposals for 'attribution bonds', which would cover the component of the probability of a natural disaster attributable to climate change, or sea level rise bonds, which would provide dividends in the event that the mean sea level exceeds a predetermined threshold. These bonds exist only in a conceptual stage, but could perhaps be pursued as future sources for L&D finance.[42]	N/A (largely free market)	• Private market	**Advantages** Can provide a private market method of investing in L&D compensation. **Disadvantages** Subject to private market interest, which is obviously limited in L&D. Reliant on extremely risky high yield bonds**.** Risk will further increase as climate change impacts continue to worsen.	Heinrich Paper, page 13 Secretariat Technical Paper, paragraph 56
National Disaster Finance					
National disaster finance (or contingency finance) and social protection	This option is suggested by the SEI as a short-term solution, given the LDFF is likely politically infeasible for some time. In summary, the SEI suggests the following:[43] • Each climate vulnerable country periodically sets aside a proportion of the country's budget to address disasters and extreme weather events (such as the ones established by Mexico and Bangladesh); • The national fund would be supplemented by payment from a joint fund (a solidarity fund) paid into by wealthier countries. Examples of such schemes include the Thai National Disaster Fund[44], Mexico's former Fund for Natural Disasters[45] and Bangladesh's Loss & Damage Reserve Fund.[46] There are existing examples of solidarity funds, such as the EU Solidarity Fund, which could be used to fund such schemes.[47] SEI also suggests that such funds could be sourced from air passenger levies, carbon taxes, debt swaps/relief/cancellation and shifting fossil fuel subsidies,	National level government (i.e. taxes), with interaction with potential solidarity fund.	• Government budgets • Bilateral transfers • Solidarity fund • Innovative tax streams	**Advantages** The benefit of the scheme is that countries facing L&D would ensure that immediate support is available following climate-induced extreme weather events, and they could dictate how and where finance is utilised.[48] It would also immediately ringfence L&D funds from mitigation and adaptation by setting up as specific fund for L&D.[49] **Disadvantages** Most importantly, unless such funds can be paid into by wealthy countries, the scheme does not align with the "*polluter pays*" principle and climate justice generally. Further, without funding, poorer	SEI Briefing Paper, page 11-12 Secretariat Technical Paper, paragraph 113-118

[39] Oxfam Paper, page 17.
[40] Secretariat Technical Paper, page 17.
[41] Heinrich Paper, page 13.
[42] Heinrich Paper, page 13.
[43] SEI Briefing Paper, page 11
[44] Secretariat Technical Paper, page 27, paragraph 113.
[45] SEI Briefing Paper, page 11
[46] SEI Briefing Paper, page 11
[47] SEI Briefing Paper, page 11-12.
[48] Secretariat Technical Paper, page 16, Section 3.
[49] SEI Briefing Paper, page 15.

INSTRUMENT	SUMMARY	GOVERNANCE	FUNDING	PROS/CONS	REPORT REFERENCES
	which could flow directly into national disaster funds.			countries would be unlikely to be able to set aside anywhere near the wealth required. The key to success of this scheme is wealthier countries agreeing to pay into a solidarity fund to top up national disaster funds.	
Multilateral bank and other international financing					
Disaster Risk Reduction Finance	The Sendai Framework is an international agreement that lays out responsibilities, targets and priorities for reducing global disaster risk. Its goal is to reduce existing disaster risk and prevent new risks from arising. It will remain in place until 2030. Priorities are to understand disaster risk, strengthen disaster risk governance, invest in DRR for resilience and enhance preparedness. All priority areas have linkages to the actions for addressing L&D that require financing as identified under the Suva Expert Dialogue. Like humanitarian assistance, it is usually provided in the form of grants or in-kind support. A vast majority of DRR actions with respect to the residual impacts of climate change centre around responding more swiftly when disaster strikes, building resilience ex ante and around the concept of 'build back better'. The implementation of the Sendai Framework is the GFDRR. GFDRR contributes to the implementation of the Sendai Framework by helping countries to integrate disaster risk management and climate change adaptation into development strategies and investment programmes and recover from disasters quickly and effectively. GFDRR is a grant-funding mechanism managed by the World Bank. Contributions from most members and other donors are pooled in the GFDRR MDTF. MDTF is used to finance projects around the world and may hold funds from any donor. Additional financing windows include cooperation between the African, Caribbean and Pacific Group of States, the European Union and Japan.	GFDRR is administered by the World Bank and governed by a Consultative Group including the World Bank Group, the United Nations Office for Disaster Risk Reduction (UNDRR) and several other international organisations and countries.	• Funding from partners (i.e. member states and international organisations) • World Bank	**Advantages** Could potentially be used for re-building areas after climate related disasters (i.e. long term support). Suited to slow-onset costs and re-building back economies. **Disadvantages** DRR largely focuses on adaptation finance, so it does not seem to fit well with the overall goal of addressing L&D.	Secretariat Technical Paper, paragraph 128-133
Special Drawing Rights (SDRs)	SDRs are an international reserve asset, created by the IMF to supplement member countries' official reserves. The IMF can create an SDR when mandated to do so by a majority of member states that hold 85% of IMF voting rights. SDRs are a potential claim on the freely usable currencies of IMF members. Countries that receive SDRs can either hold them as currency reserves or exchange them into hard currencies and eventually use them for a wide range of fiscal purposes. As such, SDRs can provide a country with liquidity. They could be exchanged with other countries to use on L&D finance or used to free up other funds, which could then be channelled to address L&D. In 2021, the largest ever SDR allocation of about $650bn was approved. This was to address the long-term global need for reserves, and help countries cope with the impact of the COVID-19 pandemic A share of SDRs could be allocated to addressing L&D. There is an important distinction between SDRs countries receive directly from the IMF and re-allocated SDRs: the former can be used as a debt-free form of liquidity, if this can be agreed between the central bank and finance ministry in the recipient country. Reallocated SDRs usually are on-lent to a country or fund	IMF and IMF member states.	IMF member states contributions	**Advantages** Access to huge amounts of liquidity (e.g. $650bn for COVID-19). Fast access to liquidity in response to disasters . **Disadvantages** Countries not held accountable to commitments under UNFCCC. 85% vote of IMF members needed. Majority of SDRs go to the wrong recipients. The IMF's Articles of Agreement determine that SDR allocations need to be distributed among member states according to their IMF quota. As high-income countries have higher IMF quotas, they have cashed in more than half of the	CAN International Discussion Paper, page 9 and 16 Oxfam Paper, page 26-27

INSTRUMENT	SUMMARY	GOVERNANCE	FUNDING	PROS/CONS	REPORT REFERENCES
	through heavily subsidised loans that can be interest free or be attached to sovereign debt security instruments.			allocation. This would need to be re-worked.	
Multilateral Development Banks	A group of six MDBs have been reporting jointly since 2011 on their financing that supports climate change mitigation and adaption. The World Bank provided 63% of total MDB adaptation finance.[50] MDBs offer a wide range of instruments and support to financing actions that may explicitly or implicitly address L&D, including investment loans, policy-based loans, grants, lines of credit, equities and technical support in establishing mechanisms like weather derivatives. However, there are examples of MDB finance effectively addressing L&D to some extent. After several severe droughts, Malawi sought methods to reduce the impact of drought on the country's industries and federal budget. It required access to funds quickly in the event of a severe and catastrophic drought and desired to reduce dependence on humanitarian appeals. The World Bank responded by assisting the Malawi Government to transfer a portion of the risk of severe drought to the international financial market using weather derivatives. As such, MDBs can play the role of financial intermediary when governments and counterparties require additional capacity.[51]	Governed by multilateral development banks who are represented by member states: • African Development Bank (AfDB) • Asian Development Bank (ADB) • European Bank for Reconstruction and Development (EBRD) • European Investment Bank (EIB) • Inter-American Development Bank (IDB) • World Bank Group (composed of the World Bank, International Finance Corporation and Multilateral Investment Guarantee Agency	Contributions from member states of multilateral banks	**Advantages** Access to large amount of funds through banks. Additional line of credit external to governments. **Disadvantages** Downside is these are generally loans (78% of MDB finance is in the form of loans).[52] Debt financing, and a market based approach generally, is not appropriate for L&D, and will place more burdens on developing countries. Developed countries are overrepresented in decision-making of MDBs.	Heinrich Paper, page 36-37 Secretariat Technical Paper, paragraph 100-107.
Bilateral Transfers and Aid					
Bilateral Transfers/ ODA	These are transfers of funds from country to country. ODA is the largest public fund transfer from developed to developing countries. ODA often comes in the form humanitarian aid, some of which may be spent in the wake of disasters attributed to climate change and could be considered L&D finance.	"Country to country" so governed by donor and recipient (largely donor).	Bilateral transfers	**Advantages** In the form of grants, so not debt generating. **Disadvantages** Hostage to geopolitics and preference. Certain states will receive preferential treatment and others which do not align with policy goals will not receive ODA. Donor "*calls the shots*"[53], such as by tying conditions to grants. External to UNFCCC framework, so countries not held accountable to commitments under UNFCCC.	Oxfam Paper, page 4, 18 Heinrich Paper page 16-17 Secretariat Technical Paper, paragraph 108, 127
Private Sector/ Philanthropy					
Private Sector	Private sector interaction with L&D, to date, more frequently takes the form of facilitating the provision of insurance, such as index-based weather or parametric insurance programmes. Private companies, in some cases, provide risk assessment to help countries to identify, price and transfer some financial risks associated with climate change	Free market (no governance)	Market	**Advantages** If L&D could somehow be incentivised, could provide an untapped source of finance.	Secretariat Technical Paper, paragraph 136-138

[50] Secretariat Technical Paper, page 25, paragraph 100.
[51] Secretariat Technical Paper, page 26, paragraph 107.
[52] Secretariat Technical Paper, page 25, paragraph 103.
[53] Heinrich Paper, page 23.

INSTRUMENT	SUMMARY	GOVERNANCE	FUNDING	PROS/CONS	REPORT REFERENCES
	impacts.			**Disadvantages** The main issue with private sector assistance is motivation, as a market-based solution would primarily be incentivised by profit, which L&D (distinct from investment in adaptation and mitigation), does not provide.	
Philanthropic funds	Philanthropic funds can have a place in addressing L&D. The Secretariat Technical Paper cites the Action of Churches Together Alliance, a coalition of over 150 churches and faith-based organizations that work together in over 125 countries, as a potentially growing sources of finance to support climate action as the global community becomes more aware of the devasting impacts of climate change.[54] A global philanthropic fund could be set up specifically to address L&D.	Global fund would be managed by donors	Donors	**Advantages** Potentially crowd funded (i.e. donations from citizens). **Disadvantages** Shortage of funds required. Governance issues. CAN International identifies that relying too much on philanthropic funds can be detrimental, because governance of the flow of money will be determined by the charities themselves, rather than parties to the UNFCCC.[55]	CAN International Discussion Paper, page 24 Secretariat Technical Paper, paragraph 139

[54] Secretariat Technical Paper, page 35.
[55] CAN International Discussion Paper, page 24.