

Implementing innovative finance instruments for loss and damage

SEI brief
March 2025

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Key messages

- Despite loss and damage (L&D) finance needs in developing countries amounting to USD 400 billion to 1.6 trillion per year by 2030, current pledges to the Fund for responding to Loss and Damage (FRLD) amount to USD 745 million, highlighting a major gap.
- A number of innovative instruments can be implemented to bridge this gap and generate additional revenue for L&D. At the global level, these include a maritime levy, global wealth tax, windfall tax or climate damages tax.
- High-income countries can also implement innovative instruments at the national level to generate public revenue, which they could use to increase their contributions to the FRLD. There are various instruments that could be considered, such as a fossil fuel extraction levy, windfall tax, air passenger levy, national wealth tax, financial transaction tax, carbon pricing or shifting a portion of fossil fuel subsidies to the FRLD.
- In addition, high-income countries can lead a push for debt reform and the reallocation of Special Drawing Rights within global conversations on reforming the international financial architecture. They can also call for wealth and windfall taxes as part of ongoing conversations within the G20 and the proposed UN Framework Convention on International Tax Cooperation, and engage with the Global Solidarity Levies Task Force.

Introduction

Vulnerable countries and communities are already facing loss and damage (L&D) such as a loss of homes, lives and livelihoods resulting from slow- and sudden-onset climate disasters. Estimates suggest that L&D finance needs in lower-income countries could amount to USD 400 billion to 1.6 trillion per year by 2030 (in 2024 USD) (Markandya & González-Eguino, 2019). Currently, pledges to the newly created Fund for responding to Loss and Damage (FRLD), however, only amount to USD 745 million as of December 2024 (UNFCCC, 2024), which is a mere 0.04-0.1% of finance needs per year.

Responding to this significant gap, this brief identifies different innovative instruments that could be implemented to generate additional finance for L&D. Many of these

Impact of super typhoon Yagi, Mae
Kok River, Chiang Rai, northern
Thailand © Somnuk Krobkum / Getty



proposals are already being discussed within international forums. Within the UN climate negotiations, they are often flagged as potential instruments that developed countries could implement to generate additional revenue and increase their climate finance contributions. Within the [G20](#), [IMF](#) and [World Bank](#), proposals such as a global wealth tax, debt reform and taxing major polluters have been considered within broader discussions on reforming the international financial architecture to be more equitable and reduce climate vulnerability.

In particular, the [UN Framework Convention on International Tax Cooperation \(UNFCITC\)](#) aims to close gaps in existing tax systems that prevent many countries from collecting much-needed tax revenues, including to address climate impacts. Similarly, the ongoing [Global Solidarity Levies Task Force](#), which brings together countries and international organizations advocating for progressive levies to support climate and development action, also includes several of the instruments we suggest. The task force is currently focused on generating revenues only for adaptation and resilience; however, our work contributes to and builds on these conversations by exploring how these instruments can also generate finance for L&D.

As such, we synthesize existing knowledge and assessments on how suitable these innovative instruments are for raising sufficient L&D finance in a manner that adheres to the equity principles of historical responsibility and the polluters pay principle. The polluters pay principle, for example, can be found in the 1992 Rio Declaration, which stipulates that those most responsible for climate change through greenhouse gas emissions should bear financial responsibility, rather than passing the burden onto society or the environment (UN, 1992). The Rio Declaration also notes that higher-income countries, in particular, bear greater responsibility for action, both financial and otherwise, due to the pressures they place on the environment.

Following this synthesis of innovative instruments, we recommend how high-income countries, who have historically been major polluters, can push for the implementation of these instruments by engaging in various international forums. Overall, we find that despite the enormous need for L&D finance, generating revenue at this scale is not completely implausible, but requires the political will to do so.

Assessing innovative finance instruments from an equity lens

Table 1 synthesizes existing studies on how innovative instruments can be used to respond to L&D. We assess these instruments according to three dimensions:

- 1. The funding potential of each instrument.** We provide an estimated range that reflects a synthesis across several studies, and include details on the estimated amounts that could potentially be raised globally based on the levy used. These are categorized according to high (green; >USD 500 billion per year), medium (blue; USD 100–500 billion per year) and low (red; USD 0–100 billion per year) funding potential.

2. **Whether the instrument would target those most responsible for climate change.** This is answered as yes (green), partially (blue), and no (red). We base this on whether the instrument adheres to the polluters pay principle (i.e. that polluters are held most responsible for the cost of their damage), as well as the principle of historical responsibility (i.e. that countries with historically high carbon emissions should take responsibility for addressing climate impacts). We also provide details on what historically major polluter the instrument would target: states, corporations or individuals. This is, however, an initial assessment of the target based on existing studies; an analysis of who the taxes ultimately fall on, and how progressive or regressive they are, would require country-specific data and analytical modelling.
3. **The level at which funding would be generated** (i.e. globally or nationally). Here, we also reflect on the body that would be responsible for administering the instrument. This has equity implications as these determine how easy the funding is to access. A mechanism accumulating funds at a global level can, in principle, be designed to channel revenues directly into an L&D fund, whereas funds accumulating at a national level would need to be separately pledged by countries for L&D finance.

It is important to note that these instruments have various possible designs and implementation modes, as well as their own individual complexities, challenges with technical and political feasibility that vary across national contexts, and potential interactions with each other, affecting the total amount of revenue generated as well as the spillover economic, social, and political effects. Exploring this, however, is beyond the scope of this brief; here, we merely use an equity lens to review various options that countries could investigate further as a first step toward generating meaningful revenue for L&D. Other studies, such as Schmidt et al. (2023), build on this further to also reflect on technical and political feasibility, as well as drawbacks of each instrument.

Table 1: Assessment of innovative finance instruments. Sources: Climate Action Network (2023), Hirsch (2019), Schmidt et al. (2023), Roberts et al. (2017), Sharma and Hillman (2024), Carlson and Hanks (2023), Ellmers and Steger (2023), Oil Change International (2024), Action Aid (2024)

Instrument	Funding potential	Does it target those most responsible?	At what level would the funding be generated?
Fossil fuel extraction levy / climate damages tax: tax imposed on fossil fuel-producing companies proportional to CO ₂ emissions of each barrel of oil, tonne of coal or cubic metre of natural gas they extract.	Medium: USD 300 billion per year by 2050 if implemented globally (based on starting rate of USD 5/t CO ₂ equivalent (CO ₂ e) that increases annually by USD 5) (Schmidt et al., 2023).	Yes: effectively applies the polluters pay principle by internalizing the external costs of fossil fuel extraction and incentivizing decarbonization, given that only 100 fossil fuel-producing companies are responsible for over 70% of greenhouse gas (GHG) emissions (Hirsch, 2019). Would need to be applied to target profits of companies rather than passing down cost to consumers (Speck, 1999). Target: high-polluting companies	National level in both high-income and lower-income countries extracting fossil fuels (in cases where extraction is privately owned rather than state-owned).
Windfall tax: Tax on the profits of large corporations, including fossil fuel companies.	High: USD 1 trillion per year based on application to profits of 722 mega-corporations in 2021 and 2022 (Action Aid, 2024).	Yes: applies the polluters pay principle by targeting the profits of corporations responsible for most GHG emissions (Action Aid, 2024). Target: high-polluting companies	National level , usually in the country where the company is registered.
Air passenger levy: Surcharge placed on air tickets.	Low: USD 5–10 billion per year if applied to all international air travel (based on fee of USD 5–10 per international flight). Potential to raise USD 150 billion (using levy of USD 20 on economy class and USD 196 on business class tickets (Chancel & Piketty, 2015; Roberts et al., 2017).	Yes: higher rates for frequent fliers or for business class would apply polluters pay principle to high-polluting individuals (Roberts et al., 2017). Lower-income countries with large tourism sectors likely not to be impacted by such a small fee (Carlson & Hanks, 2023). Target: high-polluting individuals	National level in both high-income and lower-income countries that participate voluntarily, applied to all outgoing flights.

Instrument	Funding potential	Does it target those most responsible?	At what level would the funding be generated?
Maritime levy: Volume-based GHG emissions levy on marine fuel collected directly from ship operators.	Low: USD 40–60 billion per year if applied globally (based on levy of USD 100/t CO ₂ e) (Schmidt et al., 2023).	Partially: financial burden would fall disproportionately on countries exporting the most goods by ship and most dependent on sea transport, which includes small islands and lower-income countries, but they could be allowed to keep revenues generated. Would need to be paired with protections to ensure cost not passed on to consumers or workers within the industry (Schmidt et al., 2023). Target: high-polluting countries	Global level if implemented through the <u>International Maritime Organization</u> .
Wealth tax: taxes on the rich, e.g. taxing personal income to capital gains, unrealized capital gains, property tax, inheritance and net wealth.	High: USD 2 trillion per year (based on a progressive tax rate of 1.7% for the richest 0.5%; 2.1% for the richest 0.1%; and 3.5% for the richest 0.05%) (Palanský & Schultz, 2024).	Yes: richest 1% generate more emissions than bottom 50% (Chancel, 2022; Kartha et al., 2020). Would tackle both wealth inequity and ongoing racial, gender and colonial inequalities (Carlson & Hanks, 2023). Progressive taxation could be used. Target: high-polluting individuals	Global level if implemented through international forums e.g. the UNFCCC if implemented voluntarily by high-income or lower-income countries.
Financial transaction tax: small levy on monetary transactions or trades of financial instruments, e.g. bonds, stocks, derivatives and foreign currencies.	Medium: USD 170–436 billion per year if applied to all G20 countries (Schmidt et al., 2023).	Partially: populations with more financial transactions are also those that are better off and likely have higher emissions, but less direct link to polluters (Roberts et al., 2017). Target: high-polluting individuals	National level in high-income countries.
Carbon pricing: explicit price on GHG emissions.	Low: USD 40–50 billion per year if applied globally (based on price of USD 2/t CO ₂ e) (Roberts et al., 2017).	Partially: revenues raised from those most responsible, but some evidence suggests that they can be regressive if designed without measures to avoid passing down costs to consumers (Schmidt et al., 2023). Target: high-polluting companies	National level in high-income countries.
Shifting fossil fuel subsidies: diverting government support for fossil fuel companies to use as L&D revenue.	Low: USD 60 billion per year. While total global fossil fuel subsidies in 2022 equalled USD 1.7 trillion, the majority is to subsidize energy costs for consumers. Only a small fraction (USD 60 billion) goes to fossil fuel producers (OECD & IISD, 2024).	Yes: directly targets most polluting fossil fuel companies (Carlson & Hanks, 2023). Should not be regressive if some of the revenue is used to offset costs for lower-income households. Target: high-polluting companies	National level in high-income and lower-income countries that participate voluntarily.
Debt for climate swaps / debt relief / debt cancellation: debt relief to free up national funds to address L&D.	Medium: USD 142 billion per year (average of 2021–2024 debt payments in the 82 low- and lower-middle-income countries based on the ratio of debt held by G7 governments, G7 private lenders, bonds governed by G7 law and to multilateral institutions) (Oil Change International, 2024).	Partially: majority of creditors demonstrate higher GHG intensity (currently and historically) than borrowers. However, it is not a financial transfer from the polluter countries proportionate to their historical responsibility (Ellmers & Steger, 2023). Target: high-polluting countries	National level in lower-income countries through freed-up fiscal space.
Catastrophe bonds: high-return debt instruments with triggering mechanism that determines whether investors will face partial or complete loss of their principal if a catastrophic event unfolds.	Unclear: current outstanding catastrophe bonds amount to USD 40 billion, with annual issuances reaching USD 10 billion (Schmidt et al., 2023).	No: premiums for insurance pools largely paid by poor nations themselves, and interest would need to be paid if L&D event does not occur during duration of bond. Cost of catastrophe bonds also likely to increase as likelihood of climate events increases (Schmidt et al., 2023). Target: high-polluting countries	National level pay-outs in lower-income countries.
Special Drawing Rights (SDR): international reserve assets created by the IMF. Member countries can draw liquidity as needed.	Medium: USD 500 billion per year (based on <u>Bridgetown proposal</u>) (Action Aid, 2024).	Partially: reallocation would allow poorer nations to benefit from SDRs but isn't leading to additional funding provided by polluters (Ellmers & Steger, 2023). Target: high-polluting countries	Global level through increased SDR allocations from the IMF to lower-income countries.

Insights on operationalizing global innovative instruments

Overall, our review finds that levies implemented by coalitions of willing countries nationally and on a voluntary basis hold the most potential for generating revenue quickly and equitably (Action Aid, 2024; Climate Action Network Europe, 2023; Hirsch, 2019; Schmidt et al., 2023). High-income countries could implement fossil fuel extraction levies, air passenger levies, or a financial transaction tax within their own national borders to increase the amount of public finance available to contribute to the FRLD, while also targeting major polluters. In the medium- to longer-term, high-income countries could also consider implementing a national carbon price, or instigating policies to shift their fossil fuel subsidies, to generate additional revenue.

Wealth taxes, Special Drawing Rights (SDR) reallocation, and debt reform are already being seriously considered within multilateral discussions on international financial architecture reform. While wealth taxes have the most potential for generating the highest amount of finance, and also are aligned with the polluters pay principle, they are likely to be effective at scale only if implemented globally. This is due to concerns related to “leakage”, or the ability of wealthy individuals to evade taxes by shifting assets to so-called tax havens and other jurisdictions with favorable tax treatment. Additionally, wealth taxes at the national level are typically meant to address inequality and provide reparations for lower-income communities within countries. Still, if implemented nationally, a proportion of revenues could be allocated for L&D finance, while the remainder remains within the country. High-income countries could also advance these conversations in different forums, such as in G20, World Bank and IMF meetings, or within the UN Framework Convention on International Tax Cooperation (UNFCITC). Similarly, they could also advocate for SDR reallocation.

When it comes to debt reform, high-income countries could take steps to implement measures such as debt-for-climate swaps – which provide debt relief in return for climate action – or outright debt cancellation to free up money in countries most affected by L&D. As proposed in the Bridgetown Initiative (2024), high-income countries could also pause debt repayments when a developing country faces a climate disaster. Debt reform would not generate *additional* climate finance, but the increased fiscal space would enable indebted countries to more effectively invest in climate action. High-income countries would thus need to pair this with increasing public finance, for example via the instruments suggested above, in order to provide truly additional L&D finance (Essers et al., 2021). While they may constitute a risk management instrument, catastrophe bonds also cannot be considered to generate additional L&D finance, as they place the ultimate financial burden on the countries most affected, rather than on those most responsible.

Another important factor to consider is where the funding would be generated and how it could be distributed to reach the most vulnerable countries and communities suffering from L&D. For instruments implemented nationally by high-income countries, such as an air passenger levy, this would generate additional public revenue that these countries could then use to increase their contributions to the FRLD. There is always a risk, however, that revenues generated through these instruments would be used for other purposes. Instruments implemented at the global level, such as a maritime levy,

could be designed and implemented such that payments flow directly into the FRLD. For instruments generating revenue in lower-income countries, such as a fossil fuel extraction levy, the revenue could provide additional public funds for responding to domestic L&D events.

Countries that are leading the conversations on scaling up international climate finance, and have already pledged L&D finance (see UNFCCC, 2024), can voluntarily implement these innovative instruments at the national level to generate revenue for the FRLD. In addition, they can also exercise their leadership beyond the UN climate negotiations and use various international forums to push for the implementation of these instruments at the global level. This could include:

- Supporting [Brazil's G20 proposal](#) to institute a global wealth tax.
- Supporting lower-income countries' call for funds collected by the global corporate tax to accumulate in countries where the work is carried out rather than countries where the company is registered (McCarthy, 2022). In many cases, doing so would provide finance directly to poorer countries facing L&D.
- Introducing and supporting agreements at the UNFCTC that push for a global wealth tax, a global windfall tax or a global climate damages tax, and provide mechanisms that lessen the risk of tax leakage.
- Calling for additional reforms to the international finance system, such as debt cancellation, reallocation of SDRs, and supporting the implementation of the Bridgetown Initiative.
- Engaging with the Global Solidarity Levies Task Force to push for global levies on aviation, shipping and fossil fuels.

Countries that are parties to the UNFCCC, UNFCTC and the OECD can exert influence on the G20 and G7 to take up these instruments. High-income countries like Scotland and Denmark were first movers in acknowledging the need for L&D finance and in pledging funds at the UNFCCC level. Supporting innovative climate finance instruments that could raise much larger and longer-term L&D finance would show similar leadership.

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Published by

Stockholm Environment Institute
Linnégatan 87D, Box 24218
104 51 Stockholm, Sweden
Tel: +46 8 30 80 44

DOI:

<https://doi.org/10.51414/sei2025.014>

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Acknowledgements

This brief was commissioned by Oxfam. We also acknowledge and are grateful for the feedback and comments from all reviewers of this brief.

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