

How does Loss and Damage feature in Nationally Determined Contributions?

Ben Ryder¹ and Elisa Calliari²

In the run up to COP26 all countries are expected to update their Nationally Determined Contributions (NDCs), the ‘climate plans’ that outline how countries will reduce emissions and adapt to the impacts of climate change. Yet, as the climate crisis intensifies, and the limits of mitigation and adaptation become clearer, societies will be confronted with unavoidable and in some cases irreversible loss and damage. This policy brief shows that an increasing number of countries are including loss and damage considerations and responses in their latest NDCs, and thus sending a strong signal about the need to address loss and damage to fulfil the Paris Agreement’s goals.

Key findings:

- One third of the latest NDCs mention loss and damage explicitly;
- 54% of NDCs mentioning loss and damage have been put forward by Small Island Developing States (SIDS) and Least Developed Countries (LDCs);
- Asia Pacific and Latin America and the Caribbean are the most represented regions across the NDCs that mention loss and damage (38% and 40% respectively);
- The process of updating the NDCs shows that loss and damage is becoming an important issue for an increasing number of countries, including those classified as upper-income;
- The vast majority of NDCs which mention loss and damage refer to physical and economic loss and damage, but the latest submissions point to a growing focus on non-economic losses (NELS);
- Of NDCs that mention loss and damage explicitly, 52% discuss specific loss and damage-related responses and initiatives;
- We see low, but increasing, levels of details and specificity about national loss and damage initiatives, including those focused on knowledge generation, policy programmes and institutional arrangements.

Introduction

Nationally Determined Contributions (NDCs) are at the heart of the Paris Agreement and outline countries’ national efforts towards reducing emissions and adapting to the impact of climate change. They are submitted every five years to the

UNFCCC secretariat, and each successive NDC is meant to signal a scaling up of effort and is intended to be as ambitious as possible. While NDCs are usually regarded as ‘technical documents’, they also play a political role in

signalling issues or topics that are particularly important for a country. Previous research has shown that NDCs tend to reflect similar interests to those that inform states' negotiating positions at the COPs (Leinaweaver and Thomson 2021). As such, analysing NDCs can provide useful insights about the way countries frame certain issues, which topics they think should be priorities, and which topics are downplayed or overlooked.

This policy brief analyses the content of the latest NDCs to map how countries have referred to loss and damage (Box 1) in these documents. As the Paris Agreement and its Rulebook do not mention 'loss and damage' among the information Parties are expected to include in their NDCs, the mapping reveals how some countries are using their NDC to draw attention to loss and damage and in what ways. In particular, the analysis sheds light on:

- The salience that loss and damage is gaining across different countries;
- The different meanings and understandings of loss and damage at the national level;
- Ongoing or planned national initiatives and responses to deal with loss and damage;
- Countries' requests for international cooperation and support in dealing with loss and damage.

Research approach

A content analysis was performed on the latest 164 available NDCs recorded in the interim NDCs registry as of 15 September 2021. The 164 NDCs include 86 updated or second NDCs. To trace the evolution of L&D consideration over time, their previous – and now archived – versions were also analysed. The database thus comprised a total of 250 documents, including archived first NDCs, updated first NDCs and second NDCs.

The researchers searched for the expression 'loss and damage' – and its equivalent in Spanish and French – in all NDCs (English translations were available in the interim NDC registry for NDCs submitted in other UN official languages - i.e., Russian, Chinese, and Arabic). When a document explicitly mentioned 'loss and damage' the team further identified if this was done separately from adaptation (i.e., through a dedicated section of the NDC); if the country referred to a specific category of loss and damage (e.g., economic, non-economic) and/or sector (e.g., agriculture,

Loss and damage in the UNFCCC

Climate change loss and damage has emerged as a key area of climate policy over the last decade. The concept refers to the adverse impacts of climate change resulting from slow onset (e.g., sea level rise) and extreme weather events (e.g., cyclones) and affecting both human and natural systems. As the climate crisis intensifies, impacts might exceed the capacity of human and natural systems to adapt, and thus lead to unavoidable and in some cases irreversible outcomes. These outcomes can be monetizable (e.g., loss of income and physical assets) or include non-economic losses (NELs - such as loss of biodiversity, territory, cultural heritage, and those related to the emerging issue of climate-induced human mobility).

The main vehicle to deal with loss and damage under the UNFCCC is the Warsaw International Mechanism (WIM), established in 2013 to advance knowledge generation, coordination and support to address loss and damage. At COP 25 Parties established the Santiago Network to catalyse technical assistance on loss and damage for the implementation of relevant approaches at the local, national, and regional level (UNFCCC 2020).

infrastructure); and if the NDC mentioned any loss and damage-related initiatives. Building on Chamling Ray and Archarya (2020), any loss and damage initiatives identified were further categorised into: i) Knowledge generation; ii) National-level institutional setup; iii) Adaptation measures; iv) National-level loss and damage financing and risk transfer mechanisms; and vi) International-level loss and damage finance.

Results

32% of the latest NDCs mention loss and damage, despite not being amongst the information that the Paris Agreement and its Rulebook call for countries to include.

More than **one third of NDCs** (52 out of 164) included at least one reference to loss and damage. References appear in 50% of the NDCs put forward by SIDS, 17% of those by LDCs, and 31% by other developing countries. While the inclusion of loss and damage in SIDS' NDCs is not surprising considering the role that these countries have traditionally played in driving the loss and

damage agenda, these figures show that loss and damage is becoming an increasing concern for a wider group of vulnerable countries.

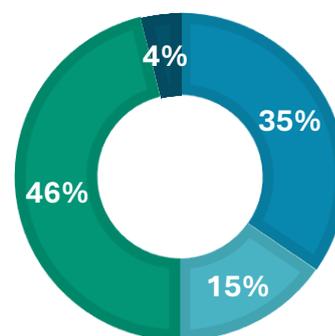
54% of NDCs mentioning loss and damage have been put forward by SIDS and LDCs.

SIDS are responsible for 35% of mentions of loss and damage, whereas LDCs are responsible for 15%, and the countries that share both SIDS and LDC status for 4% (Figure 1a). In terms of geographical distribution (Figure 1b), **the Asia-Pacific and the LAC regions are the most represented** (38% and 40% respectively) among the NDCs mentioning loss and damage. Several South American countries are now explicitly mentioning, even if in passing, ‘loss and damage’ in their NDCs. These include upper middle-income countries like Peru and Paraguay, and high-income countries like Chile and Uruguay.

For instance, Paraguay ‘recognizes the need to promote its participation in the discussions and negotiations of [the Warsaw International Mechanism] in order to carry out actions that address and minimize losses and damages related to the adverse effects of climate change, including extreme meteorological phenomena and slow onset, causing forced displacement and migration’, while Uruguay includes the ‘design and implementation of an economic assessment mechanism for loss and damage due to climate events’ among the capacity building and knowledge creation measures to be implemented to fulfil the objectives of their NDC.

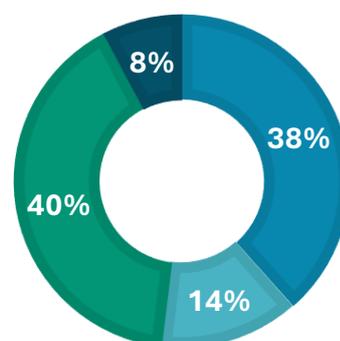
NDCS MENTIONING L&D BY PARTY GROUP (1a)

■ SIDS ■ LDC ■ Other Developing Countries ■ SIDS/LDC

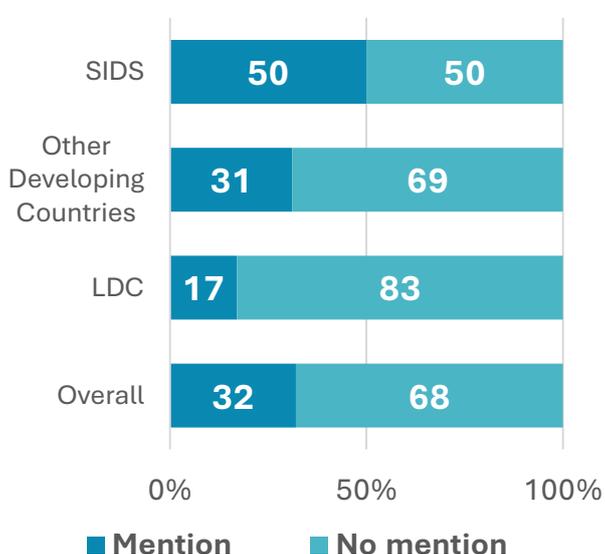


NDCS MENTIONING L&D BY REGIONAL GROUP (1b)

■ Asia-Pacific ■ Africa ■ LAC ■ Eastern Europe



PERCENTAGE OF NDCS THAT MENTION L&D



The expression ‘loss and damage’ is also used in the NDCs of some members of the Eastern European Group. The figure for Africa, in comparison, is remarkably low (14% of NDCs mentioning loss and damage) considering the continent’s high vulnerability to the impacts of climate change.

The NDC update process shows that loss and damage is becoming an important issue for an increasing number of developing countries (including those classified as upper-income).

Updated or second NDCs mention loss and damage more (+15.6%) than those drafted in the first NDC round. While some countries dropped references to loss and damage in their updated document (Colombia, Cuba, Fiji, Gambia, Malawi, Mozambique, Suriname, Zambia), others that did not mention loss and damage in their first NDCs decided to do so in their update (n=16). This includes Armenia, Belize, Cabo Verde, Chile, Georgia, Grenada, Indonesia, Maldives, Moldova,

Mongolia, North Macedonia, Panama, Paraguay, Peru, Papua New Guinea, Seychelles. 6 of them are SIDS and 10 are other developing parties mainly classified by the World Bank as upper middle-income (n=6) and high-income countries (n=1).

For instance, Peru notes in its NDC how the regulation of the national Climate Change Framework Law defines adaptation actions ‘consisting of actions, practices, technologies and necessary services aimed at reducing or avoiding (...) loss and damage’. Armenia pledges to develop a national adaptation plan ‘to promote reduction and management of climate risks by (...) avoiding losses and damages, and Georgia ‘to facilitate the measures supporting the reduction of losses and damages caused by extreme weather events’.

The vast majority of NDCs refer to physical and economic loss and damage, but the latest submissions show an increasing attention to NELs.

Most NDCs mentioning loss and damage highlight experiences of economic and physical losses and refer to sectors like agriculture, fishery, tourism, infrastructure, human settlements, and energy systems. When non-economic losses are mentioned, this is done with reference to health impacts and loss of life due to extreme events. For instance, the Dominican Republic laments how the ‘impacts of some extreme events have meant economic losses in the order of USD 9,470 million, and the most affected sectors have been: agriculture, transportation, energy, housing, education, industry and trade, sanitation, drainage, health and environment’.

Yet, the updated NDCs show an increasing recognition of NELs, not just by mentioning impacts that could be subsumed under this category, but also by employing the very expression ‘non-economic losses’ as used in the context of the Warsaw International Mechanism. Vietnam’s updated NDC recognises that the country ‘is also at a high risk of non-economic losses, which include negative impacts on people’s health as well as other consequences due to the relocation of many communities and economic zones’ and highlights that they could be ‘higher than economic losses’. Similarly, Antigua and Barbuda’s NDC states that ‘non-economic losses associated with the adverse effects of

climate change present real and devastating consequences for our population, livelihoods, way of life, health, human mobility and disaster displacement.’

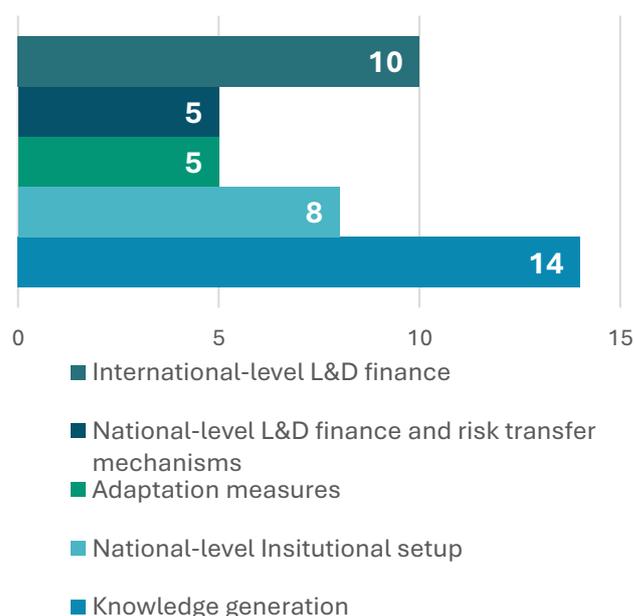
23% of NDCs mentioning loss and damage have a stand-alone section on the topic.

In the large majority of cases (9), the loss and damage section is distinct from that on adaptation (El Salvador, Nauru, Antigua and Barbuda, Barbados, Myanmar, Panama, Saint Lucia, Sri Lanka, Vietnam) while in 3 cases (Ivory Coast, Cabo Verde, Vanuatu) it is comprised with in it. This feature is more pronounced in the updated NDCs that mention loss and damage (25.5%). In the first round of NDCs this figure was only 15.5%, indicating a shift in the way that loss and damage is represented in NDCs. The stand-alone loss and damage sections are either employed to highlight the significance of loss and damage for the country (El Salvador, Nauru, Barbados, Saint Lucia, Vietnam), including through sectoral assessments (Myanmar), or to outline loss and damage responses and targets at the national level (Antigua and Barbuda, Panama, Sri Lanka).

Of NDCs that mention loss and damage explicitly, 52% discuss specific loss and damage-related responses.

While some countries only discuss the relevance of loss and damage for their national

CATEGORIES OF LOSS AND DAMAGE RESPONSES IN NDCs



Loss and damage in Sri Lanka's updated NDC

Sri Lanka's NDC provides a useful example of the level of consideration and planning that some countries are currently giving to loss and damage. Sri Lanka's NDC is organized around key sectors '*detailing Sri Lanka's climate change mitigation commitments and adaptation needs, loss and damage, and means of implementation*'. The dedicated section on loss and damage describes the significant threat climate-related hazards pose to the country and outlines the approach adopted for managing loss and damage, based on climate and disaster risk management. It further defines 5 nationally determined contributions on loss and damage, each assigned a specific time frame:

- NDC 1 (2021-2023): Conduct a gap analysis to assess the current status and understanding of L&D;
- NDC 2 (2021-2025): Strengthen the existing weather and climate forecasting system;
- NDC 3 (2021-2025): Improve data management systems to record losses and damages per sector;
- NDC 4 (2021 -2030): Establish an overarching, nationally appropriate, functional institutional mechanism for L&D in line with the 'Warsaw International Mechanism for Loss and Damage' (based on the Gap analysis – NDC 1);
- NDC 5 (2021-2030): Develop a Comprehensive Risk Management Framework founded on the provisions of the 2005 Disaster Management Act but expanded to include the entire spectrum of climate-related extreme events, slow-onset disasters and natural processes attributed to climate change and anticipated future losses and damage.

circumstances, a significant proportion of them go one step further in elaborating specific responses to deal with loss and damage.

33% of responses refer to initiatives aimed at data gathering, analysis and assessment of loss and damage (here 'Knowledge generation'). For instance, Costa Rica's NDCs pledges to promote '*by 2030, scientific research, systematic data collection, and current and prospective analysis of information on risks, impacts, losses and damages from hydrometeorological hazards*'. As part of the adaptation component of its NDC, Chile aims to perform '*by 2021, an estimation of the costs of inaction on climate change, and by 2025 an estimation of costs associated with historic losses and damage as part of this*'.

The second most cited set of responses that countries include in their NDCs refer to institutional setup, which includes initiatives to expand the mandate of current institutions or to establish new ones to deal with loss and damage. For instance, Nepal seeks to devise '*a national strategy and action plan on Loss and Damage (L&D) associated with climate change impacts*' by 2025. Sri Lanka goes further in pledging the establishment of '*an overarching, nationally appropriate, functional institutional mechanism for L&D in line with the 'Warsaw International Mechanism for Loss and Damage' (...) [that] will have the mandate to coordinate with multiple*

sector entities, in addition to monitoring functions, (...) financial and budgetary authority'.

12% of responses identify a diverse set of adaptation measures as key for managing loss and damage, including '*measures across but not limited to, the sectors of agriculture, forestry, coastal and marine ecosystems and biodiversity, health, and human security*' (The Philippines), ecosystem-based adaptation (Antigua and Barbuda), and improving the resilience to heat stress in factories by improving working conditions (Myanmar). A final set of responses at the national level refer to **loss and damage financing systems** (e.g., the institutionalisation of the National Prevention, Mitigation and Response Fund in the Dominican Republic's NDC) **and risk transfer mechanisms**. For instance, Antigua and Barbuda set the conditional target of giving farmers, fishers, residential and business owners access to '*comprehensive and tailored national programmes that allow them to affordably manage and transfer risks resulting from increasing climate variability*'. Honduras' NDC instead propose the establishment of a '*gender-responsive agricultural insurance mechanism for loss and damage*' targeting in particular women and young people.

24% of targets refer to the need for international financial support for dealing with loss and damage at the national level. For instance, Barbados calls for '*international financing for loss and damage, given the existing*

financing gap for adaptation, including through green and thematic bonds markets'. Saint Lucia's NDC notes that 'addressing the increased risk of significant levels of loss and damage due to climate change requires international support to implement a range of comprehensive risk management strategies' and further stresses that 'existing and potential risk transfer mechanisms to address loss and damage, such as continued membership in the Caribbean Catastrophe Risk Insurance Facility, may lead to a rise in costs beyond the capacity of the national budget' that require 'international support to meet the rising costs of addressing loss and damage'. Calls for international financial support on loss and damage are also put forward in the NDCs by Nauru, Venezuela, Cabo Verde, Dominican Republic, Myanmar, Dominica, Yemen, and Vanuatu.

Conclusions

Countries are increasingly employing their NDCs to signal the importance of loss and damage in their national context and to put forward specific loss and damage responses. This suggests that vulnerable countries are recognising loss and damage as an integral component of climate action, together with mitigation and adaptation. The finding is particularly significant as the Paris Agreement's Rulebook does not require countries to include loss and damage-related information in their NDCs, so any reference to the issue is completely voluntary.

Loss and damage is becoming relevant for a wider set of countries beyond traditional actors like the SIDS. Countries mentioning loss and damage in the NDCs include a wider set of developing countries and even countries that are classified as upper income. Most of them are located in Latin America and the Caribbean and in the Asia-Pacific region. Surprisingly, African countries – who have been vocal in negotiations on loss and damage given their vulnerability to climate change impacts – tend to include the topic in their NDCs to a lesser degree. Future research should look at the ways in which African countries' NDCs are formulated (e.g., which Departments or Ministries are responsible for drafting the documents, what technical support have they received by external consultants or donors, etc.) to better understand why this is the case.

International support, and finance in particular, will remain key to supporting countries in meeting their targets on loss and damage. Many of those countries that identify loss and damage-related responses highlight the need of international support to implement them, especially in the form of finance to meet the rising costs of loss and damage measures.

The extent to which NDCs reflect national interests or negotiating positions should be further explored to consider the role external actors (e.g., international organisations or consultants) might play in influencing their preparation. Several vulnerable developing countries have resorted to external technical or financial assistance to support the development of their NDCs. More research is needed to understand the role that these actors might play in shaping the ultimate content of NDCs. This could shed light on the extent to which NDCs can be seen to purely reflect national political priorities, or instead be the result of interactions between a potentially more diverse set of stakeholders.

References

- Leinaweaver, J., & Thomson, R. (2021). The elusive governance of climate change: nationally determined contributions as commitments and negotiating positions. *Global Environmental Politics*, 21(2), 73-98.
- Chamling Rai, S., & Acharya, S. (2020). [Anchoring loss & damage in enhanced NDCs](#), World Wide Fund For Nature (WWF) and Practical Action.
- UNFCCC. (2020). [Decision 2/CMA.2 Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts and its 2019 review](#)



European Research Council
 Established by the European Commission

This work was supported by the European Research Council project CCLAD (The Politics of Climate Change Loss and Damage) [Grant agreement No. 755753 — CCLAD — ERC-2017-STG]