

HOW TO QUANTIFY AND MEASURE LOSS AND DAMAGE ASSOCIATED WITH DISPLACEMENT?

Loss and Damage and the Challenges of Human Mobility and Displacement Working Group

Advisory Group on Climate Change and Human Mobility

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ACKNOWLEDGMENTS

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Written by members of the "Advisory Group on Climate Change and Human Mobility" and the "Loss and Damage and Challenges of Human Mobility and Displacement Working Group".

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This document is the outcome of discussion convened jointly by the ***Loss And Damage and The Challenges of Human Mobility and Displacement Working Group*** and the ***Advisory Group on Climate Change and Human Mobility*** which was followed by a consultative process that built on the inputs of the panellists. Inputs come from group of experts from civil society organisations, research institutions and international organisations.

Speakers on the technical panel included:

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- Jasper Linke IMPACT Initiatives; and;
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The **Loss And Damage and The Challenges of Human Mobility and Displacement Working Group** is convened by the Loss and Damage Collaboration (L&DC) and the Platform on Disaster Displacement (PDD). The Working Group looks at Displacement and Human Mobility in the context of Loss and Damage workstreams under the UNFCCC, including the Loss and Damage Fund, Santiago Network on Loss and Damage, the Warsaw International Mechanism (WIM) for Loss and Damage and the expert groups of the WIM Executive Committee (ExCom).

Recent outputs:
Key messages on Displacement and Loss and Damage

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The Advisory Group on Climate Change and Human Mobility is a multi-stakeholder and diverse group of experts created in 2011 to provide technical support to Parties of the UNFCCC and enhance understanding and action on human mobility in the context of climate change —including displacement, migration and planned relocation— based on the latest knowledge and good practices.

Recent outputs:
Key messages for COP26

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INTRODUCTION

This document is the outcome of discussion convened jointly by the Loss And Damage and The Challenges of Human Mobility and Displacement Working Group and the Advisory Group on Climate Change and Human Mobility that considered "How to Quantify and Measure Loss and Damage Associated with Displacement?". The session covered policy-relevant topics on quantifying and measuring loss and damage associated with displacement with the objective of fostering thematic understanding and elaborate technical contributions to relevant discussions under the United Nations Framework Convention on Climate Change (UNFCCC) including but not limited to, the Loss and Damage Fund, Santiago Network for Loss and Damage and the Warsaw International Mechanism for Loss and Damage. The full recording of the discussion and the slides used during the call can be found in the Annex.

II

KEY MESSAGES FROM THE DISCUSSION

Structured around the five guiding questions used to frame the discussion, the responses shared by the speakers on the technical panel, and those later shared as textual contributions, have been collated as key messages in sections A-E.

A

METHODOLOGICAL ISSUES WITH THE QUANTIFICATION OF ECONOMIC AND NON-ECONOMIC LOSS AND DAMAGE ASSOCIATED WITH DISPLACEMENT

- Attribution is a triple problem as far as loss and damage associated with displacement is concerned. Firstly, while attribution science is making advances, it is not always possible to attribute specific events to climate change. Secondly, the causal chains leading from such events to displacement are often complex, and always feature the interaction of diverse socio-economic and environmental factors which ultimately result in risk, and human mobility and immobility. Lastly, it is not always possible to determine to what extent losses of assets, welfare, or access to services that are experienced following climate impacts specifically result from displacement.

- Displacement-related data is often only available in crisis or emergency situations and it is usually intended to support short-term humanitarian response. Lack of information on pre-displacement situations makes it hard to identify pre-impact baselines. Without these baselines, in turn, it is difficult to assess what loss and damage is incurred by affected persons, and in particular what loss and damage is incurred due to displacement.

- Disaster displacement continues to be underreported and overlooked in humanitarian data collection. This is particularly the case in the context of slow-onset environmental processes, including those that are associated with climate change. Such processes often trigger displacement that is perceived to be less the result of life-saving decisions and more the outcome of livelihood sustainability or long-term well-being considerations, and is therefore granted limited consideration by relevant actors and systems.

- Understanding the full impacts of displacement also requires tracking long-term loss and damage. Some of the relevant impacts are felt across generations, for instance by children who

grow up in displacement-induced conditions of deprivation — this is the case, for instance, of reduced access to education, deteriorating health, insufficient nutrition or exposure to physical and mental abuse. Tracking of impacts over time is also needed in the case of repeated, shorter-term displacements.

- Repeated sampling of individuals over time is challenging due to their mobility, in particular if impacted communities are mobile before a specific climate impact, such as in the case of pastoralists or seasonal migrants.

- Displacement is an all-encompassing experience that impacts a diversity of overlapping and intertwined economic and non-economic dimensions of people's well-being. These dimensions are not easy to disentangle and not all these impacts can be easily measured in displacement situations.

- In particular, quantifying non-economic loss and damage (NELD) related to displacement requires addressing a key methodological issue: population movements imply the need for multi-sited assessments, targeting different groups of people forced to move, staying behind or in host locations. NELD, however, are very context-specific — because what people value is specific to societies, communities and even individuals and profoundly affected by their ties to their territory and community. These NELD assessments run the risk of falling short in capturing the full, evolving complexity of values that all persons affected by climate hazards and displacement in different social groups and in different locations attribute to different assets.

- On the one hand, NELD related with displacement need to be assessed through tools that can provide data on loss and damage indicators in context-specific manners, in order to support localised, effective responses. On the other, it is important that relevant methodologies can be used to inform analyses, comparison and prioritisation across different contexts. Striking this balance will require integrating data from different sources, including quantitative surveys, qualitative analyses, and remote sensing from satellite imagery.

- Methodological considerations also need to be informed by the aim of the data collection. Quantification of incurred loss and damage may be a precondition to claiming and obtaining compensations, but understanding of outstanding needs of people on the move is largely sufficient to target and deliver assistance to populations affected by displacement. Other types of assessments (e.g. on experiences and perceptions) will instead support different types of assistance (e.g. more focused on development/resilience).

B

INITIATIVES TO QUANTIFY AND MEASURE ECONOMIC AND NON-ECONOMIC LOSSES AND DAMAGES ASSOCIATED WITH DISPLACEMENT

- There is a wealth of displacement data initiatives, primarily linked with operations for humanitarian response and durable solutions, as well as research. Fully leveraging this wealth of data will be important to inform the debates and decision-making on loss and damage.

- ***Internal Displacement Monitoring Centre (IDMC), measuring the socio-economic impacts of internal displacement:*** IDMC works to quantify and measure the financial costs and losses linked with internal displacement impacts on internally displaced persons (IDPs), host communities and societies, focusing on livelihoods, housing conditions, health, education and security. This data is compiled through a dedicated survey that has been used to date in 15 countries. IDMC is planning to update the methodology to adapt it in order to support affected governments in assessing their losses and damages associated with displacement, including NELD by identifying barriers to access to quality education, mental health and physical health and feelings of security.

- ***IDMC's Global Estimates:*** Is comprised of secondary data, compiling information from national and international data providers, to provide a picture of displacement associated with disasters at the global level —including both the number of movements and total number of people remaining in conditions of displacement. The data is disaggregated by type of disaster — including some information on slow-onset events and processes.

- ***IDMC's assessment of potential, future displacement:*** In 2017, IDMC developed a displacement risk model and will release an update in 2024. This new iteration of the risk model integrates the effects of different climate change scenarios on the scale of disaster-related displacement.

- ***IMPACT/REACH Multi-Sectoral Needs Assessments (MSNAs):*** MSNAs are conducted on a yearly basis to survey the needs of both displaced and non-displaced people in crisis-affected countries to inform humanitarian planning and prioritization of interventions. They produce statistically representative data at sub-national level, covering a broad set of dimensions including access to education and health care, protection, shelter, and hazard exposure. They also allow for disaggregation of needs/impacts and vulnerability data according to exposure to specific types of hazards, displacement status and primary and secondary reasons for displacement — including different types of disasters, conflict and economic drivers.

- ***IMPACT/REACH Area Based Assessments (ABAs):*** ABAs are used to inform durable solutions, development and adaptation plans by providing an in-depth, holistic look at communities' needs and existing service capacities to cover these needs. ABAs provide analysis of local institutions, stakeholders, infrastructure and assets, and how they interrelate at a local level. They also explore localised impacts of hazards and environmental risks on the area and seek to find context-specific solutions with strong engagement with local actors and the community.

- ***The International Organization for Migration's (IOM) Displacement Tracking Matrix (DTM):*** DTM is a modular tool deployed in over 30 countries with displacement contexts that provides data on human mobility and different associated factors, at the different levels of granularity obtained through key informant based assessments and household surveys. DTM allows gathering of information on displaced persons, their movement, needs, conditions and intentions in an iterative manner. It is deployed within humanitarian, transition and recovery operations to inform relevant work by IOM and other actors.

- ***IOM's and Georgetown's PROGRESS report:*** Through a diversity of quantitative and qualitative methods, including key informant interviews, assessments, household surveys, focus group discussions and building on existing data sources (e.g. MSNAs, DTM household surveys and key informant assessments) The International Organization for Migration (IOM) and Georgetown University have analysed "the state of durable solutions". The various methodologies adopted have allowed the exploration of experiences of displacement in addition to giving a picture of the scale of the phenomenon in selected countries. Based on the identified information

gaps, particularly on displacement triggers, histories and intentions, IOM will be adjusting data collection across different countries through its DTM to improve predictability and interoperability of data on the impact of displacement, including NELD. This will help expand the evidence base and advocate for sustainable and long-term development funding to address needs and conditions of vulnerability of displacement-affected communities.

- ***Displacement monitoring and forecast-based financing:*** In some contexts, where forecast-based financing schemes are active, displacement can be the trigger to specific disbursements or assistance for example in Mongolia or the Philippines. This requires either an ongoing monitoring of displacement flows to detect climate-related changes in occurrence, or risk assessments to anticipate potential movements linked with disasters.

- ***Value-Based Assessments:*** Fine-grained value-based assessments can be useful to explore loss and damage incurred by climate-affected communities. While a values-based assessment accounts for economic and non-economic loss and damage, it especially helps gaining information on the latter. However, they are difficult to adapt across contexts and difficult to translate into financial asks for project development and implementation.

- ***Technical guide on averting, minimizing and addressing non-economic losses in the context of human mobility:*** the Executive Committee of the Warsaw International Mechanism for Loss and Damage (WIM ExCom) is working on the nexus between non-economic losses and human mobility. As part of their respective Plans of Action, the members of the Task Force on Displacement (representatives from the IOM, the United Nations High Commissioner for Refugees (UNHCR) and the International Labour Organisation (ILO) and the Expert Group on Non-economic losses (representatives from the Hugo Observatory for the Environment, Migration and Politics at the University of Liège and the Organization of Eastern Caribbean States) are co-leading the development of a technical guide on averting, minimizing and addressing non-economic losses in the context of human mobility.

- ***Displacement-related metrics and indicators for Disaster Risk Reduction.*** IOM and IDMC are working in partnership with governmental and non-governmental counterparts to develop a tested set of standard displacement-related metrics and indicators that are intended to contribute to monitoring progress against the targets of the Sendai Framework for Disaster Risk Reduction (SFDRR). The monitoring system for the SFDRR currently covers a diversity of variables that are useful to quantify loss and damage, including impacts on cultural heritage and assets, but no dedicated metric on displacement. In partnership with Disaster Management authorities in Indonesia, Bangladesh, Mozambique, and the Philippines, IOM offices have piloted the proposed metrics, and are compiling evidence and lessons learned to support global implementation.

Other methodologies that promise to be particularly effective for the analysis of loss and damage related to displacement include:

- ***Remote Sensing:*** Satellite imagery could be used to better analyse environmental and meteorological factors and correlate them statistically with data from humanitarian surveys, population mobility data and information on available infrastructure and services. This kind of analysis can help better understand environmental impacts on assets, services and communities and generate loss and damage analysis. This data could also be useful to contextualise the perception of environmental impacts by affected people.

- ***Longitudinal analysis:*** time series can be developed with data on key well-being and vulnerability variables from the same respondents before and after they suffer climate impacts and displacement. Ideally, such longitudinal surveys should cover both displaced and non-displaced people and communities, and should be already conducted before displacement in high-risk areas. This would allow for the collection of data both before and after the displacement, capturing information on the tipping points of people's movement in the context of incurred loss and damage, as well as the evolution of the living conditions of displaced persons and other people affected. These kinds of approaches, while costly, should help understand the specific impacts that displacement drives for affected communities. Notably, some experiences have been gathered with this methodology already in non-climate-change contexts, for example, in relation to Ukrainian refugees in Europe, and access to durable solutions among internally displaced people in Iraq. If stretched for a long enough period, these analyses would also allow for the tracking of long-term loss and damage.

C

KEY DIMENSIONS THAT NEED TO BE ASSESSED WHEN CONSIDERING ECONOMIC AND NON-ECONOMIC LOSS AND DAMAGE ASSOCIATED WITH DISPLACEMENT

- Loss and damage assessments should be multifaceted and comprehensive, integrating both economic and non-economic dimensions. Economic and non-economic loss and damage are always interrelated: economic assets lost during displacement can also have non-economic values (e.g. one's home, land, and livestock), which cannot be fully compensated by exclusively restoring the economic asset.

- Loss and damage adversely impact the enjoyment of a wide range of human rights including but not limited to the rights to life, food, water and sanitation, housing, and the right to a clean, healthy and sustainable environment, with disproportionate impacts on groups in vulnerable situations.

- Many forms of loss and damage also have cascading impacts: loss of income due to displacement, for instance, might result in mental stress, violence, or inability to afford healthcare or education.

- Because of how interrelated the different dimensions of Loss and Damage are, addressing NELD can require addressing economic loss and damage first. In other cases, it means ensuring that economic resources are made available to create conditions where non-economic assets can be restored post-displacement).

- Data needs to inform comprehensive responses across different dimensions —in a way that is aligned with the Durable Solutions criteria and objectives.

- Some dimensions that have proven to be particularly important to understanding NELD in displacement settings include:
    - Access to shelter;
    - Protection (e.g. to reduce specific exposure to gender-based violence incidents and address specific needs for protection services);
    - Access to healthcare, for both physical and mental needs, and sufficient nutrition;
    - Access to safe water and sanitation services;
    - Access to education, which is often found to be lower for displaced people, albeit with the caveat that the situation tends to improve the longer people remain displaced;
    - Sense of place, identity, and cultural assets (difficult to capture quantitatively and not usually assessed in humanitarian data collection);
    - Family integrity and social ties within communities as an indication of resilience to environmental and climate change, and a precondition to achieving solutions to displacement;
    - Economic security, including employment, skill and education level, sources of livelihood, all of which are not systematically covered by typical data collection efforts.
- However, predetermined categories of loss and damage, especially NELD, cannot be exhaustive and need to be complemented by a bottom-up definition of values. Co-creation allows for the localisation of assessments and some degree of empowerment for affected persons, as well as ownership by local authorities. It is also a way to understand economic and non-economic elements holistically.
- Data on needs and risks also need to be adapted to the specific human mobility context: who people are, where they come from, where they go and in what circumstances their movement takes place matter in terms of defining what support they will need —and therefore for supporting prevention, preparedness, response and durable solution work.
- Moreover, relevant data efforts need to capture all implications of displacement including its impacts on IDPs and its effects on host communities, the people left behind and the broader systems and/or societies (e.g. through consequences on labour and/or rental markets, and the availability of goods and services). These broader impacts on societies and economies are particularly pronounced in the case of protracted or repeated displacement.
- Assessing these systemic impacts is particularly important considering that an estimated 60% of those displaced globally reside with host communities. If these impacts of displacement are not addressed they can lead to impoverishment, lack of social cohesion and further displacement when host families stop hosting displaced persons in their homes to cope with lack of resources.
- Information on pre-displacement conditions is also important to understand how a displaced persons' situation has changed as a result of climate impacts and displacement.

D

KNOWLEDGE GAPS AND POSSIBLE WAYS FORWARD

- The **local baselines of people's well-being and access to services**, including administrative data on population demographics and mobility, are missing in many countries and in particular in fragile settings where census data is often insufficient to identify pre-impact and pre-displacement baselines. This makes it difficult to understand loss and damage and displacement. Strengthening national data systems is the foundation for more specific analyses.

- **Slow onset processes** are still underreported as a reason for displacement. Humanitarian surveys tend to only include immediate triggers such as conflict and sudden-onset hazards, whereas slow-onset processes tend to have economic consequences that are felt incrementally in a more diluted manner. The lack of agreed indicators for monitoring changes over time is another key challenge for such analyses. Assessment tools should evolve to capture all reasons for displacement, including indirect reasons, or be complemented by other surveys in which the links between a movement's trigger and its environmental context are explored. Remote sensing in areas of origin could also be useful to contextualise these immediate triggering factors. Moreover, these analyses could also help explore the environmental component of "conflict" displacement in complex crisis situations.

- Understanding how individual and/or household-level **mobility decisions are made** in the face of climate factors is difficult. Other factors, including for instance social ties or networks, influence people's decision to move and are difficult to disentangle from climate impacts.

- Understanding displacement and loss and damage experienced by **communities that are already mobile** —such as pastoralists and communities engaging in seasonal migration— is particularly difficult. For these groups, displacement can be experienced more as a disruption in regular, for example, seasonal, patterns of movement rather than a clearly forced flight. Their displacement can therefore only be identified through longer-term monitoring of migration systems and their change.

- Information on patterns of displacement —including on its **duration** and whether **people are displaced multiple times**— is largely missing. This is a key data gap to follow the evolution of the impacts people suffer: displacement experiences, as well as people's needs and access to different services change over time. Data on these patterns would also help understand progress towards the achievement of durable solutions. This requires a more systematic approach to gathering data in an iterative, standardised manner.

- Information on **displaced persons residing outside camps** is particularly hard to gather in a systematic manner because of a lack of accurate population data and is generally a blind spot of humanitarian assessments. This requires improving estimates of the locations of displaced populations, investing more resources for sampling those populations and resorting to area-based assessments rather than data collection operations only focusing on sites directly managed by humanitarian actors.

- The information needed to estimate the **costs displacement produces on the broader societal and economic system** is not available in all countries.

- Information on the **intangible dimensions of displacement** —such as the loss of the sense of belonging, place, or identity— that people are experiencing is largely missing from current assessments, despite being an essential component of the impacts people suffer when they are forced to move.

- Our understanding of **hazard exposure and vulnerability to disasters** and climate impacts of displaced persons is limited due to the general lack of risk assessments that target displaced persons and the areas in which they concentrate. This is an important dynamic in determining potential loss and damage which movement —and time spent in displacement— can influence in different manners.

- Understanding what factors act as **risk multipliers** for and during displacement and creating a hierarchy of loss and damage could be useful. Understanding what specific factors lead to displacement and what impacts of displacement impacts create more loss and damage down the line could allow for the identification of key issues that need to be prevented and addressed in priority.

- Identifying knowledge gaps should also be the outcome of collaborative efforts in each country, and must include institutions focusing on research and development. Interventions to address these gaps need to be sustainable so that they can cover long-term data collection and analysis work needed to assess loss and damage and displacement.

E

OPTIONS TO MAKE RELEVANT DATA COLLECTION AND ANALYSIS EFFORTS MORE COMPREHENSIVE, SYSTEMATIC AND COMPARABLE ACROSS COUNTRIES

- Even within the same region, there is a very limited number of indicators on loss and damage and displacement that can actually be compared.

- Some comparability across countries will be needed to prioritize, designed and delivered loss and damage assistance. However, displacement, migration or planned relocations —while potentially similar across countries— will have different meanings and implications depending on the context in which they take place. Different levels of income or human security will affect the level of options people have and the level of assistance they receive while on the move, and thereby the impacts they suffer throughout their movement.

- Assessment of NELD should be better integrated in these data collection methods and coverage should be increased, as currently only specific aspects are considered for example, access to health. Complementing quantitative and qualitative data could help provide a more nuanced picture of displacement and related loss and damage.

- The most feasible path towards standardisation and collection of comparable data might be the alignment of data efforts by humanitarian partners such as IOM's DTM and IMPACT/REACH's MSNAs to develop products that are compatible and coherent with international standards and frameworks. This will require:

    a. Harmonizing indicators;

    b. Aligning recall periods to survey displaced persons over time; and;

    c. Using different tools from the same organisation in a more coordinated manner (e.g. integrating remote sensing and surveys).

- Improving humanitarian data practices could, among others things, allow for:

    a. The production of better data on the stock of displaced persons, including disaggregation by different groups, and on their needs;

    b. The improvement of information on the length of displacement and multiple displacements; and;

    c. A more nuanced understanding of people's reasons for displacement and the interactions among different displacement triggers.

- Defining a common conceptual framework that integrates all perspectives of loss and damage and displacement that need to be assessed would be key to this end. The elements of this framework would include:

    a. How people experience loss and damage from disasters and climate impacts before displacement and how this contributes to displacement;

    b. How people suffer loss and damage as a result of their displacement; and;

    c. How displacement acts as a driver of loss and damage increasing vulnerability to future climate impacts.

For each of these dimensions, relevant data actors would need to develop a list of economic and non-economic loss and damage that would need to be monitored and a set of indicators that should be tracked (or proxies that can be used in lieu of relevant data). This framework should be accompanied by a toolbox of assessment methodologies including "gold standard" methodologies for each indicator and alternative ones whenever the gold standard methodologies are not feasible.

ANNEX

Below you can find the resources that we prepared for the discussion as well as the full length recording and resources shared by speakers and attendees during the call.

Find the slides from the working group call here.

Find the full length video recording here.

Other resources shared during the call included:

- Quantifying the human cost of global warming, from Timothy M. Lenton et al.
- Valuing a values-based approach for assessing loss and damage, from Douwe van Schie et al.
- Social consequences of planned relocation in response to sea level rise: impacts on anxiety, well-being, and perceived safety, from Mumuni Abu et al.
- UNFCCC technical paper on Non-economic losses in the context of the work programme on loss and damage.

IMAGE CREDIT

1. **Cover image:** Lake Natron, Tanzania - October 04, 2013: Maasai man is standing at Lake Natron in Tanzania. He looks at the salt lake on the horizon where a herd of giraffes running across the lake. Credit: cinoby / iStock

2. **Loss and Damage Collaboration logo:** Sundarbans web, by the European Space Agency, Contains modified Copernicus Sentinel data (2016), processed by ESA, licensed under CC BY-SA 3.0 IGO.



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