

**INTERNAL DISPLACEMENT
IN THE CONTEXT OF THE SLOW-ONSET
ADVERSE EFFECTS OF CLIMATE CHANGE**
**SUBMISSION BY THE
INTERNATIONAL ORGANIZATION
FOR MIGRATION TO THE
SPECIAL RAPPORTEUR ON THE
HUMAN RIGHTS OF
INTERNALLY DISPLACED PERSONS**



This document is the IOM submission to the call of the Special Rapporteur on the Human Rights of Internally Displaced Persons in preparation of the forthcoming Report on the issue of internal displacement in the context of the slow-onset adverse effects of climate change. It was coordinated by the Migration, Environment and Climate Change Division (MECC) in the Department for Migration Management (DMM), in a joint approach with the Department for Emergencies and Operations (DOE), with inputs from IOM Thematic Regional Specialists and colleagues from IOM's National Offices, International Migration Law Unit, Migration and Health Division, Global Migration Data Analysis Centre.

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Cover photo: A woman is crossing the river during the dry season in Udayapur, Nepal. Due to sedimentation in the Udayapur region intensified by heavy rains and deforestation, rivers are becoming shallower and broader, contributing to floods during monsoon season. Udayapur, Nepal, is one of the regions in the country vulnerable to the impacts of climate change. Several families have lost their houses and livelihoods due flooding. They also face difficulties with their plantations because of changes in rain patterns. © IOM 2016/Amanda MARTINEZ NERO.

For more stories see the IOM global communication campaign #HoldingOn showcasing the stories of internally displaced persons at www.holding-on.iom.int.

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INTERNAL DISPLACEMENT IN THE CONTEXT OF THE SLOW-ONSET ADVERSE EFFECTS OF CLIMATE CHANGE SUBMISSION BY THE INTERNATIONAL ORGANIZATION FOR MIGRATION TO THE SPECIAL RAPPORTEUR ON THE HUMAN RIGHTS OF INTERNALLY DISPLACED PERSONS



SUMMARY



Drought hit Savanne Dèsolée Haiti, which was considered to be the largest desert area of the country. © 2017/Alessandro GRASSANI

The present document is submitted by the International Organization for Migration (IOM) pursuant to the call for inputs by the Special Rapporteur on the Human Rights of Internally Displaced Persons on “Internal displacement in the context of the slow-onset adverse effects of climate change”. Through this submission, IOM intends to support the development of the upcoming report on the issue of internal displacement linked to slow-onset natural hazards in the context of the adverse effects of climate change, to be presented to the United Nations General Assembly in October 2020.

This submission is based on the work of IOM in its support to States in protecting the human rights of displaced persons, migrants and other populations affected by slow-onset events and processes, presenting the Organization’s experiences, perspectives and activities.

IOM’S MANDATE AND APPROACH

Established in 1951, IOM is the leading intergovernmental organization in the field of migration. It works closely with governmental, intergovernmental and non-governmental partners to help ensure the orderly and humane management of migration, to promote international cooperation on migration issues, to assist in the search for practical solutions to migration problems and to provide humanitarian assistance to migrants in need, including refugees and internally displaced persons.¹

IOM has long-standing, extensive experience supporting governments and other partners to prevent, prepare for and address displacement and facilitate migration in the context of disasters and environmental change. Its work is based on a comprehensive set of core documents that define its mandate as well as scope, principles and modalities of engagement to the issue.

The IOM Strategic Vision 2019–2023: Setting a course for IOM, presented at the 110th Session of the IOM Council in 2019, articulates the Organization and the Director General’s vision of how IOM needs to develop over the next five years in order to meet new and emerging responsibilities.² The IOM Strategic Vision, which is the product of one year-long internal and external consultations, recognizes climate change and environmental events and processes as key drivers of increased internal, regional, and international mobility and as one of the Organization’s strategic priorities.

At the request of its Director General, IOM is also working on a new thematic strategy on migration, climate change and the environment, to be developed throughout 2020 to support institution-wide approaches on this topic.³ Over the past three decades, IOM has developed a comprehensive policy, research and operational programme on migration, environment, and climate change. The new strategy will build upon IOM’s engagement on the topic, as approved by its Member States at the 2014 and 2015 Council.

As part of its work on climate change and migration, and with a focus on slow onset processes, the Organization works on a diversity of advocacy and research activities, including to understand the nexus between oceans, climate change and migration; extreme heat, climate change and migration; and desertification, climate change and migration. This work is framed under IOM’s commitments on the 2030 Agenda for Sustainable Development, in particular through the Sustainable Development Goals on life on land, life below water, clean water and sanitation and climate change action.⁴ Environmental change, including climate change, is putting the achievement of the Sustainable Development Goals at risk – and population movements (i.e. displacement, migration and planned relocation) are key dynamics to address and leverage in order to achieve well-being, security and resilience for all.

Additionally, this work is framed by IOM's commitment to the implementation of the Paris Agreement on climate change.⁵ In 2016, IOM organized the first technical meeting with the United Nations Framework Convention on Climate Change (UNFCCC) Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts (WIM) in Casablanca, Morocco.⁶ The meeting's focus was loss and damage pertaining to migration, displacement and human mobility in the context of climate change. In 2017, the Task Force on Displacement (TFD) was established under the WIM Executive Committee, of which IOM is a founding member. Within this capacity, IOM led several Task Force activities that are referred to in this submission. In May 2018, together with the Platform on Disaster Displacement (PDD) and on behalf of the WIM Executive Committee, IOM organized the TFD Stakeholder Meeting.⁷ The second phase of the TFD Plan of Action was launched in 2019 and directly builds on the TFD recommendations as adopted at the 24th Conference of Parties (COP) of UNFCCC.⁸

This submission is also consistent with the 2016 New York Declaration for Refugees and Migrants that recognizes the crucial role of environmental degradation, disasters and climate change for human mobility as well as with the Global Compact for Safe, Orderly and Regular Migration, which contains multiple references to the interlinkages between environment and population movements and calls for action at all levels to address them.

Responding effectively to the mobility dimensions of crises, including displacement in the context of slow-onset events and processes, is central in IOM's Migration Governance Framework. The document sets out a structure in which States and IOM can work together to govern migration in an effective manner.⁹ IOM uses its Migration Crisis Operational Framework to support its Member States and partners to better prepare for, respond to and recover from migration crises. This framework articulates a comprehensive approach to addressing all forms of displacement and complex and large-scale movements before, during and after crisis situations, including slow-onset events and processes.¹⁰ All of IOM's humanitarian work is grounded on its Humanitarian Policy, which was adopted by IOM's Member States in 2015. The document outlines an approach embedded in the Principles for Humanitarian Action and aligned with the Charter of the United Nations and with the spirit of the humanitarian imperative.¹¹

The Organization also developed a Framework for Addressing Internal Displacement to set out its principles of engagement, commitments, approach and operational objectives with regards to internal displacement, including in the context of disasters and climate change. The document has been presented at the Organization's Standing Committee on Programmes and Finance at its 20th Session, in 2017.¹² In addition, IOM frames its broad, inclusive approach to providing long-term solutions to mobility in the context of crises through its Framework on the Progressive Resolution of Displacement Situations.¹³ Together, these documents equip the organization with a solid foundation to understand and address increasingly complex, protracted crises and associated mobility impacts (on displaced populations, as well as on other migrants and affected communities).

Moreover, IOM is committed to supporting disaster risk reduction (DRR) and climate change adaptation objectives throughout its areas of operation. IOM's Strategic Workplan on Disaster Risk Reduction and Resilience 2017–2020 lays out the scope of IOM's DRR work, highlighting objectives, elements and approaches that can help its Member States implement the Sendai Framework for Disaster Risk Reduction.¹⁴

This submission is also complementary to IOM's Submission to the United Nations Secretary-General High Level Panel on Internal Displacement (May 2020).¹⁵

RECOMMENDATIONS OF IOM TO THE SPECIAL RAPPORTEUR ON THE HUMAN RIGHTS OF INTERNALLY DISPLACED PERSONS

With this submission, IOM would like to bring to the attention of the Special Rapporteur on the Human Rights of the Internally Displaced Persons, five key areas which the Organization recognizes as priorities for action and where it could offer support and strategic orientation. In particular, IOM suggests strengthening and joining efforts on the following areas:

1. Supporting **coherence and consistency** between the Report, the work of the Special Rapporteur and key ongoing policy processes of relevance, in particular the implementation of the Paris Agreement, the Sendai Framework for Disaster Risk Reduction. Key working processes include the operationalization of the Words into Action Guidelines on Disaster Displacement as well as the work of the TFD under the UNFCCC WIM, where IOM could facilitate a presentation of the Report's outcomes by the Special Rapporteur.
2. Supporting innovative **research, data and evidence** work on internal displacement in the context of the slow-onset adverse effects of climate change, in collaboration with IOM's data and research focused initiatives, including through its Displacement Tracking Matrix (DTM) and the work of Global Migration Data Analysis Centre.
3. Supporting **human rights and protection approaches** in the work on internal displacement in the context of the slow-onset adverse effects of climate change, in line with relevant international law and frameworks, as well IOM's internal strategic and guidance documents.
4. Support **consistency among processes focused on internal displacement** via IOM's contributions, including to the High-Level Panel on Internal Displacement, the GP20 Plan of Action and the implementation of the Strategy and Workplan 2019–2022 of the PDD.
5. **Joint visibility and advocacy** on internal displacement in the context of the slow-onset adverse effects of climate change through: IOM's Governing Bodies, including IOM Council high-level events; joint advocacy efforts at key events, such as the UN Climate Change Conference; and within programmes and projects at regional and national levels via IOM's network. IOM could invite the Special Rapporteur to present, share and apply the recommendations of the Report, including at the IOM Council.

HIGHLIGHTS FROM THE SUBMISSION

- Slow-onset events and processes, influenced by climate change as well as by other forms of environmental change and degradation processes, have severe, cumulative impacts on people's livelihoods, security, well-being and resilience.
- Slow-onset events and processes may have diverse mobility outcomes, resulting in more or less voluntary, short and long-term movements, over short and longer distances, of individuals, households and communities – and sometimes in the immobility of affected persons.
- Movement in the context of slow-onset events and processes often involve complex decision-making, with multiple socioeconomic and environmental drivers and variables at play, and some degree of freedom of choice for affected persons (at least in so far the when or where to move are concerned).
- It can be difficult to distinguish displacement from other types of movements (e.g. labour migration, shorter-term circulation) in the context of slow-onset events and processes.
- A variety of regional and national laws and policies are relevant to the issue of displacement in the context of slow-onset processes, including those focusing on population movements, climate change adaptation, DRR and resilience – as well as all the other domains defining rights and options for people at risk or on the move. Even when such documents do not explicitly refer to displacement or slow-onset events and processes, they often lay out relevant principles, approaches and interventions.
- Data on displacement in the context of slow-onset events suffers from a variety of limitations, linked with prevailing structures, methodologies and focus of displacement data collection efforts, as well as to the complexity of the environmental processes and related population movements.
- Innovative approaches, based on the analysis of migration and livelihood systems, the use of new technologies and the combination of different data sources can help address key information challenges.
- Slow-onset processes will affect more directly the lives and livelihoods of those who depend on local natural resources for their livelihoods and security (e.g. farmers, herders, fishermen, and indigenous peoples).
- Displacement in the context of slow-onset processes often results in specific impacts for women, boys and girls, and the elderly through dynamics such as differential patterns of movement, family separation, disempowerment and increased dependency on other household members.
- Structural and non-structural interventions to prevent and mitigate hazards and adapt to climate change are needed in order to address the drivers of displacement in the context of slow-onset events and processes. Vulnerability reduction and resilience-building efforts are also needed, including by supporting people's ability to move in ways that benefit them, their households and communities.
- Preparing for displacement by strengthening relevant capacities and implementing targeted disaster preparedness activities is essential for managing displacement in ways that minimize harm for those on the move and their host communities.
- Inclusive, principled responses, which account for the specific needs and conditions of the most vulnerable are essential to protect the human rights of all persons at all stages of a slow-onset event or process.
- Implementing short and long-term interventions that meet people's needs and support their ability to find solutions to their displacement, while minimizing impacts on ecosystems

and supporting community cohesion, is essential in the face of long-lasting, progressive environmental changes.

- Slow-onset events and processes interplay in complex, context-specific manners with inter-communal tensions and conflict. While their combined impacts can lead to population movements (and population movements can contribute to fuelling both dynamics), policies, dialogue, natural resource management practices (among other interventions) can be very effective in breaking vicious circle of displacement, resource scarcity and conflict.
- Urban areas will remain a key destination for people moving in the context of slow-onset events and processes. They will, however, increasingly become hotspots of risk related to the impacts of environmental change. Urban areas will continue to be characterized by inflows and outflows of people moving in different manners and for different reasons.
- In the context of slow-onset processes it is particularly important that policy, data collection and research, and operational efforts adopt inclusive approaches, that account for the needs and conditions of vulnerability of all at-risk and affected persons. Using rigid categories based exclusively on people's (forced) movement risks becoming a reason for exclusion and further vulnerability of other people in need. This is consistent with the work of humanitarian actors in relevant settings.



Low lying atolls in the Pacific affected by sea level rise. © IOM 2017/Muse MOHAMMED



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ACRONYMS

COP	Conference of the Parties
DRR	disaster risk reduction
DTM	Displacement Tracking Matrix
IDP	internally displaced person
IGAD	Intergovernmental Authority on Development
IPCC	Intergovernmental Panel on Climate Change
MECLEP	Migration, Environment and Climate Change: Evidence for Policy
NDC	nationally determined contribution
PDD	Platform on Disaster Displacement
TFD	Task Force on Displacement
UNFCCC	United Nations Framework Convention on Climate Change
WIM	Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts

SCOPE OF THIS SUBMISSION

SLOW-ONSET EVENTS AND PROCESSES IN THE CONTEXT OF CLIMATE CHANGE

Slow-onset events and processes encompass a variety of dynamics that emerge gradually over time¹⁶ and affect people, communities and societies through the change of key environmental features and dynamics. Some slow-onset events and processes are commonly framed as “disasters” (e.g. droughts and epidemics), while others are rather referred to as instances of “environmental degradation” or “creeping environmental changes” (such as desertification, land and forest degradation, glacial retreat and thawing of permafrost, ocean acidification, sea-level rise, salinization, and rising temperatures).¹⁷ These different phenomena unfold over more or less extended periods (weeks, months, years or decades), can affect a more or less extended area (ranging from a single local ecosystem to the whole world), can have (or not) a clearly identifiable beginning and/or end, and can be more or less difficult to reverse.¹⁸

These processes are usually the result of a combination of drivers linked with natural variability, local ecosystem use and different types of large-scale man-made environmental changes.¹⁹ Most of them will to some extent be affected by man-made climate change. While significant differences exist across regions, different climate change scenarios consistently point to an increase in mean temperature in land and ocean regions; changes in rainfall patterns with more frequent droughts and precipitation deficits; sea-level rise and more frequent saltwater intrusion; increased ecosystem degradation, ocean acidification, coral bleaching and species loss and extinction; reduced viability of crops and threatened food security.²⁰

Furthermore, many of these processes are mutually reinforcing (e.g. deforestation leading to accelerated soil erosion or desertification) or are creating environmental conditions in which rapid-onset hazards (such as floods or landslides) become more intense or frequent. More acute climate change pathways might even result in some of these processes crossing critical tipping points, resulting in irreversible, large-scale changes in the biosphere, such the loss of the Amazon forest, the collapse of West Antarctic ice sheet or the modification of thermohaline circulation.²¹

Whether completely or partly attributable to climate change, other global environmental changes or more localized patterns of ecosystem exploitation, slow-onset events and processes can have severe, cumulative impacts on people’s livelihoods, security, well-being and resilience. They also influence frequency and intensity of sudden-onset events.

IMPACTS ON PEOPLE AND THEIR MOBILITY

All the slow-onset events and processes listed above, whether or not attributable to or influenced by climate change, affect people and communities in a variety of ways. In some instances, they progressively put pressure on exposed households, testing their different abilities to prevent and adapt to, or cope with and recover from their impacts, and often making them more vulnerable to other disasters. They have profound impacts on the environmental features of many ecosystems, undermining their ability to provide ecosystem services and support human communities.²² Slow-onset events and processes also have systemic impacts on broader social, economic and political dynamics that can exacerbate tensions and fragility and trigger other potential crises.²³

Combined with ongoing and future demographic and socioeconomic dynamics, slow-onset events and processes will likely result in higher levels of environmental risk for an increasing

number of people, with particularly dire consequences for particularly vulnerable groups in highly exposed regions (e.g. Arctic ecosystems, drylands, small island developing States and low-lying coastal areas, mountain areas) and in less affluent countries.²⁴ The exact extent of these negative consequences will, however, depend on the magnitude and rate of future greenhouse gas emissions and the effectiveness of adaptation and risk reduction interventions that will be rolled out in different contexts.

Through their impacts on all dimensions of human life (including access to habitable land, sufficient water and energy, safe housing and secure livelihoods, their level of environmental and health risk), all these processes have, and increasingly will have, consequences on people's need and ability to move, and on aggregate patterns of population movements, all over the world. Drivers and characteristics of movement in the context of slow-onset events and processes are however diverse, and difficult to fully unpack, categorize and operationalize.

Firstly, the extent and nature of the impacts of these processes on people and communities is shaped by a diversity of social, economic and political variables. Insufficient risk reduction measures and in situ adaptation options, lack of access to alternative livelihood options, and welfare and support systems (rather than the changing environmental conditions) are ultimately what turns such processes into disasters.²⁵ Most of these events and processes allow for some degree of management and adaptation on the part of affected persons and relevant institutions, and do not necessarily result in overwhelming negative impacts for exposed communities.

Secondly, within the same affected context, different people will have different levels of vulnerability, and will be affected in diverse manners by an event's or process' earlier or more advanced effects. Depending on their capacities and livelihood profiles, and their access to information, resources, opportunities and political representation, they will be more or less affected by the incremental impacts of environmental change. Their socioeconomic profile may also determine whether they will be affected directly by a given event or process, or will suffer indirect (but equally relevant) consequences – it is the case of agricultural service providers in places in which rural businesses fail as a consequence of the primary impacts of environmental change, for instance.

Thirdly, vulnerability and capacity of people and households to the impacts of slow-onset processes do not translate univocally in movement decisions. Moving may be a way to mitigate negative economic impacts for some, a survival strategy for others. Some people or households may be able to stay in place and adapt or cope locally, while others might not have the means to leave, and become trapped in affected areas.²⁶ All the above complexities mean that these events and processes often result in a diversity of mobility outcomes, with people moving at different stages of the process, for different direct causes (e.g. lack of employment, crop failure, lack of habitable land, no access to water or to essential services – and more often for a combination of those), to different destinations and for different intended durations,

in ways that could be more similar to labour migration or to disaster evacuations. In some cases, only a single member of the household will move, in others whole families or communities will leave. In many situations, the most vulnerable people might not be able to move at all. Some of this movements may be permanent (including, but not exclusively, when slow-onset processes lead to areas becoming completely uninhabitable or disappearing – e.g. low-lying land inundated by rising seas), while others may be temporary, as people seek to diversify and complement incomes only until things get better. Regardless

The relationship between movements and the impacts of climate change is non-linear, and there is no clear correlation between the magnitude of climate-related events and processes and migration impacts.

Some will result in increased movements, others in transformed patterns of movement, others yet in more constrained mobility and immobility.

of the scenario, it is commonly agreed that most of these movements will be internal, and will often take place on short distances and often following existing patterns of migration and circulation – and based on existing networks and knowledge.²⁷

CONCEPTUALIZING DISPLACEMENT IN THE CONTEXT OF SLOW-ONSET EVENTS AND PROCESSES

None of the dimensions of people's movement (the anticipatory/reactive nature of the movement, the distance travelled, the intended duration and destination, the causality of the movement decision) allow for clear-cut categorization in the context of slowly evolving situations, nor can unequivocally be associated with "forced" movements. In some contexts, movements at earlier stages of a crisis will be shorter and involve only working-age, male members of the households, while those taking place when crises are more acute might involve whole households and be longer-term or permanent – but that is not always the case.²⁸

Moving always has a value as a way to prevent potential negative impacts on people's lives, livelihoods, security and well-being. For many people and households, it will be an effective adaptation or disaster prevention strategy, for others a better alternative than suffering deprivation, hunger and acute impacts in a place where no more adaptation or coping options are available.²⁹ In most cases, it will be the result of complex considerations through which people and households manage both short and long-term risks, and not exclusively linked to environmental factors. A decision to move will always be the result of people's perceptions of constraining elements (e.g. dwindling resources, increased pressures on livelihoods, insecurity) and some level of freedom of choice (e.g. whether to leave or not, or at least when to leave, and where to go). Slow-onset events and processes demonstrate particularly clearly how much forced and voluntary movements are parts of the same continuum, and how difficult they are to clearly tell apart, as different people and households move in different manners in response to more or less significant and evolving pressures, based on different capacities and constraints.

In this kind of contexts, clearly identifying those who are displaced as a separate group from other migrants (whether moving primarily for economic, environmental or other security reasons) is a real epistemological challenge. To make matters even more complex, the trajectories, conditions and status of people on the move is dynamic, and movements that started off as temporary labour migration can morph into more forced movements (or forced immobility) in the face of acute risks at home, en route or at destination.³⁰ This suggests the importance of adopting, especially (but not exclusively) at the operational level, a comprehensive focus on the situation of all people affected or in need, and avoid using rigid categories to define differential access to rights and assistance –consistently with the approach of many humanitarian actors in displacement contexts.³¹

It is even more difficult to understand how these complex dynamics will translate under different climate change scenarios. The Intergovernmental Panel on Climate Change (IPCC)'s AR5 report recognizes that "climate change over the 21st century is projected to increase displacement of people," and specifies that "displacement risk increases when populations that lack the resources for planned migration experience higher exposure to extreme weather events, in both rural and urban areas, particularly in developing countries with low income."³² Some of this displacement will be triggered by increased incidence and impacts of slow-onset phenomena. However, IPCC does not provide a specific estimate regarding the likely number of people that will be displaced and manifests a "low confidence in quantitative projections of changes in mobility, due to its complex, multicausal nature." Along the same lines, IPCC's SR1.5 notes that "the social, economic and environmental factors underlying migration (including

displacement) are complex and varied; therefore, detecting the effect of observed climate change or assessing its possible magnitude is challenging with any degree of confidence".³³ In sum, while in future scenarios people vulnerable to the impacts of slow-onset events and processes will likely have an increased need to move,³⁴ whether they will be able to do so, how that movement will concretely take place and to what extent it will be forced, is still subject to discussions and uncertainties.³⁵

In the context of slow-onset processes it is important that policy, data collection and research, and operational approaches account for all patterns of movement and immobility, and associated needs and conditions of vulnerability.

Our understanding of environmental dynamics and mobility decisions is progressing, and today's predictions of environmental or climate migration are more methodologically sound, and nuanced, than those of decades past.³⁶ This translates into more clearly laid out limitations and caveats, and alternative scenarios and dependencies on all the variables that influence both environmental and social factors (including people's mobility). It also warrants the consideration of more comprehensive approaches to human mobility in the context of slow-onset processes, which look at a broad spectrum of conditions which can compel people's movement along a continuum of more or less constrained movement choices.³⁷



A farmer in Udayapur, Nepal, affected by changes in rainfall patterns. © IOM 2016/
Amanda MARTINEZ NERO

1. SAMPLES OF NATIONAL AND REGIONAL LAWS AND POLICIES RELEVANT TO INTERNAL DISPLACEMENT IN THE CONTEXT OF DISASTERS AND CLIMATE CHANGE

National and regional policy frameworks relevant to DRR and climate change adaptation account for population movements linked to disasters and the impacts of climate change in a diversity of manners. In some instances, displacement is identified as a specific issue; in others, it is addressed as part of broader mobility concerns (as a subset of migration or as part of broader references to population movements). Some laws and policies focus specifically on slow-onset processes and climate change impacts, including their consequences on population movements. In many other cases, however, little distinction is made between different types of hazards. The below sections reflect this fact, listing a variety of elements that might or might not have explicit references to internal displacement and slow-onset events and processes.

It should also be noted that, due to the multicausal nature of displacement and migration in the context of these phenomena, a variety of other laws and policies are essential in determining rights and options for assistance of people who are at risk, or have been affected or displaced. Relevant frameworks include all those that contribute to determining access to resources in areas of origin (e.g. development planning, in particular in rural areas or in sectors that are highly dependent on environmental conditions, such as forestry or fisheries), people's access to essential services and opportunities in areas of destinations (e.g. urban planning, employment, housing, education, health), as well as other rights of people on the move (e.g. political representation, documentation and even portability of welfare benefits in different areas of a country). The above elements have been highlighted by the UNFCCC's TFD, which has recommended States to include the full spectrum of human mobility considerations (i.e. disaster displacement, voluntary migration, planned relocation) in national climate change adaptation strategies (National Adaptation Plans, NDCs, etc.), and to strengthen policy coherence across sectors when addressing climate change. While the following sections provide only a partial overview of such elements, they are essential to an integrated approach to displacement and other population movements in the context of slow-onset events and processes.

INTEGRATION OF ENVIRONMENTAL CONCERN S IN NATIONAL LAWS AND POLICIES RELATED TO HUMAN MOBILITY

Many countries refer to climate and environmental considerations in their laws, policies and strategies dealing with migration and displacement. The review undertaken by IOM in 2018 in the context of the workplan of the TFD under UNFCCC, of the available documents for 66 countries revealed that this was the case for 35 of them (or 53%), with most references being

found in domestic immigration laws and national migration policies or strategies. The majority of such references pertain to the recognition of environmental factors, including climate change, disasters and environmental degradation, as drivers of migration, displacement and/or planned relocation. Several governments, such as Ghana,³⁸ Kenya,³⁹ Nigeria,⁴⁰ and Uganda,⁴¹ Botswana and Mauritius,⁴² explicitly outline national objectives and strategies to address various forms of population movements, in the context of environmental change. Internal displacement is expressly mentioned in many of these policies. In other cases, these frameworks adopt broad approaches to the issue of mobility and the environment, which makes them relevant to the issue of internal displacement in the context of slow-onset events and processes even when it is not explicitly mentioned.

Some countries provide a detailed articulation of specific measures to address population movements in the context of climate change, including: assessing the impacts of climate change on movements; offering relief assistance and protection to those moving; developing preventive measures to address the factors that might result in population displacement; and ensuring coherence with other policy areas and their relevant national institutions, including related to climate change action, DRR, urban planning or sustainable development.⁴³

- The 2016 National Migration Policy for Ghana has as one of the objectives on migration, the environment and climate change to “assess the migration, environment and climate change nexus and resulting impacts;” it also provides for “mainstream migration into national development planning and the National Climate Change Policy 2013 and the National Urban Policy, 2012.”
- Nigeria’s 2015 National Migration Policy, while recognizing that the impacts of climate change can force people to move, including internally, sets-out among its objectives to “conduct studies on the impact of migratory movements on the environment, and the relationship between the environment and migration;”
- Uganda’s National Migration Policy adopted in 2018 has as one of the objectives in the area of migration and environment “to minimize forced migration consecutive to environment disaster or degradation” and mentions environmental hazards in the section dealing with internally displaced persons.
- Haiti’s 2015 Migration Policy includes the environmental and climate dimension as its first priority sector.
- The 2019 Resettlement Policy Framework of Lao People’s Democratic Republic, focuses on resettlements as a way to avert, minimize and address displacement, including as it relates to disasters and climate change.⁴⁴

Vanuatu’s National Policy and Climate Change and Disaster-Induced Displacement

Vanuatu’s policy, adopted in 2018, deals with all causes of displacement in the country, notably coastal erosion, environmental degradation, sea level rise and drought, including when due to climate change.

The interest of this policy lies in the fact that it emphasizes **the importance of understanding displacement within the broader mobility, climate change and development context**. In line with this approach, its aim is to protect the rights of five broad groups of people and work towards achieving durable solutions. The five groups identified and potentially overlapping include: internally displaced persons, persons at risk of displacement and/or relocation, people living in informal or peri-urban settlements, internal migrants and other communities directly or indirectly impacted by displacement.

Source: Vanuatu, National Policy on Climate Change and Disaster-Induced Displacement, 2018.

- Botswana’s 2014 Draft National Migration Policy sets out strategies to “promote interagency collaboration between ministries and agencies responsible for environment and migration management. In particular, include the Ministry of Environment, Wildlife and Tourism and the National Disaster Management Office in the National Migration Policy Technical Committee.” The policy also acknowledges that environmental factors, including droughts, are key causes of internal displacement.

A number of State policies dealing with internal displacement also address slow-onset events or processes. In most of the cases, reference is made to slow-onset disasters, such as droughts. This may be due to an intent to meet the definition of the Guiding Principles, which only mentions disasters among the causes of displacement and does not refer to processes of environmental degradation, nor to climate change.

- Afghanistan’s 2013 National Policy on Internally Displaced Persons refers to the need to minimize and address displacement related with natural hazards.⁴⁵
- South Sudan’s 2019 Protection and Assistance to Internally Displaced Persons Act stresses the need to minimize and address displacement linked with disasters (including relevant climate change impacts).⁴⁶

Other States, such as Nepal,⁴⁷ Georgia,⁴⁸ Vanuatu⁴⁹ and Fiji⁵⁰ have drafted specialized policies focusing on human mobility and environmental factors. These policies specifically refer to displacement and migration in the context of disasters and slow-onset processes, outlining key objectives, institutional roles and responsibilities in all the relevant areas of assistance.

- Fiji’s Displacement Guidelines in the context of climate change and disasters, for instance, aim to prevent and minimize the drivers of displacement in Fiji through participatory processes to build up resilience of the local communities. These guidelines cover interventions needed before, during and after displacement, based on holistic, human-centred, human rights-based and inclusive approaches. These guidelines are also accompanied by another document focusing specifically on relocations.⁵¹
- In 2015 the Government of Bangladesh adopted its first national strategy on the management of disaster and climate induced internal displacement. Their 2020 policy is the second iteration, drafted in consultation with all relevant ministries, civil society organizations as well as development partners. It follows a rights-based approach spelling out programmatic interventions to protect people during disaster displacement, as well as adopting both preventive and adaptive measures to minimize its environmental drivers.⁵²

Some policies, instead, considered population movements as a potential adaptation or coping strategy to the adverse effects of climate change.

- The 2016 National Migration Policy for Ghana states that “migration can be a positive coping strategy if well managed and can serve to build resilience to environmental and climate change”.
- Uganda’s draft National Migration Policy has as an objective to “promote migration as a positive adaptation strategy”.

Despite the existence of these frameworks, and of relevant institutional arrangements, in many countries, the attention to environmental factors, and slow-onset processes in particular, is far from being mainstreamed in national human mobility legislation, policies or strategies. While frameworks dealing with internal displacement often include references to disasters, and in some cases to climate change too, they rarely make explicit mentions of slow-onset processes.

INTEGRATION OF DISPLACEMENT AND POPULATION MOVEMENTS IN NATIONAL CLIMATE CHANGE POLICIES

Many national adaptation policies, the first Nationally Determined Contributions (NDCs) and National Communications look at different population movements and at their implications on adaptation and responses to climate change impacts. The review undertaken by IOM in 2018 in the context of the workplan of the TFD under UNFCCC, showed that by 2018, 30 UNFCCC Parties out of 37 referred to human mobility in their climate change adaptation policies,⁵³ as did 20 per cent of the countries submitting NDCs.⁵⁴ Also, 100 national communications out of 143 submitted between 1998 and 2018 made reference to some form of population movements. Colombia and Togo, in particular, integrate human mobility considerations across all three types of climate change policies.

Most of these considerations have emerged over the last ten years, following the adoption of the Cancun Adaptation Framework (2010) and the implementation of the Executive Committee of the WIM workplan (since 2013), which have greatly raised the profile of displacement, migration and relocations in the context of climate change negotiations.

Some countries identify environmental processes linked with climate change as a potential cause of population movements, including (internal and cross-border) displacement:

- Brazil's 2016 National Adaptation Plan to Climate Change - General Strategy says: "Possible impacts of climate change in Brazil and South America include: [...] displacement and migration of populations."⁵⁵
- Myanmar's 2017 first NDC says: "Observed changes in the last decades include rain patterns variations that are causing climate-driven migration that affect, for instance, the socioeconomic conditions of dry regions due to increased occurrences of drought."⁵⁶
- Egypt's 2016 National Communications says: "Rising sea levels increase the risk of coastal flooding, and may necessitate population displacement."⁵⁷
- Togo National Adaptation Plan acknowledges displacement in the context of coastal erosion.⁵⁸
- Tuvalu's 2016 NDC: "While longer term impacts such as sea-level rise could result in the unavoidable out-migration of some of her people, they have a right to pursue any and all means to ensure their nation survives and the legacy remains, with future generations living productive lives on these islands."⁵⁹

Through their climate change policy instruments, Honduras and Peru have launched processes for the development of specific plans of action to address human mobility in the context of climate change. The Honduras National Strategy on Climate Change calls for the establishment and strengthening of a legal framework to address the "special conditions of migration of climate origin"⁶⁰ while the Peru framework climate change law of 2018 and its regulation requests the Environment Ministry to prepare a plan of action to prevent and address forced migration caused by the impacts of climate change.⁶¹

Some Parties identify a specific group of "environmental migrants" and "climate migrants" (or in some instances refugees).

- Bangladesh's 2012 National Communication says: "According to the Climate Change Cell of the DoE, about 45 cm rise of sea level along the Bangladesh coast may inundate 10-15 per cent of the land by the year 2050 creating over 35 million climate refugees or environmental migrants from the coastal districts."⁶²



Drilling construction built to facilitate access to water for drought affected populations in Mauritania.
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- The Sudan's 2016 National Adaptation Plan says: "However, the adverse impacts of climate change may be experienced indirectly via forced migration. That is, as agricultural regions in other parts of Sudan become less productive, states further south may see an influx of climate refugees."⁶³

In several instances, moving (especially through relocations and migration) is referred to as a potential strategy to adapt to climate change.⁶⁴

- Malta's 2010 National Communication says: "The proposed adaptation measures include [...] facilitation of migration.", and: "Sea-level rise and storm surges can put coastal communities at risk, necessitating expensive adaptation or reactive measures, which may include the relocation of whole communities to safer locations;"⁶⁵
- Canada's 2010 document for Adapting to Climate Change - An Introduction for Canadian Municipalities mentions planned relocation as an option to address sea-level rise: "It was decided that relocating homes at risk from flooding (retreat) to a higher elevation is the most desirable and cost-effective means to reduce the multiple health and safety issues stemming from storm surge flooding;"⁶⁶
- Cuba's 2015 National Communication says "The possibility of implementing the forced relocation of human settlements could increase due to the loss of land areas as a result of the rising sea level;"
- Fiji's 2016 NDC says "The planting of mangroves, construction of seawalls and the relocation of communities to higher grounds are part of ongoing adaptation initiatives;" and "capacity-building provided to communities for which vulnerability assessments have indicated that relocation is the long term adaptation strategy to minimize risks due to anticipated impacts of climate change."⁶⁷
- Rwanda's first NDCs says: "In order to reduce locally specific hazards, relocation from high risk zones is considered as one of the strategic actions. In addition to households previously relocated from high risk zones, Rwanda will relocate additional 30 000 households by 2030."⁶⁸
- Honduras' 2018 National Adaptation Plan mentions the relocation of buildings in risk areas as a potential adaptation measure.⁶⁹
- Solomon Islands' 2016 NDC: "The rainfall trends show that: The plan to relocate the provincial headquarters and town from Taro Island to the mainland area of Choiseul Bay is also a good adaptation strategy that needs to be complemented with an Integrated Water Resource Management strategy and programme."⁷⁰
- Tuvalu's National Climate Change Policy 2012–2021 refers to "Specific Pacific Access Category for Tuvaluans considering climate change vulnerability and forced climate migrants" as well as "climate change migration/resettlement plan for each island in view of climate change impacts worst case scenario" under Goal Guaranteeing the Security of the People of Tuvalu from the Impacts of Climate Change and Maintenance of National Sovereignty.⁷¹
- The 2019 Suriname NDC notes that given the vulnerability of coastal areas to the impacts of climate change, "Suriname's dilemma is whether to continue to invest heavily in adaptation or relocate and rebuild its entire economy away from the threat of the rising sea." However, the latest NDC submitted to the UNFCCC in 2020 notes that, while the 2015 NDC and the Policy Development Plan recommended partial relocation to limit exposure to sea-level rise, this measure has not been included in the latest plan and has been abandoned.⁷²
- Viet Nam's 2016 NDC under climate change adaptation in the period 2021–2030 mentions: "relocate and resettle households and communities from areas affected

frequently by, storm surges, floods, riverbanks and shoreline erosion, or areas at risk of floods and landslides"; and "use sea-level rise scenarios in urban and land use planning for infrastructure, industrial parks, coastal and island resettlement areas."⁷³

On the contrary, other countries see migration solely as an option of last resort, excluding it from the count of adaptation measures: while migration and displacement appear as a likely outcome of climate change processes, the Saint Lucia National Adaptation Plan (2018–2028) notes: "Saint Lucia does not view migration as an acceptable adaptation strategy, and this is not included in its NAP. However, in the realm of limits to adaptation and loss and damage, Saint Lucia may wish to give consideration to collaboration with countries and organizations on proactive and context specific measures to avert, minimize and address displacement and planned migration of vulnerable communities".⁷⁴

Other policies highlight the linkage between climate change, other potential threats, and human mobility – for instance, highlighting that climate change impacts might contribute to the destabilization of societies, adverse economic, health and security impacts, which in turn could lead to a potential increase of population movements.

- Germany's 2008 Strategy for Adaptation to Climate Change states: "The predicted climate changes could reinforce these effects. Resulting persistent deterioration in living conditions could lead to social tensions and destabilization of society, and to political or possibly religious radicalization of the population in the countries of origin. This could result in an intensification of the economic, political, religious or conflict-related motives and reasons for flight, and in increased migration."⁷⁵
- Bangladesh's 2012 National Communication says: "The indirect impacts of climate change on the public health of Bangladesh are expected to be much more severe and diverse compared with direct impacts. Indirect impacts can be in two forms: (a) health consequences due to environmental change and ecological disruption that occur in response to climate change; and (b) diverse health consequences, for example, traumatic, infectious, nutritional, psychological, etc., that occur in demoralized and displaced populations in the wake of climate-induced economic dislocation, environmental decline, and conflict situations."⁷⁶
- Nauru's 2015 National Communications states: "According to the World Health Organization (WHO, 2009), globally climate change and natural disasters increase the threats of: communicable and non-communicable diseases, [...] and mental health impacts of, among other things, loss of livelihoods and climate change-induced population displacement."⁷⁷
- Namibia's 2015 National Communication states: "These forced displacements, combined with heavy rainfall and contaminated water supplies are likely to increase the incidence and transmission of waterborne diseases such as cholera, typhoid fever, leptospirosis, cryptosporidium, E.coli, giardia, shigella and hepatitis A."⁷⁸
- Papua New Guinea's 2016 NDC frames "climate induced migration" as one of the nine hazards to address to adapt to climate change. In similar vein, Papua New Guinea's national communications notes the loss and damage of physical and cultural assets of coastal communities at risk of sea-level rise and coastal flooding.⁷⁹
- Nepal's 2015 National Communication notes the impact of climate change on agriculture and food security and reports increased unemployment and rate of migration.⁸⁰

Climate change policies also take into account the need to facilitate the movement of displaced persons in the event of disasters related to climate change as a way to minimize direct human impacts.

- Malta's 2010 National Communication says: "Relevant adaptive measures for Malta in this regard could include: Improved transport systems and infrastructure so as to have better mobility for the eventuality of evacuation."⁸¹

The impacts of climate change on population movements will also be felt through increased urbanization, which many countries note in their climate change frameworks – especially highlighting risks linked to people moving to centres with weak infrastructure, lack of basic services and high unemployment.

- Solomon Islands' 2017 National Communication notes that in the face of climate change: "Adaptation and survival strategies include: [...] migration to urban centres in the country";⁸²
- Brazil's 2016 National Adaptation Plan to Climate Change - Sectoral and Thematic Strategies says: "Warmer and drier weather may cause migration to big cities".⁸³
- India's 2012 National Communication to the UNFCCC says: "Flood and climate change migration and adaptation measures will have to be integrated into day-to-day urban development and service delivery systems."⁸⁴
- The Sudan's 2015 INDCs states: "This land use context has led to serious environmental problems [...] which in turn have led to [...] rural–urban migration patterns that cannot be sustained in the long term."
- The Fiji's 2018 National Adaptation Plan recognizes that climate change will result in growing rural–urban migration, and, together with unaffordable safe housing, will cause an increase in informal settlements which have been described as "vulnerability hot spots".⁸⁵
- Namibia's 2020 National Communication identifies climate change as a driver of rural–urban migration, highlighting the additional risks migrants face in urban areas of destination (i.e. "migration-linked vulnerability").⁸⁶

INTEGRATION OF DISPLACEMENT AND POPULATION MOVEMENTS IN NATIONAL DRR STRATEGIES

National DRR strategies encompass a variety of diverse documents that have been drafted to unpack the countries' commitments to the implementation of the Hyogo Framework for Action first, and the Sendai Framework for DRR later. Consistently with DRR's comprehensive, multi-hazard approach, they refer both to slow and sudden onset disasters, and many of their provisions are also applicable to other environmental degradation processes. They identify key hazards relevant to the context, their impacts (including displacement and other forms of mobility) and measures needed to prevent, mitigate and manage them.

This section builds on a recent mapping developed for the PDD, to which IOM contributed through headquarters and field-level engagement.⁸⁷ According to this analysis, 83 per cent of the DRR strategies at the global level make some reference to human mobility issues i.e. displacement, migration, evacuation, relocation. The meaning and operational implications of these terms tend to be heavily influenced by the different countries' hazard and mobility contexts.

While many refer to the need to plan for (and facilitate) evacuations in the context of sudden-onset hazards, the most relevant to the impacts of slow-onset events and processes in the context of climate change are perhaps those which explicitly refer to "displacement" or "displaced persons" and people "forced to migrate" or "forced to leave their homes" due to the impacts of natural hazards and environmental degradation, as well as to separate, linked

and/or underlying factors such as conflict and poverty. The latter is the case of 39 per cent of the reviewed documents.

- Côte d'Ivoire's National Disaster Risk Management Strategy refers to displacement resulting from the worsening, multiple impacts of increasing coastal erosion as well as increasing displacement risk linked to uncontrolled urbanization and vulnerability in fragile settled areas of Abidjan.⁸⁸
- Egypt's national strategy for climate change adaptation refers to risks to agricultural production and food security in the Nile Delta from increasing soil salinity and waterlogging caused by the rising level of the Mediterranean Sea and floods will in turn contribute to displacement and mass migration.⁸⁹
- Uganda's 2009 Preparedness and Management Act (2009) defines "population displacements" as "usually associated with crisis-induced mass migration in which large numbers of people are forced to leave their homes to seek alternative means of survival", normally resulting from "conflict, severe food shortages and collapse of economic support systems".⁹⁰
- Kiribati's Joint Implementation Plan for Climate Change and Disaster Risk Management 2019–2028 refers to the need to avert, minimize and address displacement in the context of disaster and climate change. It also refers to the need to plan for the relocation of people from at-risk areas.⁹¹
- Belize's 2019 Preparedness guidelines refer to the need to prepare for displacement and minimize its consequences, including in the context of hazards that are affected by climate change.⁹²
- Mauritius' 2016 National Disaster Risk Reduction and Management Act lays out objectives for preventing and managing disaster displacement.⁹³

Displacement and displaced persons are also often addressed as part of broader references to "migration" (present in 35% of the documents) and "migrants", often used as umbrella terms for various forms of human mobility, whether or not qualified as "forced".

- The 2013 Federated States of Micronesia's national integrated disaster risk management and climate change policy mentions internal (and overseas) movements, including "environmental migration".⁹⁴ The country's Strategic National Action Plan for DRR and climate change adaptation also mentions the need to protect displaced populations as part of ensuring that "environmental migration" is managed in "a humane and orderly manner".
- India's National Disaster Management Plan (2016) addresses the need to include "migrants" in local-level disaster risk management measures and processes.⁹⁵

Some national DRR strategies draw attention to specific concerns of displaced people.

- Namibia's 2009 Disaster Risk Management Policy highlights the specific health and genderrelated needs of disaster displaced people sheltering in camps.⁹⁶
- Egypt's national DRR strategy (2011) points to displaced people as those most vulnerable to health problems.⁹⁷
- Nauru's Framework for Climate Change Adaptation and DRR (2015) cites the World Health Organization on mental health impacts associated with "climate change-induced displacement".⁹⁸
- Vanuatu's Climate Change and DRR policy 2016–2030 calls for special support for internally displaced populations in the context of natural hazards and the impacts of climate change.⁹⁹ It also calls for the development of a national policy on "resettlement

and internal displacement” to strengthen disaster recovery arrangements and capacity, which has now been developed and approved. It also suggests mainstreaming climate change “loss and damage into land and relocation policies and laws”.

Other national frameworks on DRR stress the need for understanding and managing the risks associated with disaster displacement and environmental migration:

- Namibia’s disaster risk management plan (2011) mentions tools including a rapid assessment form that uses displacement as an indicator of crisis by collecting data on displaced households and disaster scenarios that links the scale of flood-induced displacement to different levels of emergency.¹⁰⁰
- Pakistan’s National DRR Policy (2013) highlights people moving among those who can be at specific risk and defines displacement as a form of social or organizational vulnerability: “As people migrate or are forced to migrate within the country increasing numbers of – predominantly poor – people live in areas that are exposed to hazards they have little familiarity with”.¹⁰¹
- Armenia’s National Disaster Risk Management Strategy and Action Plan (2017) cites the “[a]bsence of management of mass migration that results from natural disasters and wars” (p. 11) as a risk hindering the implementation of the strategy.
- Haiti (2001), Kosovoⁱ (2016) and the Marshall Islands (2014) mention rapid and unplanned internal migration to urban areas as a driver of disaster risk in their strategies.
- Australia’s National Strategy for Disaster Resilience (2011) also describes internal migration as a factor that increases vulnerability to disaster.¹⁰²

Other strategies focus on planned relocations as a way to reduce exposure of people in at-risk areas – especially in the context of gradually increasing risks linked with slow-onset environmental impacts. This is particularly (but not exclusively) the case for countries in which loss of habitable land is a pressing concern, including SIDSs and low-lying States.

- The Maldives Strategic National Action Plan on DRR and climate change adaptation 2010–2020 includes planning for “safer relocation sites” as part of targeting vulnerable communities in regional development planning.¹⁰³
- Bangladesh’s National Plan for Disaster Management (2010) includes an action to strengthen the use of “erosion prediction information” in local planning and policy decisions, including in relation to the “resettlement of vulnerable communities”.¹⁰⁴
- Tonga’s Joint national action plan on climate change adaptation and disaster risk management (2010–2015) raises the option of relocating people from coastal to higher ground in inland areas in response to sea-level rise, coastal erosion, sea surge and impacts on housing and health.
- Côte d’Ivoire’s National DRR Strategy (2011) notes that it has prepared a Displacement and Relocation Plan to relocate people living in precarious conditions created by rapid and unplanned development in floodprone areas of its capital, Abidjan.¹⁰⁵
- Malawi’s 2015 national disaster risk management policy refers to the option of relocation as part of reducing underlying risk factors and ensuring identification and implementation of long-lasting solutions to floods and other disasters.¹⁰⁶

ⁱ References to Kosovo shall be understood to be in the context of United Nations Security Council resolution 1244 (1999).



The Carteret Islands, in Papua New Guinea, are highly exposed to sea-level rise. © IOM 2017/
Muse MOHAMMED

RELEVANT INTERNATIONAL AND REGIONAL FRAMEWORKS

A diversity of existing processes, policies and legal frameworks, at the international and regional levels, are relevant to addressing the situation of persons displaced internally in the context of slow-onset events.¹⁰⁷ In the absence of international instruments dealing specifically with population movements in the context of slow-onset events and processes, the foundation on this domain lies on existing legal principles, provisions and frameworks included primarily under international human rights law, humanitarian law and environmental/climate change law and nationality law, but has been articulated through a variety of binding and non-binding instruments, at global and regional levels.

Global level

International instruments such as the International Covenant on Civil and Political Rights, and the International Covenant on Economic, Social and Cultural Rights state key rights that are relevant to people moving in the context of slow-onset events, including the right to life with dignity,¹⁰⁸ to health and physical integrity, to an adequate standard of living, and, crucially, to freedom of movement and return to one's initial or chosen place of residence – which are essential to determining the situation of displaced persons and other people on the move at all stages of their movement.

Other international instruments focus specifically on mobility, providing ample attention to various issues related to population movements in the context of disasters and climate change. These include:

- The Global Compact for Safe, Orderly and Regular Migration and the Global Compact on Refugees, which, although not explicitly comprising internal movements, represent a milestone in international policy for recognizing and addressing the links between population movements and climate change. The Compacts also enunciate measures to approach the different facets of these linkages which are fully relevant to averting, minimizing and addressing internal displacement.
- The State-led Global Forum for Migration and Development (GFMD) has acknowledged disasters and climate change as drivers of migration since its inception in 2008 at the first GFMD Summit in Belgium and advanced the debate at every Summit thereafter, including by proposing solutions to internal displacement situations.
- The Nansen Initiative Agenda for the Protection of Persons Displaced Across Borders in the Context of Disasters and Climate Change, endorsed by more than 100 States in 2015, and the State-led PDD have also made positive strides in addressing internal displacement in the context of disaster and climate change.

Also extremely relevant are the UN Conventions on Climate Change (UNFCCC) and Desertification. In particular, the key instruments under the former are:

- The Cancun Adaptation Framework adopted at the 16th Conference of the Parties in 2010 makes reference to 'climate change-induced migration, displacement and relocation' as elements to be addressed¹⁰⁹ and defines slow-onset events as including the risks and impacts of "increasing temperatures; desertification; loss of biodiversity; land and forest degradation; glacial retreat and related impacts; ocean acidification; sea-level rise; and salinization".¹¹⁰
- The Paris Agreement adopted at the UNFCCC COP21 encourages Parties to "respect, promote and consider their respective obligations on (...) the rights (...) of migrants" when "taking action to address climate change".¹¹¹

- Furthermore, UNFCCC Parties present at COP21 established the *Task Force on Displacement*, comprised of 13 members, including 4 State representatives and 9 expert organizations, to develop recommendations to "avert, minimize and address displacement related to the adverse impacts of climate change," including internal movements. The recommendations of the TFD were submitted by the Executive Committee of the WIM and endorsed at COP24 in 2018,¹¹² which also extended the mandate of the TFD for another two year cycle workplan to 2021.
- The five-year workplan of the WIM Executive Committee also includes strategic workstreams (a) on slow-onset events, and (d) on human mobility, including migration, displacement and planned relocation, which have advanced the state of knowledge on the topics as well as enhanced cooperation across institutions on the topic.¹¹³

The issue of migration has been increasingly included in the deliberations of State Parties to the United Nations Convention to Combat Desertification.¹¹⁴ In particular, under this Convention there have been:

- Recognition "that desertification/land degradation and drought are major environmental, economic and social challenges for global sustainable development in particular for (...) forced migration."¹¹⁵
- Commitment to make efforts so that "Migration forced by desertification and land degradation is substantially reduced."¹¹⁶
- Adoption of migration-centred resolutions in 2017¹¹⁷ and 2019¹¹⁸ to encourage action to address land drivers of migration, including by "Promoting the restoration of degraded land as one way of changing the narrative in communities impacted by desertification/ land degradation and drought".

International institutions also include hybrid, cross-regional entities such as the Climate Vulnerable Forum, a semi-formal and non-exclusive partnership of governments of developing countries highly vulnerable to global climate change which since 2009 collaborate on addressing a variety of shared concerns, including "migration and displacement". The forum aims to advance legal and policy frameworks and tools to more effectively and equitably address climate change. In 2011, the Climate Vulnerable Forum Dhaka Ministerial Declaration called for an international dialogue for an appropriate framework to enhance understanding, cooperation and coordination with respect to climate change-induced migration and displacement, strengthening and complementing existing policies. In 2012, the Climate Vulnerable Forum Trust Fund was also established to further the implementation of priority activities together with participating intergovernmental organizations.

Regional policies on displacement

Specific regional frameworks also focus on internal displacement and migration – including instruments with explicit provisions on population movements linked with the (slow-onset) impacts of climate change.¹¹⁹ Among these instruments are:

- The African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa (Kampala Convention), which provides for the protection of people forced to move within their country as a result of *inter alia* disasters and climate change. It is based on the UN Guiding Principles on Internal Displacement adopted in 1998 (see topic 2.2 below) but goes further by including climate change among the causes of displacement listed in the definition of an Internally Displaced Person.
- Moreover, in January 2018 the African Union made available to its members a "Model Law for the Implementation of the African Union Convention for the Protection or and Assistance to Internally Displaced Persons in Africa". The model law reflects the need

to account for slow-onset disasters and the impacts of climate change in displacement laws, dedicating the whole chapter III to the issue of disaster displacement and outlining protection, assistance and durable solutions needed to address the situation of all internally displaced persons.¹²⁰

- The Great Lakes Protocol on Protection and Assistance to Internally Displaced Persons. Also based on the aforementioned Guiding Principles, it was adopted in 2006 by the Member States of the International Conference on the Great Lakes Region, as part of the Pact on Security, Stability and Development in North America. It also makes reference to disasters as one of the factors triggering the movement of displaced persons.
- In coordination with the South African Development Community, Member States and Region Inter-Agency Committee for Southern Africa, IOM is currently compiling a regional action plan on disaster displacement for Southern Africa and national disaster displacement action plans in Zambia, Angola, Zimbabwe and Malawi in coordination with relevant governments and other key stakeholders, including compiling a repository of tools.
- The South American Conference on Migration and the Regional Conference on Migration have developed non-binding guidelines to protect persons displaced across borders in events of disasters. While the focus is set on sudden onset events, the provisions in both documents apply to slower-onset processes, too. Moreover, they also outline principles that are relevant to internal displacement contexts – especially considering the continuity between internal and cross-border displacement in many disasters.
- Regional policies dealing with free movement of persons (in particular in the context of disasters and the adverse effects of climate change and environmental degradation) also have relevance to the issue of internal displacement – at least as a factor shaping their movements and opportunities. The Intergovernmental Authority on Development (IGAD) 2020 Protocol on Free Movement of Persons in the IGAD Region specifically refers to the Movement of Persons Affected by Disasters (art 16), referring to Member States' responsibility to facilitate entry, registration and stay of citizens of other Member States moving in anticipation of, during or in the aftermath of disasters. The protocol adopts a broad definition of disasters, including those triggered by sudden and slow-onset hazards, whether related or not to climate change.¹²¹

Regional policies on DRR, emergency management and climate change adaptation

Regional strategies relevant to disaster management, DRR and climate change also provide several examples of inclusion of displacement and other mobility issues.¹²² These include:ⁱⁱ

- The Framework for Resilient Development in the Pacific: An integrated approach to address climate change and disaster risk management (2017–2030), which provides voluntary regional guidance to the Pacific Resilience Partnership. It recognizes displacement as a consequence and a risk in the context of both rapid- and slow-onset hazards, and highlights the need to: “k) Anticipate and prepare for future displacement by integrating human mobility issues within disaster preparedness, response and recovery program and actions”; “l) Support increasing the protection of individuals and communities most vulnerable to climate change and post-disaster displacement and migration through targeted national and regional policies and regional labour migration schemes”; “p) Integrate human mobility aspects, where appropriate, including strengthening the capacity of governments and administrations to protect individuals

ii Similarly to the above section on national-level policies, this section builds upon PDD's mapping of relevant frameworks. Available at: www.preventionweb.net/files/65230_07052019mappingthebaselineweb.pdf.

and communities that are vulnerable to climate change and disaster displacement and migration, through targeted national policies and actions, including relocation and labor migration policies”¹²³

- The Africa Regional Strategy for Disaster Risk Reduction 2004 and Program of Action for the Implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030 in Africa, provides the African Union overall framework for DRR. The PoA lays out priority activities for the various phases. Its overall objectives include references to “migration” linked to climate change adaptation and to conflict and aim to strengthen coherence and integration between “disaster risk reduction, climate change adaptation and migration, ecosystem management, conflict and fragility, and other development imperatives”.¹²⁴
- The East African Community Risk Reduction and Risk Management Strategy (2012–2016), which cites several examples of displacement as a consequence of natural hazard induced disasters and discusses the “new phenomenon in the global arena” of ‘climate refugees’ – defined as people “displaced by climatically induced environmental disasters”, noting that it is an issue that needs to be dealt with as another instance of disaster displacement and environmental migration.¹²⁵
- The Subregional Action Programme to Combat Desertification in West Africa, which recognizes increased migration as a potential outcome of droughts and desertification.¹²⁶
- The IGAD Drought Disaster Resilience and Sustainability Initiative Strategy (2013–2027) makes a number of references to human mobility issues. The strategy highlights the disastrous impact of extreme hazards on traditional means of livelihood (pastoralism, farming or fishing) and the displacement of numerous communities. It refers to potentially ensuing intracommunal conflicts and urbanization processes as key concerns stemming from this process.¹²⁷
- The Asia Regional Plan for implementation of the Sendai Framework aim to provide broad policy direction and a long-term road map to guide the implementation of the Sendai Framework in the continent. Its Action Plan 2018–2020 mentions displacement as a key concern, highlighting the specific vulnerability of displaced persons in disasters and the need to collect displacement data “including from at-risk communities living in geographically remote areas, with consistent levels of disaggregation for sex, age and disability” (3.1.2a). It also mentions displacement as one of the key impacts of disasters, on which more information and profiling is needed.¹²⁸
- The Central American Policy on Comprehensive Disaster Risk Management, updated in 2017, contains a number of direct references to human mobility. The PCGIR mentions the need to develop criteria to quantify disaster loss and damage, including disaggregated data on migration and disaster displacement, mentions the role of “migratory status” as one determinant of disaster risk and refers to displacement and migration as humanitarian problems addressed by public policy.¹²⁹
- The updated Central American Regional Climate Change Strategy and Plan of Action (2018–2022) includes within the social protection component a strategic priority to map and analyse the nexus between climate change and variability and internal and international migration, including its socioeconomic and environmental impacts.¹³⁰
- The Caribbean Regional Protocol for the integrated protection of children and adolescents in emergencies and disaster situations recognizes that climate change continues to underscore the need to build resilience among vulnerable populations because “families often find themselves having to leave their homes and relocate to safer places to avoid danger”.¹³¹

- The Andean Strategy for Disaster Risk Management is “a set of policies and guidance” that constitutes supranational law. It identifies migration and displacement as drivers of exposure, vulnerability and resulting disaster risk: “migration and forced displacement, have brought with them the expansion of poor neighbourhoods on grounds of low economic value in areas of high vulnerability to threats and hazards.” The strategy also promotes regional interventions with the stated aim being to increase resilience and reduce disaster risk, “including the risk of [...] displacement”.¹³²
- The Arab Strategy for Disaster Risk Reduction 2030 was adopted by the League of Arab States Resolution in April 2018. It highlights “demographic changes and migration trends” and “risks associated with population displacement” as factors challenging the capacities of Arab countries to reduce and manage disaster risks. It also points out the need to address the vulnerability of “internally displaced people and other vulnerable population groups” through the incorporation of “risk reduction considerations into national and local policies, plans, and legal frameworks for all critical sectors”. Ensuring the participation of displaced persons in disaster response preparedness and recovery/rehabilitation is also mentioned.¹³³

Regional policies on migration

Similarly, regional bodies have developed policy frameworks on migration that also cover the issue of displacement and other population movements in the context of slow-onset events and processes.

- The 2012 IGAD Regional Migration Policy Framework¹³⁴ recognizes the relationship between migration and environment. In particular, its section 3.3.5 “Migration, Climate change, Environment and Adaptation” elaborates on the impact of both slow-onset and sudden-onset climate change on migration as well as the impact of migration on the environment. It recommends comprehensive policy-formulation, environmental protection and adaptation amongst other response strategies.
- The 2006 African Union’s Migration Policy Framework for Africa states that “environmental degradation and poverty are a significant root cause of mass migration and forced displacement in Africa”. The Plan of Action 2018–2027 for its implementation also highlights the intersection between migration and environment as a cross-cutting issue. Together, the policy and the plan of action lay out guidelines and principles to assist Member States and Regional Economic Communities in formulating and implementing their own national and regional migration policies.¹³⁵

Other relevant frameworks

Not unlike at the national level, a variety of policies and frameworks not explicitly developed to address issues related to population movements and climate change are however very relevant to the topic.

- In Europe, the United Nations Economic Commission for Europe (UNECE) Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention) grants access to information and participation in decision-making in relation to environmental matters, including to disaster-affected persons on the move.
- The European Union Decision 2007/779 for a Civil Protection Mechanism, instead, relates to the situation of displaced persons as it establishes a mechanism to reinforce the cooperation among the EU States in civil protection assistance interventions in the event of major emergencies caused by environmental or human-made disasters or accidents – including if they result in population movements.

2. AVAILABLE DATA AND EVIDENCE ON INTERNAL DISPLACEMENT LINKED TO SLOW-ONSET NATURAL HAZARDS

CHALLENGES AND GAPS

As seen in the first section, the diversity of slow-onset processes that can affect human communities, the differential impacts of environmental events and processes on different people, people’s different capacities and risk tolerance level, and the diversity of possible mobility outcomes make it extremely difficult to clearly identify and categorize displacement in the context of slow-onset events.¹³⁶ They also hinder work to model potential displacement to specific events and processes and in the context of broader, longer-term climate change. Some specific gaps that hinder more comprehensive data collection, and undermine the analytical and operational potential of related categories include the following:ⁱⁱⁱ

- Funding availability and prioritization at the national and local levels result in the large majority of displacement-specific data collection efforts being oriented in contexts affected by sudden-onset emergencies, often characterized by more homogeneous and concentrated population movements and resulting humanitarian needs.
- In slow-onset contexts, instead, displacement-specific data collection efforts tend to only start when a given phenomenon has reached a critical threshold (and often when a significant number of people are already on the move). This often means not being able to record any movement taking place in the initial, often less acute, phase of a crisis – but which can be just as forced in nature as those taking place at later stages. For processes that last years or decades without a clear tipping point, this can mean failing to record the overwhelming majority of related movements.
- Since it is almost always emergency-activated, displacement data collection rarely extends to people’s areas of origin, almost exclusively capturing the movement of people only while they are en route or arrive at well-defined destinations. In the context of slow-onset movements, this makes it difficult to understand individual and household dynamics leading to the decision to move (including when to move and where to go). It also results in data collection systems failing to capture information on those staying behind, who often are the most vulnerable members of the most vulnerable households. Data collection in areas of origin is further complicated by the fact that slow-onset processes tend to affect (to different extent) very wide areas, often with poorly defined boundaries.
- Even when displacement information management systems are in place, the inherent diversity of people’s movements makes it difficult to capture a full picture of relevant population movements in slow-onset contexts. Shorter and longer-distance movements, whether temporary or permanent, might be directed towards clearly identified evacuation sites (if and when they become available) as well as to a variety

ⁱⁱⁱ This section largely builds on experiences from IOM colleagues working on displacement tracking in the field. Challenges and gaps listed largely mirror those highlighted by research and analytical pieces on this topic.

of other settings (in both rural and urban areas) with no disaster management or data collection capacity in place.

- Compared to displacement in the aftermath of sudden-onset events, movements in the context of slow-onset processes is mostly less concentrated and more diluted over time. As such, it is very difficult to distinguish from other types of movements (e.g. seasonal or labour migration, shorter-term circulation) of people who might use the same routes, come from the same areas and/or be directed towards the same destinations as displaced persons.
- Movements in the context of slow-onset processes are also most often the result of more complex decision-making processes, with multiple socioeconomic and environmental drivers and variables at play, and a higher degree of freedom of choice for affected persons (at least in so far the “when” or “where to” move are concerned). Clearly distinguishing these movements based on different reasons for moving is extremely challenging, as most environmental consequences of slow-onset processes are felt by affected persons through impacts on livelihoods, food and water security, personal safety and other elements that also constitute the immediate drivers of movement. In addition to not being particularly different than those that motivate other groups of migrants (whose migration is often perceived as more voluntary), the underlying environmental elements of these decisions are often difficult to identify for the displaced persons themselves.
- Difficulties in categorization remain relevant in people’s areas of destination, especially when displaced persons are directed towards areas at risk with limited humanitarian access (e.g. due to conflict and tensions, which might also be related or fuelled by incoming movements) or informal or non-camps displacement settings where displaced persons live alongside other migrants and local communities, sharing similar living conditions, challenges and deprivation.
- Depending on the process affecting a given area, displacement in the context of slow-onset events can have widely different durations, including short term, temporary or seasonal movements that are reversed when the hazard conditions in the areas of origin end (e.g. in the case of a heat wave or drought), all the way to permanent ones in the event of an irreversible inhabitability of affected ecosystems (e.g. in the event of sea-level rise or desertification).
- Moving in the context of the gradual impacts of climate change can be an effective adaptation strategy.¹³⁷ There is a very thin line between migration that is successfully used to cope with, avoid or adjust to deteriorating environmental conditions that could otherwise result in a crisis, and displacement that takes place after people’s, households’ and communities’ tipping points have been reached. Both types of decision are part of the same risk management decision making for people and households. In fact, the success of a movement (whether it leads to an actual mitigation of impacts and increased resilience or to impoverishment and vulnerability) can often only be determined *ex post*, and it is not necessarily linked to the initial reason for moving, or manner of movement.
- Slow-onset processes can also result in the limitation of movement opportunities for people at risk or affected. For instance, they could progressively erode the resources people need to leave a given area until they are not able to leave at all. Or they could preclude movement towards preferred, more desirable locations or along less risky routes. Reduced mobility (e.g. the case of trapped population, but also of “displaced pastoralists”)¹³⁸ is particularly difficult to capture through the typical displacement tracking tools.

- Many datasets on displacement lack are developed based on ad hoc assessment methodologies, often in emergency situations in which the key concern is rapid evaluation of humanitarian needs. Therefore, they often lack analytical depth (e.g. do not have a longitudinal dimension, do not allow for disaggregation by sex and age¹³⁹ or specific preexisting conditions of vulnerability, do not provide information of drivers and trajectories of movement nor on how environmental conditions and population movements evolve over time). Due to their ad hoc nature, they are often not easily comparable across contexts.

AVAILABLE EVIDENCE

The above challenges result in significant gaps in the availability of data on displacement in the context of slow-onset events. At global level, IDMC’s aggregate estimates have long only provided figures for sudden-onset disasters. Only recently some data on slow-onset disasters have become available, indicating that in 2020 about 276,700 displacement were triggered by droughts and 24,500 by extreme temperatures/heatwaves¹⁴⁰ – figures that suffer from all the above-mentioned caveats and are likely to be significant underestimation of the phenomenon. Global-level predictions, such as the IPCC and NASA’s figure of one billion people living in coastal areas by 2050 and being at risk of sea-level rise¹⁴¹ or the 1 to 3 billion people who might be living in areas outside a favourable temperature niche by 2070,¹⁴² work better to estimate how many people will be at risk of suffering significant impacts from slow-onset processes than to actually indicate any actual migration or displacement trend.

Over the years, however, IOM has been involved in a variety of data collection efforts in areas and countries affected by slow-onset processes, and has gathered evidence on relevant numbers and trends over time. Most of IOM’s operational data collection efforts take place through its DTM, with specific, innovative approaches being highlighted in the next section.

- In 2018–2019, IOM has been monitoring inflows of drought-affected internally displaced persons into Herat City and Baghdis (Afghanistan), as a consequence of drought in surrounding provinces.¹⁴³ Data collection took place at flow monitoring points along the cities’ main access routes. IOM was providing cars to registered families, and could therefore track arrival of new internally displaced persons, as well as returns and secondary movements. Over 7 months of operations, DTM identified 32,515 drought internally displaced persons (7003 families), whose arrival followed a significant evolution over time, showing how dynamic displacement in the context of these processes can be. Most people did not return nor moved elsewhere during the assessment period (0.58% of the total), and few were planning on going back at all (1% in Herat, 10% in Baghdis). When assessing the total number of internally displaced persons in the relevant provinces in December 2018, however, IOM found that the Herat and Baghdis provinces hosted respectively 544,500 and 270,283 displaced persons – and that disaster displaced (primarily affected by droughts) represented 36 per cent of Herat’s total and 196,735 people in Baghdis.¹⁴⁴
- In Mongolia, IOM has been collecting data on rural–urban migration to understand the incidence of environmental factors and climate change on migration decision making and behaviours. The work has shown a clear incidence of weather-related factors in departure from heavily affected rural districts. Severe winter conditions triggered departures between January and March 2018, while drought resulted in movements later in the year (April to June). *Dzuds* (a cyclical, slow-onset disaster typical to Mongolia, characterized by a summer drought followed by harsh winter weather and deterioration of pasture and shortages of water in spring), also resulted in further movements. Such movements involved hundreds to thousands of people in each district and were directed to nearby areas in the same provinces, to the provincial capital and to Ulaanbaatar.¹⁴⁵

- In areas in which it already has a network of information management professionals in place, IOM can capture smaller-scale movements which would otherwise be likely to blend in broader patterns of movement. For instance, small, frequent drought events regularly lead to displacement in Burundi. Between January and March 2020, these events caused 356 new displacements in the country. While these figures are lower than those related to sudden onset disasters, they still reveal situations of acute vulnerability that need to be accounted for and sustainably addressed.¹⁴⁶
- Ethiopia is heavily affected by displacement linked with droughts and other slow-onset processes. Beginning in 2015, Ethiopia faced one of the strongest onsets of El Niño, which reduced the *kiremt* rainfall and successively resulted in drought in the southern and southeastern parts of the country. The phenomenon lasted well into 2019, driving down crop yields of the main harvest, reducing pastures for livestock, and drying up water resources. At the same time, drought is exacerbating the impact of floods throughout the country. As of March 2020, the country hosted 381,426 people displaced by drought in 244 sites, equal to 22 per cent of the total number of internally displaced persons in the country.¹⁴⁷
- In Somalia, DTM showed that, as of August 2019 drought displaced persons represented 67 per cent of the total 698,923 internally displaced persons in the country's displacement sites. The incidence of drought across the country's regions was very different with areas like the Baki District recording 100 per cent of drought displacement, and others (like Bossaso) where conflict was the overwhelming reason for movement.¹⁴⁸
- In Peru, IOM is collaborating with the Postdam Institute for Climate Impact Research to gather evidence on the climate change-human mobility nexus, which compiles published studies that identify patterns of movement from the major geographical areas of the country (coast, jungle, mountain).

INNOVATIVE PRACTICES AND OTHER AVAILABLE OPTIONS FOR DATA COLLECTION

In order to address the challenges and gaps highlighted above, and better understand the impacts of slow-onset phenomena on population movements, it is often necessary to diversify data collection approaches. The interventions more typically rolled out in emergency and displacement settings need therefore to be complemented and anticipated by rolling out efforts that allow to capture normal-time patterns of movement: unless normal-time patterns of movement are understood, it is difficult to understand the mobility impacts of slow-onset processes. This requires looking comprehensively, from early, pre-crisis stages and over time at the whole mobility landscape in areas affected and at risk, to be able to understand how they change as crises evolve. This further strengthens the need for comprehensive approaches to understanding and addressing mobility in slow-onset contexts, which do not exclusively focus on forced movements.

- Drought and climate variability induce complex movement responses in affected areas in Madagascar.¹⁴⁹ DTM showed a variety of displacement throughout the first half of 2018. By confronting these movements with the usual patterns of migration from affected areas (which usually take place from July onwards) the exercise highlighted ways and extent to which the environmental conditions (and in particular insufficient raining between December 2017 and May 2018) were affecting patterns of movement. By deploying analysis capacities and personnel in key locations, IOM identified some 986 people displaced between January and August 2018 from the 10 surveyed municipalities. The analysis also showed that over 10 years the number of people forced to leave the areas of analysis amounts to 5,699, 42 per cent of which due to drought and insufficient rainfall – with these movements quite distinct from other traditional migration patterns.¹⁵⁰

- In several West African countries,¹⁵¹ IOM is implementing its Transhumance Tracking Tool, allowing to capture and compare the movement of pastoralists and their herds during and across years. This allows for the identification of shifts in timing, direction and size of these flows – including as a consequence of shifting environmental conditions in areas of origin and destination. This is also useful to understand where potential tensions related to people's movement and/or pressures on local natural resources might arise, allowing to deploy appropriate stabilization and management interventions.

Setting up regular flow monitoring efforts, such as those that IOM supports in West Africa, in the Horn and in Central America¹⁵² can be a useful way to establish relevant baselines, in the absence of other data sources (e.g. information from census).

- Regular observation of population movements (and identification of their variations) can also be a key element in understanding livelihood stress linked with slow-onset processes in areas of origin, and inform preparedness efforts that anticipate their future impacts, including related population movements. This is one the aims of the work IOM has been performing in Mongolia.¹⁵³

In other contexts, IOM has used household livelihood surveys with a specific mobility angle to overcome some specific data collection challenges.

- This was the case of the research under the Migration, Environment and Climate Change: Evidence for Policy (MECLEP) project,¹⁵⁴ aiming to investigate understand how people with different livelihood profiles use migration as part of their well-being, adaptation and coping strategies (whether or not in response to environmental pressures and disasters), comparing the situation at the time of data collection to 10 years prior. MECLEP's approach helped to analyse the baselines of individual and household-level decision-making processes, including to try to understand whether and when their movements become overly "forced" – through approaches usually applied in long-term development contexts. MECLEP investigated slow-onset events and processes in the Dominican Republic (rising lake level threatening to inundate a village),¹⁵⁵ Mauritius (droughts),¹⁵⁶ and Viet Nam (salinization, river bank erosion, coastal erosion).¹⁵⁷ Compatibility of methodology also allowed for comparative research across contexts – whether or not characterized by events and processes directly linked with climate change. Moreover, the MECLEP methodology allowed to look at people's conditions in their areas of destination, helping investigate the concrete outcomes of their movement and impacts of environmental degradation in destination areas of migrants.

IOM has also collaborated with governments and research partners to produce a series of national assessments on migration, environment and climate change.¹⁵⁸ The assessments investigate the national migration and displacement dynamics, key environmental features and their change (including a specific focus on the impacts of relevant slow-onset events and processes in each country). They help to establish key policy and operational priorities and understand local patterns and trends of population movements, which is useful to formulate national policy options on migration and displacement in support of national climate change adaptation, environmental management and risk reduction strategies. Such assessments have been published to date for Bangladesh, Cambodia, Dominican Republic, Haiti, Kenya, Kyrgyzstan, Madagascar, Mauritius, Morocco, Mozambique, Namibia, Papua New Guinea, Viet Nam, as well as (at the regional level) for Southern Africa and South Asia.¹⁵⁹

In other contexts, IOM has worked to integrate mobility consideration in hazards and risk assessments. In the South African Development Community region, this has led to the development of national assessments for 6 countries, which also map drought-prone areas and key migration patterns they feature.¹⁶⁰ These analyses can be useful to identify areas where the impacts of slow-onset events might concentrate, and where the biggest impacts on population movements might be observed.

Increased rainfall variability increases the risks of floods in Ethiopia. © IOM 2018/
Muse MOHAMMED



Innovative data sources also have significant potential for data collection on, and improved understanding of, displacement in the context of slow-onset processes. Satellite data and other data sources that provide real-time information or forecasts on key environmental variables (e.g. temperature, precipitation, soil humidity, vegetation coverage, sea-level) can be used to identify areas in which environmental stresses might lead to hardship, and potentially inform the design and roll out of data collection exercises that can capture relevant population movements at earlier stages. On the other hand, this kind of environmental data can be used to retroactively analyse the impacts of environmental changes in areas from which unusual numbers of people are moving (potentially allowing to highlight the environmental drivers of a movement that might be otherwise qualified). As precision, quality and coverage of these products improve, so will their usefulness for relevant mobility analyses. Big data, including in particular all the information derived from mobile networks and mobile applications,¹⁶¹ represents a promising source of data for mobility tracking and analysis, as already showed in a number of disasters, including slow-onset ones¹⁶² – albeit one that comes with specific concerns for the privacy of the users and (in specific contexts) for their safety.

Lastly, as we see slow-onset processes profoundly affecting patterns of occurrence of sudden-onset events, one additional area of innovation for displacement data collection might be to build relevant capacities (and produce relevant information) in areas that have traditionally not been affected by such hazards, or to a lesser extent. Investigating shifting patterns of movement over time in response to evolving hazards might provide a better understanding of displacement caused by slow-onset and rapid onset hazards combined.

3. CLIMATE CHANGE-RELATED INTERNAL DISPLACEMENT AND THE ENJOYMENT OF HUMAN RIGHTS BY SPECIFIC GROUPS

Displacement linked with the direct and indirect impacts of climate change threatens all dimensions of the life of affected persons, including their enjoyment of essential rights. Some, including the right to life and personal security, of free movement, to own property, to desirable work, education and adequate living standards will be more directly and frequently threatened throughout people's displacement. To different extents, however, this applies potentially to any other, including the rights to equality before the law and due process, freedom of information, right to participate in government and free elections. The Guiding Principles on Internal Displacement largely recognize this reality, as well as related need for all authorities and international actors to ensure the respect of displaced persons rights – all its provisions apply to the situation of internal displacement in the context of slow-onset processes affected by climate change.

It is well documented that neither displacement nor its negative impacts affect evenly all people at risk. Conditions linked with socioeconomic and political processes, often determined long before a displacement is triggered, intersect with factors such as age, gender, ability, ethnicity and other individual or collective factors, to shape the differential vulnerability of different people and groups, within and across communities. Vulnerability to the impacts of slow-onset events and processes often correlates closely with people's conditions of marginalization, exclusion, poverty and deprivation: its gender, age, culture, status, ethnicity-specific patterns are common to different risks and disaster – as well as related displacement. While displaced persons face heightened risks of suffering from insufficient food, shelter, access to basic services and of being targeted by abuses and violence, displaced women and children are particularly vulnerable to the violation of their human rights.¹⁶³ Some specific patterns of vulnerability are however linked with displacement in the contexts of slow-onset environmental processes.

ECOSYSTEM-DEPENDENT LIVELIHOODS AND INDIGENOUS GROUPS

Slow-onset processes will affect more directly the lives and livelihoods of those who depend on local natural resources for their livelihoods and security. This is the case of farmers, herders, fishermen, and more specifically of indigenous peoples.¹⁶⁴ Different processes influenced by climate change are contributing to the displacement of these groups all around the world,¹⁶⁵ including loss of sea ice, permafrost thawing, erosion and changes in species distribution in the Arctic,¹⁶⁶ drought, desertification and loss of fertile land in Africa and higher mean temperatures and rainfall pattern changes in the Amazon. Pastoralists, for example, whose lifestyle and resilience is dependent on their ability to travel across vast terrains with their livestock to access water and grazing grounds, are now forced through environmental changes to alter traditional, known routes, often encroaching on land used by settled communities. Many have lost their way of life and been forced into internally displaced person camps and informal settlements when persistent and intense droughts decimated their herds.

Despite being among the people with the lowest environmental footprint, and despite their profound knowledge of adaptive practices in variable environments, these groups are likely

to be affected more heavily throughout their displacement. They often have knowledge and skills, livelihoods and resources (e.g. livestock) that are not easily transferred across contexts and are likely to experience a profound disruption of their lifestyle in their destination – with widespread collective (e.g. community disgregation, loss of cultural practices) and individual impacts (e.g. changing food regimes, food insecurity and short- and long-term health). Existing evidence from other displacement contexts (e.g. linked with development projects, both in the context of spontaneous movements and planned relocations) is significant and consistent in this regard.

In the case of indigenous people, the loss of ancestral living spaces and the degradation of key ecosystems has particularly far-reaching, acute consequences, as it often leads to the loss of culture and customs, religion and traditional beliefs, identity and language. For instance, indigenous groups in the Caribbean coast of countries like Nicaragua and Honduras are heavily affected by coastal erosion and sea-level rise. In mountain areas of the Andes, glacier melting is affecting belief systems of indigenous groups but also their traditional livelihoods, as water scarcity challenges agricultural production and cattle raising.

WOMEN, MEN, BOYS AND GIRLS

Age and gender are among the most important factors shaping the migratory experience. Women, men, boys and girls tend to have different migration patterns at every stage of the migration cycle (pre-departure, in transit, upon arrival, during their stay and upon return). The pressure to migrate, risk perception, priorities, strategies, destination choices, employment prospects, access to integration or reintegration activities also vary by gender and age. Overall, unequal distribution of roles and responsibilities and unequal access to resources make women and girls more vulnerable than men to the impacts of climate change and disasters in both developed and developing countries. Data and experiences of current exposure to climate-related hazards suggest that women often experience larger negative impacts of climate variability and disasters than men do, as due to gender inequality they tend to be poorer and less educated than men, to rely more on natural resources for their livelihood and to face physical, social, economic, and political barriers that limit their coping and adaptive capacities. Women, particularly in developing countries, also tend to be the ones who gather and produce food, collect water and fuel for cooking and heating.¹⁶⁷

Age and gender dynamics are at play also at the different stages of displacement in the context of slow onset processes. People with different characteristics, such as age and gender are likely to move in different manners. In many contexts, it is men and boys considered of working age (due to culture and customs or poverty, discrimination and lack of alternatives, and in spite of specific protection needs) who mostly leave to find work elsewhere (in other rural areas, or in closer or more distant cities) while women, younger children under 5, children and adults with disabilities, and older persons are left behind. In other contexts, women and girls might leave too, mostly depending on the gendered nature of the employment opportunities in areas of destination, with some occupations (e.g. domestic workers) more often the prerogative of women and girls. Sometimes, but not always, this movement might be followed by the arrival of the rest of the family as conditions in areas of origin further worsen.

Moving and staying translate into different vulnerability to hazards of different kinds. Those moving first in areas of destination bear the brunt of the issues linked with adjusting to a different context: living in unsafe houses and neighbourhoods, taking on risky jobs, facing abuses and exploitation. The vulnerability of boys who have prematurely left their families can be particularly acute. In the meanwhile, family members staying behind might face more acute environmental impacts, specific conditions of insecurity linked with the loss of a caregiver or an absent household head or breadwinner, and additional burden linked with heavier workload and care of other family members. In many cases, it is women and girls remaining in areas of origin who shoulder higher workloads: this can lead to suffering occupational hazards

indoors and outdoors, psychological and emotional stress as well as specific human rights violation, such as dropping out of school or being forced to marry.

In the specific case of children, both moving and staying in the context of slow-onset processes can translate in child labour, including slavery and slavery-like practices such as forced and bonded labour and child soldiering, sexual exploitation, or are used by adults in illicit activities, including drug trafficking.¹⁶⁸ This is a particular issue in light of the overrepresentation of children among the population of many of the countries more at risk of slow-onset events and processes, and the significant share of children among displaced persons.

Age and gender dynamics are not exclusive to more voluntary forms of migration: the movements of members of households suffering higher levels of livelihood stress might follow similar patterns, showing once again how difficult it is to clearly distinguish voluntary and forced movements (and even more so when one considers that the movement decisions of boys and girls might be forced upon them by other family and community members). In the face of acute hardship, a family might decide to send women and young children to camps where they can get assistance and leave men and boys behind in to tend to the fields, the herds or to protect the house.¹⁶⁹ This again results in different patterns of risk which are gender- and age-specific but not necessarily higher for one group over another: a camp might offer some level of assistance and protection people stay behind might not enjoy, but is also a potentially risk environment where displaced persons or individuals left without their caregiver or protection of the family unit (e.g. adults and children with disabilities, girls, older persons) can be abused, face violence, including gender-based violence, and additional hardship.

In the context of slow onset events and processes, these movements (whether chosen in anticipation or in response of pressures and shocks) often lead to family separation.¹⁷⁰ Household split and displacement, however, might have different consequences in different contexts: sometimes women, who already have more limited freedom of choice in patriarchal communities, will be further disenfranchised and excluded from decisions on household management and children's education, or will have reduced ownership of property and access to land and livelihoods. Ultimately, the impacts of slow-onset processes might result in them losing key roles they have within the household (as and make them more dependent on other members. In other cases , they can be empowered by becoming the main decision maker or breadwinner in the family but this empowerment may also imply additional exposure to risks of violence where new gender roles and responsibilities are not accepted by the family or community, given gender inequality.

The impacts people will suffer during displacement are also shaped by gender and age differences: women and children are often more exposed to gender-based violence and face additional barriers in accessing assistance and information in displacement sites, due to pre-existing social and gender norms, or new forms of discrimination and inequality.¹⁷¹ Women and girls have specific hygiene and health needs which are not always properly addressed in displacement sites. In other situations, it is the way in which humanitarian assistance is provided in displacement contexts that exacerbates pre-existing gender inequality and aggravate the risk of many forms of GBV, including risks of sexual exploitation and abuse (SEA), particularly for women and girls. For many children, instead, displacement translates in reduced access to education and higher exposure to risks of violence, abuse, neglect and exploitation. While many children, especially in displacement, will suffer from malnourishment, in many households facing food insecurity it is adults who will reduce their food intake early on to save for their children.

OTHER GROUPS

Old age is another factor of vulnerability throughout the displacement process. As shown in other contexts,¹⁷² older persons are more likely to be less mobile and are often at increased risk of ending up trapped in more risky areas. Reduced mobility and physical capacities in general, or concerns for the challenges they might face during travel, may also prevent older persons from fleeing with their families/communities and cause them to be left behind during displacement. Older people often also suffer specific impacts from being displaced: their caregiving responsibilities grow as capable adults are separated or move away from displacement sites to work, while their decision-making role within the household is often reduced as access to natural resources they usually control is lost.

They often have specific health needs, which are only heightened during displacement, and often compounded by the psychosocial impacts of being sidelined within the family, or having to bear additional care burdens as the parents or adult family members move/migrate in the search of livelihoods (e.g. to return to work their lands, or to work in informal economies such as mines) and leave behind the older persons to care for the youngest members of the family/youngest children. As such, they end up relying more heavily on outside assistance and they and the family dependent on them/and the other left behind members of the family, are at increased exposure of violence, abuse, neglect and exploitation.

Additional challenges are also faced by persons, both adults and children, with disabilities in displacement – who also face multiple forms of discrimination, neglect, lack of access to appropriate care, access to services and opportunities and rights violations in non-crisis times, which are only exacerbated in disasters and throughout the humanitarian response and recovery. This translates again in reduced mobility, reduced access to information, limited participation in decision-making processes at the household and community level, and limited consideration of their specific needs, capacities and abilities in the design and implementation of response measures.

More in general, individuals belonging to ethnic and religious minorities and LGBTIQIA people, internal and international migrants, and other groups discriminated on the basis of their beliefs, culture or race, are all likely to face increased vulnerability in the face of slow-onset processes and related displacement. Due to discrimination and exclusion processes from access to livelihoods and other rights such as civil documentation or property, these communities/groups of population often live in more hazard-exposed areas and have limited options to seek autonomously for a safer living environment – and more limited access to assistance to moving out of risky areas. They are also more likely to work precarious, risky jobs that will be affected first by the direct or indirect consequences of a disaster and will often lack any social protection. Sometimes they will be completely excluded from humanitarian and recovery assistance, or unable culturally appropriate support. Moreover, they might have limited access to participation and information opportunities throughout all phases of displacement.

Lastly, it is important to look at the specific forms of vulnerability experienced by people on the move in countries in which there are limitations on free movement (including urban movements) or in situations in which not all rights are guaranteed to those who move. In these contexts, moving in response to environmental events or processes is likely to lead to travelling and settling in situations of informality, deprivation and disenfranchisement which result in short- and long-term risk for those on the move, as well as indirect negative impacts for those staying behind.

INCLUSIVE, RIGHTS-BASED APPROACHES

Due to individual (age, gender, physical ability and mobility) and collective (being part of religious, ethnic, racial minorities) characteristics, and the way these interact with socioeconomic and political dynamics, different people will be differently vulnerable to the impacts of slow-onset events and processes and associated displacement. In order to put the interest of displaced and non-displaced persons at the centre of all relevant efforts, it is essential to adopt people-centred, rights-based approaches. Inclusiveness, participation and accessibility need to be integrated in the design and implementation of all displacement-related programmes – including preparedness, relief, durable solution and development. This is essential to meeting the needs and upholding the rights of all displaced and otherwise affected persons. Participation should be ensured to representatives of all different groups throughout all phases of displacement – keeping in mind that this requires looking at the intersections of different conditions of exclusion and vulnerability across and within (displaced and non-displaced) communities and households, including on occasions by challenging existing structures of power and disempowerment dynamics.¹⁷³



Mongolians move because of multiple reasons including livelihoods, accessibility to services, improved living conditions and family unity, but also natural hazards. © IOM 2018

4. IOM'S RESPONSES TO INTERNAL DISPLACEMENT IN THE CONTEXT OF SLOW-ONSET EVENTS

IOM applies a comprehensive migration management approach to responding to population movements in the context of slow-onset events and processes related to climate change. This is particularly important in light of the unique ways these phenomena affect population movements, often creating diverse population flows of people, households and communities moving at different stages of a crisis, with different trajectories – and often with no clear distinctions between life-saving flight/displacement and other forms of more voluntary movements.

Through decades of field experience and institutional engagement on the topic,¹⁷⁴ IOM provides a comprehensive set of responses to slow-onset events and processes and their mobility implications, articulated around three main priorities:

- To minimize forced, unmanaged migration resulting from environmental factors to the extent possible;
- To provide assistance and protection to affected populations where forced migration does occur, and to seek durable solutions to their situation;
- To facilitate movements as a way for people to adapt or cope with the impacts of climate change, including slow-onset events and processes.

To achieve these goals, IOM collaborates with governmental and non-governmental actors, at all stages of the migration cycle, to prevent, prepare for, respond to, mitigate the impact of, and address all instances of population movements related with slow-onset events and processes – whether that might be closer to voluntary migration or displacement. This operational approach is consistent with principled, effective practices for emergency response and recovery in a variety of displacement situations, which show that efforts are more effective when they are rolled out based on iterative assessments of the needs of all affected persons – regardless of their movement status and initial reasons for displacement.¹⁷⁵

IOM's broad approaches to this issue are also expressed through key partnerships in which the organization is involved:

- As a Standing Invitee to the Steering Group of the State-led PDD, IOM is actively engaged in the PDD Strategy and Workplan 2019–2022 that aims to “strengthen the protection of persons displaced across borders in the context of disasters and the adverse effects of climate change, and to prevent or reduce disaster displacement risks in countries of origin”. IOM takes the lead on or contribute to several areas of the workplan, including on capacity-building of policymakers, collecting and analysing data in disaster situations, conducting research, and supporting policy development at global and regional levels to better understand and address displacement in the context of disasters and the adverse impacts of climate change.
- As an executive partner of the Capacity for Disaster Reduction Initiative, IOM leads a process to integrate human mobility considerations into assessments of governmental capacities at national and local level on DRR, climate change adaptation and key sectoral policies. The Capacity for Disaster Reduction Initiative's work leads to the development of country assessments and DRR workplans to be supported by the UN system.¹⁷⁶

- IOM has collaborated with international partners in the development of the Words into Action guidelines – Disaster displacement: How to reduce risk, address impacts and strengthen resilience – outlining a comprehensive approach for preventing, preparing for, responding to and recovering from disaster displacement. It is now working with the Norwegian Refugee Council (NRC), PDD and UNHCR to roll it out at regional and national levels.

A. PREVENT THE CONDITIONS THAT MIGHT LEAD TO DISPLACEMENT IN THE CONTEXT OF SLOW-ONSET EVENTS AND PROCESSES

IOM undertakes a wide variety of actions designed to address the factors compelling people's movement in contexts of slow-onset disasters and environmental degradation linked to climate change. In close partnership with local communities and relevant national authorities, IOM implements DRR, climate change adaptation, and sustainable ecosystem management activities to protect lives and assets of people at risk and reduce livelihood stress they might experience.¹⁷⁷ This broad portfolio of activities includes:

- Infrastructural interventions (including green infrastructure), such as:
 - ◊ construction of water-harvesting structures such as water pans and shallow wells to increase people's access to water;
 - ◊ construction and maintenance of coastal protection infrastructure, which helps mitigate both sudden-onset recurring hazards, such as cyclones and tidal waves, and protect communities from the impacts of longer-term ones such as coastal erosion and sea-level rise;
 - ◊ micro-infrastructure for soil conservation, which in addition to reducing flood or landslide risk also protects from longer-term impacts of soil erosion;
 - ◊ reforestation/afforestation programmes, which, depending on the context, aim to reduce erosion or slow down desertification.
- Sustainable livelihoods interventions, including
 - ◊ Introduction of drought-resistant crops, including based on seasonal forecasts;
 - ◊ Promoting ecosystem conservation practices (e.g. promoting solar stoves or lights to avoid cutting down trees for charcoal), in order to strengthen community resilience and to avoid negative effects of adaptation or coping measures which might affect livelihoods sustainability in the long term;
 - ◊ Income strengthening (e.g. through better information and access to markets) and diversification (e.g. through promotion of handicraft) for people whose livelihoods rely on natural resources, including small-scale farmers;
 - ◊ Building relevant capacities, such as by training and provision of equipment for animal health workers.
- Promoting community stabilization interventions in areas in which resource pressures and/or population movements (whether linked or not with slow-onset events and processes) could link to intercommunal tensions.

Preventing soil erosion and related sudden-onset hazards in Haiti

In Haiti, IOM works to reduce risk faced by urban and peri-urban communities, in particular around settlements for internally displaced persons. In collaboration with the Civil Defence Direction and local authorities at the commune and neighbourhood levels, IOM implements a diversity of actions to reduce soil erosion and prevent related hydro-meteorological hazards – such as floods and landslides. Structural and non-structural measures include building small-scale soil retention infrastructures, enhancing water drainage, reforesting slopes and promoting sustainable watershed management. Since the start of the programme in 2010, the Organization has constructed 187,748 metres of stone check dams, excavated 322,988 metres of contour canals and micro-basins, planted 1,392,725 trees, and constructed or rehabilitated 157,099 metres of drainage canals. These labour-intensive cash-for-work projects employ internally displaced persons who fled Port-au-Prince following the 2010 earthquake. Transfer of knowledge and ownership of the process to local communities, including internally displaced persons, should ensure that these slope stabilization micro-infrastructures can be maintained (and replicated), effectively reducing local risks in a sustainable manner. All interventions are supported by risk mapping at the community level, based on a methodology combining field-level and remote sensing data, with inputs from community members.

While the above interventions are highly context-specific and dependent on local hazards (current and future), capacities and priorities, IOM's implementation of relevant activities relies on key principles and approaches that are common across operational contexts. This includes:

Promoting environmental sustainability, striving to minimize negative impacts of activities on the local environment, including by using local renewable resources as much as possible.

- Developing local capacities, including by transferring skills and knowledge to local community members;
- Supporting local livelihoods, involving beneficiaries in the implementation of relevant activities, and turning projects into short-term income opportunities for the communities (e.g. through hiring local community members in cash-for-work schemes);
- Risk-informing all relevant interventions, looking at the whole landscape of potential risks (including those linked with natural hazards and tensions or conflicts), and providing specific support to the most vulnerable individuals, according to their specific needs and capacities;
- Promoting the participation of all community members and groups throughout the design and implementation of all activities.

Slow-onset events and processes allow for ample time for forecasting, anticipating and minimizing impacts on communities. Adequate information, anticipatory financing and early action supporting well-being and resilience of at-risk communities (often more along the lines of development interventions than traditional humanitarian action) are essential to minimizing displacement, too. To this aim, IOM also contributes to and uses a diversity of internal and system-wide risk identification instruments (e.g. the Inform risk index, and its preparedness platform).



Ethiopia has been affected by recurring droughts that have affected livelihoods and triggered population movements.
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B. PROMOTING MOBILITY (INCLUDING PLANNED RELOCATIONS) AS A STRATEGY TO MINIMIZE THE FACTORS COMPELLING PEOPLE'S MOVEMENT

Understanding the value that mobility has as a resilience-building and adaptation practice in the face of environmental pressures linked with slow-onset events and processes, IOM supports a variety of interventions aiming to allow people to move at all stages of a crisis, including as a way to prevent and minimize the socioeconomic and environmental impacts of slow-onset processes on affected or at-risk communities. Such activities include:

- Support to nomadic pastoralist communities to protect traditional transhumance routes in the face of droughts, localized intergroup resource conflict and other obstacles to mobility (including within national borders). This kind of interventions have combined livelihood support and protection of livestock, management and maintenance of transhumance routes with advocacy and awareness-raising for more effective migration policies.

Supporting pastoralist communities in the arid and semi-arid zones of Kenya

In the whole Sahel area, and specifically in north and north-east Kenya (an area impacted by droughts and variability of precipitations), IOM is promoting comprehensive support to pastoralist communities, which have been negatively impacted by recurrent drought and erratic rainfall. Many of these communities have been put under additional strain by large refugee influxes from Somalia (notably following the 2011 drought). In partnership with other international agencies, IOM has provided extensive support to these communities to preserve their traditional mobility-based livelihood model (cattle herding) while also promoting income diversification in order to mitigate risk.

- Promotion of temporary or circular labour migration schemes from areas affected by environmental degradation and natural hazards in order to protect and diversify livelihoods by facilitating institutional arrangements, transportation and access to labour markets.
- Mobilization of migrants and returnees as agents of development to promote adaptation and risk reduction practices in their home communities, and engagement of diaspora members and organization in interventions to support communities of origin facing environmental pressures.
- Planned relocations, as measure to reduce the exposure of vulnerable population to the impacts of slow-onset processes. This strategy is applied both to areas exposed to recurrent, intense hazards, and those facing irreversible ecosystem degradation, including (but not limited to) as a consequence of environmental change (e.g. sea-level rise). Planned relocations are complex processes that have profound implications on the risk landscape of relocated and other affected communities. They are high in cost and have the potential to deplete the human, social and economic capital of both relocated and host communities, thereby causing impoverishment and further vulnerability. They are difficult to apply to large areas or populations and are usually only considered as a last-resort option for the most at-risk groups. Experiences and success stories demonstrate that adequate participation of concerned households to the decision-making process and long-term support for their livelihood options is essential in designing and implementing relocation plans that can effectively reduce risk.¹⁷⁸ IOM is currently conducting an analysis of planned relocation processes in the Caribbean to determine existing policies, past processes and recommend adequate solutions to Caribbean States.

Relocation of Carteret communities in Bougainville, Papua New Guinea

The atoll communities of north-eastern Bougainville in Papua New Guinea reside on isolated and remote low-lying islands. They face slow-onset changes to their environment, including seawater intrusion and salinization of soil, soil erosion, land loss and climate variability, leading to, among others, food insecurity and increased vulnerability to disasters. In 2005, the Government decided that the 1,000 residents should be evacuated 100 kilometres away, 10 families at a time, to the larger island of Bougainville. IOM assisted with the relocation of the affected population. Finding land in Bougainville for the resettlement of evacuees was challenging: the island had just emerged from a civil war, and 96 per cent of the land area was governed by customary ownership and often subject to competing claims by landowners, so establishing clear titles was a complex process. Neither did the Carteret Islanders have sufficient resources to buy land for themselves. A community-driven initiative was instrumental to addressing the issue, with the Catholic Church donating enough land to support the relocated communities and their activities.

C. PREPARING FOR DISPLACEMENT IN THE CONTEXT OF SLOW-ONSET EVENTS AND PROCESSES

While taking measures to minimize the conditions that might compel people's movement is essential, it is just as important to recognize that many slow-onset events and processes will result in some degree of population displacement, as people flee to save their lives or access assistance. Preparing for these movements is key to saving lives and minimizing the impacts that displacement can have on both displaced persons and other affected communities. Disaster preparedness measures that account for population displacement are needed at all levels (local, national, international), and should be implemented by all relevant stakeholders. As part of its portfolio, IOM implements a variety of relevant activities, including:

- IOM works closely with States at all levels – global, regional national and local – to help them prepare for populations movements in the context of slow-onset events and processes, including by providing support for coherent and integrated policy development, building the capacity of policymakers on the nexus between environment and population movements, and by providing knowledge and evidence.
- As the global lead for the IASC cluster on camp coordination and camp management (CCCM) in disaster situations, IOM is committed to building the capacities of national and international authorities to anticipate and respond to disaster-induced displacement. This is essential for relevant actors to be able to set up effective and timely systems to address the needs of people living in displacement sites. IOM works to strengthen information management, coordination and operational capacities of governments, CCCM cluster partners and other humanitarian actors. These interventions are key to enhanced preparedness for displacement in contexts affected by slow-onset events and processes – such as for governments' responses to droughts in Ethiopia and Somalia.
- Setting up and maintenance of key preparedness infrastructure, including evacuation sites and Emergency Operation Centres, which allow people to flee to safe areas in case of needs and key government agencies to better manage responses associated with population displacement.
- Advanced planning of displacement sites and pre-positioning of relevant items, including pre-identification of procedures to source all needed materials and services.
- Capacity-building, awareness-raising and community engagement on disaster risk management at community level, including by defining and attributing roles and

responsibilities within communities for managing evacuations and displacement, and ensuring coordination of the community level with higher institutional levels to ensure effective responses to population displacement.

- Hazard monitoring and early warning systems, to anticipate the impacts of hazards and allow people to move in a more dignified manner in the face of disasters. In many slow-onset contexts, this can also be useful to anticipate environmental changes and minimize livelihood loss (e.g. planning for switching to different crops in a drought year), thereby potentially reducing a household's or a community's need to move out of a certain area.

IOM supports current efforts by the humanitarian system to shift from rapid response to early action, through strengthened preparedness and anticipatory approaches to funding (including forecast-based financing).¹⁷⁹ In the context of slow-onset processes early interventions allow not only to minimize potential displacement, but also to provide assistance to all the people affected (and moving) at early stages of the process. Moreover, as highlighted in the data section above (example on Mongolia), IOM's work to understand shifting patterns of movement can contribute to better preparedness for the whole response systems (including international and national actors).

D. PROTECT AND ASSIST THOSE INTERNALLY DISPLACED IN DISASTER SITUATIONS

In the face of the acute impacts of slow-onset events and processes, moving is often the only safe option available to the victims. At the same time, displacement can result in a variety of additional risks for those displaced, as well as for all other people and communities that are affected by their movement, including reduced access to resources, opportunities and services and increased exposure to natural and man-made hazards, violence and abuses. Humanitarian assistance and protection are therefore essential to make sure that the rights of displaced persons and their host communities can be upheld throughout their displacement. Through its engagement in a diversity of displacement contexts, and in collaboration with international and national partners, IOM supports a broad range of intervention to manage displacement and its impacts:

- Information management throughout all phases of displacement, which IOM performs through its DTM. This allows to locate populations needing assistance and protection, and assess their evolving needs, priorities and intentions throughout their displacement. IOM regularly captures, processes and disseminates this information through its available tools, providing a baseline for the action of the whole humanitarian and response system. The iterative, comprehensive and flexible nature of the tool is essential in the face of the evolving risks, movements and needs that are often associated with slow-onset crises.
- Support to evacuations, as a way to ensure that movements take place in a dignified manner, and that fleeing to safer areas is an option available to all community members, and the most vulnerable and less mobile in particular;
- Camp management, including all interventions to ensure the provision of services and assistance to displaced persons. This includes specific interventions to protect particularly vulnerable individuals within the displaced population, and address their pre-existing needs as well as reduce any additional vulnerability they might be facing as a consequence of displacement. This includes setting up communication practices and participation opportunities accessible to all displaced persons, and in particular the most vulnerable among them – including by creating fora and mechanisms for expressing specific needs and complaints, and follow-up mechanisms to address them.

- Mitigating impacts of displacement on the host communities. Active efforts are required to adequately manage rapid, large-scale population movements, in order to preserve the living standards of the receiving communities and avoid potential intracommunal tensions and discrimination. In addition to displacement planning, these interventions include:
 - ◊ supporting the capacities of local institutions to provide basic services, in order to avoid depleting existing standards of health care, education, transportation, and water and energy provision for the receiving community;
 - ◊ multiplying income opportunities, taking into account that the influx of population fuels the local market and economy;
 - ◊ promoting dialogue and trust among communities, especially if pre-existing tensions linked with cultural and ethnic differences exist;
 - ◊ avoiding situations of inequality vis-à-vis vulnerable members of the host community when offering support and assistance to displaced persons, by ensuring that displacement assistance is provided with consideration of pre-existing local conditions of vulnerability.

- Mitigating the environmental impacts of displacement, including all local negative effects that can be related with increased population presence and activities (e.g. pressures on local natural resources). This includes accounting for and addressing environmental concerns in the planning and management of displacement sites, including by:

- ◊ Adopting approaches that minimize the environmental impact of displacement management (e.g. use of renewable energies in the context of humanitarian assistance to displaced populations);
- ◊ Carrying out environmental assessments as part of displacement site selection;
- ◊ Ensuring that the procurement and disposal of materials necessary for constructing settlements and for providing water, sanitation and energy are compatible with local carrying capacities;
- ◊ Ensuring that all other interventions that support displaced persons and host communities (e.g. livelihood strengthening and diversification) are assessed and compatible with locally available natural resources and carrying capacity.

E. PROVIDE EFFECTIVE REMEDIES, OVERCOME PROTRACTED DISPLACEMENT AND SUPPORT DURABLE SOLUTIONS

Long-term approaches are required to sustainably address the challenges created by any displacement situation – and this is particularly the case for those linked with environmental events and processes that may span over long time periods or even be permanent. Issues common to any type of displacement, such as guaranteeing access to basic services and sustainable livelihood options, providing displaced persons with options to settle in safe accommodation on land which is not subject to environmental risk can be even more daunting in the face of the progressive degradation of ecosystems. While in most sudden-onset disaster contexts a majority of displaced persons will rapidly return to their areas of origin, in the context of slow-onset events and processes this might not be possible, resulting in protracted displacement and/or in the complete inability to return to irreversibly degraded environments. This has implications in the planning and management of displacement – as well as in the design of durable solutions, which, in scenarios in which areas of origin are becoming completely uninhabitable, needs to primarily focus on local integration and/or relocation of affected persons.

Whatever option may be available, return, local integration and relocation should be chosen freely by displaced persons. This requires providing sufficient, timely information to all displaced persons throughout their displacement process, as well as regularly capturing their intentions, priorities and needs, in order to understand their evolutions throughout the displacement phase and as conditions in areas of origin and other opportunities for durable solutions evolve. Participation of displaced persons and all other affected communities should be guaranteed throughout all decision-making processes, in order to prevent the creation of situations of heightened vulnerability.

Relevant actors should ensure that safe, dignified living is possible in the intended destination before closing camps, collective centres, transitional shelters and other receiving facilities. This requires providing people with skills and capacities that allow them to make a living in their area of destination, and that their livelihood options are compatible with local environmental conditions in the short and in the long term.

Moreover, and in particular in the case of progressively increasing environmental pressures, sustainable solutions to displacement should aim to establish a safer, more resilient community that can rely on sustainable livelihoods, effective social protection measures, and embedded DRR culture and practice. This requires informing all durable solutions interventions to a thorough assessment of environmental impacts and available carrying capacity, in order to promote livelihood, housing and other practices that are compatible with the evolution of local ecosystems. This is important also for the areas where temporary settlements are hosted, too: as part of camp closure it should be ensured that any waste produced is disposed of responsibly and the sites where these settlements were located are environmentally rehabilitated.

Implementing durable solutions is a complex, long-term process that needs to be sensitive to maintaining as far as possible social networks and community ties, local knowledge and capacities and the agency of affected persons and households. Solutions should take into account existing socioeconomic and legal issues, as well as the evolution of ecosystems, including current and future effects of climate change. Looking at available land and property issues is particularly important in the event of profound environmental changes which might result in land loss and property destruction, caused both by environmental change and humanmade processes, often require the permanent relocation of the affected population. Unresolved land issues and/or insecure land tenure can hinder all programmes for effective, durable solutions, and recognizing and protecting property rights, particularly for the most vulnerable individuals, as well as implementing fair and adequate compensation schemes, including finding alternative settlement solutions, are key factors in ensuring the long-term sustainability of any return, integration and relocation scheme. This requires:

- Recognizing and addressing property rights and needs of all individuals;
- guaranteeing adequate access to information, legal counselling and representation to secure rights;
- identifying and assessing potential obstacles in addressing land, property and housing issues, taking into account existing and potential conflicts over land and local natural resources;
- including land and property issues as early as possible in response and recovery processes;
- restoring and improving land administration systems based on a thorough understanding of existing land and property practices (especially customary tenure systems) and dispute resolution mechanisms, in order to avoid conflict.

IOM's interventions to support durable solutions include a variety of interventions to support the structural and socioeconomic recovery of affected communities, following the "build back better" approach and related principles. In the face of slow-onset events and processes some specific approaches also need to be adopted.

In the case of returns, this includes:

- Identifying the main risk factors that pressured people out of their settlements in the first place, and (if possible) designing risk reduction and adaptation measures that can minimize future impacts on communities and reduce their need to move in the future;
- restoring and enhancing essential assets and livelihoods, revitalizing local productive activities and markets and re-establishing local services;
- promoting new settlement and ecosystem management practices through education and training, in order to create safer and more sustainable living conditions;
- approaching returns comprehensively, including by considering the situation, needs and risks faced by those who have stayed behind.

In the case of local integration or relocation, this includes:

- Ensuring the full participation of both the receiving community and the population to be relocated, at all stages of planning and implementation, is essential in order to ensure sustainable and successful outcomes;
- ensuring that displaced populations enjoy legal status and political representation in the host community and guarantee that administrative frameworks allow for easy, low-cost registration and access to public services and political participation;
- providing integration support, such as information on procedures, services available, and rights and responsibilities;
- promoting the co-development of the displaced and host communities by maximizing the contributions of the former to the local economy and making full use of their skills and culture;
- supporting trust building and dialogue opportunities among the two communities.

As part of durable solutions planning and support, it should also be considered that many households and communities will plan for a new migration project to help recover. This requires understanding likely trajectories of these movements, facilitating movement to and integration in areas of destination, and might require providing people with skills and capacities that allow for a successful migration project. Planning in areas of destination is equally important, to prevent people's arrival to result in tensions and further vulnerability, including to local environmental hazards.

5. THE IMPACT OF HEALTH CRISES ON CLIMATE CHANGE-RELATED INTERNAL DISPLACEMENT



Madagascar is one of the countries most affected by climate change, cyclically ridden by droughts and floods, and battered by cyclones of increased intensity. © IOM 2017/Natalie OREN

The COVID-19 pandemic and related lockdowns have had extensive, complex and perhaps unprecedented impacts on local and long-distance mobility patterns, all over the world. Their impacts on displacement related to disasters, including slow-onset events and processes affected by climate change, have been (and will be in the foreseeable future) very diverse and context specific, and without any doubt very profound.¹⁸⁰

People who have been already displaced by disasters are more vulnerable to the direct and indirect impacts of the pandemic. Many are living in crowded locations in which physical distancing is simply impossible, and with very little access to hygiene items and personal protective equipment – or adequate care in case they get sick. Many of them might already suffer from poor health as a consequence of their journey or due to the deprivations they have experienced and could be at higher risk of developing severe symptoms. For other displaced persons, COVID-19 has translated in barriers to receiving assistance, as in most contexts humanitarian access has been reduced and the logistics behind the delivery of essential items and services disrupted.

COVID-19 is progressively spreading to areas that are environmentally fragile and vulnerable to the impacts of climate change. These areas are also often affected by conflict, poverty and fragile health systems – and characterized by high level of displacement. In these contexts, COVID-19 and related movement restrictions might hinder people's ability to move out of harm's way, including in the face of slow-onset events and processes. The presence of an active outbreak poses disaster-affected persons a difficult choice between the health risks linked to a potential infection during the evacuation or in displacement sites, and the risks they would be facing staying in areas at risk. This is likely to result in worse outcomes, as people's ability to make safe choices is further constrained. While this situation has been in full evidence in recent sudden-onset events (cyclones in the Pacific and South-East Asia, earthquake in Zagreb), it is likely already an unreported reality for many people affected by slow-onset events and processes.

Displaced persons, not unlike other people on the move around the world, might also be the target of abuses and xenophobia, as population movements continue to be commonly looked at as a risk factors by receiving communities. This situation might become even more acute for displaced persons in sites that are affected by COVID-19 – in these cases displaced persons moving out of these settings (e.g. to return to their home communities) might become a specific target of violent acts, which might hinder their ability to find durable solutions.

COVID-19 has undermined the well-being of many families and communities that relied on migration to manage and adapt to environmental stress and related insecurity.¹⁸¹ Many migrants who were away for work (in urban areas, in other rural areas, abroad) have lost their job and income, and cannot send back the remittances families back home relied upon. Many other people who were planning to migrate are stuck at home, sometimes with a growing debt and no way to pay it off. In other cases, migrants who were supposed to come back from a period abroad and help with the work in the productive season are stuck abroad. All these conditions are resulting, and will result in the coming weeks, months and perhaps years, in increasing hardship for these families, and acute vulnerability to future disasters. Faced with the impacts of upcoming events and processes, these people and households might not have

sufficient means to reduce risks, plan for migration or cope locally, and might be forced to leave in less safe and dignified manners – exposed to a variety of additional issues, including health and mental health impacts. On the other hand, as their resources are eroded, they might also end up with no options to leave at all, and become completely trapped in areas at risk.

The economic consequences of COVID-19 have also triggered the return of many laid off, destitute migrants to their home countries and locations. The case of Peru is emblematic in this regard.¹⁸² In many cases, these people's places of origin were located in environmentally fragile areas, in which outmigration allowed to balance and reduce local resource consumption and environmental pressures. The massive return of these people, especially if protracted over time as new migration opportunities don't become readily available, and their need to make a living (including through government-sponsored programmes in support of rural livelihoods) has the potential to exacerbate or trigger environmental degradation processes. This, in turn, might result in heightened impacts for the communities that depend on the degraded ecosystems months and years down the line – including potential displacement.

Lastly, COVID-19 is having significant consequences on policy dialogues and forums essential to addressing both climate change and other forms of environmental degradation, and related displacement. This might end up slowing policy progress and reduce commitments on the issue of disaster displacement in the context of climate change, deprioritizing it in global, regional and national agenda, fundraising efforts and public awareness – with potentially disruptive longer-term implications.

While the COVID-19 situation presents undeniable specificities, linked (among other things) to the pervasiveness and ubiquity of the pandemic's impacts and related mobility restrictions, it is just one of the situations in which climate change, health crises and mobility interact. Climate change is expected to result in an increased propagation of vector-borne diseases such as malaria, dengue, Zika and Chikungunya as well as in a variety of other impacts (such as those linked with water and food insecurity and malnutrition, heat stress) which make people more vulnerable to other health risks. Many people moving internally in the context of climate change, environmental degradation and natural disasters have specific physical and mental health needs, linked both to their migration experience and to their previous exposure to hazards. Yet, they often experience significant barriers to accessing essential health and social services, including in their own country.

In light of the above comprehensive, integrated approaches are essential to addressing the interconnected challenges of migration and displacement, climate change, and health. COVID-19 could represent an opportunity to build back better addressing an increasingly complex risk landscape through inclusive and environmentally sustainable interventions.

6. HOW CLIMATE CHANGE AND CONFLICT COMBINE TO ACT AS DRIVERS AND CAUSES OF INTERNAL DISPLACEMENT, AND WHAT SPECIFIC COMBINED EFFECTS THEY HAVE ON INTERNALLY DISPLACED PERSONS

The relationship between climate change, environmental degradation, insecurity, violence, conflict and displacement is much debated and often presented in a deterministic manner, despite being complex and subject to many uncertainties. Existing evidence on the causal relationship between these elements is however contradictory and overall inconclusive – and the discourse should be approached with caution.

This is not to say that environmental dynamics, including slow-onset processes related to climate change, cannot affect instability, insecurity and conflict. Changes in rainfall and temperature and ecosystem degradation do reduce the availability and quality of key resources (water, fertile land) as well as the well-being and security of people whose livelihoods depend on the environment. They can drastically undermine food and water security and institutional capacities to provide assistance to affected populations. All of this may exacerbate and escalate resource-related tensions – potentially leading to conflict. Whether directly, through their implications for people's safety, or indirectly, through their impacts on well-being and livelihoods, these tensions and conflicts can lead to outward migration or displacement from affected areas.

On the other hand, population movements (including those triggered by slow-onset events and processes) can become a factor of instability – and even more so in a context of an already changing environment with increasing resource pressures and existing tensions or conflicts in receiving areas.

While these linkages can potentially unfold as described, it should not be assumed they actually will. Degradation of natural resources, including if linked or not to climate change, does not automatically lead to conflict over resources – it can however exacerbate existing tensions and increase the risk of conflict in already-fragile contexts, especially when coupled with inadequate policies.¹⁸³ Arrival of newcomers in a certain area does not necessarily result in heightened environmental pressures and does not necessarily spark intracommunal tensions.

In various areas of the Sahel, desertification and drought have altered traditional transhumance routes. This has resulted in the encroachment of pastoralist communities in the remaining fertile areas, often those that were previously occupied by farmers.¹⁸⁴ The competing demand for fertile land and water resources for agriculture and grazing have on occasions led to intra-communal frictions – including in Darfur before the 2003 civil war.¹⁸⁵ If ecosystem degradation contributed to land disputes, however, the crisis could only escalate as it did because of brutal government actions against dissidents and rebels, reforms that destroyed local mediation and dispute resolution mechanisms, and pre-existing sociopolitical tensions. To mitigate such

conflicts and promote social cohesion between pastoralists and farmers, IOM Sudan has recently implemented climate smart livelihood activities aiming at supporting positive inter-tribal economic trade in sectors such as rice cultivation or fish farming.

In the Syrian Arab Republic, severe droughts and related crop failure resulted in large-scale food insecurity and mass migration of up to 1.5 million farmers to moved into cities.¹⁸⁶ While it has been highlighted how migration pressures might have contributed to sparking the 2011 civil war, the uprising took place in a complex historical and political context that predates the drought. Moreover, without decades of water mismanagement and the Government's poor management of the drought, the situation in rural areas would not have deteriorated as it did.

In the Lake Chad basin, competition over natural resources was prevalent before the current conflict – both ecosystem degradation and population inflows have however caused additional resource pressure in the area. Traditional conflict resolution mechanisms and community governance mechanisms largely failed as violence escalated. Even in such a complex environment, however, appropriate policies can work, as in the case of the land and water resource management systems implemented by the Nigerian Government in order to prevent intracommunal confrontations between pastoralists and farmers.¹⁸⁷

In the South American Andes, melting glaciers are disrupting water availability in countries which rely on glacier runoff for various purposes, notably including agriculture, electricity generation and house usage. This situation of increased water scarcity bears a potential for conflict both within and between countries.¹⁸⁸

7. SLOW-ONSET EVENTS AND PROCESSES, POPULATION MOVEMENTS AND URBAN AREAS

Slow-onset events and processes are more commonly associated with changes in the functioning of ecosystems that undermine livelihoods and security of rural people and communities. However, in a world that is increasingly urbanized and more broadly shaped by interactions, networks and socioeconomic and political dynamics that take place in urban areas, they need to be approached as an urban concern, too.

SLOW ONSET PROCESSES AND MOVEMENTS TOWARD URBAN AREAS

Cities are a natural destination for those whose livelihoods and security are at risk due to environmental dynamics, including slow-onset events and processes. In fact, urban migration and circulation are at the core of risk reduction strategies that allow people and household to avoid or mitigate their negative impacts.¹⁸⁹ Reaching cities allows rural residents to access diverse markets, services and economic opportunities and effective protection systems that are essential to adapting to environmental variability and change and to cope with (and recover) from the impacts of disasters. Remittances sent back to family and community members remaining in areas of origin also contribute to the implementation of adaptation measures, making families and communities more resilient to disasters and the impacts of environmental change, including climate change.

These movements are diverse and context specific, with cities being the destination of both better planned or anticipatory, and of more forced or responsive ones.¹⁹⁰ As climate change and other environmental changes continue to affect relevant environmental dynamics, it is expected that urban areas will be the main destination of affected persons¹⁹¹ – or at least of those among the affected who can afford to move and who have a skill profile matching the needs of urban labour markets.¹⁹²

While the movement towards the cities often makes it possible to save their lives, improve their longer-term prospects and manage environmental impacts in places of origin, many of those moving into urban areas will also face specific risks. Upon their arrival, they will often become part of poor urban populations that are excluded by formal land and housing and labour markets. When their arrival is not properly planned for or managed, migrants and displaced persons will often have little choice but to settle in underserved, marginal neighbourhoods, where they will face acute health, economic, environmental and security issues.¹⁹³ This is particularly the case for people moving to urban areas in which they have limited citizen rights (due to legal or administrative arrangements), little employment opportunities (e.g. including due to the different skills that are required in urban labour markets) or face particular forms of discrimination. It should also be kept in mind that risks for urban migrants transfer to their households of origin: whenever migrants are affected by hazards in cities, they also are less able to contribute to the well-being of their family back home, which could in turn lead to failure of adaptation or limited coping capacity and resilience in the face of slow-onset processes.

Migrants and displaced persons (regardless of the reason for their displacement) are often disproportionately represented among residents of informal, risky settlements, regardless of

the wealth level of the country concerned. In Brazil, many of the migrants from the north-west fleeing droughts have joined the favelas of major cities in the region and in the south of the country.¹⁹⁴ In Dhaka, people fleeing disasters and environmental degradation form a majority of slum dwellers, and some slums even bear the name of these disasters, like the “Bhola slum” which emerged following the displacement following cyclone Bhola in 1970.¹⁹⁵

In the context of urban displacement, including (but not exclusively) associated with slow-onset events and processes, it is often challenging and even counterproductive trying to tackle the situation of displaced persons in isolation. Interventions, instead, need to address comprehensively the needs and conditions of vulnerability of those displaced, of other people on the move and of host communities – tackling deeply-engrained dynamics of exclusion, marginalization and spatial segregation through development-oriented approaches that complement life-saving humanitarian efforts.

SLOW ONSET PROCESSES AND THEIR IMPACTS ON URBAN AREAS

The arrival of migrants and displaced persons, including those moving in the context of slow-onset events and processes, is a key demographic dynamic for urban areas of destination, transforming their size, functions, organization and culture.¹⁹⁶ All over the world, poorly managed urbanization is a key driver of disaster risk,¹⁹⁷ leading to the accumulation of vulnerable people and assets in areas highly exposed to hazards. These include slow-onset events and processes: heatwaves, coastal erosion, droughts and sea-level rise are only some of the phenomena that are extensively affecting urban areas all over the world. Meanwhile, typically urban hazards such as landslides and floods are being made more frequent and intense by the combined impacts of climate change and local ecosystem exploitation and degradation. Some of these events and processes, such as heatwaves, should even be considered hazards that primarily affect urban areas.¹⁹⁸ In addition, coastal zones (a place of settlement of choice for human communities throughout the ages) are (and will be) urbanizing at an extremely rapid rate – leading to a concentration of people in urban areas of all sizes exposed to sea-level rise and increasing coastal hazards, in context of high vulnerability linked with inadequate urban development decisions and planning practices.

In some cases, it is the very arrival of incoming people that can worsen environmental stress on, and degradation of, available natural resources, leading to slow-onset environmental issues for the whole community. This is for instance the case of Lima, where population inflows are associated with increases in demand of water in an area already suffering from water stress due to insufficient rainfall or the melting of glaciers.¹⁹⁹

All these environmental impacts are likely to affect patterns of movement (and immobility) of urban dwellers and incoming populations. There is a potential for movements out of urban areas which will be more frequently and intensely affected by slow-onset events and processes and into safer, more desirable locations with cooler climate or no exposure to cyclones and storm surges.²⁰⁰ However, it is likely that these movements will be diluted in time and will take place over very short distances, including as people move to other, less exposed areas in and around the same city.²⁰¹ Moreover, all mobility decisions will take place in the context of market dynamics that shape and reconfigure access to land, housing, services and employment opportunities in urban areas, which will partly hide the environmental reasons behind the different patterns of movement. This is the case, for instance, of so called “climate gentrification”, and ongoing process whereby people value and seek to move to higher areas less vulnerable to sea-level rise and coastal flooding,²⁰² making it once more very difficult to identify causes and patterns of movements that are specifically attributable to slow-onset processes. To add to this complexity, and regardless of the environmental impacts and out-migration context, it is also likely that movements into risky urban areas will continue as

people continue to respond to different conditions of deprivation and risk in areas of origin, and are left with (increasingly limited) secure options for settlement in areas of destination. These movements into, from and within urban cities will continue to overlap, shaped by (and contributing to) changing environmental conditions.

Once again, these processes call for inclusive approaches, which build on local capacities, expertise and mandates of governmental and non-governmental actors, to address immediate conditions of need and vulnerability of all, while preventing the creation of future risks. It is essential that this kind of work also includes displaced persons, migrants and other people who might be affected by the impacts of slow-onset processes in urban areas.

ENDNOTES

- 1 https://publications.iom.int/system/files/pdf/iom_constitution_en.pdf.
- 2 <https://governingbodies.iom.int/system/files/en/council/110/C-110-INF-1%20-%20IOM%20Strategic%20Vision.pdf>.
- 3 <https://environmentalmigration.iom.int/iom-strategy-migration-climate-change-and-environment>.
- 4 <https://environmentalmigration.iom.int/migration-environment-and-climate-change-sdgs>.
- 5 <https://environmentalmigration.iom.int/human-mobility-unfccc>.
- 6 <https://environmentalmigration.iom.int/technical-meeting>.
- 7 <https://environmentalmigration.iom.int/iom-pdd-task-force-displacement-stakeholder-meeting>.
- 8 <https://unfccc.int/sites/default/files/resource/10a1.pdf>.
- 9 MiGOF, adopted by IOM's Member States at the 106th session of its Council, in 2015, is available at <https://emergencymanual.iom.int/entry/17080/migration-governance-framework-migof>.
- 10 The document, endorsed by IOM's Member States at the Organization's Council in 2012, is available at: <https://www.iom.int/mcof>.
- 11 <https://emergencymanual.iom.int/entry/15815/ioms-humanitarian-policy-principles-for-humanitarian-action-pha#1,1580289116115>.
- 12 www.iom.int/sites/default/files/press_release/file/170829_IDP_Framework_LowRes.pdf.
- 13 www.iom.int/sites/default/files/our_work/DOE/humanitarian_emergencies/Progressive-Resolution-of-Displacement-Situations.pdf.
- 14 www.iom.int/sites/default/files/our_work/DOE/humanitarian_emergencies/Disaster-Risk-Reduction-Strategic-Action-Plan.pdf.
- 15 www.un.org/internal-displacement-panel/news/international-organization-migration-iom.
- 16 www.undrr.org/terminology/disaster.
- 17 <https://unfccc.int/resource/docs/2012/tp/07.pdf>.
- 18 For the linkages between heat waves and population movements: <https://environmentalmigration.iom.int/extreme-heat-and-migration> and water and migration: https://environmentalmigration.iom.int/sites/default/files/Paper_in%20print.pdf - while on the oceans: <https://environmentalmigration.iom.int/ocean-environment-climate-change-and-human-mobility>.
- 19 <https://environmentalmigration.iom.int/atlas-environmental-migration>.
- 20 www.ipcc.ch/sr15/.
- 21 www.nature.com/articles/d41586-019-03595-0.
- 22 www.pnas.org/content/117/21/11350.
- 23 www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2020-03-04_texte_43-2020_migration-impacts_2.pdf and https://environmentalmigration.iom.int/sites/default/files/migration_in_the_2030_agenda.pdf.
- 24 <https://environmentalmigration.iom.int/climate-change-and-migration-vulnerable-countries-snapshot-least-developed-countries-landlocked>.
- 25 <https://global.oup.com/academic/product/disaster-by-choice-9780198841340?cc=ch&lang=en&>.
- 26 www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2020-03-04_texte_43-2020_migration-impacts_2.pdf and <https://environmentalmigration.iom.int/books/assessing-evidence-migration-environment-and-climate-change-viet-nam>.
- 27 For some example of different institutional sources, see: www.internal-displacement.org/sites/default/files/publications/documents/201905-disaster-displacement-global-review-2008-2018.pdf, https://publications.iom.int/system/files/pdf/mecc_outlook.pdf and <https://www.unhcr.org/climate-change-and-disasters.html#:~:text=Most%20disaster%20displacement%20linked%20to,situations%20of%20conflict%20or%20violence>.
- 28 www.internal-displacement.org/sites/default/files/publications/documents/201912-ethiopia-slow-onset.pdf.
- 29 <https://publications.iom.int/books/world-migration-report-2020-chapter-9>.
- 30 www.nature.com/articles/s41599-020-0443-2.
- 31 As shown by the preliminary findings of the joint study by IOM and UNHCR on 'Legal, Policy and Institutional Coordination on Conflict and Disaster Displacement: A Review of Five Case Studies' (forthcoming).
- 32 www.ipcc.ch/report/ar5/syr/.
- 33 www.ipcc.ch/sr15/.
- 34 [https://media.ifrc.org/ifrc/wp-content/uploads/sites/5/2019/09/2019-IFRC-CODN-EN.pdf](http://media.ifrc.org/ifrc/wp-content/uploads/sites/5/2019/09/2019-IFRC-CODN-EN.pdf).
- 35 [https://cordis.europa.eu/project/id/603864/reporting](http://cordis.europa.eu/project/id/603864/reporting).
- 36 [https://environmentalmigration.iom.int/making-mobility-work-adaptation-environmental-changes-results-meclep-global-research](http://environmentalmigration.iom.int/making-mobility-work-adaptation-environmental-changes-results-meclep-global-research), www.mdpi.com/2076-0760/8/5/131 and www.eurekalert.org/pub_releases/2020-05/uol-hae052820.php.
- 37 www.worldbank.org/en/news/infographic/2018/03/19/groundswell---preparing-for-internal-climate-migration.
- 38 Government of Ghana (2016), Ministry of Interior – National Migration Policy for Ghana.
- 39 Republic of Kenya (2017), Ministry of State for Immigration and Registration of Persons - Draft Kenya National Migration Policy.
- 40 Federal Republic of Nigeria (2015), National Migration Policy 2015, available from: available from: https://publications.iom.int/system/files/pdf/national_migration_policy_2015.pdf.
- 41 Government of Uganda (2015), Ministry Of Internal Affairs - Uganda National Migration Policy - Facilitating Legal And Orderly Migration Final Draft, June, 2016.
- 42 Mauritius Migration and Development Policy and Action Plan, 2020 draft document, courtesy of IOM's Regional Office in Pretoria.
- 43 Implementation of the migration, environment and climate change-related commitments of the 2030 Agenda in https://environmentalmigration.iom.int/sites/default/files/migration_in_the_2030_agenda.pdf.

- 44 <http://documents.worldbank.org/curated/en/116011569399033038/pdf/Resettlement-Policy-Framework.pdf>.
- 45 www.refworld.org/publisher,NATLEGBO,,AFG,52f0b5964,0.html.
- 46 www.refworld.org/docid/5d39c4504.html.
- 47 Government of Nepal (2018) Climate Change and Migration Strategy Paper, courtesy of IOM Nepal.
- 48 <http://mra.gov.ge/res/docs/201406171444442634.pdf>.
- 49 [www.iom.int/sites/default/files/press_release/file/iom-vanuatu-policy-climate-change-disaster-induced-displacement-2018.pdf](http://iom.int/sites/default/files/press_release/file/iom-vanuatu-policy-climate-change-disaster-induced-displacement-2018.pdf).
- 50 Displacement Guidelines - In the context of climate change and disasters. [www.pacificclimatechange.net/document/displacement-guidelines-context-climate-change-and-disasters](http://pacificclimatechange.net/document/displacement-guidelines-context-climate-change-and-disasters) and Planned Relocation Guidelines: A framework to undertake climate change related relocation <http://fijiclimatechangeportal.gov.fj/document/planned-relocation-guidelines-framework-undertake-climate-change-related-relocation>.
- 51 [www.pacificclimatechange.net/sites/default/files/documents/Displacement%20Guidelines.%20In%20the%20context%20of%20climate%20change%20and%20disasters.pdf](http://pacificclimatechange.net/sites/default/files/documents/Displacement%20Guidelines.%20In%20the%20context%20of%20climate%20change%20and%20disasters.pdf).
- 52 https://reliefweb.int/sites/reliefweb.int/files/resources/National-Strategy-for-Climate-Induced-Displacement-21-Sept-2015_Bangladesh_0.pdf.
- 53 <https://unfccc.int/sites/default/files/resource/20180917%20WIM%20TFD%20I.1%20Output%20final.pdf>.
- 54 <https://unfccc.int/sites/default/files/resource/20180917%20WIM%20TFD%20I.1%20Output%20final.pdf>.
- 55 [www.mma.gov.br/images/arquivo/80182/PNA_Volume%20I_EN.pdf](http://mma.gov.br/images/arquivo/80182/PNA_Volume%20I_EN.pdf).
- 56 www.unfccc.int/sites/ndcstaging/PublishedDocuments/Myanmar%20First/Myanmar%27s%20INDC.pdf.
- 57 <https://studyres.com/doc/3245209/egypt-third-national-communication>.
- 58 www.unfccc.int/sites/NAPC/Documents%20NAP/Togo%20NAP.pdf.
- 59 www.unfccc.int/sites/ndcstaging/PublishedDocuments/Tuvalu%20First/TUVALU%20INDC.pdf.
- 60 <http://extwprlegs1.fao.org/docs/pdf/hon148589.pdf>.
- 61 <https://busquedas.elperuano.pe/normaslegales/ley-marco-sobre-cambio-climatico-ley-n-30754-1638161-1/#:~:text=La%20Ley%20Marco%20sobre%20Cambio,las%20medidas%20de%20adaptaci%C3%B3n%20y>.
- 62 Ministry of Environment and Forests. (2012). Second national communication of Bangladesh to UNFCCC.
- 63 www.unfccc.int/sites/NAPC/Documents%20NAP/National%20Reports/Sudan%20NAP.pdf.
- 64 https://publications.iom.int/system/files/indcs_and_ndcs.pdf.
- 65 www.climateandforests-undp.org/projects/malta-second-national-communication-may-2010.
- 66 www.unfccc.int/sites/NAPC/Documents%20NAP/Adaptation%20Strategies%20and%20Plans/Adapting%20to%20Climate%20Change%20-%20An%20Introduction%20for%20Canadian%20Municipalities.pdf.
- 67 www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Fiji%20First/FIJI_iNDCFinal_051115.pdf.
- 68 www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Rwanda%20First/INDCRwanda_Nov.2015.pdf.
- 69 <http://www.miambiente.gob.hn/media/adjuntos/pdf/DNCC/2018-05-10/16%3A35%3A53.282976%2B00%3A00/PNA.pdf>.
- 70 [https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Solomon%20Islands%20First/SOLOMON%20ISLANDS%20INDC.pdf](http://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Solomon%20Islands%20First/SOLOMON%20ISLANDS%20INDC.pdf).
- 71 https://reliefweb.int/sites/reliefweb.int/files/resources/TUV_2012_Te_Kaniva_CCpolicy.pdf.
- 72 www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Suriname%20Second/Suriname%20Second%20INDC.pdf.
- 73 www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Viet%20Nam%20First/VIETNAM%27S%20INDC.pdf.
- 74 www.latinamerica.undp.org/content/dam/rblac/docs/Research%20and%20Publications/Repository/Barbados/UNDP-RBLAC-SaintLuciaAdaptationPlanBB.pdf.
- 75 www.preventionweb.net/files/27772_dasgesamtenbf1-63.pdf.
- 76 Ministry of Environment and Forests. (2012). Second national communication of Bangladesh to UNFCCC.
- 77 <http://prdrse4all.spc.int/data/nauru-national-communication-under-unfccc-1st-2nd>.
- 78 [https://unfccc.int/sites/default/files/resource/namnc3.pdf](http://unfccc.int/sites/default/files/resource/namnc3.pdf).
- 79 www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Papua%20New%20Guinea%20First/PNG_IND%20to%20the%20UNFCCC.pdf.
- 80 [https://unfccc.int/documents/133269](http://unfccc.int/documents/133269).
- 81 www.climateandforests-undp.org/projects/malta-second-national-communication-may-2010.
- 82 www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/SI%20SNC%20FINAL_1-1.pdf.
- 83 [www.mma.gov.br/images/arquivo/80182/BOOK_PNA_Volume%20II%20v4.pdf](http://mma.gov.br/images/arquivo/80182/BOOK_PNA_Volume%20II%20v4.pdf).
- 84 [https://unfccc.int/documents/109438](http://unfccc.int/documents/109438).
- 85 www4.unfccc.int/sites/NAPC/Documents/Parties/National%20Adaptation%20Plan_Fiji.pdf.
- 86 www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/5823401_Namibia-NC4-1-Namibia%20-%20NC4%20-%20Final%20signed.pdf.
- 87 www.preventionweb.net/files/65230_07052019mappingthebaselineweb.pdf.
- 88 www.environnement.gouv.ci/pollutec/CTS3%20LD/CTS%203.16.pdf.
- 89 www.climasouth.eu/docs/Adaptation011%20StrategyEgypt.pdf.
- 90 www.ifrc.org/docs/IDRL/Disaster%20Policy%20for%20Uganda.pdf.
- 91 www4.unfccc.int/sites/NAPC/Documents/Parties/Kiribati-Joint-Implementation-Plan-for-Climate-Change-and-Disaster-Risk-Management-2019-2028.pdf.
- 92 <http://site.nemo.org.bz/preparedness-guidelines/>.

- 93 <http://extwprlegs1.fao.org/docs/pdf/mat160988.pdf>.
- 94 <http://countrysafeguardsystems.net/sites/default/files/Micronesia%20Disaster%20Risk%20ClimateChange%20Policy%202013.pdf>.
- 95 <https://ndma.gov.in/images/policyplan/dmplan/National%20Disaster%20Management%20Plan%20May%202016.pdf>.
- 96 <http://extwprlegs1.fao.org/docs/pdf/nam169289.pdf>.
- 97 [www.climasouth.eu/docs/Adaptation011%20StrategyEgypt.pdf](http://climasouth.eu/docs/Adaptation011%20StrategyEgypt.pdf).
- 98 https://reliefweb.int/sites/reliefweb.int/files/resources/NRU_2015_RONAdapt_Framework.pdf.
- 99 www.preventionweb.net/files/46449_vanuatuccdrrpolicy2015.pdf.
- 100 www.ifrc.org/docs/IDRL/NATIONAL_DISASTER_RISK_MANAGEMENT_PLAN_2011.pdf.
- 101 www.ndma.gov.pk/Documents/drrpolicy2013.pdf.
- 102 <https://knowledge.aidr.org.au/resources/national-strategy-for-disaster-resilience/#:~:text=Released%20in%202011%2C%20Australia's%20National,recover%20from%20emergencies%20and%20disasters>.
- 103 www.preventionweb.net/files/60595_maldivesstrategicnationalactionplan.pdf.
- 104 www.preventionweb.net/english/professional/policies/v.php?id=16676#:~:text=This%20plan%20is%20an%20outcome,addressing%20the%20disaster%20risks%20comprehensively.
- 105 www.environnement.gouv.ci/pollutec/CTS3%20LD/CTS%203.16.pdf.
- 106 www.preventionweb.net/files/43755_malawidrmpolicy2015.pdf.
- 107 <https://unfccc.int/sites/default/files/resource/WIM%20TFD%20II.2%20Output.pdf>.
- 108 See General comment No. 36 (CCPR/C/GC/36). For an application of the right to life with dignity to the impacts of climate change, see CCPR, Ioane Teitiota v. New Zealand, 7 January 2020 UN Doc. CCPR/C/127/D/2728/2016.
- 109 Paragraph 14 (f) of Decision 1/CP.16
- 110 Paragraph 25 of the Decision 1/CP.16.
- 111 Preamble, page 1. At: <https://unfccc.int/sites/default/files/resource/10a1.pdf>.
- 112 Decision 10, CP./24.
- 113 <https://unfccc.int/sites/default/files/resource/docs/2017/sb/eng/01a01e.pdf>.
- 114 <https://environmentalmigration.iom.int/addressing-land-degradation-%E2%80%93-migration-nexus-role-united-nations-convention-combat-desertification>.
- 115 www.unccd.int/sites/default/files/inline-files/Ordos%20declaration.pdf.
- 116 [www.unccd.int/sites/default/files/inline-files/ICCD_COP\(13\)_L.18-1716078E_0.pdf](http://www.unccd.int/sites/default/files/inline-files/ICCD_COP(13)_L.18-1716078E_0.pdf), Objective 2.
- 117 www.unccd.int/sites/default/files/sessions/documents/2017-09/ICCD_COP%2813%29_L.25-1716167E.pdf.
- 118 www.unccd.int/official-documents/cop-14-new-delhi-india-2019/22cop14.
- 119 <https://unfccc.int/sites/default/files/resource/WIM%20TFD%20II.2%20Output.pdf>.
- 120 www.refworld.org/docid/5afc3a494.html.
- 121 As endorsed by IGAD's committee of ambassadors, ministers of interior and ministers of labour in Khartoum, Sudan, on 25/2/2020.
- 122 www.preventionweb.net/files/65230_07052019mappingthebaselineweb.pdf.
- 123 www.forumsec.org/the-framework-for-resilient-development-in-the-pacific/#:~:text=The%20Framework%20for%20Resilient%20Development%20in%20the%20Pacific%20is%20a,risk%20management%20in%20the%20region.
- 124 www.preventionweb.net/files/7603_AFRICAREGIONALDRRSTRATEGYfullPDF.pdf.
- 125 [www.ifrc.org/Global/Publications/IDRL/regional/EAC_DRMMS\(2012-2016\).pdf](http://www.ifrc.org/Global/Publications/IDRL/regional/EAC_DRMMS(2012-2016).pdf).
- 126 www.unccd.int/sites/default/files/relevant-links/2017-07/Economic%20Community%20of%20West%20African%20States%20%28ECOWAS%29.pdf.
- 127 www.itacaddis.org/docs/2013_09_24_07_50_06_IDDRSI%20Strategy%20Revised%20January%202013.pdf.
- 128 www.unisdr.org/2016/amcdrr/wp-content/uploads/2016/11/FINAL-Asia-Regional-Plan-for-implementation-of-Sendai-Framework-05-November-2016.pdf.
- 129 www.preventionweb.net/english/professional/policies/v.php?id=58144.
- 130 www.sica.int/download/?odoc_120055_1_15102019.pdf.
- 131 www.unicef.org/easterncaribbean/media/1661/file/Reg%20CP%20protocol.pdf.
- 132 www.comunidadandina.org/StaticFiles/201761101634prevensionDesastres.pdf.
- 133 www.preventionweb.net/files/59464_asdrreportinsidefinalforweb.pdf.
- 134 <http://migration.igad.int/about/igad-regional-migration-policy-framework>.
- 135 https://violenceagainstchildren.un.org/sites/violenceagainstchildren.un.org/files/documents/other_documents/35316-doc-au-mpfa_2018-eng.pdf.
- 136 www.internal-displacement.org/sites/default/files/publications/documents/20181213-slow-onset-intro.pdf and <https://unfccc.int/sites/default/files/resource/WIM%20TFD%20II.2%20Output.pdf>.
- 137 www.tandfonline.com/doi/full/10.1080/17565529.2013.835707 and <https://environmentalmigration.iom.int/making-mobility-work-adaptation-environmental-changes-results-meclep-global-research>.
- 138 www.internal-displacement.org/expert-opinion/how-can-pastoralists-become-displaced-when-they-lead-traditionally-mobile-lifestyles#:~:text=Displaced%20pastoralists%20share%20many%20needs,the%20national%20laws%20and%20policies.
- 139 www.umweltbundesamt.de/sites/default/files/medien/1410/publikationen/2020-03-04_texte_42-2020_migration-literature-review_1.pdf.
- 140 www.internal-displacement.org/global-report/grid2020/.
- 141 https://report.ipcc.ch/srocc/pdf/SROCC_SPM_Approved.pdf and <https://www.nature.com/articles/s41467-019-12808-z>.
- 142 www.pnas.org/content/117/21/11350.
- 143 <https://displacement.iom.int/reports/afghanistan-%E2%80%94-drought-response-situation-report-26-april-2019?close=true>.
- 144 <https://displacement.iom.int/reports/afghanistan-%E2%80%94-baseline-mobility-assessment-summary-results-october%20%94december-2018?close=true>.
- 145 <https://displacement.iom.int/mongolia>.

- 146 <https://displacement.iom.int/burundi>.
- 147 <https://displacement.iom.int/reports/ethiopia-%E2%80%94-national-displacement-report-4-february-%E2%80%94-march-2020?close=true>.
- 148 <https://displacement.iom.int/reports/somalia-%E2%80%94-displacement-situation-report-site-assessment-round-7-july-august-2019?close=true>.
- 149 www.youtube.com/watch?v=3iZARK3ZWSc.
- 150 <https://dtm.iom.int/reports/madagascar-%E2%80%94-rapport-de-suivi-des-d%C3%A9placements-ao%C3%A9BBt-2018>.
- 151 For Mauritania, see: <https://dtm.iom.int/reports/mauritanie-%E2%80%94-rapport-sur-les-suivi-des-mouvements-transhumants-1-18-mars-%E2%80%94-16-mai-2019>, for Chad, see: <https://dtm.iom.int/reports/tchad-%E2%80%94-dashboard-de-suivi-des-mouvements-de-transhumance-3-d%C3%A9cembre-2019-%E2%80%94-mars-2020>.
- 152 <https://migration.iom.int/europe?type=arrivals>.
- 153 <https://medium.com/@UNmigration/climate-migration-in-mongolia-iom-is-helping-the-government-prepare-9dc73387a149>.
- 154 <https://environmentalmigration.iom.int/making-mobility-work-adaptation-environmental-changes-results-meclep-global-research>.
- 155 <https://environmentalmigration.iom.int/node/1155>.
- 156 <https://environmentalmigration.iom.int/assessing-climate-change-migration-nexus-through-lens-migrants-case-republic-mauritius>.
- 157 <https://environmentalmigration.iom.int/adapting-climate-change-through-migration-case-study-vietnamese-mekong-river-delta>.
- 158 [www.environmentalmigration.iom.int/country-profiles](https://environmentalmigration.iom.int/country-profiles).
- 159 <https://environmentalmigration.iom.int/migration-environment-and-climate-change-regional-policy-forum-southern-africa-and-indian-ocean>.
- 160 https://publications.iom.int/system/files/pdf/spaces_of_vulnerability.pdf.
- 161 https://publications.iom.int/system/files/pdf/mpp16_24june2014.pdf.
- 162 http://enriquefrias-martinez.info/yahoo_site_admin/assets/docs/CLIMATE_1.81125143.pdf, <https://web.flowminder.org/publications/unveiling-hidden-migration-and-mobility-patterns-in-climate-stressed-regions-a-longitudinal-study-of-six-million-anonymous-mobile-phone-users-in-bangladesh> and <https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1001083>.
- 163 <https://reliefweb.int/sites/reliefweb.int/files/resources/2E33B9CFFB3B8F7BC1256C7C004EFCAA-UNICEF.pdf>.
- 164 www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf.
- 165 www.researchgate.net/publication/267868094_Report_of_the_Indigenous_Peoples'_Global_Summit_on_Climate_Change.
- 166 www.refworld.org/pdfid/510a3d462.pdf.
- 167 www.unwomen.org/-/media/headquarters/attachments/sections/library/publications/2020/gender-climate-and-security-en.pdf?la=en&vs=419.
- 168 www.ilo.org/global/topics/child-labour/lang--en/index.htm and https://www.unicef.org/protection/57929_child_labour.html.
- 169 www.internal-displacement.org/publications/durable-solutions-drought-displacement-ethiopia.
- 170 www.alliancecpcha.org.
- 171 www.calltoactiongbv.com/.
- 172 www.odi.org/sites/odi.org.uk/files/resource-documents/12292.pdf.
- 173 <https://environmentalmigration.iom.int/human-rights>.
- 174 https://publications.iom.int/system/files/pdf/mecc_outlook.pdf.
- 175 IOM and UNHCR (forthcoming, 2020) Legal, Policy and Institutional Coordination on Conflict and Disaster Displacement: A Review of Five Case Studies. Provisional title.
- 176 www.cadri.net/en/who-we-are and <https://www.cadri.net/sites/default/files/cadriTools/modules/CADRI-DRMTool-HumanMobility.pdf.zip>.
- 177 The activities described in the following sections are a synthesis of a variety of reports, including: <https://publications.iom.int/books/compendium-iom-activities-disaster-risk-reduction-and-resilience>, <https://www.preventionweb.net/publications/view/71787> and www.preventionweb.net/publications/view/61539.
- 178 [www.brookings.edu/research/guidance-on-protecting-people-from-disasters-and-environmental-change-through-planned-relocation/](https://brookings.edu/research/guidance-on-protecting-people-from-disasters-and-environmental-change-through-planned-relocation/) and <https://www.unhcr.org/protection/environment/596f1bb47/planned-relocation-toolbox.html>.
- 179 https://cerf.un.org/sites/default/files/resources/cerf_ag_anticipatory-action_20181017_en_0.pdf.
- 180 <https://environmentalmigration.iom.int/blogs/more-health-crisis-assessing-impacts-covid-19-climate-migration>.
- 181 <https://environmentalmigration.iom.int/blogs/more-health-crisis-assessing-impacts-covid-19-climate-migration>.
- 182 www.nytimes.com/es/2020/04/30/espanol/america-latina/peru-virus-migracion-caminantes.html.
- 183 www.degruyter.com/view/journals/peps/22/4/article-p331.xml.
- 184 www.wilsoncenter.org/sites/default/files/media/documents/publication/ecsp_navigating_complexity_web.pdf.
- 185 [www.fmreview.org/climatechange/edwards](https://fmreview.org/climatechange/edwards).
- 186 <https://journals.ametsoc.org/doi/citedby/10.1175/WCAS-D-13-00059.1> and <https://www.pnas.org/content/112/11/3241>.
- 187 <https://reliefweb.int/report/nigeria/shoring-stability-addressing-climate-fragility-risks-lake-chad-region>.
- 188 www.dw.com/en/glacier-water-conflict-andes/a-16376190 and https://www.researchgate.net/publication/242500757_The_effects_of_climate_change_on_people_in_the_Andes_melting_glaciers_mean_drought_tension_and_conflict_for_Peru's_mountain_people_in_and_around_Huascaran_National_Park.
- 189 www.iom.int/wmr.
- 190 www.internal-displacement.org/sites/default/files/201909-niger-slow-onset-report-fr.pdf and <https://www.tandfonline.com/doi/full/10.1080/0966369X.2019.1640188>.
- 191 <https://openknowledge.worldbank.org/handle/10986/29461>.

- 192 www.iom.int/sites/default/files/our_work/ICP/MPR/IOM-CeciliaTacoli-30October2014.pdf.
- 193 <https://pubs.iied.org/pdfs/10725IIED.pdf> and <https://www.iom.int/world-migration-report-2015>.
- 194 www.fundacaosintaf.org.br/arquivos/files/Ebook%20impactos%20das%20mudancas%20climaticas%20no%20nordeste%20brasileiro.pdf.
- 195 www.tandfonline.com/doi/abs/10.1080/21632324.2015.1082231.
- 196 www.un.org/en/development/desa/population/events/pdf/expert/27/papers/II/paper-Skeldon-final.pdf.
- 197 <https://gar.undrr.org/part-ii-implementation-sendai-framework-disaster-risk-reduction-and-disaster-risk-informed>.
- 198 <https://ui.adsabs.harvard.edu/abs/2017ResPh...7.4294J/abstract>.
- 199 Bergmann et al. Assessing the Evidence: Climate Change and Migration in Peru. Potsdam Institute for Climate Impact Research and IOM. (forthcoming).
- 200 www.fmreview.org/cities and <https://doi.org/10.1371/journal.pone.0227436>.
- 201 www.theguardian.com/environment/2020/jan/28/how-the-venice-of-africa-is-losing-its-battle-against-the-rising-ocean.
- 202 <https://iopscience.iop.org/article/10.1088/1748-9326/aabb32/meta>.

KEY IOM READINGS

GLOBAL IOM

- 2020 *IOM and the Sendai Framework: A Global Review of IOM's Contributions to Strengthening Disaster Resilience*. <https://publications.iom.int/system/files/pdf/drr-2019-ar.pdf>.
- 2018 *Mapping Human Mobility and Climate Change in Relevant National Policies and Institutional Frameworks*. <https://unfccc.int/sites/default/files/resource/20180917%20WIM%20TFD%20I.1%20Output%20final.pdf>.
- 2018 *Mapping Human Mobility (Migration, Displacement and Planned Relocation) and Climate Change in International Processes, Policies and Legal Frameworks*. <https://unfccc.int/sites/default/files/resource/WIM%20TFD%20II.2%20Output.pdf>.
- 2018 *Taking Sendai Forward: IOM Progress Report on Disaster Risk Reduction and Resilience 2018*. www.iom.int/sites/default/files/our_work/DOE/humanitarian_emergencies/transition-recovery/drr/drr-report-2017-2018-1221.pdf.
- 2018 *Migration and the 2030 Agenda: A Guide for Practitioners*. https://publications.iom.int/system/files/pdf/sdg_en.pdf.
- 2017 *Migration in the 2030 Agenda*. https://environmentalmigration.iom.int/sites/default/files/migration_in_the_2030_agenda.pdf.
- 2014 *IOM Outlook on Migration, Environment and Climate Change*. <https://environmentalmigration.iom.int/iom-outlook-migration-environment-and-climate-change-1>.
- 2013 *Compendium of IOM Activities in Disaster Risk Reduction and Resilience*. www.iom.int/files/live/sites/iom/files/What-We-Do/docs/IOM-DRR-Compendium-2013.pdf.
- 2009 *Compendium of IOM's Activities in Migration, Climate Change and the Environment*. https://publications.iom.int/es/system/files/pdf/compendium_of_ioms_activities.pdf.

IOM and OHRLLS

- 2019 *Climate Change and Migration in Vulnerable Countries: A snapshot of least developed countries, landlocked developing countries and small island developing States*. <https://environmentalmigration.iom.int/climate-change-and-migration-vulnerable-countries-snapshot-least-developed-countries-landlocked>.

Ionesco D., D. Mokhnacheva D and F. Gemenne

- 2017 *The Atlas of Environmental Migration*. <https://environmentalmigration.iom.int/atlas-environmental-migration>.

Oakes R., S. Banerjee and K. Warner

- 2019 Chapter 9: Human Mobility and Adaptation to Environmental Change. In *World Migration Report 2020*. <https://publications.iom.int/books/world-migration-report-2020-chapter-9>.

Vigil, S., IOM and UNCCD

2019 *Addressing the Land Degradation – Migration Nexus: The Role of the United Nations Convention to Combat Desertification.* <https://environmentalmigration.iom.int/addressing-land-degradation-%E2%80%93-migration-nexus-role-united-nations-convention-combat-desertification>.

Mosler Vidal E., J.D. Tjaden and F. Laczko

2018 *The Global Migration Indicators 2018.* <https://environmentalmigration.iom.int/global-migration-indicators-2018>.

REGIONAL

IOM

2019 *La movilidad humana en la agenda climática de las Américas.* <https://publications.iom.int/books/la-movilidad-humana-en-la-agenda-climatica-de-las-americas-necesidades-y-oportunidades>.

RELATED TO COVID-19

Guadagno, L.

2020 *Migrants and the COVID-19 pandemic: An initial analysis.* <https://publications.iom.int/system/files/pdf/mrs-60.pdf>.

IOM INFOSHEETS

2015 *Contributions to the United Nations Convention to Combat Desertification (UNCCD).* <https://environmentalmigration.iom.int/contributions-united-nations-convention-combat-desertification-unccd>.

2016 *Ocean, Environment, Climate Change and Human Mobility.* <https://environmentalmigration.iom.int/ocean-environment-climate-change-and-human-mobility>.

2017 *Extreme Heat and Migration.* <https://environmentalmigration.iom.int/extreme-heat-and-migration>.

IOM POLICY BRIEFS

Neve J., R. Diniega, S. Bilegsaikhan and B. Mayer

2017 *The changing climates, cultures and choices of Mongolian nomadic pastoralists.* Policy Brief Series, Issue 1, Vol.3. <https://environmentalmigration.iom.int/policy-brief-series-issue-1-vol-3>.

Ghenis, A.

2016 *Making migration accessible: Inclusive relocation for people with disabilities.* Policy Brief Series, Issue 6, Vol. 2. <https://environmentalmigration.iom.int/policy-brief-series-issue-6-vol-2>.

Tangermann, J.S. and M. Traore Chazalnoel

2016 *Environmental migration in Morocco: Stocktaking, challenges and opportunities.* Policy Brief Series, Issue 3, Vol. 2. <https://environmentalmigration.iom.int/policy-brief-series-issue-3-vol-2>.

Pires Ramos, E., L. Lyra Jubilut, F. de Salles Cavedon-Capdeville and C. de Abreu Batista Claro

2016 *Environmental migration in Brazil: Current context and systemic challenges.* Policy Brief Series, Issue 5, Vol. 2. <https://environmentalmigration.iom.int/policy-brief-series-issue-5-vol-2>.

Schade, J.

2016 *Land matters: The role of land policies and laws for environmental migration in Kenya.* Policy Brief Series, Issue 1, Vol. 2. <https://environmentalmigration.iom.int/policy-brief-series-issue-1-vol-2>.

Entzinger, H. and P. Scholten

2015 Relocation as an adaptation strategy to environmental stress. Policy Brief Series, Issue 6. <https://environmentalmigration.iom.int/policy-brief-series-issue-6-relocation-adaptation-strategy-environmental-stress>.

WEBPAGES

- Human Rights-Based Approaches to MECC: <https://environmentalmigration.iom.int/human-rights>.
- Health and Migration, Environment and Climate Change: <https://environmentalmigration.iom.int/mecc-and-health>.
- IOM's series on COVID-19, migration and the environment: <https://environmentalmigration.iom.int/covid-19-pandemic-migration-and-environment>.
- Capacity for Disaster Reduction Initiative (CADRI): www.cadri.net/.

TOOLS

NRC, PDD, IOM, IDMC, UNHCR, the German Federal Foreign Office

2019 *Words into Action guidelines - Disaster displacement: How to reduce risk, address impacts and strengthen resilience.* <https://environmentalmigration.iom.int/words-action-guidelines-disaster-displacement-how-reduce-risk-address-impacts-and-strengthen>.

Government of Fiji

2018 *Planned Relocation Guideline: A framework to undertake climate change related relocation.* <https://environmentalmigration.iom.int/planned-relocation-guidelines-framework-undertake-climate-change-related-relocation>.

IOM, Georgetown University, UNHCR

2017 *A Toolbox: Planning Relocations to Protect People from Disasters and Environmental Change.* <https://environmentalmigration.iom.int/toolbox-planning-relocations-protect-people-disasters-and-environmental-change>.

IOM

2016 *Migration, Environment and Climate Change: Training Manual (Facilitators' Guide) - Module 2: Disasters and Mobility.* <https://environmentalmigration.iom.int/training-manual>.

RESEARCH PROJECTS

- Migration, Environment and Climate Change: Evidence for Policy (MECLEP). <https://environmentalmigration.iom.int/migration-environment-and-climate-change-evidence-policy-meclep>.

- ◊ Results from the MECLEP Global Research. https://publications.iom.int/system/files/pdf/meclep_comparative_report.pdf.
- ◊ Assessing the evidence:
 - Viet Nam
 - Papua New Guinea
 - Dominican Republic
- ◊ Pacific Climate Change and Migration (PCCM). <https://unfccc.int/news/pacific-islanders-faced-with-migration-can-benefit-from-paris-agreement>.
- ◊ Transhumance Tracking Tool – Chad. <https://dtm.iom.int/reports/chad-%E2%80%94-transhumance-tracking-tool-dashboard-1-august-2019>.

