Forced Migration Review

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Climate change: Choices for displaced people

Refugee Studies Centre
UNIVERSITY OF OXFORD

Forced Migration Review

Forced Migration Review (FMR) brings together diverse, knowledgeable authors – especially those with lived experience – to foster practical learning and discussion that can improve outcomes for forcibly displaced people. Our free flagship magazine is accessible to a global audience, online and in print. Related audio and visual content is available online.

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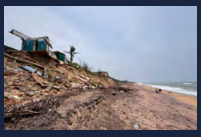

Cover photo: Eroding coastline at Podampeta, Odisha. Credit: Architesh Panda

From the **Editors**

As many gather for COP30 in Brazil later this month, it feels timely to be publishing this issue of FMR. The huge response we received to our call for proposals confirmed that the interplay of climate change and displacement is a key theme of interest to our readers, with many actively working on projects related to it. In FMR 76, authors from five continents share their unique perspectives to bring you a rich body of articles which we hope will inform and inspire, bringing fresh thinking and provoking debate.

As we have edited this issue, the voices of those most affected have constantly brought home to us the very real human impacts of a changing climate. In Micheal Gumisiriza's article (p.114), he shares a refugee called Chance's view from the ground: "The rains delay, and when they come, they come like they are angry. They come with a lot of force and end up washing everything away and destroying crops and property." Musa, a 45-year-old displaced father of five, highlights the complex relationship between different drivers of displacement on the shores of Lake Chad. "We left because of fighting, but we would have left anyway. The water is gone. The fish are gone. The land is sand now. How do you stay in a place that has nothing?" he tells us in Seun Bamidele's article (p.61).

Limited choices and painful trade-offs are recurrent themes in the issue but each and every author also offers ways forward which will expand options, increase agency and enable people facing displacement

Alice Philip

Jo Boyce

to shape the best futures they can for themselves and their wider communities. This kind of grounded hope is something which we surely need in the face of the huge challenges the climate crisis presents and we are so grateful to the authors for their committment to moving forward the debates and proposing solutions.

The Platform on Disaster Displacement (PDD) has been a long-time partner of FMR and they brought their considerable expertise to the development of the call and to every stage of the reviewing process. Particular thanks go to Sarah Koeltzow at PDD for her unwavering commitment to this project and her many hours of reviewing alongside our wonderful team of specialist reviewers: Evan Easton-Calabria, Hannes Einsporn, David Durand-Delacre, Jassin Irscheid, Hayley Kornblum, Juan Mendez, Nicodemus Nyandiko, Ferdinand Nabiswa Makhanu, Ranjan Panda, Annah Pigott-McKellar, Héloïse Ruadel, Yvonne Su, Shana Tabak and Paul Tacon.

We are very grateful as ever to the organisations who have supported FMR this year: UNCHR, as a core donor, and the University of Oxford as our host institution, and on this issue in particular the Robert Bosch Stiftung, the International Labour Organization and the Centre for Refugee Studies at York University, Canada.

Over the last few months, We have had to make some changes at FMR and have sadly had to say goodbye to long-time staff members Sharon Ellis and Maureen Schoenfeld, who had faithfully supported the Editors over many years, with special responsibilities for administration, finance and communications. We are really grateful for all they gave to FMR and wish them well in their next steps.

The next year marks an exciting new phase in FMR's development as we take time to reshape our work for the future. Much has changed since we launched over 30 years ago – in forced migration trends and in communication technology – but our commitment to being a forum where ideas spark discussion and enrich debates has not diminished. We remain focused on improving outcomes for displaced people through everything that FMR does. We are developing some new projects which we are looking forward to sharing with you over the coming months – do watch this space!

We would love to hear from you if you would like to be involved in FMR in any way over the coming year or have topic suggestions to share with us. We are looking for new partnerships and collaborations and await your email. We will also be launching a readership survey in early 2026 and invite you all to help shape our future with your responses.

With best wishes,

Alice and Jo
FMR 76 Editors

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We are grateful to the following donors: Robert Bosch Stiftung, UNHCR, the International Labour Organization and the Centre for Refugee Studies at York University, Canada. We would also like to thank all our authors; advisors on this issue (Atle Solberg, Sarah Koeltzow from the Platform on Disaster Displacement, Jassin Irscheid and Hannes Einsporn at the Robert Bosch Stiftung, Kari Diener, Sam Huckstep, Sarah Miller, Steven Miron and Jocelyn Perry) and all our reviewers (listed in full on p.3).

FMR Staff who worked on different stages of this issue: Alice Philip (Managing Editor), Emily Arnold-Fernández (Associate Managing Editor), Catherine Meredith (Deputy Editor), Jo Boyce (Deputy Editor, maternity cover), Maureen Schoenfeld (Communications and Finance Assistant) and Sharon Ellis (Administrative Assistant).

Foreword

Speaking of 'choice' in the context of people being forced to move amidst the climate crisis can feel audacious. What options do people displaced by climate impacts really have? Their decisions are made under conditions of uncertainty, amid shrinking options for migration and mobility and dwindling international solidarity.

However, this issue reminds us not only why we should work towards more choice but also provides us with insights into how this could be done better. The contributors critically reflect on challenges and solutions from across the world: from innovative approaches in climate financing in the Philippines and the vital role of refugee leadership in governance structures in Uganda and Pakistan, to rights-based planned relocations in Latin America, Africa, the Pacific, and across Asia as a complex process requiring careful consideration of cultural ties, livelihood reconstruction, and community participation to avoid merely shifting vulnerability to a new location. The issue also investigates the use of digital technologies to inform climate displacement responses and critically assesses migration pathways, decent economic opportunities, and sustainable livelihoods in high-income countries like Canada, Australia and New Zealand.

From rising sea levels threatening coastal populations to the intensifying frequency and severity of natural hazards, the climate crisis is rendering homes uninhabitable and futures uncertain for millions – especially for those who have been least responsible for its causes. Collectively, the contributions to this issue emphasise that responses to climate displacement must be proactive, rights-based and human-centered, moving beyond reactive measures. The international aid system, however, is undergoing a rapid transformation, driven significantly by sustained and severe cuts in aid budgets. This situation should give even more urgency to questions of how international solidarity is organised, and who participates in its decision-making.

At the Robert Bosch Stiftung, our objective is to shape migration policy, governance and practice in a manner that upholds human dignity through far-sighted, inclusive approaches. Whether it is our work on access to climate finance, on mechanisms that support agency and choice, or on translating policy into action, we believe centring affected communities as integral partners is essential to forging effective and just pathways forward.

The articles in this issue underscore that effective and sustainable solutions are those in which affected communities are not merely recipients of aid, but active decision-makers in shaping their own futures. Integrating their knowledge and perspectives with innovative tools and support – national and international – serves to enhance dignity and agency for people as they navigate the accelerating impacts of climate change.

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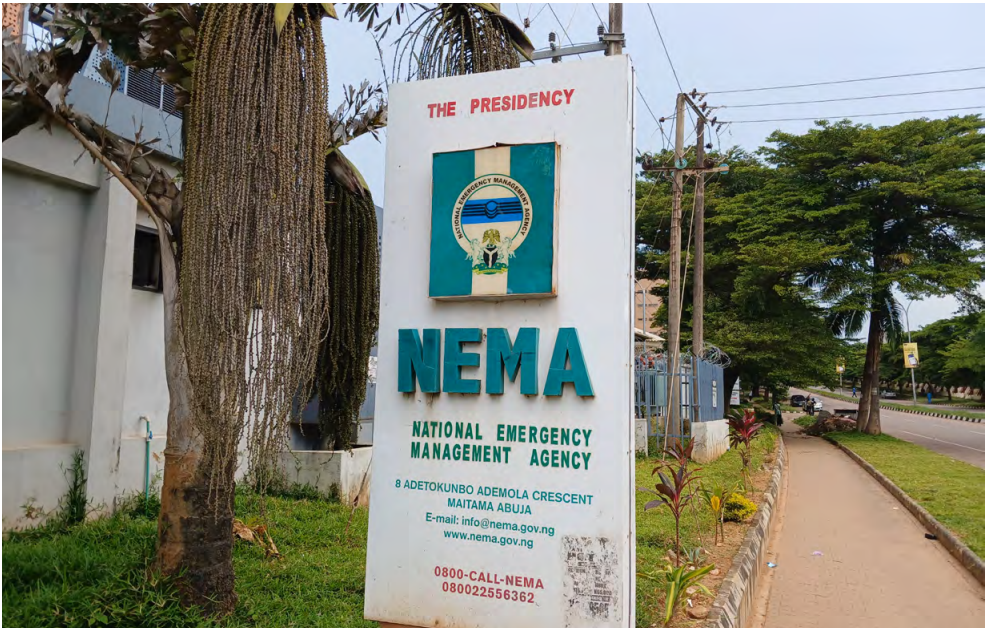
Adapting to climate uncertainty in Nigeria

Taofik Oyewo Hussain

Communities repeatedly displaced by floods in Nigeria are not passive victims. They are relocating, supporting each other and innovating to adapt, efforts that deserve recognition and better support amid intensifying climate impacts.



National Emergency Management Agency (NEMA) headquarters, Abuja. Photo: Taofik Oyewo Hussain

Every rainy season, communities brace for the now-familiar threat of flooding. In recent years, recurrent seasonal floods have devastated large swathes of Nigeria, from riverine villages in Kogi to the creeks of Bayelsa and farmland belts in Jigawa. In 2022, the country suffered its worst flooding in a decade, inundations that affected 4.4 million people and forced more than 2.4 million from their homes.[1] Even lesser floods uproot thousands annually, especially in low-lying communities along rivers like the Niger and Benue. Lacking consistent institutional support, residents of flood-prone areas have devised their own ways to survive and adapt.

One common strategy is self-initiated relocation. Many families preemptively move valuables and loved ones to higher ground or nearby towns when severe rains are forecast. In some cases, whole communities have gradually migrated away from riverbanks after consecutive floods. Such moves are usually organised informally – for example, villagers might pool resources to transport people by boat or truck to safer locations.

Without government relocation schemes, these grassroots evacuations can mean the difference between life and death.

Mutual support systems during crises are equally important. Those who remain behind often shelter neighbours in sturdier buildings on higher land. Host communities in drier areas take in displaced relatives and even strangers, offering shelter, food and small jobs – a dynamic of people helping people that springs from solidarity. During devastating floods in Mokwa (Niger State) in 2025, for instance, local youth groups formed impromptu rescue teams. They helped evacuate the vulnerable and ferried families to relief camps when official responders were overwhelmed.[2] Such community initiatives and teamwork have repeatedly filled gaps left by slow external assistance.

Communities also engage with early warning information in practical ways. Nigeria's agencies issue seasonal flood outlooks and alerts, but these warnings only save lives if they reach and motivate local people. In areas with good radio coverage, residents tune in to weather forecasts and pass on urgent warnings through village leaders or mobile phone networks. Where available, community volunteers (including Nigerian Red Cross members) help disseminate alerts and organise evacuations, translating technical warnings into local languages and actionable advice. These efforts reflect a growing understanding that timely information can be as critical as physical relief supplies.

Finally, many at-risk communities have adapted their physical environment and routines to live with flooding. Over years of recurrent floods, residents have learned to elevate and reinforce their homes. In some flood-prone villages, families literally live above the water: they have built raised platforms in their houses and move up to these lofts when floodwaters arrive.[3] People navigate inundated streets on canoes, makeshift rafts or wooden walkways, maintaining a semblance of daily life until the waters recede. Others improvise flood defences by piling sandbags, digging drainage channels or clearing debris from waterways when storms loom. Such measures are modest and often temporary, but they illustrate how local knowledge and ingenuity are being used to reduce harm. Community elders recall traditional warning signs – for example, unusual animal migrations or river level markers carved into trees or riverbanks that indicate previous high-water levels which help them gauge when flooding is imminent and decide when to relocate – that still complement modern forecasts. In effect, those on the frontlines of Nigeria's floods are drawing on any tools available to protect their lives and livelihoods.

Underlying challenges shaping decisions

While local resilience is remarkable, it unfolds within harsh constraints. Structural challenges – from insecure land tenure to deep poverty and policy gaps – shape the decisions available to displaced people. These underlying factors often limit community initiatives to short-term coping rather than long-term solutions.

One major challenge is land insecurity. Many flood-affected families live on marginal lands: riverbanks, wetlands or informal settlements that are highly exposed to floods. They may not hold formal title to their land, which leaves them vulnerable both to natural hazards and to eviction without compensation. If a community decides to relocate to safer ground on its own, they face uncertainties about ownership and rights in the new location. In some instances, displaced people who settle on unused lands have later been forced off when the legal owner or authorities lay claim. This precarious

tenure situation makes it difficult for people to permanently move away from danger. Instead, many return to the floodplain after each disaster, rebuilding in place even when they know the risk – because at least there they have some claim to land or housing. As Nigeria's population grows and land pressures increase, competition for safe sites is intensifying, further constraining options for resettlement.

Poverty is another critical factor. Most communities hit hardest by floods are low-income rural or peri-urban populations with few savings or assets. For them, relocating is not a straightforward decision as they have to weigh up the economic consequences. Moving to a new home on safer ground requires resources to purchase land or rent housing, to transport families and belongings, and to establish livelihoods afresh. Those resources are usually out of reach. Likewise, investing in flood-proof infrastructure (such as concrete houses on stilts or elevated grain storage) is often impossible for low-income households without external support. As a result, people make pragmatic choices to cope with what they have. For example, a farming family might choose to stay near the river despite annual floods because that is where their farmland is; moving could mean losing their income entirely. In this way, poverty forces trade-offs between physical safety and economic survival. It also means that when floods do hit, the poor suffer disproportionately: they often lack insurance, savings or access to credit to recover, trapping them in a cycle of vulnerability.

A further challenge is the limited and uncoordinated institutional response, which leaves gaps that communities must try to fill. Nigeria's emergency management framework spans federal, state and local agencies, but in practice it has struggled with fragmentation and inconsistent support. The National Emergency Management Agency (NEMA) routinely warns states about anticipated flooding and urges preventive measures, yet implementation on the ground is uneven. Local officials may ignore alerts due to lack of funds or political will, and disaster preparedness plans are often rudimentary or non-existent. Early warning information, for instance, does not always filter down to remote villages in time. According to Nigeria's Hydrological Services Agency, efforts to prevent and adapt to flooding have long been "fragmented and reactive," typically "left to humanitarian responses at the last minute".[4] This reactive mode means that many communities only see officials after the damage is done, arriving with blankets and food but no lasting solutions.

Policy gaps exacerbate this problem. Nigeria endorsed a National Policy on Internally Displaced Persons in 2021, recognising climate-related displacement and calling for better prevention and durable solutions.[5] However, coordination and funding to implement such policies remain weak. Disaster management responsibilities are not clearly delineated across government levels, and climate adaptation has yet to be fully integrated into local development plans. The result is that displaced people frequently fall through the cracks. For example, there is no systematic programme to relocate communities out of high-risk flood zones, nor to support them in rebuilding on safer land. Instead, relocation tends to happen ad hoc, if at all. Similarly, relief aid often addresses immediate needs but not the underlying vulnerabilities. Displaced families might receive food and tents for a few weeks, but then be left on their own to rebuild in the same hazardous location.

These structural issues limit the choices that people have when facing displacement. Often, their only viable options are ones that

trade one risk for another. If they stay in place, they risk lives in the next flood; if they move to a crowded displacement camp or an urban slum, they might escape high water but face loss of livelihood, social ties and dignity. It is telling that even after horrific floods, many survivors express a desire to return home quickly – not because it is safe, but because it is home and they lack alternatives. Without addressing land access, poverty alleviation and coordination between relevant authorities and actors, community coping strategies can only go so far. Local ingenuity keeps people alive, but it is stretched to its limits by these broader forces.

Agency and dignity in uncertainty

Despite the constraints, people exercise agency in how they respond to climate displacement and acknowledging this agency is both ethically and practically important. Far from passive victims, Nigerian flood survivors are active decision-makers: they weigh their limited options, make calculated trade-offs and take collective action to safeguard what they value. Recognising this reality is key to designing support that reinforces rather than undermines their efforts.

Agency in this context can be seen in small but meaningful acts of choice. It is evident when families decide, on their own terms, when to evacuate and what to carry with them. It appears when community members organise a meeting to demand that local authorities repair a broken dam or dredge a clogged river channel. It is also reflected in the pride people take in rescuing neighbours or recovering reusable materials from the wreckage of their homes. These actions demonstrate a determination to retain control over their lives, even amid chaos. They are expressions of human dignity – a refusal to be defined solely as helpless victims of disaster.

At the same time, the agency that displaced people can exercise is constrained by circumstances largely beyond their control. There is an ethical imperative for government and humanitarian actors to expand the realm of choice available to those at risk. Practically, this means any interventions should start by listening to the affected communities. Policies and programmes will be more successful if they are informed by the experiences and priorities of the people they aim to help. For example, if a community is reluctant to move from a floodplain, there may be cultural, economic or historical reasons for it – perhaps the land is ancestral or vital for their livelihood. Understanding these perspectives could lead to solutions that respect people's attachment to place (such as embankments or elevating homes), or at least lead to relocation plans that come with appropriate compensation and community input.

Supporting agency also means investing in what communities are already doing right. External assistance can amplify local strategies by providing resources and expertise. For instance, since host families generously accommodate displaced people, aid agencies and government programmes could offer those hosts some support – whether food, cash or materials – to ease the burden and encourage this solidarity to continue. Community early-warning and response teams, already active in many locales, could be trained and equipped as an official part of disaster management, bridging the gap between national systems and the grassroots. When flood survivors rebuild, providing them with technical guidance or grants to rebuild more safely and stronger can transform a purely reactive recovery into an opportunity to reduce future risk. These approaches treat affected people as partners with agency, not just beneficiaries.

It is also important to be cautious about romanticising resilience. The fact that Nigerian communities adapt resourcefully does not absolve authorities of responsibility. On the contrary, it calls for more accountable governance that works in tandem with citizens. The courage and creativity of those at the frontlines of climate impacts should be met with an equally committed effort to address structural problems. This includes accelerating initiatives like the National Adaptation Plan (NAP) – which outlines how the country will adapt to climate change in the medium- and long-term – to systematically reduce disaster risk.[6] It also means improving policy coordination – for example, ensuring that early warning information is not just issued nationally but is translated into local action plans with clear roles for state and community actors. A climate security approach centred on human security would prioritise safeguarding people's livelihoods and rights in the face of recurrent hazards, not just physical protection.

Ultimately, affirming displaced people's agency is about upholding their right to a say in their own future. Whether deciding to rebuild or relocate, they deserve to be consulted and to lead lives of dignity, not perpetual dependency. As climate uncertainty grows, Nigerian communities will continue to navigate difficult trade-offs. Policymakers, humanitarian workers and donors can best help by supporting the choices people are already making and by widening the range of good choices available. That means recognising local initiatives as the first line of defence, strengthening them with better infrastructure and services, and crafting inclusive policies that give those most affected a voice. In this way, the resilience and resourcefulness of ordinary people can be the cornerstone of a more effective and humane response to climate-induced displacement in Nigeria.

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Leading in displacement: refugees at the forefront of climate action

Ayoo Irene Hellen, Qiyamud Din Ikram and **Jocelyn Perry**

Refugee voices are excluded from key decision-making spaces related to climate change, but their leadership is crucial for the creation of fair and effective policies. Three case studies highlight opportunities for input, as well as the barriers that remain.

Despite being particularly affected[1] by climate-related impacts, refugees[2] are routinely marginalised in global climate policy frameworks, negotiations and access to climate finance. Their lived experiences, adaptive strategies and innovative local solutions remain underrepresented.

Recent developments, such as the launch of the 'Refugees for Climate Action' network at COP29 by UNHCR, signal a growing recognition of the need to amplify refugee voices in climate discourse. However, meaningful inclusion remains rare. The result is a loss of refugees' expertise in global conversations and lower adaptive capacity for refugees in response to climate change.

Drawing on the expertise of leading refugee climate advocates, this article argues for a paradigm shift from viewing refugees solely as vulnerable victims to recognising them as agents of change. By including refugee perspectives, climate policies can become fairer, more effective and better suited to the needs of those most affected.

Barriers to equitable access and participation

Displaced populations face a complex web of systemic barriers that hinder their meaningful participation in climate governance and their ability to access the resources necessary for effective adaptation. Central among these challenges is the restrictive legal and political environment in many host countries, where refugees often lack fundamental rights that would enable them to engage fully in public life, including in climate policy discussions and advocacy. Without legal protections and formal recognition, refugees encounter mobility restrictions and limited opportunities to organise or participate as stakeholders.

This legal marginalisation is compounded by a widespread lack of access to decision-making spaces at multiple levels. Refugees are generally excluded from local climate fora and national climate processes, such as National Adaptation Plans (NAPs), which outline how countries will adapt to climate change in the medium- and long-term, Nationally Determined Contribution (NDC) processes, which set out their commitments on greenhouse gas emissions, and disaster preparedness efforts.[3]

At the international level, the absence of official refugee recognition or accreditation within multilateral spaces such as the UN climate change processes and institutions – the UN Framework Convention on Climate Change (UNFCCC), Kyoto Protocol and Paris Agreement – means refugees have little or no voice in global climate policymaking.

Social perceptions and marginalisation further isolate refugees, as negative stereotypes portray them as passive recipients of aid rather than as active agents of change. This

stigmatisation diminishes collaboration opportunities with host communities and decision-makers.

Finally, refugees are often excluded from international and national climate funding and technical assistance schemes due to procedural complexity, lack of information, and structural barriers – such as high costs of travel and restrictive visa regimes.

Such exclusion leads to climate policies that rarely address the specific vulnerabilities and needs of displaced communities, or incorporate their knowledge and expertise into designing and implementing solutions. Nevertheless, three examples from across the world highlight opportunities for greater refugee inclusion in key climate response processes, and the obstacles that remain to be overcome.

Disaster response in Pakistan

Disaster response in Pakistan highlights entrenched structural inequities, with Afghan refugees – among the world's largest and longest-standing displaced populations – frequently marginalised in disaster planning and relief efforts. Refugee camps are often situated in vulnerable locations such as on riverbanks, in floodplains and on unstable slopes, exposing residents to recurring hazards like monsoon floods. During devastating floods in 2010 and 2022, refugees faced the destruction of shelters, loss of livelihoods and disruption of basic services. However, their access to timely and adequate assistance lagged behind that of host communities, revealing significant gaps in inclusive disaster risk governance.

Compounding this exclusion, formal disaster risk reduction (DRR) strategies rarely address refugee-specific vulnerabilities. Early warning systems commonly bypass refugee settlements, forcing communities to depend on informal communication networks, including youth-led WhatsApp groups, to disseminate urgent flood alerts. These grassroots efforts underscore refugees' resilience but also reflect systemic neglect.

Legal restrictions, such as lack of secure land tenure and limitations on property rights, prevent refugees from building permanent, flood-resilient housing, trapping them in cycles of repeated loss. Yet despite these barriers, refugee communities demonstrate agency by reinforcing shelters with available local materials, improving drainage systems, elevating living spaces to prevent flood damage, and mobilising collective support to protect vulnerable community members. These adaptive survival strategies highlight refugees' resilience but remain stopgap solutions that cannot replace the long-term security and stability provided by permanent resilient housing.

To create more effective and equitable disaster responses, refugee settlements must be integrated into provincial and national DRR frameworks, with guaranteed access to early warning systems and investments in resilient infrastructure tailored to their specific contexts. Recognising refugees as active partners with invaluable local knowledge could transform Pakistan's disaster governance from reactive exclusion to inclusive resilience, benefiting both displaced and host communities amid escalating climate threats.

Uganda's National Adaptation Plan

Refugee-Led Organisations (RLOs) are already doing important work to mitigate and adapt to the impacts of climate change at the grassroots level in Uganda. However, these organisations face significant challenges: they have limited access to funding and technical assistance and are often excluded from key climate fora and decision-making spaces.[4]

The Government of Uganda has long been

heralded as a model of progressive refugee policy, welcoming refugees and supporting a settlement model that enables refugees to work and farm, a model that contrasts with the more restrictive encampment and employment policies of some refugee host countries. For this model to continue to be sustainable under worsening environmental conditions, refugees must be supported to transition to less resource-intensive energy sources and to adapt their farming techniques and homes to worsening drought, heat and storms.

A key element to this process is the development and implementation of Uganda's National Adaptation Plan (NAP), which is currently underway. Refugees have significant expertise to contribute to this process but must be informed of how the NAP process is being conducted and how they can contribute to it. There must also be resources for them to participate, including for their attendance at consultations and participation on the NAP Committee.

Uganda's 2023 Global Refugee Forum (GRF) pledge committed to including "refugees and their specific situations in its nationally determined contributions and adaptation plans," and this must include the resources for meaningful inclusion, rather than just tokenistic representation by refugees in discussions.

If successful, the partnership between RLOs and the Government of Uganda can provide lessons for the inclusion of refugees in NAPs and NDCs around the world. As numerous other countries made similar GRF pledges, they can and should make progress on this inclusion by the next GRF in 2027 as well. These lessons can be amplified by the UNFCCC's Task Force on Displacement under the Executive Committee of the Warsaw International Mechanism for Loss and Damage as well, as part of their implementation of the *Technical guide on integrating human mobility and climate change linkages into relevant national climate change planning processes*.

UN Climate Change negotiations

UNFCCC processes are party driven, meaning they are led by countries that are members of the Framework, Protocol, and Agreement. This participation structure leaves refugees without a seat at the table during annual Conference of the Parties (COP) meetings and mid-year Subsidiary Body (SB) meetings.

As part of recent COP and SB meetings, Refugees International's delegation has included all three authors of this piece. We conducted pre-COP consultations with refugee leaders to collect their input and shared their perspectives via official side events and Pavilion events, bilateral meeting and press briefings.[5] However, as 'observer' organisations, civil society groups cannot actively participate while countries debate and decide. Three avenues offer promising options for greater inclusion of refugee perspectives and reflection in UNFCCC decisions.

First, civil society organisations should expand their outreach to refugee communities, conduct pre-COP consultations with a diverse array of refugee leaders and include more refugees as part of their official delegations.

Second, countries often consult with civil society ahead of formally determining their COP positions. Countries should also conduct consultations with refugee communities or invite them to these civil society meetings as well. As a result, country perspectives may more accurately reflect refugees' concerns and input.

Finally, refugees must have a seat at the table as negotiators themselves as most host countries are likely to prioritise national perspectives over those of refugees in

the case of divergent perspectives. While refugees are certainly not a monolithic group, they have some similar experiences and concerns across contexts. Through support for a refugee delegation, refugees could develop common positions much as countries do, and through official recognition at UNFCCC sessions, they would be able to advance these perspectives with the same status as countries.

Final recommendations

To enhance refugees' ability to meaningfully participate and decide how to respond to climate change in their communities, they need access, information, and resources.

Access

As UN climate change institutions expand, they must ensure that refugees and RLOs are able to access the opportunities they offer on a par with others. This includes accreditation for RLOs at the UNFCCC, and addressing barriers to documentation for refugees and registration for RLOs at the national level within host countries. Physical or practical access barriers to participation must also be considered. Even if refugees are able to receive a badge to attend a UN conference, visa regimes and funding for travel costs must be addressed as well.

Other opportunities that build capacity for refugee leaders, such as educational programmes and scholarships, should also expand access by removing upper age restrictions and additional eligibility barriers – as refugees may have their education interrupted during displacement and take longer to complete academic programmes. Other barriers often include requirements for formal documentation (both identity and academic certifications), language proficiency exams, work or leadership experience, and legal residency status – all of which can be difficult for displaced people to provide due to the circumstances of displacement outside their control.

Information

Even if granted nominal access to participate in decision-making processes, refugees must have sufficient information to understand the systems and feel prepared to contribute. National governments, international bodies such as the UNFCCC's institutions, and civil society organisations and universities produce huge quantities of technical information for climate action. These include models projecting future climate risks or hazards, as well as guidance on how to prepare for climate-driven disasters and adapt to other effects of climate change. However, these resources are rarely made available in multiple languages, particularly for communities that may not speak English or any of the UN languages. They may also be written in technical jargon that is inaccessible for refugees working with communities on the ground.

Resources

Due to systemic issues or practical barriers, RLOs are often excluded from funding opportunities provided by national governments and UN institutions. As the UNFCCC's institutions expand, they must ensure that they expand their efforts to include refugees as well. This includes the Adaptation Fund and the Fund for responding to Loss and Damage, and the Santiago network for Loss and Damage, which is intended to provide technical assistance. Private sector efforts and philanthropies, such as the Adaptation and Resilience Fund, should ensure their outreach includes RLOs as well. They must ensure that their systems for application and receiving support are conscious of the barriers faced by refugees and provide options for mitigating them.

As displacement due to climate change and other environmental disasters increases,

refugees and others living in displacement must be meaningfully included in all relevant decision-making spaces and policy processes. The shifts advocated here have the potential to generate policies that are fairer, more effective and better suited to the needs of refugees.

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Already displaced, now facing disaster: climate change impacts on displaced people

Evan Easton-Calabria

Forcibly displaced people are highly exposed to climate-related hazards. Increasing their access to early warning systems, early and anticipatory action and climate-adaptive programming are necessary for effective adaptation.

Hilaweyn camp, Dollo Ado, Ethiopia, during a storm. Credit: Raphael Bradenbrink

Fleeing persecution, conflict and other protection violations, forcibly displaced people enter geographies prone to climate-related hazards which they may not anticipate or be prepared for. They may have limited assets, be disconnected from national early warning systems and be unfamiliar with local weather and topography. They may also end up in the most hazard-prone parts of host regions or countries. Despite this, forcibly displaced people lag far behind in receiving needed investments to prepare for current and future climate risks.

Until recently, much of the discourse surrounding climate change and displacement focused on people forced to flee *due* to extreme weather events and other climate change impacts (climate-induced displaced people). The impacts of climate change on *already displaced* populations were under-acknowledged and under-explored, with little reliable data existing to elucidate the types of and extent of exposure once people were in exile. Yet these impacts have been evident in many interviews conducted with refugees in East

Africa over the past decade, and have been increasingly emphasised since 2020, when drought and flooding have become more severe and impactful in much of the region.

Many refugees interviewed in the Nakivale refugee settlement in southwest Uganda, for example, brought up 'too much sunshine' as a key issue impacting their ability to produce crops. Extreme heat and drought conditions have reduced harvest yields and limited agricultural livelihoods options, increased market prices and further reduced many refugees' already tenuous levels of food security. Elsewhere, in refugee settlements in the Adjumani district in northwestern Uganda, colleagues from Makerere University have documented the many impacts of flooding on refugees.[1] The research found that limited early warning systems or formal preparedness activities have exacerbated already dire situations, with a reported increase in health issues, flooded homes and even children washed away by floodwater.

Multi-hazard risk exposure

Research conducted by the author with the Red Cross Red Crescent Climate Centre analysed the current and projected exposure of refugees and IDPs to climate-related hazards: flash flooding, wildfire, extreme heat, drought and strong winds and tropical cyclones. It documented the locations of 46 million displaced people in 864 sites in the top refugee- and IDP-hosting countries, generating localised data at camp/settlement and city/urban level in 20 countries. The data shows that even though people may have been forced to flee due to persecution, armed conflict, violence and climate-related hazards, they are often vulnerable to other hazards, particularly climate-related ones. The vulnerability to climate-related hazards identified reinforces research findings by other actors, including UNHCR and the World Bank.

Of the forcibly displaced populations mapped, over 75% were exposed to three or more hazards (what is known as multi-hazard exposure). This means, for example, that refugees in a particular area may be dealing with drought in one season, followed by extreme flooding in another, compounded by the risk of cyclones. Most forcibly displaced people exposed to four or more hazards were in conflicted-affected or newly post-conflict countries: Syria, Yemen, and the Democratic Republic of Congo. Limited governance, weak weather forecasting and extreme weather alert capacities; limited weather, climate, and population data; and active conflict (or the threat of it) all play a role in reducing the adaptive capacities of both governments and people themselves, including those forcibly displaced.

The risk of extreme heat exposure is the most common hazard faced in the population analysed. This is particularly alarming given the inadequate shelter of many refugees and IDPs, who – faced with both external and individual limitations – often live in tents or in poorly designed homes lacking cooling mechanisms or access to community cooling shelters.

Compounding and cascading risks and challenges

Forcibly displaced people are not just dealing with climate hazards alone. Instead, millions face restrictions on freedom of movement, a reliance on non-durable building materials and temporary infrastructure in camps, language barriers that impede information dissemination and uptake, the ongoing risk of conflict and violence, and more. The semi-closed economies of many camps and settlements also mean that food prices can skyrocket when harvests are poor. In the Nakivale refugee settlement, for example, refugees are meant to be self-reliant through food production, yet the combination of

drought, flooding, and reduced plot sizes has severely limited this potential. A Congolese farmer living in Nakivale explained that food insecurity "has even worsened with time. Changes to the climate have seriously affected our harvests, leading to hunger. Inflation in the country also reduced the capacity of households for buying what we made and still makes insignificant the cash support we get from World Food Programme, which was even reduced to a minimum year after year."

These difficult realities increase forcibly displaced people's vulnerability to climate-related hazards and their impacts, and also have implications for the humanitarian, development and government actors seeking to assist them. A restriction on the right to freedom of movement means, for example, that in the Cox's Bazar refugee camp in Bangladesh, evacuation of people from camps in advance of cyclones is impossible. In the Bekaa Valley, Lebanon, the limitation on durable shelter has increased damage from flooding and left more refugees doubly displaced, with tents destroyed and possessions lost. Similarly, a restriction by the Ugandan government on the type of bricks refugees can build with also means that homes and community structures are further susceptible to hazards like flooding, which in turn has knock-on effects on assets and savings.

Anticipating climate-related hazards – and responses

Research shows clearly that more investment in early warning systems and early action in fragile and conflict-affected contexts is needed, with an explicit focus on displaced populations. This agenda is all the more important in order to fulfil the United Nations Early Warnings for All initiative, which aims to ensure that every person on earth is covered by early warning systems by 2027.

The commitment to 'Early Warning, Early Action' is a crucial principle and component of global adaptation to climate change, but countries affected by fragility, conflict and violence, and populations such as refugees and IDPs, lag far behind in receiving needed investments to prepare for current and future climate risks. Members of the Technical Working Group on Self-Reliance, Displacement, and Climate Risks, co-chaired by the Refugee Self-Reliance Initiative and Refugees International, have repeatedly raised concerns about refugees' lack of representation in National Adaptation Plans, which outline how countries will adapt to climate change in the medium- and long-term, for example.[2] They have also highlighted the lack of recognition in many adaptation documents of climate risks displaced people face based on camp locations and the often limiting legal and social environments of exile.[3]

As a minimum standard of humanitarian and development programming, climate risks should be evaluated at programme design stage and adapted in implementation. Practitioners working with forcibly displaced people should understand and address the particular climate risks they face – in part by asking forcibly displaced people about their experiences and including them in the co-creation of climate-adaptive programming.

The scale of the climate crisis also demands going beyond the minimum. Long-term climate projections show that extreme heat may make some refugee-hosting areas unliveable, meaning practitioners and policymakers must begin discussions now about how to drastically change living conditions in camps or develop relocation plans to enable people to live safely elsewhere in exile. Many refugees feel they have no choice but to endure their worsening circumstances, as they lack the funds and

connections to move out of camps and settlements, even when these sites are flooded or no longer have viable conditions for agriculture.

In the best-case scenario, a variety of actors, including humanitarians, displaced people, donors and climate scientists collaborate using a variety of tools to identify, plan for and mitigate the impacts of climate change on displaced people. For example, weather forecasts can inform the provision of humanitarian assistance *before* a natural hazard occurs to avoid a disaster. At the time of writing, 154 so-called anticipatory action frameworks, based on a combination of forecasting, pre-arranged financing and pre-positioned assistance, are now in place in 48 countries, developed by actors like the Red Cross Red Crescent Climate Centre, UN OCHA, World Food Programme, Start Network, and many others.[4] A further 197 frameworks are being developed in 76 countries. In advance of extreme weather events like flooding, early action to support forcibly displaced people has been implemented in isolated cases, including by the UN in an IDP camp in South Sudan to avoid dire health and livelihood impacts and mass unplanned evacuation.[5] However, early and anticipatory action for forcibly displaced populations still remains the exception.

If the international community is serious about improving prospects for forcibly displaced people and delivering more effective assistance overall, increasing early warning systems and early and anticipatory action for the world's more than 123 million displaced people must be a key component of adaptation assistance. This can take place through channels such as the UN Loss and Damage Fund and recent COP commitments to increase climate finance for countries experiencing fragility, conflict and violence. It can also take place – in part – through the leadership and community structures of displaced people themselves. Technical working group members have shared the value of refugee engagement fora, refugee committees, and refugee-led organisations as important avenues for both channelling adaptation assistance and information, and sourcing existing practices from displaced people themselves.

Adaptation assistance, including anticipatory support, for forcibly displaced people can mitigate the risk of secondary or multiple displacement due to climate-related hazards. Climate-adaptive programming can improve the effectiveness of a variety of sectors, from livelihoods to water, sanitation and hygiene (WASH) to shelter. Supporting forcibly displaced people to prepare and take action in advance of climate-related disasters may increase their available choices – and be the difference between their ability to adapt in situ or being forced to move yet again.

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1. *This research takes place as part of the Center for Climate and Health Global Research on Disasters (CORD), Tufts University. Makerere University, Uganda, is one of seven consortium partners. This research is led through the Makerere School of Public Health, https://sph.mak.ac.ug/.*
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No choice but to move: climate displacement and eroding livelihoods in Mongolia

Kiril Sharapov

As climate change reshapes Mongolia's environment, herders are being pushed to cities – not by sudden disaster, but through slow erosion of options. Their stories challenge dominant ideas of choice, agency and what counts as 'displacement'.

Abandoned ger in the Mongolian countryside. Credit: Kiril Sharapov

Climate change is accelerating internal displacement globally. However, much of the attention from policymakers and the media remains on cross-border movements, especially those framed as 'threats' to securitised borders of the Global North, or on cataclysmic weather disasters. In contrast, the slower, cumulative processes displacing people within countries, especially in the Global South, receive far less visibility in Western media and international policy.

In Mongolia, tens of thousands of herder families who have relied on nomadic pastoralism for generations are struggling to survive amid harsher winters, droughts, desertification and pasture degradation. Owing to its unique geography, Mongolia has warmed three times more quickly than the global average,[1] making it one of the most affected countries, where climate impacts are pushing rural populations to migrate.[2]

Official policy discourse often frames migration from rural Mongolia to Ulaanbaatar as a matter of personal choice or economic adaptation. Yet displaced herders describe a form of forced displacement that does not fit existing policy categories. Seasonal movement between pastures was long part of herding life, but relocation to the city occurs under very different conditions. Rather than a continuation of herding practices or a search for improved livelihoods, it marks a departure from a pastoral way of life that had become increasingly difficult to sustain. As winters worsen and pastures deteriorate, moving to the city becomes one of the few remaining options. As reported by UNHCR, over 818,000 individuals migrated to Ulaanbaatar from rural areas between 1990 and 2024, accounting for almost 50% of Ulaanbaatar's total population in 2024.[3]

This article draws on interviews with displaced herders in Ulaanbaatar's ger districts (areas characterised by the traditional dwellings favoured by nomadic herders[4]) during fieldwork in 2016 and 2024 to explore how environmental pressures, economic hardship, and institutional neglect influence migration decisions.[5] It explores how herders experience and interpret their movement, the pressures they face and how they try to rebuild their lives. Displacement in this context is neither wholly voluntary nor entirely forced, but a process shaped by limited options. Recognising these experiences is essential for developing more inclusive and humane responses to climate-linked mobility.

Why are herders moving?

For Mongolian herding families, leaving the pastures for the city is rarely a simple choice. Migration often comes as a last resort after mounting pressures make herding unsustainable. As climate change intensifies, pastureland and water sources are disappearing, undermining traditional livelihoods. While official narratives frame such movement as voluntary or economically motivated, herders describe it as a matter of survival, not opportunity.

Environmental change remains central to these transformations. Winters have become longer, harsher and deadlier. Dzud, extreme winter events that follow dry summers, have caused widespread livestock deaths: in 2024/2025, over 8 million livestock (12.5% of the national herd) perished, and over 180,000 herder households were severely affected.[6] Once rare, dzud events now occur almost annually due to climate change. Amid these shocks, herders also described gradual changes: shorter summers, erratic rainfall and shrinking grazing land due to mining. Open cast mining operations and infrastructure have fragmented pastures and dried sacred water sources, further undermining mobility and grazing practices rooted in seasonal patterns. Participants in the study described these changes as deeply unsettling forces, disrupting both the material conditions and emotional foundations of the ecological and cultural rhythms that had sustained pastoral life for generations.

The economic fallout is equally severe. Feeding livestock in harsher winters has become costlier, while returns from wool and meat have declined. Many families have gone into debt trying to keep animals alive, but formal loans have often been inaccessible, leaving them trapped between rising costs, unreliable markets, mounting debt and limited institutional support.

These conditions have intensified long-standing structural vulnerabilities. Many herders recalled the 1990s post-socialist transition, when rural infrastructure was dismantled under neoliberal reforms. Collective systems for winter shelters, veterinary care and income support were replaced by a model of individual

responsibility and market efficiency, despite generations of reliance on community-based support. These reforms eroded essential safety nets and shifted environmental and economic risks onto individuals and families, who were left to navigate mounting pressures with ever-diminishing resources.

Faced with the loss of animals, income, and state protection, many herders tried to hold out but were eventually forced to leave. Moves to the city were reluctant, driven by necessity rather than opportunity. In rural Mongolia, displacement unfolds quietly, through accumulated hardship. Herders move not because they are pulled toward better futures, but because their ability to stay and carry on has been steadily worn away.

Decisions under pressure: not voluntary, not forced

Herders described migration as a last resort, undertaken after exhausting all other strategies. Some delayed relocation by splitting up families, leaving livestock with relatives, or maintaining seasonal ties to rural areas, but such arrangements proved unsustainable. Others moved repeatedly, settling where possible, often without tenure or stability. In this context, what appears as a single move was often a fragmented, drawn-out process marked by uncertainty and improvisation.

Education often disrupted families' efforts to remain in rural areas. Several herders moved after struggling to secure schooling for their children. In some cases, one parent would stay behind to tend the remaining livestock while the other relocated with the children (contributing to the rising divorce rate in Mongolia); others moved as a household hoping to return. However, in many cases moves that were initially envisaged as short-term or seasonal became extended by necessity. With each shift, from countryside to a regional centre, to a provincial town, and then eventually the capital, the prospect of returning grew increasingly remote.

Families arriving in the city settled wherever they could, often in unregulated ger districts on Ulaanbaatar's outskirts. Lacking land titles or registration, many found themselves shut out of essential services, forced to navigate welfare systems that turned them away or to send children to distant, overcrowded schools. In these conditions, some turned to relatives or informal networks for support with housing and income, while others described family members who had left the country altogether, overstaying short-term visas to take up precarious work abroad. Rather than hopeful ventures, these movements reflected a pattern of decisions shaped more by resignation and narrowing options than by opportunity.

Displacement for many was not a singular moment but an ongoing, often uncertain process. The line between staying and moving blurred, and decisions were rarely clear-cut. "For people from the countryside, when they lose their livestock, the city becomes the only option," one herder explained. "But in reality, there is not much to be found there either."

Life in displacement: coping with urban hardship

The move to Ulaanbaatar brought new challenges rather than stability. The ger districts on the city's margins had expanded rapidly with little planning or public investment. These neighbourhoods, lacking basic infrastructure, presented daily challenges: electricity was often shared through a single makeshift electricity cable between households; toilets were outdoor pit latrines that froze in winter; and water had to be carried from distant communal wells. Without piped services or insulation, homes were cold and damp, and coal heating filled the air with toxic smog, particularly during winter months.[7]

Administrative status shaped access to essential services. Families without land titles or registration faced obstacles enrolling children in school or accessing welfare and healthcare. Adults without registration were excluded from formal employment, relying instead on low-paid or irregular work found through informal networks.

Most households relied on their own skills and social ties, but the transition remained difficult. Some generated income through small-scale trade or casual labour; a few received remittances from relatives abroad, though this too was unreliable. Daily life centred on practical adjustments – managing heating, sourcing water or fuel and doing what was needed to get by. One participant summarised it plainly: "We came here because we had no choice. But here, it's a hard life too."

Women often found ways to earn money from home or within their neighbourhoods – sewing, selling food or cleaning. Children's education remained a priority, shaping household routines and decisions. Though rarely viewed as a guarantee of improvement, education offered one of the few ways to imagine a different future.

Support networks helped in small but tangible ways. Families living near relatives or others from their home province often shared food, childcare and information. Some helped each other navigate paperwork or access services. Yet few participants spoke of long-term plans or expected change. Several also reported rising mental health challenges, increasing levels of alcoholism and domestic violence linked to the strains of urban precarity and displacement.

One woman, a former herder living in a remote ger without electricity or water, said she no longer thought about the future at all. Growing older, she was preparing for the end of her life. Her greatest concern was her daughter, who had a disability and no one else to turn to. Her only connection to the outside world was a battery-operated radio. Reflecting on what lay ahead, she noted that she no longer really knew what was happening in the present, let alone what the future might bring. Her story, like many others, was not framed as desperate but as a quiet, matter-of-fact account of ongoing uncertainty.

Rethinking 'choice' in the context of climate displacement

The experiences of Mongolia's displaced herders challenge simplified understandings of mobility in the context of climate change. These families are not migrating by clear choice, nor are they always moved by sudden catastrophes. Instead, their mobility reflects a gradual loss of viable options driven by environmental stress, economic fragility and the erosion of rural infrastructure.

In Ulaanbaatar, these families continue to live with uncertainty. While physically relocated, many remain socially and economically unsettled. The official narrative continues to frame their movement as adaptive or voluntary, yet their stories reveal a pattern of movement shaped by constraint, marginalisation and shrinking alternatives.

For policymakers, there is both a conceptual and practical need to rethink how climate-related migration is understood. Rather than an aspirational dash from one place to another, this kind of mobility is often a long, 'sticky' process, which unfolds over time and across many locations. People do not simply move from point A to point B: they may return seasonally, move between relatives or live in a prolonged state of precarity without ever fully settling. This understanding requires us to extend the concept of climate-linked displacement both spatially and temporally, and recognise it as a process shaped by accumulation, interruption and adaptation,

rather than a discrete moment of departure or arrival. Addressing such complexity demands coordinated responses across sectors and levels of governance.

For national policymakers in Mongolia:

- **Ensure access to rights and services in urban areas.** Administrative procedures should be simplified to allow displaced families to register land, enrol children and access health and social protection.
- **Strengthen rural infrastructure.** Investing in veterinary care, seasonal services and early warning systems can reduce the likelihood of forced movement.
- **Support mobility and transition for displaced households.** For those who are forced to relocate, provide assistance that facilitates safe movement, including temporary shelters, livelihood transition schemes and guidance on administrative and legal procedures. This support should also cover families settling in peri-urban or informal areas who may not yet have access to full urban rights and services.
- **Recognise climate-related internal displacement as a distinct category.** Formal mechanisms should be introduced to identify, document and address climate-related internal displacement. This would enable better coordination between disaster response, migration governance and social policy.

For international donors, development actors and urban authorities:

- **Treat displacement as a long-term process.** Programmes in urban planning, education and livelihoods must be designed to reflect the extended and unsettled nature of mobility. This includes recognising that arrival in a new location does not necessarily end displacement.
- **Coordinate across sectors and timelines.** Responses should cut across emergency relief, development and social protection to avoid siloed or short-term interventions.

If these steps are not taken, displacement linked to climate change will persist through silence and neglect, experienced not as a crisis, but as everyday erosion. Listening to those affected is a necessary first step toward a more just and informed response.

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Neo-colonial pathways to safety? Climate displacement and Australia and New Zealand's migration policies

Laura Kraft

Australia and New Zealand's permanent migration pathways for Pacific Islanders who are at risk of climate displacement may reflect geopolitical interests and neo-colonial power dynamics, rather than rights-based protection.

In June this year, Australia launched its new climate visa for Tuvaluans, as established under the 2023 Australia-Tuvalu Falepili Union treaty. More than 80% of Tuvalu's population of approximately 10,900[1] applied for just 280 available places in the 2025/26 round. This overwhelming response demonstrates the severity of rising sea levels and the deep concerns of affected communities facing salinised water, lost livelihoods, and the projected submersion of their country by 2050.[2]

However, Tuvalu is not alone. This crisis reflects a broader regional challenge: climate change is widely recognised as the Pacific's single greatest threat. While much climate-induced migration remains internal, increasing cross-border movement is inevitable, raising urgent questions about responsibility, equity, and protection.

International law is often viewed as a potential safeguard for those displaced by climate impacts, yet current legal frameworks offer limited protection. Despite growing awareness and important legal developments – such as the UN Human Rights Committee's Teitiota decision, rulings and advisory opinions by regional and national courts, and most recently, the International Court of Justice – refugee and human rights law continue to address climate-induced displacement only in a rudimentary manner.

Given these shortcomings, concrete legal and policy measures are urgently needed to better protect those affected by climate change. Global and regional initiatives, including the 2018 Global Compact for Migration and the 2023 Pacific Islands Regional Framework on Climate Mobility (both non-legally binding), call for expanding safe and regular pathways, including humanitarian visas, regional free movement agreements, and migration quotas, to support those displaced by climate change. Such 'voluntary' migration can empower communities to move safely before disaster strikes, diversify livelihoods, reduce resource pressures, and build resilience.[3]

As members of the broader Pacific family and historically high emitters of greenhouse gases, Australia and New Zealand bear a particular moral, political, and historical responsibility to offer protection, support, and opportunities to their climate-affected neighbours – including through permanent migration pathways.

Current permanent migration pathways

New Zealand has long offered limited permanent migration options through the 1970 Samoan Quota (SQ) and 2002 Pacific Access Category (PAC) visa schemes. Officially framed as labour-based migration programmes, they nonetheless function as

limited avenues out of climate-threatened countries. The SQ visa, established after Samoa's independence to maintain close ties, allocates up to 1,100 places to Samoan citizens (including dependents) annually – 1,650 in both 2025 and 2026 (to reallocate ballot places not able to be used during the COVID-19 pandemic). Fiji and Tonga both receive an allocation of 250 annually through the PAC, with 75 each to Kiribati and Tuvalu. Both schemes operate by lottery, ostensibly to avoid taking only the most skilled migrants and thereby depleting the labour force in the country of origin. Applicants must be between the ages of 18 and 45, citizens of the eligible country with birth or parental ties, meet English, health, and character requirements, and hold a qualifying job offer (or have a partner with one).[4] At the time of writing, SQ entrants pay around NZD 820 (USD 470) for the visa, while PAC entrants pay a ballot fee (NZD 86-89 / USD 50) plus a visa fee (NZD 1280 / USD 740) if successful.

Australia only introduced permanent pathways in 2023 with the Pacific Engagement Visa (PEV), granting 3,000 places per year across selected Pacific Island countries (PICs) and Timor-Leste, by lottery, with similar age, nationality, and job-offer rules but far lower fees (AUD 25 (USD 16) for registration and a AUD 335 (USD 220) visa fee).[5] The 280 places made available under the Falepili Union treaty were introduced in 2025 as a separate PEV stream which, unlike the general PEV stream, has no upper age limit or job-offer requirements.

Challenges and concerns

Though presented as acts of regional solidarity and humanitarian support, Australia and New Zealand's permanent visa pathways for Pacific Islanders contain structural flaws that severely limit their reach and fairness. Overall, these policies reflect selective inclusion and gatekeeping shaped by national interest, rather than genuine humanitarianism, reproducing the very power dynamics they claim to redress. By diverting attention from meaningful climate adaptation and emissions reduction, Australia and New Zealand externalise the costs of a crisis they have historically helped to create. Recurring patterns of influence, control, and a hierarchy of mobility and protection warrant critical scrutiny as many of these dynamics reflect neo-colonial practices.

1. Lack of climate framing

Despite often perceived and presented as *de facto* responses to climate displacement, neither the SQ, PAC nor PEV mention climate change in their objectives, eligibility rules or official communications. The Falepili Union treaty is the only instrument to explicitly name climate impacts – but it is tied to a single country.

2. Quotas do not match need

Visa caps raise serious concerns about equity and fairness as they often bear little relationship to vulnerability or population size. In 2025-26, Samoa's quota for New Zealand is 1,650, while climate-threatened Kiribati and Tuvalu receive just 75 places each. Some PICs, such as Vanuatu or Papua New Guinea, have no permanent pathway to New Zealand at all.

In the 2025 PEV ballot, 56,000 applicants competed for just 3,000 places: PNG's allocation was just 1,350 despite its 10.7 million population and relatively small existing diaspora in Australia. Countries with smaller populations or alternative U.S. migration access (like Palau or Micronesia), by contrast, received allocations that in the end remained underutilised.[6]

3. Random selection fails the most vulnerable

Both Australia and New Zealand maintain that random lottery promotes fairness

and equal opportunity for all applicants, while helping to mitigate brain drain. In practice, however, this approach turns access to protection entirely into a game of chance, sidelining those with the most urgent protection or migration needs arising from climate displacement by treating all applicants as equally situated.[7] Climate migration should instead be recognised as a moral and political right today – and as a legal right to protection in the future – ensuring that the most vulnerable are prioritised.

4. Eligibility criteria exclude

Beyond the randomness of the lottery, strict eligibility requirements under the SQ, PAC, and general PEV systematically favour the relatively privileged, undermining the humanitarian intent of the programmes. Those most exposed to climate impacts often fail to meet these criteria, leaving them excluded.

The Falepili Union stream offers somewhat looser entry criteria, but it is tied to a broader treaty arrangement: in exchange for the visa pathway, crisis assistance, and a formal affirmation of Tuvalu's sovereignty, Australia gained considerable influence over Tuvalu's defence and security policy through a veto right.[8]

5. Limited Pacific agency

Several PICs, including Kiribati, Samoa, and the Marshall Islands, initially declined PEV participation over concerns about brain drain,[9] lack of transparency, and inadequate consultation.[10] Similarly, critics of the Falepili Union treaty point to the absence of broad community input into the its terms and emphasis, noting that many Tuvaluans wish to remain on their ancestral land and this is not sufficiently addressed within the treaty.

6. Prohibitive costs and practical barriers

The fees and travel costs can be a significant burden in countries with low household incomes.[11] Lengthy processing times of up to 11 months (in the case of the PAC and SQ) and the difficulty of securing pre-departure jobs further limit access, forcing reliance on overstretched diasporas and increasing the risk of exploitation.

A critical view

Seen through a postcolonial and climate justice lens, these pathways reflect and reinforce enduring power asymmetries with PICs. Far from neutral policy tools, they function as mechanisms of mobility gatekeeping, shaped by histories of colonisation and serving the political, economic, and discursive interests of the host states while limiting genuine Pacific agency.

Three key areas illustrate these neo-colonial dynamics:

Political instrumentalism

Migration pathways often serve (geo-) political interests as much, if not more than, humanitarian ones. Australia and New Zealand continue to wield migration policy and conditional aid as levers of influence, perpetuating neo-colonial dynamics that instrumentalise Pacific climate vulnerability for political ends.

Schemes like Australia's PEV and the Falepili Union treaty function not only as mechanisms of support for PICs, but also as tools of foreign policy, positioning Australia as the partner of choice amid China's growing influence in the region. While the Falepili Union treaty offers visas for Tuvaluans, it also grants Australia control over Tuvalu's defence and security policy. This asymmetry – where Australia's climate inaction contributes to the displacement risk, only to be 'resolved' through conditional migration – illustrates how climate vulnerability is instrumentalised to advance strategic interests. New Zealand's SQ and PAC are less overtly instrumental, yet

they remain shaped by colonial histories and broader strategic priorities.

Economic instrumentalism

While permanent residency might appear to differ from exploitative temporary labour schemes, economic considerations continue to outweigh humanitarian or climate justice objectives. Strict eligibility criteria filter out the most disadvantaged, ensuring that selection favours employability over vulnerability. This reflects a neoliberal logic: migration is framed not as a right or as climate reparation – grounded in moral, political, historical responsibility – but as an opportunity for those who can 'add value' to the host state. Pacific migrants are viewed not as climate-affected individuals or historical partners, but are instead valued primarily for their economic utility.

Such dynamics also risk undermining the development capacities of sending countries by creating a form of brain drain. Although neither Australia nor New Zealand actively pushes Pacific Islanders to migrate, the accelerating climate crisis does – creating a structural pressure that makes migration an increasingly necessary form of adaptation. Yet, in the absence of formal (legal) recognition of climate displacement in their migration frameworks, receiving countries maintain control over who gets to move, on what terms, and for whose benefit. While lottery-based selection processes aim to mitigate against brain drain, the design of the schemes still tends to privilege the receiving countries' interest in attracting productive labour, while insufficiently addressing the structural vulnerabilities that drive mobility in the first place.

Framing and legitimacy

Australia and New Zealand present these pathways as acts of solidarity, generosity, and regional care, portraying vulnerable PICs as passive beneficiaries. This donor-recipient framing reproduces colonial hierarchies while legitimising the host states' strategic interests. Rhetorical devices like the 'Pacific family' or 'regional mobility partnerships' obscure underlying power asymmetries. The Falepili Union treaty invokes Tuvaluan concepts of neighbourliness (falepili) yet embeds security and control provisions that undermine equality and reciprocity.

Appeals to 'generosity' sidestep responsibility for historical and ongoing contributions to climate change, while the absence of explicit climate change considerations in the PEV, SQ, and PAC reveals a gap between stated values and actual policy. Australia and New Zealand remain among the region's highest per-capita emitters and are slow to reduce fossil fuel reliance. By relying on sentimental narratives, both states avoid more critical engagement with the political and moral obligations arising from colonial histories and ongoing emissions.

Towards rights-based, climate-just migration pathways

Tuvalu, like many PICs, faces a double bind: dependence on external support from countries like Australia and urgently needing to preserve its sovereignty and the dignity of its people. As climate mobility becomes more inevitable, the question is not whether Pacific Islanders will move, but under what conditions. From a climate justice perspective, Australia and New Zealand must go beyond rhetorical commitments and symbolic measures, reimagining migration policy to centre Pacific agency, challenge entrenched hierarchies, and create truly rights-based, climate-just pathways.

Recommendations for policy reform

Reframing migration pathways: Schemes must acknowledge mutual benefits and interdependence, historical responsibility

(colonial histories and carbon emissions) and the right of Pacific peoples to mobility on equitable terms, rejecting donor-recipient narratives.

Genuine co-design: Reforms must be developed through participatory processes with Pacific affected communities. This includes consultations on eligibility and prioritisation, as well as concerns about brain drain, culture loss, and sovereignty.

Equitable access: Visa streams should be opened to older adults, unskilled workers, and those less likely to qualify under existing frameworks; character and health requirements should be reformed to prevent discrimination; and lottery systems should be balanced with targeted protection.

Material and legal support: Visa and application fees for low-income applicants should be subsidised or waived altogether; both legal status and protection from statelessness should be guaranteed; and receiving States should provide housing, employment, and legal orientation support post-arrival and educate employers and service providers about visa entitlements.

Migration as a complement, not a substitute, for climate action: Australia and New Zealand must invest meaningfully in Pacific climate adaptation initiatives, reduce their own carbon emissions, and protect the 'right to stay' for those who wish to remain on their ancestral land. Only by pairing mobility pathways with these commitments can migration policy reflect genuine reparative justice, regional solidarity, and true partnership – centred on the voices and rights of Pacific peoples.

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Confronting climate injustice: how Canada can support displaced people

Rahul Balasundaram

As one of the world's leading historical polluters, Canada can uphold climate justice by facilitating mobility and supporting development and adaptation initiatives for those displaced by climate change.

Canada leads the world in cumulative emissions per population and is the second highest in terms of cumulative emissions per capita.[1] Despite its negative historical contributions to the climate crisis, Canada does not have an explicit policy focused on climate mobility, and to date, the government has only introduced ad hoc and temporary policy mechanisms to respond to sudden-onset climate events, rather than developing permanent solutions for individuals affected by both the sudden and slow-onset causes of climate displacement.

To remedy its destructive impact on the planet, Canadian policymakers can implement the following recommendations to uphold a climate justice-centered approach to climate mobility. These recommendations include modifying the current guidelines for admission on humanitarian and compassionate grounds; utilising 'public policy class' admissions to facilitate mobility; introducing resettlement and private sponsorship pathways; and amending the Immigration and Refugee Protection Act (IRPA). Canada should also leverage existing labour, family reunification and education pathways; support regional and global initiatives to facilitate climate mobility; and significantly expand funding for loss and damage, climate adaptation and disaster reduction efforts.

1. Expand humanitarian and compassionate grounds guidelines

Under Section 25 of the Immigration and Refugee Protection Act, Canada grants permanent residency based on humanitarian and compassionate grounds, such as during adverse conditions in an individual's country of origin. The Minister of Immigration and Citizenship is permitted to "examine the circumstances concerning the foreign national" and "grant the foreign national permanent resident status" based on "humanitarian and compassionate considerations relating to the foreign national." As such, Canada should recognise climate displacement as a relevant consideration for admission under humanitarian and compassionate grounds by enacting and amending guidelines related to Section 25 of IRPA.

The Canadian Association for Refugee Lawyers recommends adding the following consideration to the current humanitarian and compassionate grounds guidelines: "short-term or long-term environmental disasters or degradation… that can be expected to pose a risk to a person's life, liberty, or security of the person…because of its direct physical effects and/or because of secondary socio-political effects such as population pressures, profound poverty, and political strife."[2] By adding such a guideline, Canada would enable access to permanent

protection beyond the traditional definition of a "refugee" in Canadian law for those impacted by sudden and slow-onset climate events and disasters. While it may be argued that such a definition would be too broad, it is worth remembering that the current definition of a refugee under international law is too narrow in scope amidst the realities that communities are facing and enduring globally, and such a narrow definition also risks perpetuating climate injustice.

2. Leverage 'Public Policy Class' admissions

Canada should create a public policy class under Section 25.2 of the IRPA, which would enable the Minister to grant permanent residency based on "public policy considerations" for those who would not otherwise qualify based on humanitarian and compassionate grounds, typically a group of individuals in similar circumstances. Recently, Canada used this mechanism to support the evacuation and resettlement of Afghan nationals, including marginalised groups such as women leaders and human rights defenders. Following the 2010 Haiti earthquake, Canada used the public policy class to temporarily defer the removal of individuals back to Haiti and introduced a temporary policy giving Haitian nationals the opportunity to apply for permanent residency.

There is no legislative or regulatory process required to create a public policy class under section 25.2 of IRPA. Canada can flexibly adapt to the needs of groups of individuals affected by specific climate-related events and disasters across the world and provide permanent protection. However, since this policy option is used in an ad hoc manner and is left to the Minister's discretion, there is no guarantee of a public policy being invoked for any climate-related event, risking inconsistent application of this protection mechanism. As such, guidance must be developed by government authorities to provide clarity on when and how the public policy class could be used in the context of climate change and displacement.

3. Introduce resettlement and private sponsorship pathways

Regulation 146 of the Immigration and Refugee Protection Regulations states that protection may be granted to "a person in similar circumstances to those of a Convention refugee [who] is a member of the country of asylum class."[3] Accordingly, through the Humanitarian Protected Persons Abroad Class, the Government of Canada may resettle individuals if "they are outside all of their countries of nationality and habitual residence" (under regulation 147(a)) and if "they have been, and continue to be, seriously and personally affected by civil war, armed conflict or massive violation of human rights in each of those countries" (under regulation 147(b)). Canada should introduce a new class under the Humanitarian Protected Persons Abroad Class for those individuals seriously and personally affected by climate-induced risks, including sudden and slow-onset events. Alternatively, Canada could also expand regulation 147(b) to include individuals whose life and security are threatened due to climate-induced risks.

By expanding the eligibility criteria of the Humanitarian Protected Persons Abroad Class, Canada can leverage its longstanding commitment to refugee resettlement and private sponsorship to resettle or sponsor those fleeing the effects of climate change. Currently, Canada has three principal refugee resettlement and sponsorship programmes: the Private Sponsorship of Refugees programme, the Government-Assisted Refugee programme and the Blended Visa Office-Referred programme.

In 2019, the government introduced a new programme to support the sponsorship of individuals facing persecution due to their

sexual orientation or gender identity. As such, Canada has several options for formally recognising climate change displacement and supporting climate displaced individuals using the same approach: introduce a programme specifically to protect those who are forced to flee due to the effects of climate change; expand the Humanitarian Protected Persons Abroad Class to individuals facing climate-related risks so resettlement or sponsorship can be considered under one of the current programmes; and/or introduce a public policy class to facilitate the resettlement and sponsorship of individuals displaced and forced to flee as a result of the effects of climate change.

4. Amend Section 97 of IRPA

Section 97 of IRPA establishes that a person may be granted protection if they are "personally" subjected to the danger of torture, a risk to their life, or of cruel, unusual treatment or punishment. However, according to Section 97(1)(b)(ii), this risk must not be faced generally by other individuals in or from the country because generalised risks such as crime, violence, corruption, human rights violations, political extremism and general insecurity may fall outside the 1951 Convention definition of a refugee. The personalised risk requirement seemingly excludes individuals seeking protection from the wide-reaching effects of climate change or disaster displacement, although it can be argued that simply because a risk is generalised, it does not negate an individual's right to life, liberty or security.

The Canadian Association for Refugee Lawyers proposes adding a new subsection – Subsection 97(1)(c) – to establish a legislated exception to the requirement of "personalised risk" for individuals affected by climate change. The government can leverage the existing Chairperson Guidelines developed for Immigration and Refugee Board (IRB)[4] decision-makers to provide guidance on identifying individuals who should be considered as protected persons under the expanded Section 97(1)(c) regulation. For example, the Protection Agenda of the Nansen Initiative suggests that an individual may need protection due to an ongoing, imminent or foreseeable disaster that may pose a risk to their life or safety and they are not able to receive support from government or humanitarian actors. After amending Section 97 of IRPA, it would be useful to incorporate this guidance into the existing guidelines for IRB decision-makers to ensure that an individual's life, liberty or security are not jeopardised because of climate change.

5. Explore other climate mobility pathways and support regional and global initiatives

Canada can explore a wide range of other climate mobility pathways to undertake a justice-based approach to this issue. For example, Canada implements special measures to prioritise and expedite applications for temporary or permanent residence in Canada from countries affected by a disaster. For example, following the Haitian earthquake in 2010, the government incorporated special measures to instruct government officials interim federal health coverage, as well as work and study permits for Haitians seeking permanent residence in Canada.[5]

Canada should pursue similar actions as a response to inevitable climate-related disasters in order to ensure permanent and seamless settlement and integration for those impacted by climate-related events. However, such ad hoc and temporary measures should not take priority over the longer term policy solutions explored above.

Canada should leverage existing economic and labour mobility pathways, such as the Temporary Foreign Worker Program for

those affected by climate change, since many of these programmes already target countries that are made vulnerable by the effects of climate change, such as Small Island Developing States in the Caribbean and countries that are susceptible to drought in Central America, such as El Salvador, Guatemala, Honduras and Nicaragua.

However, such pathways should only be used if working conditions are fair and safe and permanent residency is granted upon arrival in order to prevent individuals from being trapped due to a precarious immigration status. Furthermore, as the top source countries of immigration to Canada such as the Philippines and Pakistan face significant environmental degradation, Canada should also explore family reunification pathways for those affected by climate change, especially as this mechanism would facilitate a smoother settlement and integration process due to the presence of social networks in the country. Moreover, Canada should investigate the use of education mobility pathways, whether focused on humanitarian protection (for example, the World University Service of Canada programme) or more generally to support students to continue their educational and employment aspirations, especially if these aspirations have been obstructed because of climate change and its impacts on their local communities.

Beyond domestic policy and legislative changes, Canada can also advocate for regional and global progress on climate mobility. Following the regional agreements such as the OAU Convention Governing the Specific Aspects of Refugee Problems in Africa and the Cartagena Declaration on Refugees in Latin America, Canada can support regional partners and institutions in establishing regional climate mobility agreements and policies. In this regard, Canada should also support the establishment of bilateral and regional labour agreements to address the environmental and livelihoods needs which are increasing due to climate displacement.

On a global level, Canada is a signatory to the UN Global Compact for Safe, Orderly and Regular Migration, which urges States to "identify, develop and strengthen solutions for migrants compelled to leave their countries of origin due to slow-onset natural disasters, the adverse effects of climate change, and environmental degradation." Canada should use this forum to support regional and global solutions to climate mobility, while also advocating for the establishment of an optional protocol under the 1951 Refugee Convention to provide legal protection to persons displaced across international borders due to climate change, as per the UN Special Rapporteur's 2023 recommendation.[6]

6. Fund loss and damage, climate adaptation and Disaster Risk Reduction efforts

Canada has only committed CAD 2.65 billion (2015-2021) and CAD 5.3 billion (2021-2026) as part of its international climate finance commitments.[7] This is significantly below what could be considered Canada's fair contribution to global climate financing if calculated according to its share of historical emissions. In fact, Canada only gave 37% of its fair share of international climate financing in 2020, falling USD 3.3 billion short of its target for the year from a climate justice point of view. Canada should significantly expand its international climate financing obligations. Providing adequate amounts of funding for climate adaptation efforts relative to its historical impact on global greenhouse gas emissions will also ensure that communities are able to adapt – to the extent possible – and secure their livelihoods, including by moving within their country or region as a response to the changing climate conditions in their respective contexts.

To achieve this, Canada should also provide

funding to organisations led by migrants and refugees themselves, as a matter of both procedural justice and agency in relation to climate justice and displacement, but also because they know how best to respond to the needs of their communities.

Additionally, displacement can cause significant loss and damage for individuals and communities due to trauma and psychological impacts, loss of income and livelihoods, lack of access to food and water, reduced health and access to health care, inability to continue education, disruption of community, and loss of sense of place and identity. Therefore, from a climate justice perspective, Canada should provide a significant amount of funding to the Loss and Damage Fund established at COP27 to ensure that countries are compensated for the destruction caused by the actions of the Minority World, including Canada.

Ultimately, considering its historical and ongoing impacts on the health of the planet, Canada has an obligation to support countries that are disproportionately and negatively impacted by the climate crisis. By following these recommendations, Canada can be a leader in facilitating climate mobility and repaying its climate debt to countries in the Majority World.

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This article has been written in the author's personal capacity and does not reflect the views of the Canadian Council for Refugees.

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Imagining alternative migration futures for the Pacific Island States

Vittorio Bruni and **Yvonne Su**

Climate forecasts often project inevitable displacement for the inhabitants of Pacific Island States, but scenario planning shows that migration futures are not fixed and uncertainty need not be a barrier to action.

Home to 2.3 million people and spanning an area that covers roughly 15% of the earth's surface, Pacific Island States (PIS) are on the frontline of climate change. Rising sea levels, coupled with more frequent and intense cyclones, threaten livelihoods, cultures and sovereignty. Some islands have already disappeared while others are uninhabitable after severe storms.

Governments are planning for futures where parts of their territory may no longer support human life. Kiribati has purchased land in Fiji to secure farmland.[1] Tuvalu is developing a 'digital nation' to preserve sovereignty and maritime rights as 95% of its land may be submerged by 2100.[2] Elsewhere, the Maldives is experimenting with artificial islands and projects in South Korea and Saudi Arabia are both exploring the potential of floating cities. These varied responses demonstrate that climate futures are not fixed, but rather a contested horizon, shaped through the entanglement of climate change, power, inequality, politics and technological possibilities.

Why forecasting falls short

Forecasting models are valuable for anticipating some migration trends, but forecasts of mobility and immobility have repeatedly been proven wrong.[3] Common limitations include linear assumptions that the future will resemble the past, reliance on proxy data from very different contexts, and a tendency to focus on factors that can be easily measured while overlooking those that are harder to quantify, such as sudden policy shifts or geopolitical conflict.[4] Simplified push-pull models can obscure the ways that migration is shaped by intertwined social, economic, political and environmental forces. Such models often fall into the trap of environmental determinism, assuming climate change will drive migration in predictable ways, when history shows that governance, conflict, and economic structures often play equal or greater roles in determining who moves, when, and why.

Scenario planning as an alternative

Scenario building offers a way of engaging with uncertainty that forecasting models cannot.[5] Instead of predicting a single 'most likely' future based on past trends, it generates a small set of plausible, contrasting futures by combining economic, political, social, technological and environmental factors. From military origins, it is now used by governments, corporations, and NGOs to explore uncertainty and stress-test strategies.[6]

While scenario planning is not a new concept in climate policy, its uptake has primarily been in climate adaptation and disaster risk management. Its use in climate migration research remains limited and largely experimental. Most studies continue to rely on econometric forecasting, vulnerability

mapping, or case-based analysis, despite the profound uncertainties that characterise migration decisions. Recent work has begun to explore scenarios of internal climate migration in US 'receiving cities' and pilot exercises for planned relocation in the Pacific and Caribbean; however, such examples remain rare. Precisely because migration futures are shaped by unpredictable interactions between climate, policy and human agency, scenario planning is a valuable tool for envisaging multiple plausible migration trajectories.

Projects such as Global Migration Futures have shown that scenario planning can identify critical uncertainties, challenge linear assumptions, and reveal hidden drivers of change. Crucially, it involves affected communities, ensuring their perspectives help shape the futures being imagined. This also respects recognitional justice in which the knowledge and experiences of those being studied are centred within the research.

Scenario planning in practice

York University's Centre for Refugee Studies (CRS) held a Summer Course on Climate Migration in June 2025 which tested a simplified scenario-building process focused on the question: How might migration in, to, and from Pacific Island States look in 2050?

The workshop was held during the final two days of the five-day Summer Course, ensuring that all participants had engaged with the lectures, panel discussions, and relevant literature before the scenario planning exercise began. Background research was put together in consultation with top experts on climate migration, including practitioners with extensive field-based experience in the Pacific.

Participants first identified events that had shaped migration in the past, classifying them as either continuous trends, such as ageing or sea-level rise, or discontinuous shifts, including colonialism, decolonisation, wars and significant policy changes. The exercise revealed that discontinuous events, particularly political and policy shifts, have historically driven migration in the region. They then identified relative certainties, such as changes in tourism or demographic shifts, alongside uncertainties, including migration policy, technological innovation and shifts in public opinion. Dramatic changes like sea-level rise are inevitable and could produce different migration outcomes depending on political and social responses.

These factors were plotted on graphs to better understand their relevance, level of (un)certainty and potential impact on migration. Relative certainties were plotted with 'acceleration' on the Y-axis and 'impact on migration' on the X-axis. Acceleration was defined as the rate at which a factor changes or intensifies over time – not simply whether it is growing, but whether that growth is speeding up or slowing down. Impact on migration refers to the extent to which a factor is expected to influence migration and mobility in the future.

Relative uncertainties were plotted on a separate graph, again with 'impact on migration' on the X-axis, but this time with 'uncertainty' on the Y-axis. Highly uncertain factors were those which participants could not confidently predict would occur, or, if they did occur, what direction they might take or how their effects on migration might unfold, acknowledging that such outcomes could vary widely and remain volatile.

Participants were encouraged to debate, discuss, and share their perspectives, bringing their own disciplinary backgrounds, personal experiences and cultural frames of reference into the conversation before jointly positioning these factors on the graph. The key takeaway from this exercise was

humbling: the future is far less knowable than it appears at first glance, and how different factors interact to shape migration is far more contingent, contested and uncertain than we tend to assume.

Participants developed four scenarios for migration in 2050, exploring how political, economic, social, technological, and environmental dimensions might interact and shape migration. The aim was not to predict the future, but to construct coherent and plausible stories that could reveal risks, opportunities and blind spots in current policy thinking.

Scenario examples

Workshop participants developed a range of scenarios. One group explored a future characterised by high adaptation capacity and full recognition of Pacific Island States migrants. In this scenario, while climate change impacts still occurred, investments in technology and adaptation proved effective in reducing climate related vulnerability. Additionally, the willingness of other countries to accept both permanent and seasonal migrants from the PIS fostered an environment in which circular migration, remittances and investments in the homeland contributed to economic growth and stability. Another group envisaged a scenario focused on economic growth within the PIS and the closure of migration corridors to other countries. They projected a shift toward a digital economy, diversified sources of income, and closer integration between the States. Tourism and tech startups would thrive, benefiting from favourable conditions in the PIS. Less optimistic scenarios were also considered, highlighting the challenges of a regional context marked by low economic growth and the absence of migration corridors, or by limited adaptation capacity and regional instability. While these are just a few, brief examples of the scenarios developed during the workshop, they offer valuable insight into the thinking process, complexities and challenges of attempting to peer into the future of migration and climate change.

Lessons from the process

The exercise reinforced that uncertainty is a permanent feature of migration futures and that engaging with it directly opens new possibilities. Migration outcomes in the Pacific are shaped as much by policy choices, governance and legal frameworks as by environmental change. For example, technology can shift trajectories in polarising ways by supporting adaptation and resilience or deepening inequalities.

The late activist and philosopher Grace Lee Boggs described the work of imagining alternative futures as both political and creative.[7] In contexts where dominant narratives frame climate-related migration as an unavoidable crisis, the practice of envisaging different possibilities becomes a form of resistance. It pushes back against fatalism, disrupts narrow policy thinking and enables Pacific Island communities and their allies to centre agency, dignity and justice in planning for what comes next.

Implications for policy and practice

Beyond reimagining futures, scenario planning offers practical utility for policy and governance. It can be embedded into National Adaptation Plans (NAPs) – which outline how countries will adapt to climate change in the medium- and long-term – and regional migration frameworks to stress-test strategies under conditions of deep uncertainty, revealing where rigid approaches may fail. For Pacific Island States, avoiding one-size-fits-all approaches is essential. While the Pacific nations share climate risks, their capacities, vulnerabilities and political contexts differ. Here, it is particularly effective in the context of planned relocation, where

policy choices, financing, and community consent will interact in unpredictable ways. More broadly, it can support receiving countries and regional bodies in anticipating immigration pressures and aligning infrastructure, housing and legal frameworks accordingly.

Investing in adaptation that preserves choice is crucial. Mobility should be viewed as one adaptive strategy among many, rather than solely as a last resort or evidence of maladaptation. This requires integrating migration planning into national climate policies, ensuring it is resourced, rights-based, and grounded in community priorities and needs. International actors can support more coherent and just approaches by creating migration pathways that recognise sovereignty, dignity and agency, and by aligning resources with the visions of the communities most affected, rather than solely with donor priorities.

Building new narratives

Before the workshop, many participants imagined the future of the Pacific in apocalyptic terms: submerged islands, stateless populations and inevitable displacement. Scenario building disrupted that narrative. One of the most profound realisations to emerge from this process was that uncertainty, rather than foreclosing the future, can make it brighter. By engaging with multiple plausible futures, it became clear that migration outcomes are not fixed but contingent, shaped by policy choices, technological innovation and political struggle. In the case of climate migration, this point highlights that political factors and choices drive climate-induced displacement, contradicting the prevailing scholarship and narratives that view climate change as an environmental inevitability.

In this reframing, the future ceases to be a linear path leading toward disappearance and becomes instead a space of possibility. What initially appeared as an inescapable crisis opened into a horizon of action, where communities, governments and institutions can shape more just and adaptive responses. Instead of diminishing our sense of agency, embracing uncertainty expanded it: we have far more capacity to act – and to reimagine the future – than we often allow ourselves to believe. Yet, this gives us not only hope but also responsibility: if the future is open, we will be held accountable for how it unfolds. The fate of these island states and their populations will depend on the choices made today and whether agency is mobilised to turn possibilities into action.

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What is choice without knowledge? Climate literacy for displaced communities

Philippa Weichs, Emmanuel Zangako Peter and **Isaiah Du Pree**

Climate literacy enables greater agency, decision-making, and meaningful refugee participation. One refugee-led organisation in Egypt is piloting workshops and supporting community-led initiatives to help translate knowledge into power.

Refugee volunteers planting a tree at St Andrew's Refugee Services, Cairo, on Earth Day 2022. Credit: StARS

The climate crisis acts as a 'risk multiplier' of displacement, exacerbating direct and indirect drivers, including armed conflict, food insecurity or loss of livelihood, both within countries and across borders.[1] As the climate crisis increases the risk of displacement across the world, approximately 75% of the roughly 123 million people globally displaced are sheltered in countries with high to extreme exposure to climate-related hazards.[2] The impact of the climate crisis on displaced people, many of whom already face precarious living conditions, is thus particularly severe. Yet, there remains a noticeable lack of research on how to effectively tailor climate change communication to the lived experiences of displaced communities, limiting their ability to prepare and adapt to the climate risks they face while displaced.

Climate change communication occurs within complex systems of individuals, institutions and organisations with a diverse range of knowledge, politics, experiences and cultures.[3] Communication about climate change often focuses on raising awareness and inducing social behaviour change, harnessing people's sense of responsibility for their 'homes', local communities and country of residence to get them to reduce emissions and care for the environment, excluding those navigating lives disrupted by forced displacement, loss of home and marginalisation.

Climate literacy, which often emerges as a result of exposure to climate change communication, is an understanding of how the climate system works, as well as of human influence on the climate and vice versa.[4] A basic level of climate literacy, or having heard of climate change and understanding that it is caused, at least in part, by humans, has been shown to be a strong predictor of risk perception.[5] Risk perception is formed based on individual experience, knowledge and observations and informs adaptation strategies, including changes in behaviour, support for relevant public policies or mobility decisions. Most climate communication in recent years has focused on mobilising or convincing people in the Global North of the urgency of the climate crisis, as there is a perception that those in Global South countries do not need convincing because they already bear the brunt of it. What these audiences need, however, is to 'make sense' of what they are seeing, to understand how science can explain the changes they are experiencing in their environments, what the future holds, and what they can do about it.[6]

Piloting climate literacy workshops

Working at refugee-led organisations (RLOs) serving displaced communities in Egypt, we recognised that, to improve climate literacy among these communities, it is essential to tailor climate change communication to their lived experiences and develop messaging within a participatory format. The motivation to do this work was clear: displaced people face unique, compounded challenges and climate vulnerabilities shaped by a precarious legal status, limited access to services, economic strain and frequent marginalisation. In order to strengthen their ability to prepare and adapt to climate risks and lead on their own solutions, communication about climate change aimed at appealing to displaced communities should reflect the intersections of these hardships.

In conversations with refugees from Sudan, South Sudan, Ethiopia, Eritrea and Yemen, all countries significantly impacted by climate change, many described how climate hazards like extreme heat, flooding and failed harvests – in addition to conflict and other forms of insecurity –had influenced their reasons to relocate. But while many of those we spoke with demonstrated high levels of climate literacy in relation to their countries of origin, their awareness of how global climate change manifests itself through climate hazards in Egypt and the urban environment of Cairo was limited – a disparity that was only revealed thanks to the participatory format. As one South Sudanese refugee we spoke with said, "Nobody has raised the issue of climate change, its effects and impact on Egypt, before. But I think it is high time that we think about bringing awareness to the [refugee] communities so that they may know exactly what is happening".

From these discussions, we recognised the need to strengthen climate literacy and adaptive capacity in a participatory, community-centred format. Together

with an environmental organisation that supports local communities vulnerable to the effects of climate change, Saint Andrews Refugee Services (StARS) piloted a participatory model of climate literacy workshops, engaging refugees from various countries of origin, ranging from one-day workshops to a curriculum of workshops spanning up to eight sessions.

Rather than focusing on abstract science, the workshops aimed to draw connections between the global climate crises and the participants' lived experiences of climate hazards in their countries of origin, providing a space for personal reflection on their journeys of displacement. Through the use of multimedia, storytelling, guest speakers, case studies of the participants' countries of origin and collective reflection, our approach centred on encouraging mutual learning and fostering engagement. The process revealed the importance of making meaningful connections between climate change and lived realities and priority needs, including health, protection and livelihoods, exploring environmentally friendly means of income generation given the financial difficulties displaced communities often face. Our approach helped us understand how climate literacy is often rooted in memories of home and belonging, and how forced displacement can fracture and diminish climate awareness when the priority becomes survival in a new place.

Crucially, our approach led to meaningful outcomes. By the end of the workshops, the overwhelming majority of participants expressed a strong understanding of the connections between climate and displacement. Many of them also said that they intended to share their knowledge within their communities, hoping to spread awareness and inspire positive change, particularly among children and young people. To support their efforts, we are developing a comprehensive facilitation guide, in English and Arabic, that will be shared with participants to assist them in conducting their own climate literacy workshops. In the meantime, one RLO has already launched workshops focused on raising awareness, encouraging environmentally friendly behaviour and supporting adaptation, inspired by the climate literacy workshops they had participated in with StARS.

The takeaways are evident: when displaced people are engaged not just as recipients of information but as co-creators of climate knowledge made accessible and relevant to them, the result is deeper understanding, action and leadership from within their own communities.

Knowledge and participation: a personal perspective

One author's first-hand experience illustrates how climate knowledge enables refugees and migrants to participate in conversations and decisions that deeply affect their lives and enables the development of community-led solutions.

"As a displaced person myself and a founder of a volunteer organisation in support of displaced youth living in Cairo, I have seen firsthand how access to knowledge and information can transform lives" Emmanuel says.

"In 2022, I was selected to volunteer and support global delegates at COP27 in Sharm El Sheikh. It was my first time witnessing a major global event. But what surprised me was the absence of refugees in conversations that directly concerned them. While displacement, migration, refugees and climate change were discussed, no actual refugees contributed to these discussions. We were there as helpers, not as leaders, not as participants and not as equals. It

was from that moment I, together with my friend, said enough of others speaking on our behalf. It is time to speak for ourselves.

Before attending COP27, I had little understanding of what climate change truly meant, I thought of it only as a natural disaster. Yet, I had already witnessed its impact on my country, South Sudan. My own displacement was influenced both by climate change and conflict, and many of my fellow countrymen and women are still affected today.

Upon returning from COP27, we started documenting our experiences and the challenges faced during the event. That experience sparked the creation of Refugee Voice on Climate Change (RVCC), a refugee-led initiative working to amplify the voices of displaced people in global climate discussions and platforms. RVCC's mission is simple: we work to empower people with lived experience of displacement to demand global action in recognition of climate-induced displacement and mobility. Both my friend and I later took an active part in StARS' workshops."

RVCC's work now also includes a project centered around climate education and community awareness that uses storytelling as a tool to communicate the lived experiences of those affected by climate change. Through these stories it raises awareness, challenges stereotypes and inspires communities to respond to climate change and develop adaptation strategies. Through mentorship and support, RVCC has also enabled a colleague to lead a team of 15 young refugees and migrants who organise climate literacy sessions and outreach programmes in community schools across Greater Cairo. His story demonstrates the power that goes with knowledge and the recognition that refugees are not just recipients of aid, but leaders of change.

When refugees are not aware of what climate change is or how to protect themselves from its effects, they will be unable to take action. They will also be unable to participate in important discussions, community adaptations and other decision-making, action-oriented spaces. When refugees are empowered with knowledge, they develop more capacity to become leaders and bring fresh ideas, new energy and mindful solutions rooted in local realities.

Recommendations

Based on our experiences, we recommend that researchers, service providers, donors and practitioners take the following steps to co-develop climate literacy and communication strategies grounded in displaced communities' lived experiences – thereby laying the ground for refugee-led, community-based adaptation strategies to be successful:

- Expand the knowledge base on climate risks that refugees face along their journeys of displacement. Large parts of the current research landscape focus on how climate change shapes internal displacement. Yet, climate change also drives cross-border displacement and affects the lives of refugees in host countries. As such, researchers should map refugees' climate-related exposure and vulnerabilities along their journeys of displacement, adopting a holistic view covering countries of origin and transit as well as host countries. Centring refugees' lived experience, research should be based on participatory methods and give special attention to intersectional vulnerabilities.
- Tailor climate change communication to refugees' lived experiences of displacement to strengthen their adaptive capacity. Refugees' experience

of displacement, both past and present, shapes the narratives, themes and frames that resonate with them regarding climate change. To be effective, any communication around climate change – and as such, any activities supporting refugees' risk preparedness and adaptive capacity – needs to be grounded in that lived experience, and to be developed with and by refugees.

- Strengthen climate-sensitive, refugee-led and community-based services. Refugees – equipped with the right resources and support – are best placed to address the climate risks their communities face and provide the services they need. Refugee-led, community-based risk preparedness and adaptation activities often not only have the trust of displaced communities, they are also more effective and long lasting.
- Shape climate-related policy and decision-making spaces to be led by refugees. People with experience of displacement remain systematically marginalised in policy and decision-making processes; climate change is no exception. Recognising the role that refugees play in implementing and leading solutions to the climate risks they face, policy- and decision-makers must ensure that they shape their spheres of influence to meaningfully engage with and include refugees.

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The promise of satellite imagery in addressing climate displacement

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Satellite imagery can offer a powerful new perspective on the drivers of climate displacement, as case studies in Ghana and Libya demonstrate, but ethical concerns and data limitations call for caution, especially amid advances in digital technology.

Climate shocks and hazards are rapidly reshaping forced displacement trends in Africa, with the continent expected to see as many as 105 million people migrating in the context of climate change by 2050.[1] Good data will be needed to assess and monitor climate displacement, and evaluate interventions designed to rebuild communities and livelihoods. This requires context-specific approaches that combine field-based methods with new forms of data, such as satellite imagery. The two case studies in this article illustrate the power of satellite imagery to shed light on the drivers of climate displacement and to help to inform responses.

Coastal erosion in Ghana

Fuveme is a coastal community situated in the Anloga District of Ghana's Volta Region. It is located east of the Volta estuary, which has become increasingly vulnerable to sea-level rise and associated flooding. Between 2005 and 2017, a combination of satellite imagery and drone technology revealed that 37% of Fuveme's coastal land had been lost to coastal erosion and rising sea levels.[2] As part of the broader Volta Delta ecosystem, the area is endowed with valuable natural resources, including minerals, wetlands, lagoons, groundwater and fish stocks. These resources form the basis of the local economy, with most residents engaged in fishing and fish-related activities.

Figure 1 contains satellite imagery of the impact of coastal erosion on Fuveme taken in March 2017 and May 2025. The image from 2017 depicts the shoreline prior to the intensified effects of sea-level rise in the area. At this point, the coastline appears relatively intact, with a broader landmass that suggests the presence of a wider beachfront. There is evidence of

Figure 1: Fuveme, Ghana (Left, 2017; Right, 2025). Source: Esri, DigitalGlobe, Maxar and the GIS User Community

built infrastructure near the water's edge, alongside natural coastal features such as vegetation and sandbars, among others, which serve as natural buffers that would be expected to protect the area from further coastal erosion.

By contrast, the image from May 2025 reveals notable alterations in the coastal landscape. The shoreline has receded significantly inland – by several meters in some locations – which can be attributed to climate change in the region. This indicates a marked increase in coastal erosion and tidal flooding. Land areas visible in 2017 have since been submerged, and several buildings and structures previously located near the sea appear to have been destroyed. Additionally, the loss of vegetation along the coast reflects the erosion of natural coastal defences, further exposing the area to high-energy wave activity and storm surges.

Taken together, the two satellite images provide a good visual narrative of the ongoing environmental degradation in Fuveme over an eight-year period. These images not only show physical changes in the coastal zone; they also have significant implications for destruction of livelihoods, cultural loss and displacement. Indeed, subsequent field visits have revealed there is now no trace of a once-thriving community of roughly 1,000 people.[3] Many of the displaced residents were relocated further inland to a new settlement called Fuveme-New Town, but fishing and fishmongering continue to be the community's traditional sources of livelihood, compelling residents to return to the coastal ecosystem with which they are familiar for economic survival.[4] Such cultural connections and economic practices cannot easily be reestablished by relocation methods.

Nevertheless, opportunities for the innovative use of satellite imagery that incorporate local considerations look promising. In the White Volta Basin, another region of Ghana, integration of satellite imagery with participatory mapping improved flood mapping accuracy, enabling more reliable risk assessments and early warnings.[5] Participatory mapping engaged local communities, combining their knowledge with satellite data to delineate flood-affected areas. This process empowered communities and ensured that interventions addressed locally prioritised needs.

Flash flooding in Libya

Derna is a coastal city located in eastern Libya along the Mediterranean shoreline between the Jebel Akhdar mountains and the sea. Throughout its history, Derna has benefitted from its strategic location with access to natural resources such as fertile soils, freshwater springs and rich marine ecosystems. These resources underpinned local livelihoods, with many residents relying on small-scale agriculture, trade and fishing as primary sources of income. However, Derna is also highly vulnerable to flash flooding due to its position at the mouth of Wadi Derna, a seasonal river valley that channels fresh rainwater into the city. Dams upstream of the city held millions of gallons of water from rainfall until 11 September 2023, when Storm Daniel hit the eastern Libyan coastline, resulting in the dams' collapse and the single deadliest flooding event in Africa.[6] The fragmentation of the Libyan state as a result of the Libyan civil war greatly impacted the dams' structural integrity. According to reports, corruption and mismanagement of funds meant that the dam was not adequately maintained.[7] Over 23,500 people and 4,700 households were displaced internally within Derna.[8]

Figure 2: Derna, Libya (Left, 2022; Right, 2024). Source: Esri, DigitalGlobe, Maxar, and the GIS User Community

Figure 2 contains satellite imagery of the impact of Storm Daniel on Derna taken in October 2022 and November 2024. The second image depicts Derna in the aftermath of the storm showing the scale of the destruction; buildings previously visible are no longer to be seen, swept into the sea by the water's force.

Satellite imagery was crucial for relief efforts. International organisations used it to identify which neighborhoods in Derna had lost the most housing, roads and water infrastructure, helping authorities to prioritise where to deploy emergency shelter and restore services and where to begin reconstruction.[9] Humanitarian agencies also used geospatial mapping with local partners to guide the placement of aid distribution points and temporary resettlement areas, ensuring assistance reached displaced households most in need.

The changes in satellite imagery thus provide insight into social and economic realities. It is hard to downplay the role of the climate in displacing entire communities when images make the scope and scale of the changes in the area so clearly visible. Frontline responders, other relevant stakeholders and the general public can use accessible digital tools, such as EU's Copernicus Data Space Ecosystem, NASA's Earth Science Data System, the crowdsourced OpenStreetMap, and the open-licensed OpenAerialMap, to show the extent of continuing damage in their own communities. In sudden-onset situations, having the most up-to-date, high-definition images can make a difference when assessing situations.

However, there are limitations in data access and quality. More resources are needed to enable coordination and communication between frontline responders, local community members and international organisations, and for the analysis of prolonged environmental exposure. Resources are also often unavailable in the countries and areas where they are needed most.

The road ahead

Satellite imagery as a digital tool offers the potential to monitor and develop plans to better address the effects of climate change, and thus climate displacement, on affected communities. With increased access to open source satellite data, satellite imagery can be used to add nuance to understandings of climate displacement in different contexts in both slow and

sudden onset climate-related hazards as the case studies illustrate. However, there are several considerations for practitioners to note in the future.

Ethics and data privacy concerns:

as satellite imagery becomes more accessible and widely used in addressing climate displacement, it is critical to remain aware of the ethical dimensions and data privacy concerns associated with its application. The use of high-resolution imagery to track environmental changes or population movements – however well-intentioned – may inadvertently expose vulnerable communities to surveillance or exploitation. This is particularly concerning in contexts of forced displacement, where affected individuals and groups often lack the power to consent to, or challenge, how data about them is collected, interpreted or disseminated. Use of satellite imagery must be guided by ethical principles that prioritise data privacy and protection, ensure informed engagement wherever possible with local experts and safeguard against the misuse of spatial and personal data. Collaborations with local actors and affected populations are essential.

Scarcity and unreliability of field-based data:

while satellite imagery offers valuable insights into climate displacement, its effectiveness is significantly enhanced when integrated with accurate field-based data.[10] However, in many regions across Africa, field data remains scarce, outdated or inconsistent, limiting the accuracy and relevance of analyses. The lack of comprehensive figures on displacement – particularly for marginalised subgroups among forcibly displaced populations– compounds this challenge. Such gaps may lead to the exclusion of vulnerable populations from policy responses or programmatic interventions or lead to the misallocation of resources. Improving the quality, frequency and inclusivity of field data collection should therefore remain a priority for governments, humanitarian organisations and research institutions in order to take full advantage of satellite imagery. Community-based participatory approaches that centre lived experiences can complement satellite observations, offering a more holistic understanding of climate displacement. Satellite tools should be seen as a complement – not a substitute – for on-the-ground engagement.

The advent of advanced digital technologies:

the future of satellite-based approaches in climate displacement analysis lies in their integration with emerging digital technologies. Machine Learning (ML) and Artificial Intelligence (AI) are increasingly being used to automate the detection of environmental changes, identify risk patterns and predict future displacement scenarios. These advances hold great promise for scaling early warning systems, enhancing real-time monitoring and supporting anticipatory action. However, the successful implementation of these technologies relies on foundational knowledge of satellite-based methods, as showcased in this article. Before practitioners can fully leverage AI or ML-driven insights, there must be a clear understanding of how satellite data is sourced, interpreted and validated. Without this grounding, there is a risk of overreliance on automated systems that may replicate existing biases or misinterpret contextual nuances.

As governments, humanitarian organisations and research institutions increasingly adopt advanced digital skills in addressing forced migration, we call for this adoption to be accompanied by

investments in satellite-based methods training, accessible education and capacity-building and digital literacy, especially among practitioners and communities in the Global South. Equipping local actors with the foundational knowledge needed to engage meaningfully with geospatial data can help ensure that advanced digital technologies complement – rather than replace – human expertise and agency.

By addressing these key challenges, the humanitarian and development sectors can harness the full potential of satellite imagery to inform just and effective responses to climate displacement.

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Displaced by climate, marginalised by the State: Afro-Colombians in Medellín

Michael Nabil Ruprecht and **Sonja Ayeb-Karlsson**

Climate change is intensifying racialised displacement in Colombia. For internally displaced Afro-Colombians from the Chocó, environmental degradation intersects with conflict and state abandonment in shaping forced migration.

In Colombia's Pacific coastal department of the Chocó, Afro-descendant communities are facing compounding crises. While the region has long been marked by underdevelopment, armed conflict and state neglect, a new and intensifying force is reshaping life and displacement dynamics: climate change. Shifting rainfall patterns, recurrent flooding, prolonged droughts and soil degradation have destroyed local livelihoods and transformed environmental threats into existential ones. Yet these are not simply natural events; rather, they are deeply embedded in racialised histories of territorial abandonment, exclusion and violence.

This article draws on original qualitative fieldwork conducted across six neighbourhoods in Medellín between September 2023 and May 2024 with Afro-Colombian communities displaced from the Chocó.[1] The study is based on 50 in-depth semi-structured interviews, complemented by participant observation and community gatherings designed to collaboratively identify key issues. It argues that climate change functions as an amplifier of structural violence and racial marginalisation, accelerating the displacement of historically neglected populations. By tracing how displaced families experience, narrate and resist this layered crisis, the article demonstrates how state abandonment and racialised governance generate a distinctive form of climate displacement that remains largely unacknowledged within national and international frameworks.

Environmental degradation as a trigger of displacement

The Chocó, one of Colombia's most biodiverse yet impoverished regions, ranks among the areas with the highest annual rainfall globally, sustained by intense precipitation and dense river networks. Yet residents report that this hydrological cycle has become increasingly unstable in recent decades, a pattern consistent with broader climate-change signals documented in tropical Andean and Pacific lowland regions.[2] Seasonal rains have become less predictable, with sudden-onset floods inundating entire villages, while multi-week dry spells strain drinking water access and compromise planting and harvesting cycles. These shifts directly threaten small-scale agriculture and fishing - the foundations of *Afro-Chocoano* livelihoods - by eroding food security, reducing income opportunities and amplifying existing vulnerabilities.

Many fieldwork participants linked these changes to broader climate change processes, as well as to deforestation and illegal mining. Indeed, climate change, uncontrolled logging and gold mining (often by armed groups or multinational

corporations) have intensified not only sedimentation in rivers - thus contributing to risks of massive flooding - but also river pollution. Residents describe how riverbanks erode more quickly, crops fail more often, and formerly fertile land becomes uninhabitable. In such contexts, climate change is not simply an environmental phenomenon but part of a broader territorial and racialised dispossession.

As one elderly woman from the San Juan basin noted during interviews:

"The water eventually took our house, but before that, it had already taken our fields and animals...when we asked the authorities for help, they said they couldn't do anything... so there was nothing left to keep us there."

In this sense, environmental stressors act less as new threats and more as amplifiers of existing forms of State abandonment and structural marginalisation. Displacement becomes the inevitable outcome when livelihoods collapse, State protection fails, and no institutional safety net exists.

Racialised displacement and the role of the State

Despite official narratives that position climate shocks as apolitical or 'natural', the experiences of *Afro-Chocoano* communities suggest otherwise. Participants in the study consistently described the absence of State protection in both the lead-up to displacement and its aftermath. They viewed local governments as largely ineffective, under-resourced or corrupt. Environmental early warning systems were either unavailable or ignored, and State authorities also failed to prevent land grabs or violent threats by illegal armed actors competing for resources across the territory.

Importantly, this absence of State support and protection is not new. It reflects a long trajectory of racialised State neglect, whereby Afro-Colombian territories receive minimal infrastructure investment, health services or educational opportunities. As scholars such as Arturo Escobar have argued, the abandonment of Afro-descendant territories is a form of structural violence: uneven development allows the State to justify directing resources towards regions deemed more 'modern' or 'productive,' thereby projecting the neglect of Afro-Colombian territories as a rational policy choice rather than racialised exclusion.[3]

Some residents viewed this neglect as intentional. One respondent, displaced from the Atrato River valley, explained:

"If this were Bogotá or Medellín, the government would have done something... but we are Black and we live far away from big cities, so they let the river wash us away."

This perception that Afro-descendants are excluded from the collective sense of who is fully recognised as a citizen deserving of protection reinforces feelings of abandonment and further intensifies their displacement experiences. It also explains why many climate-displaced Afro-Colombians do not register as internally displaced persons (IDPs): they fear that, given the pervasive conflict-focused framework, their displacement will not be acknowledged as legitimate, and their rights will not be protected by the state.

Urban resettlement in Medellín

Displacement from the Chocó often leads families to Medellín, the capital of Antioquia, whose booming economy and public transport infrastructure offer the illusion of opportunity. In reality, Afro-Colombians arriving in Medellín face a new set of challenges. They are frequently pushed to the city's geographical margins, including the steep, landslide-prone hillsides of the Aburrá Valley, informal and precarious settlements

or flood-prone ravines.

This urban periphery is itself a product of historical displacement. Many of Medellín's poorest *comunas* (neighbourhoods) - such as Manrique, Villa Hermosa and San Javier (also known as *Comuna 13*) - are home to generations of conflict-displaced Colombians, and new arrivals from the Chocó often settle alongside earlier waves of migrants. However, they report particular vulnerabilities as Afro-descendants, including racist policing, discriminatory rental markets and exclusion from local decision-making.

Crucially, housing is often precarious, consisting of informal dwellings built on unstable slopes, with no land titles, sewage or access to safe drinking water. Many families live in structures threatened by landslides or rain-induced collapses, mirroring the environmental vulnerabilities they left behind. This creates a tragic irony: those displaced by climate risks in the Chocó often find themselves re-exposed to environmental risks in Medellín, this time without the social safety nets of extended kinship or customary land rights.

Institutional gaps and policy failures

Colombia has a progressive legal framework on internal displacement, enacted through Constitutional Court rulings and the 2011 Victims and Land Restitution Law (also known as Law 1448). However, environmentally displaced Afro-Colombians face substantial obstacles in accessing assistance. One major challenge is the lack of effective recognition. Climate factors are excluded from displacement registries - the official databases the State uses to identify and certify IDPs - meaning those fleeing floods or environmental degradation often remain 'invisible' to the system. This limits their access to humanitarian aid, housing subsidies or psychosocial support. However, in April 2024 Colombia's Constitutional Court issued a breakthrough ruling explicitly recognising climate change as a contributing factor to internal displacement for the first time. This precedent opens legal and institutional pathways for better recognition and protection of those displaced by environmental crises, particularly in historically marginalised regions such as the Chocó.

Another barrier is urban governance. Medellín has won global praise for its innovation, sustainable architecture and urban development, labelling itself as one of the world's smart cities. However, critics argue this model often excludes poor, racialised communities, deepening the wealth gap between privileged and neglected neighbourhoods. As one local advocate explained:

"The city's strategy is beautification, not inclusion. There are a few cable cars and museums, but most of our people in the slums still suffer from frequent water and electricity shortages…not to mention the deficient public bus system when you live up on the valley slopes…sometimes we have to walk one hour uphill to get back home after work."

Indeed, the focus on urban spectacle and gentrification in certain neighbourhoods has created new tensions, particularly as informal settlers, many of them climate-displaced Afro-Colombians, face eviction or relocation due to infrastructure projects. In some cases, urban development is reproducing displacement, rather than solving it.

Community responses and everyday resistance

Faced with institutional indifference, Afro-Colombian communities have developed their own responses. During fieldwork, participants highlighted several grassroots initiatives, including traditional midwifery

networks, mutual aid schemes, youth cultural workshops and women-led soup kitchens. These spaces serve not only as survival strategies but as sites of identity affirmation and resistance. One particularly innovative example is the work of local ethnic councils. Called *consejos comunitarios*, these are local governance bodies recognised by Law 70 of 1993. Members are chosen in community assemblies to represent the group's interests. While they were originally tied to managing rural collective lands, councils have also adapted to urban settings, helping displaced Afro-Colombians maintain cultural and political representation. They work as a bridge between the community and government institutions, advocating for housing and land rights, pushing for inclusion in urban planning, and making sure displacement policies respect cultural and collective rights. In this way, councils protect not just material needs, but also community identity and survival during displacement.

These community responses are complemented by trans-local solidarity networks. Afro-Colombian leaders in Medellín often maintain links to their home communities in the Chocó, circulating news, mobilising resources and engaging in advocacy efforts both locally and nationally. Religious spaces, such as Afro-Colombian churches or community centres, often act as hubs for organising, while cultural practices such as traditional music and dance serve as forms of resistance and memory preservation.

However, community-led resilience remains fragile and uneven as these efforts often face barriers, including lack of funding, political co-optation and legal uncertainty. Participants emphasised that true transformation requires more than resilience, it requires justice as well as state support and recognition. One community leader put it plainly:

"We resist not because we are strong, but because we are ignored. We should not have to fight this hard just to be seen."

Integrating Afro-Colombian voices into climate policy

While grassroots resilience is admirable, it cannot substitute for institutional accountability. It is critical that national and international actors move beyond symbolic inclusion and toward practical, systemic changes. Afro-Colombian voices must be central in shaping Colombia's climate response, particularly when it intersects with questions of displacement, race and historical exclusion.

Emerging models of participatory climate governance, such as community-led risk mapping, offer promising directions. Likewise, academic and NGO partnerships that prioritise co-production of knowledge with affected communities help amplify marginalised voices. However, these efforts must be matched by political will, equitable funding and clear metrics of inclusion.

Multilateral frameworks such as the UNFCCC and the Cartagena+40 process should explicitly address the racial and ethnic dimensions of climate-related displacement by requiring race/ethnicity-disaggregated data; embedding the participation of Afro-descendant organisations in protection design and monitoring; and aligning adaptation, disaster risk reduction (DRR) and mobility policies with safeguards against discrimination for groups such as the *Afro-Chocoanos*.

Recommendations

The experience of Afro-Colombian IDPs from the Chocó challenges dominant narratives around displacement and climate change. It demands a shift from understanding climate-induced migration as a singular, apolitical process, to seeing it as a deeply racialised, historical and structural phenomenon.

Climate shocks do not act in isolation; they compound legacies of neglect and exclusion.

The following policy recommendations could help address these challenges:

1. Implement the Constitutional Court ruling expanding the legal definition of forced displacement in Colombia to include environmental factors.
2. Integrate racial equity and cultural rights into all phases of climate adaptation, disaster risk reduction and urban planning.
3. Support Afro-Colombian organisations with direct funding, legal tools and participatory mechanisms for urban governance.
4. Develop tools that capture the environmental, social, economic and political drivers of displacement, enabling both analysis of complex mobility patterns and evidence-based advocacy for targeted policies and interventions.
5. Invest in the Chocó's resilience by strengthening local institutions, infrastructure and land rights, preventing displacement before it begins.

Ultimately, this article underscores the urgency of reclaiming the narrative of environmental displacement, as a product not of nature, but of state agency, policy choices, historical injustices and institutional failures. Afro-Colombians displaced from the Chocó to Medellín are not just victims of climate change; they are survivors of systemic abandonment and architects of grassroots resistance.

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Between displacement and entrapment: climate-induced (im)mobility in the Middle East

Wassim Ben Romdhane, Bram Frouws and **Jennifer Vallentine**

A complex interplay of aspirations, capabilities and constraints determines whether people stay or move in response to climate hazards. Understanding how these factors interact can help inform more nuanced interventions.

In the Middle East, where extreme heat, recurrent droughts and intense storms intersect with protracted conflict and fragile governance, climate-related hazards are reshaping lives, livelihoods and movement patterns. Drawing on field research in Yemen, Iraq and Syria, this analysis challenges the assumption that climate change inevitably drives forced displacement and highlights a more nuanced understanding: while severe shocks may prompt many people to move, many others cannot because they are blocked by barriers such as resource constraints, legal hurdles and social obligations. When movement does occur, it is most often within countries, and when cross-border, it tends to remain within the region. For those unable to move, the result is a state of 'involuntary immobility'. This interplay between environmental drivers and structural obstacles explains why piecemeal interventions often fall short and underscores the need for integrated responses that address both displacement and entrapment.

This article draws on a study conducted by the Mixed Migration Centre (MMC) between November 2024 and February 2025 involving 880 household surveys (220 per site) across the governorates of Aden and Al-Maharah in Yemen, Al-Qadissiya in Iraq and Al-Hasakeh in Syria. These were supplemented by in-depth interviews and group discussions with host community members, internally displaced people, migrants and subject-matter experts. It builds on MMC's conceptual model applying the aspiration–capability framework of migration decision making in the context of climate change and adaptation.

Framing climate and agency: the aspiration–capability lens

Climate-driven mobility hinges on two intersecting dimensions: the aspiration to seek safety or opportunity, and the capability to act on that aspiration. Capability includes factors like financial resources, legal permission and social support. When both aspiration and capability are high, people may move voluntarily. Where capability exists but the desire to move remains low, people may stay in place voluntarily despite hazards, possibly pointing to positive adaptation and coping mechanisms. Conversely, when people want to move but cannot, they are left trapped. Finally, when environmental shocks overwhelm the possibility of staying but leave some capacity for movement, forced displacement occurs. For the purpose of this article, the analysis focuses primarily on the latter two outcomes, highlighting key implications for policy and practice.

Involuntary mobility

Forced displacement does not arise from climate hazards alone. It emerges when

environmental stressors intersect with structural vulnerabilities, including poverty, weak infrastructure, displacement histories and limited institutional support. These pressures combine to strip people of the ability to remain, leaving movement as the only available option. Importantly, even when such conditions take hold, displacement is often not an immediate response. Findings highlight that in many cases, mobility occurred only after the erosion of multiple support layers, when households could no longer cope in place.

In Aden, unpredictable and heavy rainfall, often leading to flash floods, was the most commonly reported climate-related hazard, with severe impacts on housing and infrastructure. One displaced fisherman in Seera, a district of Aden, put it plainly: "We coexisted with the climate until the floods came and destroyed my dwelling. I had to move to a safe place." Focus group participants, particularly from migrant and displaced communities living in informal shelters in Aden, described facing repeated damage to their homes during heavy rains. In some cases, this reportedly forced households to evacuate when shelters became uninhabitable, prompting renewed displacement among those already uprooted by conflict, hardship and earlier climate-related shocks. These groups were often located in flood-prone areas with limited protection, heightening their exposure to loss and disruption. This example illustrates how sudden-onset hazards can lead to displacement when physical exposure intersects with inadequate shelter. It also highlights the reported failure of housing systems and disaster preparedness mechanisms to protect those most at risk.

In Al-Hasakeh, fewer households reported recent displacement due to climate, but interviewees emphasised how environmental degradation had contributed to a broader collapse in livelihoods. As agricultural land became barren and income sources dwindled, some households reportedly found they could no longer survive in place. Weak governance and limited institutional capacity to regulate water use or support farmers further accelerated this decline. One Syrian respondent described the decision to move: "What happened in terms of climatic changes in recent years is the straw that broke the camel's back regarding migration because it prompted many people to resolve the matter and to move." This case illustrates how slow-onset climate change, when layered onto existing economic and governance challenges, can overwhelm coping capacities and lead to displacement. In such contexts, mobility often marks the point at which cumulative stress becomes insupportable.

These examples illustrate that involuntary mobility is not about sudden flight alone. Rather, it often follows the failure of multiple systems, including livelihoods, shelter, infrastructure and institutional support, that once enabled people to stay. Movement becomes inevitable when these systems collapse, not necessarily when hazards strike. Addressing forced climate-related mobility requires early intervention to reinforce these systems before thresholds are crossed. This includes efforts to bolster housing resilience, restore degraded livelihoods and provide inclusive support to displaced populations and those at risk of being displaced.

Across the research sites, most reported displacement was to other areas within the same country, often from rural districts to towns or cities. Cross-border moves were less common and generally regional, reflecting a mix of factors such as support networks, costs of migrating further afield, administrative requirements and, in some cases, preference for staying closer to home.

Involuntary immobility

Remaining in place is not always a reflection of resilience. Across all four governorates, many households that wanted or needed to move reported being unable to do so due to a combination of financial, legal and procedural barriers. In these cases, urgent risk did not translate into action, leaving families stranded in deteriorating conditions.

Survey findings from Aden revealed that a large proportion of respondents had considered relocating but were unable to follow through. Among those who expressed a desire to move, most pointed to the inability to afford housing and basic needs at the destination as key barriers. While the predominantly urban setting offered some services and infrastructure, widespread unemployment and high living costs reportedly kept many families in place. This example highlights how limited economic capacity can entrench involuntary immobility even in cities, where relocation might otherwise appear more feasible.

Financial constraints were even more pronounced in Al-Qadissiya. Drought-related crop failures had undermined incomes and deepened existing poverty, and many households that wanted to move lacked the resources for transport, rent or resettlement. As one interviewee explained, "We no longer have the capacity to migrate or open new projects outside the region, forcing us to remain in the region and rely on small plots of agriculture to meet basic needs." These findings show how immobility in rural areas is often a reflection not of preference, but of severe resource deprivation.

In Al-Hasakeh, immobility was shaped by administrative and institutional hurdles. Households reported that movement was limited by the lack of documentation, restricted mobility permissions and fragmented control across different authorities. Even when income or support networks were present, these barriers made it difficult or impossible to relocate. The result is a form of enforced stillness, where households are effectively locked in place by governance and legal systems.

In this sense, immobility is not always a stable state; it can reflect a limbo of uncertainty, marked by stalled intentions and unrealised plans. In some cases, such intentions may be tied to concrete steps such as saving for transport or securing documentation, while in others they may be more aspirational, reflecting hopes for change rather than strategies that are realistically within reach.

Together, these cases point to a consistent pattern: involuntary immobility is not incidental. It is the predictable outcome of intersecting constraints preventing movement, even when the desire or need to relocate is strong. Addressing this often-overlooked dimension of climate risk requires not only supporting those who move but also removing barriers that entrap those left behind and strengthening in situ resilience and protection for people to remain safely if they choose to.

Intersecting constraints and blurred boundaries

While the aspiration–capability framework distinguishes between involuntary mobility and involuntary immobility, the line between the two is often difficult to draw in practice. Many households do not fall neatly into one category or the other. Instead, they navigate a spectrum of constraints that shift over time and vary by context.

Some households that managed to move did so through unsustainable or exploitative means, such as selling off essential assets, taking on debt or accepting precarious work conditions in destination areas. In these cases, mobility occurred but it did not

come from a position of agency. Others who appeared immobile had previously moved but returned due to insecurity, unaffordability or poor living conditions, as seen in parts of Al-Maharah and Aden, underscoring the unsustainability of their earlier mobility. These return dynamics blur the distinction between those who move and those who stay, revealing how displacement and immobility can overlap, and even become cyclical.

This complexity underscores the need to move beyond binary classifications. Understanding how capability and aspiration interact, sometimes enabling movement, sometimes forcing stillness, can help identify which barriers are most pressing, which groups are most vulnerable and when, and which types of intervention might be most effective. It also highlights the need for flexible, context-specific approaches that recognise the overlapping pressures people face and the fluidity of mobility over time.

Implications for policy and practice

Climate-related (im)mobility cannot be addressed through isolated or hazard-specific interventions. Effective responses must consider the full spectrum of mobility outcomes, including supporting those who are displaced, those who are stuck in place and those navigating precarious forms of movement in between. This demands integrated approaches that address both structural barriers and systemic support gaps.

First, interventions should be designed with dual targets in mind. The same outreach that delivers assistance to displaced households can also reach those immobilised by a lack of documentation, income or transportation. In flood-affected areas, for example, coordinated packages could combine cash, legal and housing assistance to help people recover or relocate safely, regardless of whether they have already moved or remain at risk.

Second, anticipatory action must extend beyond early warning systems. When drought or storm risks are identified, response plans should include pre-arranged support for both in-place adaptation and voluntary relocation. Seed vouchers, transport stipends and mobile legal clinics can help households prepare for multiple scenarios rather than react to crises after the fact.

Third, identifying invisible constraints is key. Regular surveys and community engagement should include questions about unrealised mobility intentions and perceived barriers to movement. This allows governments and aid actors to detect pockets of entrapment early and target support to those who might otherwise be overlooked. In areas like Al-Hasakeh or Al-Qadissiya, for instance, such insights could inform microloans distribution, documentation drives or targeted infrastructure upgrades.

Finally, policy frameworks should embrace both mobility and staying as potential forms of positive climate adaptation. Rather than viewing movement solely as a failure to adapt, programmes can facilitate safe, flexible options such as circular permits, seasonal work schemes or decentralised relocation assistance, while investing in resilience building and in-place adaptation so that staying is a voluntary and sustainable choice. This helps turn constrained mobility into a planned transition and prevents immobility from becoming an enduring form of risk.

By approaching displacement and immobility as interconnected outcomes of shared constraints, policy and practice can become more responsive, inclusive and effective under conditions of accelerating climate stress.

Final thoughts

Climate-related mobility in the Middle East cannot be understood as a simple movement

of people responding to environmental hazards. It is shaped by an interplay of aspiration, capability and constraint, producing outcomes that range from forced displacement to involuntary immobility. What unites these experiences is not the hazard itself, but the barriers that determine who can move, who cannot, and on what terms.

Findings from Yemen, Iraq and Syria indicate that mobility patterns are largely short-range, with movement usually remaining within national borders and, when crossing them, more often to nearby countries within the region. They reveal that displacement often occurs only after multiple systems, such as livelihoods, shelter, infrastructure, and support networks, have eroded. Simultaneously, immobility is rarely a choice. It reflects entrenched obstacles, from financial hardship to administrative restrictions, which leave households stuck even when conditions deteriorate.

Effective responses must confront these dual realities head-on. This means bolstering resilience at origin through income support, legal protections and basic services, while expanding safe and flexible mobility options for those needing or wishing to move. It also requires identifying and addressing invisible forms of entrapment, where people are left behind not by preference, but by circumstance.

As climate impacts deepen, more households will be forced to navigate this spectrum of constrained options. Policymakers and practitioners must move beyond binary categories of 'migrants' and 'non-migrants' to recognise the fluid, pressured and uneven nature of climate-induced (im)mobility. Only by expanding choice and dismantling barriers can climate responses uphold agency, equity and protection in the years ahead.

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Sacred lands: belonging and displacement in Nigeria

Seun Bamidele

Being forced to move means more than just the loss of property and income – it entails a deep rupture of cultural and spiritual ties. That means relocation requires solutions that are not just technical – they must centre community perspectives.

Entrance into sacred land in Osogbo. Credit: Seun Bamidele

In Nigeria, the impacts of climate change intersect with long-standing socio-political and economic vulnerabilities, producing displacement crises that are both complex and persistent. The losses experienced by those who may be forced to move are not merely material. For many Nigerians, land is more than a resource; it is a living archive, containing the graves of ancestors, the presence of deities and the trees under which lineages began. The imperative to 'move to safety' is therefore entangled with an equally powerful imperative to remain. Communities often face an impossible choice: to abandon land and risk cultural erasure, or to remain in place and endure environmental danger.

The testimonies included here – supplemented by accounts documented in advocacy reports and journalistic sources – are used to illuminate how communities articulate loss, resilience and resistance.[1] The article explores both state-led and community-led responses, assessing

where they have succeeded, where they have fallen short and why. It also considers the tensions that arise when technocratic relocation strategies collide with deep cultural attachment to place, and asks how lessons emerging from Nigeria – both promising practices and missteps – can inform displacement policy and practice in other climate-vulnerable contexts.

'More than a buffer against waves'

Nigeria's geographical diversity, from its low-lying coastal regions to forest belts and semi-arid northern plains, makes it especially susceptible to climate change impacts. In the Niger Delta, rising sea levels, saltwater intrusion, and relentless coastal erosion have submerged fishing villages and destroyed mangrove ecosystems, displacing tens of thousands of residents. Mangroves are more than a buffer against waves; they are nurseries for fish, a source of medicinal plants, and a place of spiritual significance in many Delta communities.[2]

In the southwest, sacred forests and river systems central to indigenous spiritual practices are threatened by deforestation, prolonged drought and erratic rainfall. The Osun-Osogbo Sacred Grove, a UNESCO World Heritage site, has suffered flooding that has damaged shrines, altered the river's course and uprooted ancient trees considered the dwelling places of spirits.

Northern Nigeria faces its own climate pressures. The encroachment of the Sahara through desertification has accelerated, reducing arable land and forcing pastoralist communities southwards in search of grazing land. This has contributed to tensions between herders and farmers, sometimes escalating into violent conflict.

The scale of the crisis across the country is staggering. In 2022 alone, the Nigerian Emergency Management Agency estimated that over 1.4 million people were affected by flooding across more than 30 states.[3]

Voices from the frontlines

The lived experiences of displacement are marked not just by the loss of property or income, but by the erosion of cultural and spiritual worlds. In Osogbo, Osun State, a 62-year-old priestess dedicated to worship of the Osun River deity described the stakes: "This land is not just soil. It is where our ancestors are buried, where the spirits live. They say the river is dangerous now, that we should move. But if we leave, we lose who we are".

In Delta State, Joseph, a fisherman, watched the erosion advance year by year: "The water eats one house, then another. It is like the land is dying. I have lost my grandfather's home. But I stay because this is where we bury our people. Who will find our spirits if we move?"

In Nembe, Bayelsa State, another fisherman echoed the sentiment: "We cannot carry our ancestors' graves on our backs. If we go, it is like leaving them behind in the water".

In Baga, Borno State, a town that once thrived on Lake Chad's fishing economy, displacement has been compounded by conflict. With the lake shrinking to a fraction of its former size due to climate change, livelihoods vanished, and armed groups moved into the vacuum. Musa, a 45-year-old displaced father of five, explained: "We left because of fighting, but we would have left anyway. The water is gone. The fish are gone. The land is sand now. How do you stay in a place that has nothing?"

Such testimonies illuminate how displacement threatens not only physical safety but also cultural survival. For many, the right to remain is inseparable from the right to maintain identity, heritage and connection to the land.

Planned relocation: State approaches and community perspectives

Government-led relocation schemes in Nigeria are designed to move people from flood-prone and erosion-threatened areas to more secure sites. In principle, these efforts aim to protect lives and reduce exposure to hazards. In practice, however, they often overlook the socio-cultural and economic dimensions of displacement.

Daniel, a fisherman from Obogoro in Bayelsa State, recalled: "They came with trucks and told us they had land for us somewhere inland. But it's bushland, we can't fish there. They said we'd be safe, but safe from what? Hunger? No one asked us what we wanted".

Relocation sites frequently lack basic services – clean water, schools or healthcare – and offer few livelihood options. Without meaningful consultation, relocation risks deepening hardship and triggering return migration to unsafe zones.

In Epe, Lagos State, a planned move of riverine dwellers sparked resistance when women leaders were excluded from planning committees. One protestor asked: "We carry the water, we cook, we fish, we know this land. But they did not ask us anything. How can you plan a move for a people without their mothers?"

In Cross River State, a displaced farmer similarly noted: "The new place they gave us has no market. We can farm, but who will buy our crops?"

Such exclusion reflects a broader pattern in which relocation is treated as a technical problem to be solved by engineers and planners, rather than a social process requiring dialogue and negotiation.

Community-led adaptation and resistance

In contrast, some communities have organised to remain in place, advocating for adaptation strategies that honour cultural ties while addressing environmental risk.

In Ondo State, the grassroots coalition Aye Mo Ile Mi ("I Know My Land") brings together farmers, traditional leaders, youth and religious custodians to push for sustainable and culturally attuned land-use planning. Kehinde, a 28-year-old youth leader and agroecology trainer, explained: "We don't want to be victims. We want to be part of the solution. Give us the tools, not bulldozers. We have ways to work with the land, to make it live again". The coalition partners with NGOs and universities to develop flood-resilient crops, reforest degraded areas, and restore sacred groves that serve both ecological and spiritual functions.

In Edo State, displaced farming families have revived traditional 'communal work days' to rebuild terraces and restore ancestral irrigation systems using indigenous engineering techniques. These efforts show that when communities are empowered, adaptation can be both culturally respectful and environmentally effective.

Cultural and psychological impacts

The consequences of displacement extend beyond material loss. Sacred landscapes, burial grounds and ceremonial sites are often abandoned or destroyed, severing connections to cosmology and collective memory. Chief Ajayi, an 84-year-old oral historian from Ogun State, reflected: "I was born under that tree. My father was buried beside it. Now the tree is gone, washed away. I don't know how to pass on our stories any more". A young man from Akwa Ibom shared: "We used to gather at the old shrine during planting season. Now it's under the water. The planting feels empty without it".

Some communities are using digital tools to document oral histories and ritual practices, creating archives that preserve memory even

when physical landscapes are lost. Others are building replica shrines in relocation sites to re-anchor ritual life. While these strategies offer continuity, they cannot fully replace place-based traditions.

Integrating local knowledge and technology

Scientific tools such as satellite imagery can map flood risks and erosion patterns, but they must be paired with local ecological knowledge. Many communities possess deep environmental memory, passed down through observation of natural cycles, animal behaviour and spiritual signs. Abiola, a community organiser in Ondo State, recalled: "We knew the flood was coming. The birds were moving differently. The river spirit was angry. We prepared, but they didn't listen to us".

By integrating traditional observation with scientific data, risk assessments become more accurate and culturally resonant. Partnerships between meteorological agencies and community elders could improve early warning systems and ensure warnings are trusted and acted upon.

The role of faith and traditional institutions

Religious and traditional institutions remain central to resilience-building in climate-affected Nigerian communities. Temples, mosques, churches and shrines often serve not only as moral anchors but also as gathering spaces, emergency shelters and channels for mobilising collective action.

In Osun State, custodians of the Osun Sacred Grove integrate spiritual rituals with ecological restoration, replanting native trees and maintaining sacred waterways as both an act of worship and an environmental safeguard. Elsewhere, interfaith coalitions bringing together Christian, Muslim and indigenous leaders have begun framing climate action as a shared moral responsibility, lobbying for adaptation funding and policies that respect cultural heritage.

Faith leaders possess a unique authority to shape public attitudes. When they frame environmental stewardship as an ethical and spiritual duty, they can inspire large-scale volunteerism for cleanup campaigns, tree planting, flood mitigation works and sustainable farming practices. By engaging these institutions as equal partners in planning, policymakers can bridge the gap between technical adaptation strategies and the lived cultural realities of affected communities, ensuring that resilience efforts are not only scientifically sound but also socially and spiritually rooted.

Lessons for other climate-vulnerable contexts

Nigeria's experience offers transferable insights for other climate-vulnerable contexts in West Africa and beyond. Adaptation efforts achieve greater legitimacy and impact when they are co-designed with affected communities, grounding interventions in local knowledge and respecting deep cultural ties to land and water. Planned relocation, when unavoidable, must be understood not merely as a logistical or engineering task but as a deeply social process. This requires sustained consultation, the provision of meaningful livelihood support such as market-relevant skills training, access to viable economic opportunities and mentoring and the establishment of cultural safeguards that go beyond symbolic recognition to include the explicit incorporation of community traditions and custodians. For example, the role of the priestess of the Osun River should not only be acknowledged but actively integrated into relocation and development planning, ensuring that rituals, sacred sites and practices central to community identity and heritage are preserved and transmitted

across generations. Without these, even well-resourced projects risk fostering mistrust, resistance or unintended harm.

Faith-based and traditional institutions, which often serve as trusted moral authorities and conveners, can be powerful allies in mobilising public engagement and sustaining resilience initiatives. Effective climate adaptation benefits from integrating digital technologies such as satellite imagery, climate modelling and mobile early-warning systems with indigenous knowledge systems that carry generations of place-based environmental understanding. Together, these tools can produce more accurate, locally relevant risk assessments, enabling policies and programmes that are scientifically sound, culturally resonant and socially inclusive.

Final thoughts

Climate-induced displacement in Nigeria underscores the inseparability of environmental change and cultural identity. The testimonies of fishermen watching ancestral waters swallow their boats, priestesses tending sacred groves under threat, elders recalling the stories etched into each tree and shoreline, and youth navigating between inherited traditions and uncertain futures all reveal a shared truth: the decision to stay or to move is never purely logistical. It is as much about safeguarding heritage, memory, and belonging as it is about ensuring physical safety.

These choices are embedded in histories of place, spiritual commitments, and the social fabrics that bind communities together. The path forward demands far more than relocation blueprints or climate-resilient infrastructure. It calls for approaches that listen deeply to the land, to history and to the communities who refuse to be erased by rising waters or creeping drought. Policies and programmes must move beyond the transactional language of 'risk reduction' to embrace the relational realities of displacement. Only by bridging environmental, cultural and social dimensions can responses to climate-induced displacement be not only protective but also life-affirming, enabling communities to endure with dignity and agency.

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Supporting decent work for those forced to move and those who want to stay

Anne Beatrice Cinco, Paul Tacon, Héloïse Ruaudel and **Alice Vozza**

Ensuring access to decent work in the context of climate displacement is an essential element of supporting a 'just transition'. Emerging practices from across the world suggest how climate action and labour strategies can reinforce each other.

In the context of climate-related displacement, it is critical to apply a 'just transition' lens – which places decent work and social justice at the core of responses to climate change.[1] This enables people to adapt and sustain livelihoods where they are, to protect themselves during displacement and to rebuild productive lives after relocation. When access to decent work is disrupted, this foundation weakens, eroding adaptive capacity and resilience. The risks are most acute in low- and middle-income countries, which accounted for three-quarters of disaster displacements in 2024 and where high unemployment, widespread informality and limited social protection systems expose displaced populations to risks of extreme poverty and exploitative forms of work.[2]

Rural economies are disproportionately exposed to climate change: farming, fishing and herding communities that were once self-sustaining are displaced into camps or cities where livelihood alternatives are scarce. In Bangladesh and India, salinisation driven by sea level rise and unsustainable land use has become a major factor reducing agricultural productivity in coastal regions. This has forced households into urban labour markets, where their skills often do not match economic demand. In Latin America and the Caribbean, many Indigenous Peoples moving to urban areas face limited recognition of their traditional knowledge and skills, resulting in high dependence on informal jobs. In East Africa, recurrent droughts have displaced pastoralists in Kenya and Ethiopia, many of whom end up in precarious casual labour.

Displacement also places additional strains on host communities already facing environmental and economic challenges, amplifying competition over jobs and resources that can threaten social cohesion. The uncertainty surrounding return to disaster-affected areas raises critical questions about long-term labour market integration, particularly in regions where rising seas threaten territorial integrity or prolonged drought renders entire areas of origin uninhabitable.

These dynamics underscore the need for effective implementation of integrated, rights-based strategies that place decent work and just transition principles at their centre. This article offers reflections on the intersections between climate and labour policies. It outlines key entry points for building adaptive capacity, mitigating the risks of involuntary migration and immobility, and expanding opportunities for displaced populations and those at risk of forced displacement or being trapped in place due to environmental and socioeconomic constraints. It also considers how rights-based labour mobility can serve as a household-level adaptation strategy.

Linking climate and employment agendas

Despite challenges, there is growing evidence that climate action and labour and employment strategies can reinforce each other. Emerging practice suggests three main entry points where these agendas are starting to converge:

1. **Climate policies increasingly reference jobs and livelihoods.** Some National Adaptation Plans (NAPs) and Nationally Determined Contributions (NDCs) – which outline how countries will adapt to climate change in the medium- and long-term and set out their commitments on greenhouse gas emissions – include provisions for employment creation, livelihood diversification and social protection. In countries heavily affected by displacement, these linkages are especially important. Kenya's NAP 2015-2030, for instance, seeks to promote livelihood diversification for vulnerable groups, including displaced persons, to reduce involuntary rural-urban migration. The Philippines' NAP also substantially addresses how livelihoods can be safeguarded even in situations of voluntary or forced mobility.[3] Grenada's NAP emphasises the expansion of social protection for smallholder farmers and fishers, including through insurance and risk transfer instruments. Somalia's NDC addresses just transition and emphasises climate adaptation and resilience-building across vulnerable sectors. However, many NAP and NDC commitments remain constrained by limited targets, financing and implementation mechanisms.

2. **National employment policies (NEPs)** increasingly reference climate change, and several countries have even developed strategies dedicated to green jobs and skills for just transitions. However, most fall short of providing guidance to address the employment implications of climate-related displacement and respond to the needs of affected or at-risk workers and enterprises. Several Pacific Island states who are currently revising their NEPs will be among the first to integrate measures to maximise the job creation potential of mitigation, disaster recovery and relocation planning, alongside worker protections, including fair recruitment practices, to ensure migration contributes positively to climate adaptation.[4]

3. **Labour mobility frameworks** are recognising climate drivers. Regional instruments are emerging, such as the Pacific Regional Framework on Climate Mobility, the first of its kind to comprehensively address human mobility in the context of climate change. In Eastern Africa, the 2020 Free Movement Protocol adopted by Intergovernmental Authority on Development (IGAD) members contains provisions for entry and stay in the context of disasters (before, during and after). In the Caribbean, agreements under the Caribbean Community (CARICOM) and the Organisation of Eastern Caribbean States (OECS) have facilitated short-term entry, documentation waivers and access to labour markets for populations displaced by hurricanes. Although full enactment and endorsement remain limited, these frameworks signal a growing recognition of labour mobility as an adaptation strategy. The UNFCCC Task Force on Displacement has produced a technical guide on integrating human mobility and climate change linkages into relevant national climate change planning.

Pathways to decent work: country experiences

Implementation of tailored strategies is needed to address different forms of climate mobility. Sudden-onset disasters may necessitate short-term emergency

employment creation for rapid wage support, whereas slow-onset processes demand longer-term measures, including livelihood diversification and skills development and recognition. These strategies can benefit both displaced people and host communities, supporting their coexistence.

ILO Recommendation No. 205 on Employment and Decent Work for Peace and Resilience provides a normative framework for employment-oriented responses to crises and disasters, including those linked to climate change. It also underscores the importance of promoting equality of opportunity and treatment for refugees, internally displaced persons (IDPs) and other forcibly displaced populations.

Building on these principles, several country experiences illustrate how active labour market policies and income support can be integrated to support a just transition in contexts of climate-related displacement.[5]

Employment-intensive investment programmes (EIIPs) can generate public works that are both labour-absorbing and climate-responsive, especially as part of emergency response. In Jordan, EIIPs have employed both Jordanian nationals and Syrian refugees to rehabilitate cisterns, roads and degraded land. In Iraq's Dohuk governorate, large-scale afforestation, irrigation improvements and solid waste and recycling facilities have also created jobs for IDPs, refugees and host communities, while also improving environmental resilience.[6]

Skills development is a cornerstone of transition, providing displaced people and host communities with the capacities needed to access decent work, including in the green economy. In Cox's Bazar, Bangladesh, competency-based training in different occupations, including solar panel installation, is being offered to refugees. Courses align with both the national and Association of Southeast Asian Nations (ASEAN) Qualifications Reference Frameworks, enabling the portability of skills across borders. Recognition of prior learning is equally important to enable smoother transitions to formal labour markets, while connecting skills programmes with public employment services and job search support has been proven effective in facilitating transition into actual jobs.

Entrepreneurship promotion can foster opportunities for more sustainable livelihoods. In South Wollo, Ethiopia, a market system analysis identified opportunities for green job creation, and skills training and business creation support were provided accordingly. By promoting green entrepreneurship, these interventions aimed to strengthen community resilience and minimise the risk of displacement.

Social protection systems, including insurance schemes and cash transfers, act as buffers against shocks and help reduce reliance on negative coping strategies. For example, Ethiopia's Productive Safety Net Programme is a national flagship initiative that has stabilised food security in drought-affected areas and reduced crisis-driven migration. Brazil's Bolsa Floresta programme links cash transfers to sustainable natural resource management, incentivising conservation while sustaining incomes. Both illustrate how social protection can underpin just transition by cushioning against climate shocks while incentivising sustainable practices.[7] However, some challenges remain, particularly regarding the portability of benefits across borders.

In cases of planned relocation, evidence shows that livelihood restoration is often the weakest component of schemes. Integrating market assessments and livelihood mapping

into site selection can improve outcomes, ensuring proximity to viable economic activities and employment services.

International labour mobility as an adaptation strategy

International labour mobility can also complement, rather than substitute for, *in situ* adaptation, where it is voluntary. Migration can diversify household income, generate remittances that can support sustainable investments, and contribute to climate change adaptation in destination countries where labour shortages exist in green sectors.[8]

However, the current labour migration landscape provides few options for such climate-adaptive movements. Without strong safeguards, labour mobility can lead to increased exposure to climate impacts, or expose workers to irregular pathways which do not protect their rights and heighten risks of informality, debt bondage, exploitation and unsafe living and working conditions. Seasonal or circular schemes often provide limited labour rights, including restrictions on the freedom to change employers, on access to fair wages and on social protection. As such, they may be inadequate for addressing the specific needs and vulnerability of populations displaced by climate change.[9]

Ensuring that labour mobility contributes to adaptation requires robust, rights-based governance. Countries have begun to translate this into practice in different ways. Bolivia's 2013 migration law explicitly referenced climate migrants and called for international agreements to facilitate entry and protection abroad. Peru's 2018 Climate Change Framework Law mandated a national plan of action to prevent and address forced migration due to climate impacts. Kiribati's Migration with Dignity policy invested in education and vocational upskilling to enable citizens to secure jobs abroad before rising seas force displacement. Building on such national efforts, the Global Compact for Safe, Orderly and Regular Migration calls for the expansion of regular pathways for people compelled to move due to sudden- and slow-onset disasters. The bilateral Australia-Tuvalu Falepili Union treaty is an example of such a pathway enabling Tuvaluan citizens to study, work and access social protection in Australia.

Key considerations going forward

Without adequate labour and social protections, adaptation strategies, including labour mobility, can risk reinforcing vulnerability. The fundamental principles and rights at work –freedom of association and collective bargaining, elimination of forced labour, abolition of child labour, elimination of discrimination, and the right to a safe and healthy working environment – provide the minimum foundation. Other international labour standards extend protections to those most affected: the ILO Conventions on migrant workers (C97, C143), the Indigenous and Tribal Peoples Convention (C169) and the Transition from the Informal to the Formal Economy Recommendation (No. 204) are just a few examples.

Safeguards for fair recruitment are equally critical, including zero-cost recruitment, transparent contracts and access to grievance mechanisms. The ILO Guiding Principles on Refugees' Access to Labour Markets provide practical guidance for extending equal opportunities to displaced populations. Social dialogue with governments, employers' and workers' organisations also remains key to designing sustainable and inclusive labour market responses. Meaningful engagement with climate-affected individuals and respecting cultural and indigenous knowledge are also central in shaping and implementing policies and programmes that contribute to a just transition.

Climate-related displacement cannot be addressed through humanitarian measures alone; labour market and broader development responses are essential for a coherent approach consistent with the goal of averting, minimising and addressing climate-related displacement, ensuring sustainable livelihoods and decent work for all, including those who wish to remain, those who move voluntarily, those who are displaced and host populations. The task ahead is to build on emerging practices and move beyond reactive measures, scaling up and enhancing employment, skills, social protection and migration systems so that they operate in anticipatory and preventive ways, reducing the risks of forced displacement and fostering pathways to resilience.

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Slow versus sudden: tailoring planned relocation to different hazard types

Claudia Fry, Giovanna Gini and **Annah Piggott-McKellar**

The degree of suddenness of a climate hazard influences any subsequent relocation in multiple ways – from the institutional response to the psychosocial experience for affected communities – requiring approaches tailored to different timelines.

Relocations have occurred throughout history in response to non-climate-related drivers, such as infrastructure development or the establishment of protected areas. Relocation can also be triggered by hazards without a climate driver, including earthquakes and volcanic eruptions. Today, however, climate change is emerging as a key driver of relocation, both through slow-onset processes such as sea-level rise, melting permafrost and coastal erosion, and by intensifying sudden-onset events, including tropical cyclones, severe storms, extreme rainfall and flooding, storm surges and, in some regions, climate-induced landslides.[1]

Often, multiple hazards with different temporalities, including slow and sudden onset, interact and compound one another's impacts. In addition, sudden onset hazards such as floods are not necessarily experienced as single events but can be cyclical and repetitive. Yet, while repeated floods may prompt *in situ* adaptations that help residents tolerate them, climate change is intensifying these events, making them increasingly severe and unpredictable and, at times, forcing relocation. It is also important to note that climate-driven hazards do not operate in isolation: they intersect with historical, political and economic factors, shaped by past or ongoing colonial processes and structural inequalities, to shape vulnerabilities.

In practice, however, one hazard typically becomes the primary trigger for relocation. This underscores the need to account more explicitly for the temporal characteristics of hazard type – slow-onset or sudden – in relocation policy and practice.

Climate-related community relocations are gaining prominence in climate policy. Alongside this, research and policy frameworks have begun to recognise the complexity of relocation and the need for context-specific, rather than standardised, approaches, marking important steps toward more just and sustainable outcomes. For example, the Fiji government is refining risk assessments by incorporating broader notions of (un)inhabitability, and research is demonstrating the need for more long-term collaboration among relocation actors for more inclusive decision-making and strengthened cross-sectoral coordination of funding mechanisms.[2] We extend this discussion by emphasising that the temporality of climate-related hazards, whether slow- or sudden-onset, plays a fundamental role in shaping relocation processes and outcomes.

Four key differences

In this article, we draw on our research with communities across Oceania and Latin America, including those living in places identified for potential relocation, those

with direct relocation experience, and those resisting relocation, to elaborate on the differences between the choices available to those affected by slow and/or rapid onset hazards. We identify four key areas where temporality influences the ability of at-risk communities to initiate relocation and secure meaningful support: (1) institutional support and access to funding instruments; (2) opportunities for negotiation and rights protection; (3) levels of acceptability of relocation; and (4) the psychosocial implications and availability of support mechanisms for grief and loss.

1. Institutional support and access to funding

A major barrier to just and equitable community-led relocation and adaptation is the lack of institutional support, including technical and financial support, coupled with limited access to information and funding. While sudden-onset hazards often capture media attention and trigger rapid emergency assistance, slow-onset hazards, in which people's needs build gradually over time, tend to receive far less recognition and resources.

The case of Qoma Island in Fiji highlights these disparities. Following the devastating impacts of Cyclone Winston in 2016, which destroyed most houses on the island, the local community recounts receiving significant support, including the reconstruction of houses and the provision of new homes, even for families who before had been without a house. Some village members reflect that, paradoxically, while cyclones bring devastation, they also attract much-needed assistance that is otherwise out of reach. In the aftermath of the cyclone, the government also proposed a relocation plan. However, the community rejected this based on their intimate connection to their lands and reefs. Instead, the community has consistently advocated for the construction of a sea wall, viewing it as the only acceptable adaptation measure that would allow them to remain on their ancestral land. This need has become increasingly urgent, as the island continues to lose land to the sea, and homes and grave sites are frequently flooded during king tides (exceptionally high tides). While the community has succeeded in securing some funding for nature-based coastal protection efforts, they have not yet received support for a sea wall.

Thus, while sudden- and slow-onset hazards interact and compound each other's impacts on Qoma Island, they generate very different forms of institutional response. This disparity underscores how institutional attention is unevenly distributed across different types of hazard, often privileging emergency support after sudden disasters over preventative measures against slower, long-term threats.

2. Opportunities for negotiation

Another significant difference relates to the amount of time communities have to negotiate the terms of their relocation, which directly affects how human rights are respected or overlooked in the process. While many relocations occur within the context of a combination of both hazard types, the pace at which impacts unfold shapes the opportunities for communities to advocate for their rights and influence relocation decisions.

In the case of slow-onset hazards, communities often have more time to engage with state authorities and negotiate the relocation process, even if these negotiations are imperfect. For example, the Guna Yala community of Panama's Gardi Sugdub island began discussions on relocation well in advance of the anticipated impacts of sea-level rise. Negotiations started more than a decade before the first moves took place, with government-led construction of new housing beginning in 2018 and the

first families relocating in 2024. While social participation in the planning process was limited and the community ultimately had to accept the project as designed, the extended timeline nonetheless provided space for long-term dialogue and engagement that would not be possible in a sudden-onset context.

In contrast, sudden-onset hazards leave little time for negotiation, often forcing communities to accept relocation under emergency conditions with fewer safeguards for their rights. For example, after a severe flood in 2018, the community of La Curvita in Salta, Argentina, was evacuated from the banks of the Pilcomayo River and later relocated 12 kilometres inland. For months, residents lived in tents along a highway, exposed to the elements and without adequate protection – conditions that compromised their rights to housing, health and security. Government authorisation for relocation took several months, during which only minimal financial assistance was provided. As a result, many families moved into new houses that remained incomplete and precarious even years later. The lack of planning and support also affected their access to essential services such as education, healthcare and water.[3] This case illustrates how the urgency of sudden-onset hazards can lead to relocation processes that undermine basic human rights, leaving communities in prolonged states of vulnerability.

3. Levels of acceptability of relocation

Relocation can only proceed when it is acceptable to the community itself. For example, the 2018 planned relocation policy guidelines by the Fiji government stress that any relocation must be carried out with the community's free, prior and informed consent (FPIC), a principle grounded in the right to self-determination and protected under the International Labour Organization's Indigenous and Tribal Peoples Convention, 1989 (No. 169). Our research shows that levels of acceptability can in part be shaped by the type of hazard experienced and the urgency it creates.

Importantly, what is considered acceptable is not fixed; it shifts over time and under different circumstances.[4] During sudden-onset disasters, communities may come to accept relocation more quickly, as decisions are forced by immediate circumstances rather than prolonged negotiation. The experience of El Bosque in southern Mexico illustrates this dynamic. Following a severe storm that flooded homes and left many families without shelter, the community perceived relocation as an urgent necessity to ensure safety. In this context, relocation was broadly accepted, not because it aligned with long-term community aspirations, but because the immediate risks made it the only viable option. However, this urgency also meant the community had little influence over critical aspects of the process, such as the location of the new settlement or the design of the housing.[5]

By contrast, communities facing slow-onset hazards often have more time to consider alternatives, weigh cultural and livelihood implications, and negotiate conditions before accepting relocation. Whilst Qoma islanders are still looking for support for a seawall, the village women's group has secured international funding for nature-based solutions to coastal erosion, supporting them in planting mangroves and vetiver grass to protect their grave site from sinking further into the sea. Whilst additional support is still needed, this is an example of how a community is engaging in processes to negotiate for adaptation on its own terms – allowing it to stay in place and ensure cultural continuity. Yet, this extended timeline can also lead to prolonged

uncertainty, with divided opinions emerging and consensus harder to achieve. The level of hazard urgency therefore plays a decisive role in shaping how, when and under what conditions relocation is deemed acceptable by the affected population.

4. Psychosocial implications

The temporal nature of the hazards that trigger or lead to relocation significantly shapes psychosocial implications and the types of support that are available and required. In sudden-onset-related relocation, displacement can occur with little or no warning, often leaving people with a profound sense of shock and disempowerment. Grief may be intensified by the abrupt severing of ties to place, household and communal infrastructure and social networks. Emotional responses are often acute, with heightened risk of post-traumatic stress, and anxiety.[6] Support systems – including emergency housing, financial assistance and crisis counselling – are usually more readily available and mobilised quickly, but they tend to be short term. For example, in Grantham, Australia, a catastrophic rainfall event which led to a flash flood destroyed homes and claimed 12 lives, triggering a community relocation where the first house was built and occupied within one year. Yet, despite this fast pace of relocation, years later, the psychosocial and community impacts of the displacement and relocation continue to be felt in the community.

In slow-onset relocations, the psychosocial trajectory is often shaped by a prolonged period of uncertainty. People may experience anticipatory or ambiguous loss, mourning a home and way of life that still exists but is known to be at risk. This can lead to chronic stress and an erosion of identity and belonging. The longer time, however, can also create opportunities for participatory planning and adaptation of livelihoods, which can ease the psychosocial implications of the relocation. In Vidawa, Fiji, the community has been experiencing coastal erosion and flooding for over a decade.[7] In response, they have initiated their own relocation plan, moving gradually away from the coastline. This slow, community-led process has allowed residents to negotiate relocation terms, decide who moves and when, and retain control over decision-making. As many continue to live between the old and new sites, they maintain connections to both places, which can help ease feelings of grief and loss. However, this connection also means that grief is often tied to concern for the safety of those who remain at the original site, and to the ongoing transformation of a place that still holds deep meaning.

Implications for the future

Our comparative reflections from Australia, Fiji, and across Latin America have demonstrated that sudden-onset hazards often trigger rapid institutional response, emergency assistance, and immediate relocation, but offer limited opportunities for negotiation or meaningful participation, which can compromise rights and long-term wellbeing. Slow-onset hazards, by contrast, unfold over time, providing space for negotiation, community-led planning, and adaptation measures that align with local worldviews. Yet, they are frequently under-recognised by institutions, face limited funding, and can create prolonged uncertainty and anticipatory grief.

For practitioners and policy-makers, this means designing relocation frameworks that are adaptable to different hazard timelines, while ensuring that fundamental rights, including participation, cultural continuity and access to adequate housing, are safeguarded in all contexts. This could include integrating approaches that address the trauma and psychosocial needs of sudden-onset

relocation; engaging in ongoing dialogue with communities considering relocation to understand changing levels of acceptability; strengthening institutional channels between communities facing slow-onset hazards and government actors to foster support for preventative measures; and establishing safeguards (legal, procedural and institutional mechanisms to protect human rights) for people relocated by sudden-onset hazards in the time between displacement and relocation. Future research and policy development should focus on bridging the gap between international guidelines and local realities, building tools that can accommodate the distinct challenges posed by different hazard types. Above all, relocation must be pursued only when communities themselves determine it is necessary and must be implemented in ways that strengthen, rather than erode, their rights, agency and resilience.

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Environmental justice and planned relocation in Central Africa

Gabriel Ajabu Mastaki

While internal displacement due to climate hazards is accelerating in Africa, access to relocation solutions remains highly unequal. The concept of environmental justice can shed light on the underlying causes and suggest avenues for reform.

Planned relocation refers to a structured process, led by relevant authorities, aimed at the sustainable relocation of communities exposed to environmental hazards to safe sites, with the guarantee of decent housing, essential services and sustainable livelihoods, in full respect of fundamental rights. It differs from emergency evacuation, which is temporary and often improvised, as well as spontaneous resettlement at the initiative of households.[1]

In African contexts, and particularly in the Democratic Republic of Congo (DRC) and Burundi, access to such relocation remains deeply unequal. In 2024, sub-Saharan Africa had an estimated 38.8 million internally displaced people, including 9.8 million due to natural disasters, an increase of more than 70% from the previous year.[2] However, only a tiny fraction benefitted from an anticipated and inclusive process that met standards of sustainability and protection.

These disparities are not only related to differences in the intensity of hazards. They can be explained by structural factors that determine the ability of a community to be relocated in safe and dignified conditions: the availability of economic resources, the quality of local institutions, the accessibility of services and social cohesion. In the DRC, persistent poverty, a chronic lack of infrastructure and weak local governance hamper anticipation and planning. The provinces of Kivu and Tanganyika, which account for 81% of the 6.9 million internally displaced people recorded in the country in 2023[3], illustrate this. Although armed conflict remains the main driver, climate hazards act as a multiplier of vulnerabilities, making it more difficult to implement sustainable solutions.

In Burundi, the recurrent floods of Lake Tanganyika, particularly in Gatumba (western Burundi), are causing repeated displacements. Rising waters aggravated by the effects of climate change have damaged more than 200 schools, affected tens of thousands of people and led to massive displacement. Between September 2023 and April 2024, an estimated 179,200 people were affected, including more than 31,200 internally displaced persons. These people have been abandoned by the state, and no relocation mechanism has been put in place. Spontaneous relocations to sites lacking infrastructure and livelihood restoration plans, such as Mutambara (Rumonge province), reveal an underlying problem[4]: without participatory planning, land tenure security or anticipatory financing, relocation loses its protective function and becomes another driver of precarity.

From this perspective, environmental justice offers an essential analytical framework. It does not consider relocation only as a technical response to climate threats, but

as an issue of equity in the distribution of resources used for planning, protection and choice, so that durable solutions are also made available for the most marginalised populations.

The limits of relocation policies

Despite the growing urgency of displacement linked to climate hazards, planned relocation is still struggling to establish itself as a strategic instrument for risk management and adaptation in Africa. In most contexts, institutional responses favour a reactive approach, focused on immediate humanitarian assistance, to the detriment of more structured planning. The lack of pre-established mechanisms to map areas under threat from hazards, to identify fallback sites, to secure land tenure and to involve communities in planning, too often leads to spontaneous displacements, dictated by the pressure of the event rather than by prior assessment.

Existing frameworks, whether regional instruments, such as the Kampala Convention (2009), or national disaster management legislation, do not fully cover the diversity of environmental mobility situations. The texts tend to focus on sudden hazards (floods, storms, landslides) and neglect slow and irreversible processes (coastal erosion, desertification, sea-level rise) which require, not a rapid return to areas of origin, but sustainable, secure and legally regulated solutions.

This focus on sudden hazards deprives displaced people of effective safeguards and limits the authorities' ability to fulfil their human rights obligations including the duties to respect,[5] protect[6], and fulfil these rights[7] in accordance with relevant international instruments.[8] However, existing legal frameworks, by focusing primarily on sudden-onset hazards, tend to channel resources toward emergency responses, thereby constraining authorities' ability to plan durable solutions for slow-onset and irreversible processes like desertification or sea-level rise. In the context of climate change, the duty to protect implies that governments must take proactive measures to prevent foreseeable harm, such as exposure to environmental risks or precarious living conditions.

In addition to these legal shortcomings, there are structural inequalities in access to relocation programmes. The political and media visibility of a community directly influences the speed and scale of assistance it receives. Areas with strong institutional support are more likely to attract resources, while remote rural populations, ethnic minorities or people with disabilities are frequently moved to more precarious sites, without prior consultation or appropriate support measures. This lack of transparent selection and prioritisation mechanisms reinforces socio-spatial divides and, in some cases, weakens social cohesion in host areas.

Finally, institutional fragmentation undermines the coherence and sustainability of relocation initiatives. The lack of coordination between government ministries, specialised agencies, local authorities, and technical partners such as UN agencies, international NGOs, or expert consultancies in risk management – leads to dispersed efforts and operational inconsistencies. Over-reliance on external funding, which is subject to aid cycles and changing donor priorities, increases the vulnerability of projects. Without integration into a long-term national strategy and multi-year monitoring, relocation risks displacing vulnerability rather than reducing it, or even creating new economic and social dependencies.

These findings underscore the need for a clear legal framework, coordinated governance and a forward-looking approach. In this way,

planned relocation can move from being a one-off and reactive tool to become a real lever for resilience and environmental justice.

Avenues for reform

To make planned relocation an effective instrument of environmental justice, it is necessary to go beyond the reactive approach that is still dominant in most African countries. It must be thought of as an exceptional anticipatory measure, to be undertaken only when it is no longer possible to maintain the status quo, and conducted in conditions that guarantee the dignity, autonomy and fundamental rights of the persons concerned.[9] Such a paradigm shift first requires a precise legal framework, defining reasons and triggers for relocation on the basis of transparent and scientifically validated risk analyses. This framework must incorporate the principles of necessity and proportionality. It should require that decisions, and the reasoning behind them, be made public, and should stipulate that there should be free, prior, and informed consultation with communities, as well as effective remedy mechanisms.

The effectiveness of such a normative framework depends on the existence of standardised and enforceable procedures: mapping of areas at risk, upstream identification of fallback sites, definition of triggering indicators such as thresholds of rainfall, soil saturation, or population exposure that signal when relocation planning should be activated. These indicators must be defined before a crisis occurs, based on scientific data and risk modelling, to allow for anticipatory action rather than reactive response. Prior environmental and social assessment and multi-year monitoring based on verifiable indicators are also essential. This institutional foundation must be complemented by operational planning, which, rather than being reduced to a simple transfer of the population, is part of a gradual process that includes technical and social preparation, the design of sites according to the needs expressed, the organisation of safe relocations, the rebuilding of livelihoods and sustainable integration into the local socio-economic fabric.

The viability of relocation depends on an intrinsic relationship between land tenure security, access to essential services and restoring livelihoods. Land tenure security involves the recognition of customary rights, the issuance of official titles, including joint titles to promote gender equality, and fair compensation for material and intangible losses. At the same time, basic services including drinking water, health, education and mobility must be restored or created, in order to prevent relocation sites from becoming new sources of vulnerability and risk. Livelihoods, whether agricultural, artisanal, or commercial, need to be reinstated or adapted through targeted support to local value chains, vocational training and access to credit.

Another essential pillar is the predictability and stability of funding. The most effective funding options combine domestic budget allocations, international climate finance, and bilateral partnerships, complemented by anticipatory instruments such as forecast-based financing. This mechanism, by automatically triggering resources on the basis of hydro-meteorological thresholds, makes it possible to acquire and prepare sites before crises peak, thus reducing human and economic costs.

Finally, integrated governance structures are essential. They must make clear the role of national authorities, local authorities, specialised agencies, and technical and financial partners within an intersectoral coordination structure with resources and clearly defined powers. These governance

structures must ensure the effective participation of populations, including women, persons with disabilities, ethnic minorities and other vulnerable groups, by integrating their specific needs from the design stage of projects. Stakeholders must also be open to regional solutions where internal relocation is not viable, by mobilising free movement agreements and regular migration routes as safe and predictable alternatives.

Applied to the DRC and Burundi, these guidelines call for the development of a National Climate Relocation Plan, integrated with land use planning, disaster risk reduction and social protection policies. Such a plan, based on a clear legal framework, enforceable procedures, equitable land tenure arrangements, proactive financing and robust inclusion standards, would make it possible to shift from a forced movement of final resort to a strategic choice, contributing both to community resilience and to the correction of inequalities in access to protection and opportunities.

Final thoughts

Ultimately, considering planned relocation from the perspective of environmental justice makes it possible to shift the centre of gravity of public policies, moving from ad hoc crisis management to an equitable redistribution of the capacity for anticipation, protection and choice. An analysis of the contexts in the DRC and Burundi reveals a paradox: while climate hazards are increasing and aggravating pre-existing vulnerabilities, the legal frameworks, operational mechanisms and resources needed for sustainable relocations remain incomplete, which too often turns these operations into vectors of new fragilities.

However, successful international experiences demonstrate that relocation based on a clear legal foundation, standardised procedures, effective land tenure security, and simultaneous restoration of services and livelihoods, as well as anticipatory and stable financing, can become an instrument of protection and dignity. The challenge for Central Africa, and in particular for the DRC, is not only to adopt these principles, but to make them effective, measurable, and verifiable, through independent monitoring and shared indicators.

It is only in this way that planned relocation will cease to be a choice of last resort forced by an emergency situation, and instead become a strategic choice, contributing to sustainable risk reduction, the socio-economic integration of displaced communities and the building of truly inclusive resilience.

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6. *This obligation, whether preventive or remedial, requires the state to prevent foreseeable attacks and to guarantee reparation in the event of a violation.*
7. *The state has a positive obligation to create the conditions for the full enjoyment of human rights, by putting in place the necessary legal, institutional and procedural bases. This requirement, which is often legislative, implies pro-active action on its part.*
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Unstable ground: navigating climate relocation through Bosnia's invisible fault lines

Kaja Burja and **Nika Burja**

Europe's climate crisis is fuelling extreme weather, displacement and fragility. Technocratic relocation fails to acknowledge human attachment, cultural memory or the role of inequality. True adaptation demands justice, which means recognising the invisible fault lines that shape vulnerability, resilience and belonging.

A grandmother tends to her crops in the Balkans, keeping her connection to land. Credit: Nika Burja

Europe is the fastest-warming continent in the world.[1] Since the 1980s, Europe's warming rate has been more than twice the global average, resulting in record-breaking heatwaves, destructive floods and unprecedented wildfires. While economic damage from floods and storms has been substantial, the health impacts of heat stress, particularly on vulnerable populations like the elderly, are increasing dramatically. Amid these accelerating hazards, debates about where and how people can live safely have shifted from hypothetical to urgent, pushing 'planned relocation' onto policy agendas.

In the prevailing discourse, planned relocation is primarily interpreted as a logistical or engineering challenge but this perspective overlooks the profound human dimensions at play. Decisions to stay, move or adapt are not simply rational calculations of risk or

economic viability; they are deeply embedded in cultural memory, intergenerational dynamics and an intrinsic sense of socio-spatial belonging. This article challenges the conventional technocratic view of planned relocation, arguing that truly effective climate adaptation must account for the complex interplay between human attachment to place and community identity.

Central to understanding community responses to climate stress and relocation proposals are the 'invisible fault lines' that run through societies. These include generational divides, profound fears of cultural loss, which create tensions between groups with different attachments to cultural practices, and differing perceptions of risk. Consequently, climate policy, if not explicitly designed with social equity and distributive justice in mind, risks exacerbating existing socio-economic inequalities and creating new forms of forced displacement.

The Bosnian context – legacy of war and new climate threats

Bosnia and Herzegovina (BiH) has a recent and painful history of devastating conflict (1992-1995), which resulted in massive forced migration and internal displacement of over half the country's population. The Dayton Peace Accord of 1995 aimed to reverse these egregious acts of ethnic cleansing by linking post-war reconstruction to the 'right to return', enshrined in Annex 7. While this policy did facilitate some repatriation, it also inadvertently generated resentment among existing residents and created complex property issues, rendering land a 'high-value political asset'.

Alongside its protracted post-conflict recovery, BiH is confronting rapid environmental degradation and changing climate, exemplified by the 2014 floods – the most severe in over a century – which affected about one million people and displaced 90,000. Recent events continue to demonstrate this escalating threat. In March 2025, 12 people were evacuated due to flooding in Prijedor in the north-west of the country, and four were evacuated due to a landslide in the village of Zelinja Srednja in the north-east. Flash floods and landslides in October 2024 caused 27 deaths, affected over 1,000 households, and led to the evacuation of over 300 individuals, with damages estimated at 144 million euros. These events highlight that climate-induced displacement is not a singular, large-scale catastrophe but a continuous, accumulating process that erodes community resilience over time.

Many of those affected are already vulnerable, including Roma minorities and internally displaced persons (IDPs) from the war, who are thus experiencing double displacement. These communities are not just facing a new disaster; they are re-experiencing the trauma of forced movement and loss of place. A new climate disaster, forcing them to consider relocation again, is not merely a practical challenge but a re-traumatising proposition that undermines their re-established sense of belonging and stability. This historical layering of vulnerability and unresolved trauma means that displacement under climate stress is rarely a simple choice for these populations.

Importantly, in Bosnia, older people frequently resist state-sponsored relocation plans tied to post-disaster reconstruction. This resistance is deeply rooted in ancestral land ties and a profound distrust of government processes. While post-war reconstruction efforts were intended to aid recovery, they were often perceived as political tools. Where officials saw a chance to rebuild safer, modern settlements, many older people saw the plans as a threat to their identity. This resistance

was not just about homes; it was about ancestral land ties. Generations of families had lived, farmed and been buried on these lands – to move was to sever a direct link to their history. Compounding this, a deep-seated distrust of government processes, a legacy of post-war political instability and corruption, meant that many people simply did not believe the state would act in their best interests. They feared losing their land and their autonomy for good. This situation is a powerful example of how a history of conflict, and a lack of trust, can become significant barriers to climate adaptation, turning a technical solution into a contested social process.

The 'right to return' policy, which guaranteed displaced Bosnians the legal right to reclaim property they had owned before the war, illustrates this tension. While intended as a cornerstone of peace and reconciliation, in practice it bred resentment. Many who had remained in their homes throughout the war felt abandoned, since they received little or no financial support, while those returning often benefited from international aid and housing assistance to reclaim their properties. Tensions deepened when returnees found others occupying their homes – people who were often unwilling or unable to leave after years of settlement. What was meant as a legal safeguard for displaced persons thus became another source of division, highlighting how policies designed for recovery could inadvertently reinforce mistrust and social fractures. Moreover, the 2014 floods damaged many municipal records, including land registry information, and many houses that were built before and after the war lacked proper permits, which further complicated recovery efforts and compensation. When such a high proportion of homes are informally registered, any state-led relocation scheme faces immense legal and administrative hurdles. This traps vulnerable populations in risky areas, where planned relocation is almost impossible without fundamental land reform. The emotional and mental toll on survivors also remains significant, with many experiencing fear and trauma, highlighting a critical need for psychosocial support that often goes unaddressed.

This deep historical context means that current government-led relocation initiatives, even for climate reasons, are viewed through a lens of past injustices, perceived manipulation and a history in which community needs came second to bigger political agendas. Therefore, resistance to climate-induced migration is not simply about immediate practicalities, but a profound act of reclaiming agency and cultural continuity in the face of perceived external impositions.

Cultural unrooting and 'domicide 2.0'

This resistance in Bosnia, and similar dynamics elsewhere, highlights a critical new perspective: climate displacement, when mishandled, is a form of cultural unrooting. The term 'domicide', or the deliberate destruction of home, was introduced by Douglas Porteous and Sandra Smith in their 2001 work *Domicide: The Global Destruction of Home*, and has since been applied to describe violent displacement during the Bosnian War. It represents a strategy to eradicate not just physical structures but also the social and cultural fabric of a group. Today, we are seeing 'domicide 2.0,' a slow-onset process where climate change, combined with technocratic relocation plans, erases cultural and social ties to one's home. It is a direct and hostile act of unrooting, severing people's ties to their land and heritage through natural forces, such as wildfires, floods, landslides, droughts and earthquakes, driven by a post-war settlement pattern and fragile governance. Villages are built on floodplains and steep landslide-

prone slopes, river corridors are weakened by illegal gravel extraction and deforestation, dikes and drainage systems are ageing, and responsibilities are fragmented across state, entity, canton and municipal levels. While not 'deliberate' as in the wartime sense, the outcome of this new physical and psychological violence is chillingly similar: homes erased, archives and cemeteries lost, neighbourhoods scattered and the everyday social ecologies that anchor identity dissolved. This is not a purely natural process, it is amplified by human decisions that sideline the environmental and climate crisis and produce policies that permit building in hazardous areas, underinvest in protection and maintenance, neglect particular populations or erect legal/financial barriers that effectively prevent return. Without a focus on preserving the intangible bonds that define a community (for example, shared practices, local knowledge and social networks) relocation simply replaces one home with a house, leaving a community that is physically present but culturally adrift.

Bridging the fault lines: recommendations

Effective climate adaptation and planned relocation thus demand a fundamental reorientation in policy and practice. This means moving from top-down, technocratic models to human-centred approaches that genuinely foreground community agency, local knowledge and the delicate socio-cultural fabric of affected populations. Adaptation must extend beyond physical infrastructure to encompass the preservation of cultural heritage, social networks and mental well-being, recognising the profound emotional toll of displacement and loss. Establishing 'just resilience' demands policies that are anticipatory and place-specific, coordinated at different levels, from the local to the international, grounded in legally portable rights and documentation, backed by predictable multi-year finance that follows people rather than projects, and rooted in an understanding of cultural preservation as integral to human security. Without such measures, relocation risks becoming a form of dispossession masquerading as protection.

(Re)building trust in government

In this light, refusal to move should not be misread as stubbornness or climate denial. It is often a rational and deeply human defence of social worlds built on land, kinship and memory. Any credible adaptation pathway in Bosnia must therefore start with trust-building and tenure clarity: reconstructing damaged land registers recognising *de facto* and informal tenure and creating transparent, trauma-informed grievance and compensation systems. This also includes establishing early warning systems and clear legal frameworks for climate-displaced people, as well as demonstrating that authorities are not just reacting to a crisis but are proactively working to build resilient and just societies.

Community-centred relocation planning

Relocation, where unavoidable, should be voluntary, phased and proximity based. Land-for-land swaps should privilege ancestral continuity, protect cemeteries, sacred sites and other anchors of cultural memory. Keeping extended families and neighbours together is not just a logistical preference but a social necessity that preserves care networks. Moreover, relocation co-design with local older people, women, youth and faith leaders can reframe movement as continuity rather than rupture, creating adaptation anchored in dignity and belonging. Diaspora co-financing and independent oversight bodies can further reduce fears of politicized allocation and strengthen community confidence in outcomes.

Safety and belonging as complementary goals

Finally, effective adaptation lies not in a binary between staying or moving, but in recognising the spectrum of choices people seek. Pairing small-scale, in situ risk reduction measures (for example, slope stabilisation, floodproofing) with opt-in relocation approaches acknowledges that safety and belonging need not be zero-sum choices. This dual strategy bridges different time horizons: localised measures reduce immediate exposure to hazards and buy time, while voluntary relocation pathways offer longer-term safety if risks intensify. Crucially, this combination respects community agency and affirms that people should not sacrifice belonging in order to be safe. Such an approach also supports social cohesion by allowing gradual and voluntary movement, rather than abrupt and disruptive displacement. For example, in a flood-prone river valley, households might first receive support through small-scale, *in situ* risk reduction measures, such as elevating homes on stilts, reinforcing slopes or installing local flood barriers, to reduce immediate hazards and reassure residents that their community is not being abandoned. At the same time, government agencies or NGOs can introduce an opt-in relocation programme that offers secure land tenure, housing assistance or community-led planning in safer areas. Because relocation is voluntary and gradual, families can weigh their sense of belonging and cultural ties against physical risk, and some may even move collectively with extended family or neighbours. Without these measures, narrowly conceived 'technical' fixes will deepen social cleavages, entrench involuntary immobility and ultimately undermine the climate resilience they aim to secure. It is not sufficient to merely rebuild physical structures; the imperative is to rebuild communities, preserve their unique heritage and support the psychological well-being of people who have already experienced profound losses of place and identity.

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Speaking up: using participatory communication to support inclusive relocation

Jose Daniel Rodriguez Arrieta

Incorporating locally appropriate means of communication and deliberation into decision-making around planned relocation gives agency to affected communities, as case studies from Vietnam and Peru demonstrate.

Local trader travelling on the Mekong river in Vietnam. Credit: Tho-Ge

As floods, droughts and coastal erosion intensify due to climate change, planned relocations multiply in response. Yet, these are often carried out without genuine prior consultation, ignoring local knowledge and methods of communication. Based on two case studies – one in the Mekong Delta, the other in the Peruvian highlands – this article examines how tools such as participatory mapping, local radio, and community messaging networks allowed communities to exercise agency in order to deliberate, make decisions and rebuild their futures on their own terms. It also analyses how these practices relate to human rights and to communication for social change, and draws lessons for state actors, international agencies and local organisations.

Mapping a way out in the Mekong Delta

In a number of provinces of the Mekong Delta in southern Vietnam, rural communities have

faced increasing threats from coastal erosion, soil salinisation and the resulting damage to their livelihoods. In response, projects such as CS-MAP (Climate-Smart Mapping and Adaptation Planning) have incorporated community-oriented participatory mapping methodologies to identify safer areas and plan informed relocations.

The CS-MAP mechanism was developed by the Vietnamese Ministry of Agriculture and Rural Development (MARD) in collaboration with CGIAR's Climate Change, Agriculture and Food Security (CCAFS) programme, and was later implemented and validated through participatory processes with local communities following serious salt-water intrusion during El Niño in 2016.[1] Through participatory workshops, residents identified the areas most at risk of salination and discussed possible local adaptation options. These observations were subsequently combined with scientific data on topography, hydrology and infrastructure, producing maps that were validated by the community before being submitted to provincial authorities. This approach allowed communities to be not just recipients of external plans, but protagonists. This strengthened their visibility in official decision-making and allowed them to question the appropriateness of sites proposed by external actors, including local authorities and development agencies, and better negotiate with them.

The result not only ensured residents' physical safety, it was also more legitimate in social and cultural terms: families knew why certain decisions had been made and what they implied for their livelihoods. In addition, the process enabled spaces for inclusive dialogue: women, older people and people with less access to resources were able to have their say, especially when workshops were organised with local translation and gender-sensitive facilitators.

However, the process was not perfect: there were structural limitations to implementation, such as a lack of long-term resources to keep maps updated. In addition, many families had expected some financial support for relocation, but in most cases assistance was limited or unclear, which created uncertainty after the mapping stage. Many had to resort to local loans to build housing, which led to debts that had an adverse impact on their livelihoods after relocation.

Community deliberation in the Peruvian Andes

In the Peruvian highlands, the rapid retreat of glaciers has disrupted agricultural cycles, access to water and the ability of communities to remain on their land. According to figures reported by IDL-Reporteros, an online newspaper based in Lima, and by the aid organisation CARE Peru – both cited in *The Guardian* – more than 72,000 families left rural areas between 2018 and 2024, driven by prolonged droughts, soil erosion and lack of institutional support.[2] However, many other communities chose to reorganise internally and make collective decisions before deciding whether to move, developing local strategies to adapt in place whenever possible.

One notable example can be found in the Sacred Valley, north of Cusco, where Water Users' Associations operate as community regulatory bodies for water use. Through open assemblies, these organisations prioritise the equitable use of water for essential crops, adjusting traditional practices to new climatic patterns. These decisions are made through face-to-face deliberation involving not only community leaders and water user representatives, but also women farmers, young herders and older adults, whose experience is key to recognising risks and evaluating alternatives.

Popular communication networks have also emerged using accessible media such as

loudspeakers mounted on vehicles, radio messages and WhatsApp groups in Quechua. Together with the assemblies, these channels allow communities to share alerts on water sources, coordinate meetings and above all open spaces for discussion on options for remaining, diversifying production or undertaking relocation within the local area.

In one community in Calca, for example, hand-painted maps were drawn directly on the walls of communal buildings to visualise areas at risk and possible relocation sites within the district itself. Discussions were broadcast over loudspeakers and through voice messages sent to mobile phones, allowing those who could not attend in person – such as older adults or people with disabilities – to take part as well. This community communication strategy made possible a collective decision-making process based on local, accessible and shared knowledge. However, this process was not problem free either. In some cases, community proposals developed through these participatory methods were reportedly not incorporated into municipal planning processes, partly because local authorities required formal technical studies or registration within official planning frameworks. This limited the extent to which community-led initiatives could access public funding or technical support, showing that participation without formal recognition still leaves important gaps in implementation.

Remaining barriers

These cases demonstrate that communities affected by climate change are not passive subjects, but crucially important collective actors capable of deliberating, making decisions and creating their own proposed solutions. However, despite the use of these inclusive practices, exclusions remained.

A critical issue in both contexts was the gender barrier: in many meetings, female participation was only significant when specific strategies were designed (facilitating groups, differentiated spaces, inclusive language). Without this, women tended to be listeners, not decision-makers, even though they often bear the brunt of the loss of housing or access to water. Language exclusion was also noted, particularly in Andean areas where technical decisions were delivered in Spanish and using incomprehensible terminology. It was only when the meaning – not just the language – was translated that information became shared knowledge.

The conditions for agency

In both territories, communication was a tool of power. Wall maps, voice messages, rural assemblies and telephone networks were not just 'media', but environments in which agency occurred, the sense of displacement was reconfigured, and collective alternatives were shaped. Replicating these strategies requires recognising that not every channel is useful if it is not well adapted to the local area, language, pace of life or accepted practices of each community. Experience also shows that the right to participate is not exercised in a vacuum. It requires binding consultation protocols, with adequate time, allocated resources and genuine co-management. Where local authorities listen to but do not recognise community decisions, exclusion is reproduced in new forms.

In terms of funding, there is an urgent need to abandon a vertical, top-down project model and promote flexible funds, co-managed between governments and communities, allowing relocations to be adjusted to environmental changes and local priorities. Whether to say "yes" or "no" to a relocation cannot depend on a family's ability to borrow money.

From a human rights perspective, this implies that relocation cannot be understood as a favour, but as a state obligation subject

to standards of consultation, participation and reparation. From the perspective of communication for social change, it implies that every action must include strategies designed not only to inform, but to empower and sustain collective dialogue before, during and after displacement.

Recommendations

To move towards inclusive, sustainable and fair relocations, the following safeguards and strategies are proposed:

Key safeguards

1. Binding consultation protocols, defined with the community, which guarantee the right not only to be informed, but to co-create alternatives.[3]
2. Legal recognition of community decisions, such as assemblies, internal community agreements or public votes, even if they do not take conventional forms.
3. Human rights monitoring mechanisms, including by community-based organisations, and reports which are accessible in the local language.
4. Co-managed funds, directly involving communities in the allocation of resources for relocation, infrastructure and livelihood recovery.

Transformative communication strategies

1. Community communication networks using well-known channels (radio, loudspeakers, mobile messaging) to translate technical information into culturally relevant formats.
2. Participatory audiovisual materials, designed by and for communities, in their languages, and using references relevant to their locality.
3. Radio and social media campaigns led by young people and displaced leaders, communicating from the inside and not from the outside.
4. Documentation of processes in real time, to create shared memory, to feed back decisions and sustain the community bond during displacement.

Climate displacement is not just a matter of infrastructure or technical assistance. It is a deeply human, cultural and political process. Human rights and communication for social change must therefore move from the periphery to the centre of public policy design, international agency programmes and financing agendas. UNHCR, state agencies, funding organisations and local governments should incorporate these safeguards and strategies as mandatory intervention criteria. Relocating is not just about moving houses, but about rebuilding lives with real participation, meaningful information and guaranteed dignity.

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Beyond survival: two cases of planned relocation in India

Architesh Panda and **Sumanta Banerjee**

Early examples of planned relocation in Odisha saved lives but left livelihoods fragile, increased onward migration and curtailed access to common resources, underscoring the need for inclusive, livelihood-centred climate mobility policies.

Eroding coastline at Podampeta, Odisha. Credit: Architesh Panda

Between 1999 and 2016, Odisha lost about 154 km–nearly 28 %–of its 485 km coastline to sea-water ingression, while repeated cyclones, from the 1971 storm to the 1999 super cyclone and more recent events, eroded farming and fishing-based livelihoods.[1] Odisha's planned relocation, among the earliest to take place in India, unfolded through two major initiatives.[2] Under the 2006 Odisha Resettlement & Rehabilitation Policy (ORRP) about 600 families from the severely eroded village of Satabhaya in Kendrapara were moved to Bagapatia (beginning in 2017) and provided with homestead land, housing and basic services. Similarly, after Cyclone Phailin in 2013, the World Bank-supported Odisha Disaster Recovery Project (ODRP) resettled around 700 households from Podempeta to New Podempeta in Ganjam district.

While both communities were relocated

with housing and compensation, their post-relocation experiences diverged in important ways. Podempeta households, traditionally marine fishers without agricultural land, continued to face water scarcity and restrictions on fishing, though they benefitted from stronger participation in planning and decision-making. Satabhaya households, primarily farmers, struggle with waterlogging, resource constraints, and fragile livelihoods, reflecting limited consultation and weaker institutional support during relocation. The contrast highlights that sustainable outcomes depend not only on physical safety but also on enabling conditions such as livelihood opportunities, access to common property resources, inclusive and gender-sensitive planning, and sustained stakeholder engagement.

Migration as adaptation

International policy frameworks and development agencies increasingly frame migration as an adaptation strategy under the concept of "migration with dignity." This framing emphasises mobility as a means of diversifying risks and sustaining livelihoods in the face of climate stress.[3] The Odisha experience highlights the challenges of this approach. After resettlement, Satabhaya households were not compensated with agricultural land and thus lost their farming-based livelihoods. Likewise, Podempeta households were cut off from their traditional dependence on marine fishing. With no concrete livelihood support plan in place, many households have turned to migration as a coping strategy rather than a dignified choice. Men now migrate seasonally or permanently to states such as Kerala and Tamil Nadu for work in fishing or construction. Although migration was among the livelihood strategies used previously, its frequency and duration have increased significantly since relocation, reflecting the limited options available at the new sites.

For these households, migration is less a pre-emptive adaptation choice than a distress-driven response to the absence of viable local livelihoods. The economic benefits of the resulting remittances are often outweighed by the social and emotional costs of family separation, while the absence of male labour further increases women's household burdens, as discussed below. Children are often required to contribute more to household labour, reducing school attendance. These trade-offs highlight that while migration may offer short-term relief, it can simultaneously erode long-term resilience.

Moreover, migration from Odisha's relocated villages is highly precarious. Our interviews with the local community find that migrants are often engaged in low-paid and insecure labour, lacking social protection and labour rights. This exposes them to a variety of risks, including exploitation and poor living conditions. Far from guaranteeing adaptation, such migration often compounds losses and damages by adding layers of economic and non-economic vulnerability. The Odisha case thus illustrates the limitations of treating migration as a straightforward adaptation pathway. While mobility may be unavoidable given the loss of local livelihoods, its outcomes are mediated by social inequalities and weak institutional support.

Community engagement

While relocation policies often prioritise physical safety through the provision of land and housing, their long-term sustainability depends heavily on whether communities are meaningfully engaged in planning, site selection and decision-making processes. In the context of Odisha, the contrasting experiences of Satabhaya and Podempeta provide valuable insights into how governance arrangements shape relocation outcomes.

In Satabhaya, the resettlement process was largely state-led, through the Odisha Resettlement and Rehabilitation Policy (ORRP). Communities were offered housing and land in Bagapatia, but had limited influence over the choice of the relocation site. As a result, they were resettled on low-lying, swampy land prone to waterlogging, which has created new risks of flooding and disease. Poor drainage has led to stagnant water around homes and schools, resulting in children missing up to a month of school each year due to these unhygienic conditions and the associated diseases.

One of our interviewees, Smita from Bagapatia, explained: "During the rainy season, our roads remain waterlogged for months, turning into breeding grounds for mosquitoes, increasing the frequency of outbreaks of fever and other illnesses among children . As a result, children often miss up to two months of classes each year. After resettlement, we realised how crucial proper drainage and health facilities are for our community."

Although a village committee was nominally consulted, decision-making power rested largely with government authorities, resulting in a mismatch between community priorities and the chosen site. These governance shortcomings have translated directly into fragile livelihood conditions, where households struggle not only with the loss of agricultural land but also with inadequate infrastructure.

By contrast, the Podempeta relocation, undertaken under the World Bank-supported Odisha Disaster Recovery Project (ODRP), although not perfect, demonstrates how greater community involvement can improve outcomes. Here, the marine fishing community was offered multiple options and, in many cases, was able to purchase or select lands they preferred, which offered good conditions for housing and infrastructure. Community members actively participated in planning the layout of the new settlement, including roads and water tanks. This participatory approach fostered a greater sense of ownership over the relocation process and produced relatively higher satisfaction with housing and infrastructure compared to Satabhaya. However, despite these governance improvements, challenges remain: there has been very little follow-up work after relocation to improve the conditions of the villagers in terms of infrastructure and livelihood. For example, clean drinking water has been an issue because the water available in the area is quite saline due to proximity to the sea.

One young man, who had returned from years of fishing work in Kerala that left him with chronic back problems and unable to continue such labour, expressed his frustration: "Every year, many researchers, government officials, and people from international organisations come here and ask us questions. But they go back, and our voices never reach the authorities."

The role of gender

The impact of planned relocation differs according to gender in ways that shape outcomes. In the case of Satabhaya, gendered vulnerabilities are especially pronounced. With many men migrating to nearby towns and other states in search of work after relocation, women often represent the most immobile group, left behind to manage households under increasingly constrained conditions. So much so that for the group interviews in the villages, only a few men were available to join the discussion.

In Bagapatia, loss of access to agricultural land and forest-based resources has meant that women – who once contributed through farming, fishing, honey collection and vegetable cultivation – now struggle

to secure daily food needs, relying heavily on purchased goods and small menial jobs. While NGOs and civil society groups have introduced small-scale livelihood programmes, such as poultry and goat-rearing, these interventions have proved unsustainable and insufficient to replace lost incomes. While women interviewed in our community were prepared to start new livelihood practices, there is simply not enough support to break the cycle of poverty and make livelihoods sustainable.

At best, the current provisions are ad hoc quick fixes, rather than long-term solutions; women still mostly rely on income from male members of the family who have migrated. These gendered impacts are compounded by the unequal distribution and use of remittances. Remittances are often controlled by male household members and prioritized for debt repayment or household assets rather than for women's needs or productive activities, leaving women with limited decision-making power or financial autonomy. Consequently, remittances rarely compensate for non-economic losses such as declining health, weakened social networks, and disrupted cultural life.

In addition, the burden of unpaid care work has intensified in the relocated villages, not because women's roles have changed, but because the conditions under which they perform them have worsened. In the resettlement sites, poor infrastructure, unreliable water supply, and limited access to health and childcare services have increased the time and effort required for everyday tasks. For example, in Bagapatia's low-lying environment, recurring waterlogging not only exposes families to disease but also forces women to spend additional hours securing clean water, maintaining sanitation, and caring for sick family members. Thus, relocation has magnified pre-existing gendered responsibilities by placing them in a more resource-scarce and physically demanding environment.

By contrast, in Podempeta, where community engagement in relocation planning was stronger, women had comparatively greater opportunities to participate in decisions about housing and infrastructure. Nevertheless, their livelihoods remain constrained by restrictions on marine fishing due to the presence of a conservation area protecting turtles, as well as by persistent water scarcity. Here too, male out-migration for work has left women with heavier responsibilities and limited external support. Before resettlement, dried fish trading was a thriving, women-led livelihood, anchored in a longstanding tradition. Despite the community's proximity to the Humma dried-fish market – one of Odisha's largest – this source of income has declined sharply since relocation, constrained by rising household care burdens, seasonal access to the sea and limited capital to make the business viable for women. Across both sites, therefore, relocation has reinforced traditional gender divisions of labour while curtailing women's access to sustainable livelihoods.

Access to common property resources

Access to common property resources (CPRs) such as forests, grazing lands, fisheries and water bodies is central to the livelihoods of rural communities, especially those facing climate stress. In the context of climate-induced relocation, however, CPRs are often overlooked, with compensation and resettlement packages prioritising housing and basic infrastructure rather than restoring access to shared natural resources.[4] This omission can significantly undermine the long-term sustainability of relocated communities, as CPRs frequently serve as both safety nets during crises and as key sources of supplementary income

and food security. The Odisha relocation experience demonstrates how the loss of CPRs reshaped livelihood trajectories and exacerbated vulnerability in both Satabhaya and Podempeta.

For the Satabhaya community, relocation to Bagapatia resulted in a near-total loss of access to forest-based resources. Before relocation, households depended heavily on honey collection, firewood and other forest products to diversify incomes and meet subsistence needs. After resettlement, however, forest access was curtailed due to conservation restrictions and fears of wildlife attacks. This loss has been compounded by the absence of agricultural land in the rehabilitation package, leaving households dependent on food purchases in an area where wages and opportunities are scarce. The inability to draw on CPRs has thus converted once self-reliant households into cash-dependent consumers, increasing their vulnerability to both market shocks and climatic stresses.

The Podempeta community illustrates a different but equally constraining CPR dynamic. As a marine fishing community, Podempeta households traditionally relied on access to the sea for both food and income. Post-relocation, however, their dependence on marine resources has been disrupted by conservation regulations. The nearby coast, designated as a critical olive ridley turtle nesting ground, is closed to fishing activities for up to eight months each year. While these conservation measures serve important ecological goals, they have inadvertently stripped households of their primary livelihood source without offering viable alternatives. The meagre financial support provided by the government to compensate for the income loss is insufficient. Unlike in Satabhaya, where civil society organisations have introduced small-scale animal husbandry and poultry programmes, Podempeta residents face limited livelihood alternatives, and as a result, large-scale male out-migration has become the dominant coping strategy. The transition to new forms of employment entails significant social and economic costs, particularly when previous occupations–such as marine fishing–were deeply embedded as a way of life.

The loss of CPRs in both cases highlights how relocation interventions can unintentionally deepen livelihood fragility. Forests and fisheries are not merely economic assets but also cultural and social anchors, linked to identity, knowledge systems and community cohesion. Their loss constitutes both economic and non-economic forms of damage, reducing food sovereignty and eroding resilience. Importantly, these losses also reveal trade-offs between different policy priorities: disaster risk reduction through relocation, biodiversity conservation and community livelihood security. Without mechanisms to balance these competing goals, relocated communities are left with limited autonomy over their resource use and diminished adaptive capacity.

Key lessons

The Odisha experience shows that planned relocation can save lives but risks leaving livelihoods fragile unless it is embedded in inclusive and livelihood-centred policies. For this to happen, a number of approaches are needed. First, compensation must go beyond housing to secure equitable access to common property resources. Land-for-land compensation,[5] livelihood integration into conservation programmes, and recognition of customary rights can transform restrictions into opportunities for income and ecological stewardship.

Second, migration should be addressed as part of adaptation policy. Recognising that some migration is inevitable as a coping strategy, protecting migrant workers'

rights in destination areas while reducing the vulnerabilities of those left behind – particularly women – is essential. Integrating migration into National Adaptation Plans (NAPs) and Nationally Determined Contributions (NDCs) – which outline how countries will adapt to climate change in the medium- and long-term and set out their commitments on greenhouse gas emissions – applying intersectional and gender-responsive frameworks, can help shift mobility from distress to dignity.

Third, relocation governance must be understood as a continuous process. Transparent decision-making, sustained community engagement and accountability mechanisms are necessary, from site selection to livelihood planning. Avoiding token consultation and investing in long-term institutional capacity is key to building resilience.

Finally, gender equity must be central. Ensuring women's participation in decision-making, equal access to land and resources, and targeted livelihood support, can prevent relocation from reinforcing existing inequalities. Only by embedding these principles can planned relocation move from short-term survival to long-term resilience.

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Non-economic losses: centring choice and place

Julia M Blocher and **Dalila Gharbaoui**

Climate-related displacement causes non-economic losses – of land, heritage and identity – that cannot be adequately addressed through financial compensation alone. Policy responses must centre affected people's values and choices, prioritising dignity, cultural continuity, habitability and social cohesion.

A boy and his canoe in Foueda Island, Lau Lagoon, Solomon Islands, a community facing rising sea-levels. Credit: Jason Kagame

The novel and loosely defined concept of non-economic loss and damage is receiving growing attention in discussions under the United Nations Framework Convention on Climate Change (UNFCCC). The interplay and scales of climate change-related hazards and processes result in a broad range of losses and damages, many of which are not easily quantifiable in financial terms.

Non-economic losses (NELs) may be losses that affect individuals (for example, loss of life, health or mobility), society (for example, loss of territory, cultural heritage, Indigenous or local knowledge, languages or societal or cultural identity) or the environment (for example, loss of biodiversity or ecosystem services). These intangible losses are additional to the loss of property, assets, infrastructure, or agricultural production and revenue caused by the adverse impacts of climate change. The latter, being more tangible, can be more easily assigned a

monetary value, which facilitates concrete discussions with historical emitters around compensation.

Climate change-related displacement is itself recognised as a form of NEL, affecting diverse communities worldwide. A key UNFCCC paper highlights how climate displacement disrupts social networks, identity and belonging. Outcomes linked to displacement also have cascading effects on other NELs, undermining habitability and driving further forced out-migration. Habitability can be defined as a place's capacity to support human life: protection from hazards, access to food and water, adequate space, opportunities that sustain health and wellbeing, and the collective strength of communities to thrive. As habitability declines, the ways people choose to move are also likely to change - often to longer distance location, particularly where livelihoods are affected at the site of origin.[1]

Habitability loss leads to key intangible climate-related losses because habitability is a central element in the relationship between people and the environment. Gradually evolving climate hazards interact with human mobility in such a way that one loss triggers further harm – eroding social cohesion, interrupting knowledge transmission and reshaping ways of being, which all compound habitability loss and further exacerbate mobility drivers. For example, disaster displacement during harvest seasons disrupts agricultural livelihoods in origin areas, contributing to loss of traditional knowledge regarding farming that later undermines agricultural productivity in the context of increasingly frequent drought cycles, corroding cultural heritage that is often overlooked but is valuable. These feedback cycles include interlinked losses between territory and habitability; livelihoods, wellbeing, and identity; cultural heritage, processes of enculturation, and social cohesion; and biodiversity and ecosystem services.

Non-economic losses and climate justice

The links between NELs and climate displacement should play a central role in debates on climate justice, equity and intersectionality. Historically emitting countries that have benefited economically for generations from fossil fuel-based economic growth bear some responsibility to rebalance the impacts borne by countries that were on slower growth trajectories.

While no agreed definition for NELs exists, UNFCCC processes – through the work of the Warsaw International Mechanism for Loss and Damage – have been initiated to avert, minimise and address them. In addition to identifying and describing representative cases of NELs related to human mobility. This article proposes a value-based and intersectional approach–rooted in social equity, justice, and human rights–to guide planning and the development of displacement scenarios. This approach focuses on the choices people make in response to climate impacts and uses these insights to inform policy pathways that would meaningfully address non-economic losses.

Ultimately, ensuring that the voices and choices of individuals and communities are reflected in future climate and vulnerability assessments will provide critical data to guide decision-making, climate policies and the allocation of climate funding. Importantly, it also helps people displaced in the context of climate change to actively contribute to, and shape, effective solutions for their circumstances.

Typologies of intangible climate losses

An existing typology of climate-related non-economic losses and damages sets out 20 different values across the three

dimensions of cultural heritage, biodiversity, and territory.[2] The top ten expressed and ranked by research participants in the Pacific were: spirituality; family; education and skills; connection to, and custodianship of, land and sea; wellbeing; sense of place and 'home'; traditional governance system and decision-making; subsistence society and/or traditional livelihood; equality; and looking after one another. These values are all subjective and place-dependent and their links with human mobility – migration, displacement, planned relocations or resettlements of communities, and degrees of immobility – tend to be highly context specific, socially connected, dynamic, and multidirectional. Human mobility influences NELs and they, in turn, influence human mobility drivers.

Drawing on this typology, we conducted 79 key informant interviews to identify, describe and assess representative cases of NELs and what actions had been taken to address them.[3] This aims to inform research and policy responses that strengthen systems for preserving what people consider most important to them, which responses should be prioritised and where resources should be allocated.

Interviews were conducted in spring and summer 2024, with experts from eight regions of the world, representing ministries, non-governmental organisations and academia, selected specifically for their prior knowledge of NELs and climate mobility concepts. Interviewees were identified by United Nations partners – the International Organization for Migration (IOM), UNHCR, the International Labour Organization (ILO) and other partners from government and academia during development of a technical guide on NELs in the context of human mobility.

The centrality of land- and place-based values

In contexts of customary land tenure, land is inseparable from culture and society. Land systems underpin natural resource management, Indigenous early warning mechanisms, immediate coping strategies and long-term adaptation. Land and place also strongly influence mobility decisions and outcomes: people on the move from communities with deep attachments to land often face disarticulation and social alienation.[4]

More than half of our key informants (39) identified land loss directly, or referenced it when describing intangible or non-economic losses. These accounts fell into four categories:

- land alienation, the situation of being forced to leave or losing access or rights to ancestral land;
- land relinquishment, meaning the surrender or abandonment of land, often under duress;
- land degradation, referring to declining land quality and resource depletion, commonly driving out-migration or slow-onset displacement in agrarian societies; and
- land fragmentation, that also exacerbates the three categories above, and describing the division of land into smaller parcels that undermine its integrity and weaken kinship and social ties.

In low-lying areas, sea-level rise threatens to cause land loss and fragment contiguous land, making it harder for neighbouring communities to sustain historical relationships. Land alienation associated with displacement and relocations is prominently related to NELs. For example, one interviewee noted:

"It leads to mental health issues… the loss of the lands and the loss of their ancestral grandparents' graves. Especially in the province of Khyber Pakhtunkhwa (Pakistan), we've been severely affected as well by floods. It is like a whole region; a whole graveyard being flooded away."

Another interviewee offered:

"In the Pacific Islands, there are proofs that when communities are being displaced and relocated, besides the secondary displacements from the temporary relocations, many of the elders within the communities have mentioned that the customs and ways of living and social hierarchies – historical and ancestral hierarchies – they are starting to be lost because the younger generations start to los[e] that connection to their vanua, their fenua, and also their respect and their connection with the ancestral ways of working,"

Vanua/fenua and similar words in other Austronesian languages are sometimes translated as 'land', but can be better understood as an integrated worldview where land, identity and community form a unified whole. As an illustration: the placenta is often buried below or next to a tree to signify connection with ancestral land or *fonua* (Tongan), *vanua* (Fijian), *whenua* (Māori) and *fanua* (Samoa).[5]

Social fragmentation after Tropical Cyclone Vasa

The experiences of survivors of Tropical Cyclone Yasa in Fiji illustrate the complex dimensions of social fragmentation linked to land loss experienced in the wake of natural disasters. Following the cyclone, Nabavatu village encountered significant land instability that compromised the structural integrity of homes. A substantial number of households were displaced, leading to families living in a makeshift 'tent village' for an extended period while awaiting permanent relocation.

Social fragmentation resulted, as displaced communities struggled to maintain established social networks and overcome competition over limited resources.[6] This fragmentation severely threatens survivors' emotional well-being. Long-term psychological impacts – including post-traumatic stress disorder (PTSD) – are widely documented, underscoring the necessity for comprehensive support mechanisms. Social dislocation related to displacement can result in increased feelings of isolation and loss of identity, which can hinder not only individual recovery but also the collective restoration of community ties.[7] The cyclone also caused significant loss and damage to agricultural and community structures, exacerbating vulnerabilities and undermining economic recovery.

At the same time, a community's psychological resilience is significantly bolstered by robust social networks, which tend to weaken in the face of displacement like that caused by Cyclone Yasa. This case highlights the importance of centring and supporting community choice that respects traditional land ownership systems and social connections as it is crucial in facilitating mobility and sustainable relocations within and between islands – and central to minimising and addressing NELs associated with these movements.[8]

From victims to agents

Displaced individuals should not be viewed solely as victims of circumstance but as agents capable of making meaningful choices about their futures. This includes not only the choice to move or to stay with 'dignity', but also the right to define what dignity means from their own perspectives.[9]

Centring the lived experiences of affected

people, as well as the locally specific values that guide them, is key. Doing so fosters deeper understandings of the complex relationships between people, their environments and cultural identities, and ensures that responses are grounded in context-specific needs. A values-based approach to non-economic losses (NELs) places people's choices and lived experiences at the center of climate policy. By grounding responses in social equity, justice, and human rights, it enables locally-owned interventions and broadens the scope of vulnerability assessments to include cultural and emotional dimensions. This approach also supports more inclusive data collection and responsive policy design, helping to address NELs in ways that go beyond financial compensation. Practical guidance on NELs must frame the issue as inherently local, with assessment tools designed to capture both economic and non-economic factors, including social cohesion, cultural identity, mental health and dignity. A local values-based approach, rather than a predefined framework, places people and their lived experiences at the centre and guarantees that people's lived experiences are acknowledged, valued, and respected.[10]

Interviewees emphasised that any assessment or programme for NELs must be inclusive and built on deep consultation with diverse stakeholders, particularly Indigenous peoples, youth and people living with disabilities. Insights from communities can translate into actionable policy. For instance, informants proposed solutions to land-based NELs and drivers of forced mobility, such as acquiring new land, expanding existing ownership or purchasing additional property. A prominent example is the government of Kiribati's 2014 purchase of 22 km^2 of land on Vanua Levu, Fiji, to provide options for potential population relocation.

Policies based on a deeper understanding of individuals and communities can be further strengthened to address land-based declines in habitability that are associated with displacement or forced relocations and related NELs. Policies should prioritise social cohesion and cultural preservation, as well as practical support systems for displaced, migrant or relocated populations and those who choose, or are forced, to stay in place. Ultimately, this enables them to make informed choices about how to adapt to the future.

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Disasters, displacement and legal choices: how communities are using courts to seek justice

Bella Mosselmans, Matthew Scott, Yumna Kamel and **Anila Noor**

People displaced by climate-related disasters are not passive recipients of aid or policy decisions. They are taking strategic legal action to secure their rights and hold States accountable in domestic, regional and international forums.

Flooded homes along the Colorado River, USA. Credit: Byran Roschetzky

Individuals and communities across the world are using the law strategically to avoid being displaced or to pursue dignified lives in the aftermath of displacement. Legal action is becoming a critical tool to address systemic exclusions and promote equitable adaptation responses, and is particularly impactful when civil society collaborates under the guidance of directly impacted communities. Drawing on the Climate Mobility Case (CMC) Database[1] and complementary jurisprudence, this article highlights judicial and quasi-judicial decisions from around the world and analyses how individuals and communities are taking action to:

- Avoid being displaced or hold States accountable for failing to prevent climate-related displacement;
- Secure protection of their rights during evacuation and throughout displacement; and
- Facilitate durable solutions to displacement.

In different cases, we see how international human rights law, domestic constitutions, and administrative and land law are being used by individuals and communities. We also see how litigation must go hand-in-hand with other initiatives such as policy reform, advocacy and intersectional community-led organising to ensure that legal victories translate into meaningful protection and lasting change.

Prevention of displacement

Displacement is a harm, and in many contexts a form of violence that also contributes to other harms undermining people's safety, dignity and wellbeing. Many communities are therefore doing everything possible to avoid being displaced.

Faced with imminent displacement from their ancestral homelands, the 27 founding members of Pacific Islands Students Fighting Climate Change (PISFCC) mobilised to secure an advisory opinion from the International Court of Justice (ICJ) on State obligations in the face of climate change. Through sustained media campaigns and subsequent legal submissions by States, this initiative platformed the voices of communities already (and soon to be) displaced. In July 2025 this led to a landmark ruling by the ICJ that States have an international legal obligation to prevent harm to the climate system and make reparations to injured States. This ruling will undoubtedly influence decision-making around future greenhouse gas emissions, as well as how frontline communities are supported in making the choice to move or stay. In the meantime, affected communities have been bringing specific claims to international, regional and national courts, with mixed results.

In Daniel Billy v Australia, Indigenous Torres Straits Islanders argued that Australia was failing to support adequate climate adaptation measures, leaving the community exposed to sea level rise, storms and flooding. The UN Human Rights Committee found that Australia's limited investment in adaptation meant that the community might be forced to relocate to mainland Australia. This relocation would deprive the community of their right to practise their culture, which is intimately tied to the land, resulting in a violation of Articles 16 and 27 of the International Covenant on Civil and Political Rights (ICCPR). Although Australia's reply to the decision highlights funding commitments for numerous new adaptation initiatives, subsequent domestic litigation by Torres Straits Islanders in the Pabai v Commonwealth of Australia case indicates that Islanders continue to experience climate-related displacement risk.

Related cases in the CMC Database demonstrate the difficulties in securing positive outcomes. In Guyo v Kenya Electricity Generating Company PLC, the Environment and Land Court at Malindi, Kenya, dismissed a claim brought by a Member of Parliament on behalf of his constituents and others who were displaced when dam operators on the Tana River released excess water during heavy rains. In that case, the Court considered that multiple other factors contributed to the displacement of communities and did not consider the dam operators to be negligent in either design or in the release of water. Similarly, in Lekulai & 90 others v Attorney General & 3 others, the High Court of Kenya dismissed the claim by members of the Ilchamus community who had been repeatedly displaced by flooding. The Court considered that the flood was the result of an Act of God and found that delivery of humanitarian relief in the aftermath was sufficient conduct for the State to discharge its duty to the community.

Communities also pursue legal action when the state is directly responsible for their displacement. In Pakistan, which has repeatedly experienced catastrophic flooding

and associated displacement of millions of residents, strengthening urban flood protection is a priority. Yet, when the Supreme Court instructed the National Disaster Management Authority to clear all informal settlements alongside waterways leading into and out of Karachi, nearly 100,000 were forcibly evicted. Many had been resident for decades and some had an entitlement to the land. Their case was raised by a group of UN Special Rapporteurs in a 2021 communication to the government of Pakistan[2], but a 2024 in-depth report by Human Rights Watch[3] suggests that, notwithstanding the strong human rights basis requiring the government to remedy the forced evictions, limited action has been taken and people remain displaced.

Protection during evacuation and displacement

The cases highlighted above demonstrate that legal action may sometimes result in a judicial finding that requires States to take action to prevent displacement, and in principle, may hold States accountable for failures to do so. However, with well over 45 million disaster displacements in 2024 recorded by the Internal Displacement Monitoring Centre[4], the experience is widespread and growing. Some litigation aims to enhance protection of people during evacuation and throughout displacement. In Budayeva & Others v Russian Federation, families of people killed in the July 2000 mudslide that devastated the mountain community of Tyrnauz argued that Russia's failure to invest in protective infrastructure – including early warning systems and evacuation preparedness – resulted in a violation of the right to life. This case affirms the duty of States to take steps to prevent foreseeable harm and highlights how short-term displacement in the form of evacuation can, if carried out effectively, reduce exposure to harm.

Critically, Article 11 of the Convention on the Rights of Persons with Disabilities, as well as domestic law in many countries, requires states to address the specific situation of persons with disabilities in emergency situations. In this context, a precedent can be found in the legal action taken by California Independent Living Centers against the City of Oakland and others in relation to disaster preparedness plans that failed to adequately address the particular situation of persons with disabilities. The legal action led authorities to engage in a broad consultative process that resulted in a plan that improved support, through accessible early warning systems, a Geographic Information System (GIS) to facilitate emergency evacuation, the identification of 20 accessible emergency shelters, and the designation of a Shelter Functional Needs Coordinator. This and other improvements enabled the litigants to settle the case against the city without the need for a Court judgment.

Litigation that takes place in the aftermath of displacement may not remedy harm already experienced, but can lead to improvements in law, policy and practice. A series of cases brought by affected persons to the Colombian Constitutional Court has progressively expanded legal protection to people internally displaced in the context of disasters, building on the country's IDP framework, established during decades-long armed conflict. In Sentencia T-123 [2024], the Colombian Constitutional Court found in favour of claimants who had been displaced by flooding of the Bojabá River but were denied recognition as displaced peoples and were denied state aid comparable to that of people displaced by violence. The Court urged Congress to create comprehensive legislation for environmental displacement, drawing from the Guiding Principles on Internal Displacement.

Durable solutions

Affected communities are increasingly asserting the right to stay in their homes, and international frameworks on displacement recognise that durable solutions must safeguard voluntary, informed choice – including the ability to stay, as well as the option to relocate. As the climate emergency gathers momentum, however, it is clear that millions of people will lose their homes forever to rising sea levels, wildfires, recurrent flooding, droughts or storms. The extent of a State's legal obligation to facilitate relocation of communities is not settled but is a question of increasing salience. With one study counting over 400 community relocations worldwide[5], and extensive accounts of harms resulting from poorly planned moves, legal action can help to clarify State obligations in this context, whilst also addressing immediate community priorities.

A series of Romanian cases have addressed the obligations of the State to address legal security of tenure for relocated people. In these cases the State was directly responsible for the need for people to relocate, as their homes were exposed to subsidence risk resulting from mining activity. Domestic law required the State to grant legal security of tenure to families who had been living for decades in homes it had provided.

In the US, legal action has been undertaken by Indigenous communities to secure Federal Government support to relocate. The case against the government was articulated by a group of UN Special Rapporteurs in 2020[6] and to date has not received a response from the authorities. The Alaskan communities seeking relocation continue to face serious impacts from sea level rise and melting permafrost, while some Louisiana residents from Isle de Jean Charles have been relocated. However, reports highlight the community's limited role in relocation planning, and the exclusion of many former residents. Further, the site itself lies in a flood plain and adjacent to an oil rig maintenance facility, revealing ongoing tensions.[7]

Lessons learned

The cases discussed in this article highlight several important lessons on how the law is being used to address the harms communities experience due to climate-related displacement and adaptation measures.

First, affected communities are not passive victims but agents of change. They are using domestic, regional and international legal systems to resist displacement, secure protection, and pursue durable solutions. From landmark international cases like the ICJ advisory opinion, to litigation in Kenya, Norway, Colombia, and beyond, communities are using the law strategically to challenge state inaction, demand recognition of rights, and shape adaptation in more inclusive and equitable ways.

Second, litigation can compel governments to confront their obligations, whether through immediate reforms – as in California's adoption of accessible evacuation and shelter plans – or through gradual policy reform and broader systemic change, such as the national legislation that will be implemented following the Constitutional Court of Colombia's rulings.

Third, legal strategies are most impactful when grounded in leadership by affected communities and supported by broad coalitions of civil society, lawyers and grassroots organisations. Grounding legal action in the experiences and expertise of frontline communities makes it a tool not only for protection and justice but also for empowering those most affected to shape their futures.

Fourth, notwithstanding success in court, communities often continue to face harm associated with displacement even years after the judgment. Many cases documented in the CMC Database reveal the limits of the law in securing truly transformative outcomes. Implementation is often delayed, partial or symbolic. Structural inequality, a lack of political will and under-resourced legal systems often stand in the way of translating judgments into lived change. Overcoming these barriers requires pairing litigation with broader social, political and institutional strategies that centre the leadership of frontline groups.

Such strategies must also drive shifts in public narratives, strengthen government implementation and build renewed political will. Refugee-, Indigenous-, and community-led organisations play a vital role - through intersectional advocacy, they can bridge gaps in legal and policy frameworks, connect communities with policymakers, and mobilise collective voices. Centring the perspectives of marginalised groups helps ensure outcomes reflect lived realities and address the distinct vulnerabilities that climate-related displacement often exacerbates.

Even when rulings are unfavourable, they often build public pressure and lay the groundwork for future claims. In that sense, legal action is not only about winning in court, it is also about asserting presence, agency and resistance in a world that often systemically denies displaced communities those rights.

Ultimately, climate-related displacement is not only an environmental or humanitarian challenge but a justice issue. As the climate crisis deepens, legal action will remain a vital pathway for communities to assert their rights, challenge exclusion and demand that adaptation be equitable, participatory, and grounded in dignity. Those who go to court – often at personal cost – should be recognised not just as litigants, but as leaders in the global struggle for climate justice.

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Anticipatory financing: enabling choice amid displacement in the Philippines

Oenone Chadburn and **Maria Theresa Niña Espinola-Abogado**

Disaster-prone communities are being given financial support ahead of predicted cyclones through anticipatory financing mechanisms. Broadening mitigation options has significantly influenced how households approach evacuation and livelihood protection.

The Philippines is the world's most disaster-prone country according to the World Risk Index and has held this ranking for 17 consecutive years. In 2024 alone, 9.6 million Filipinos were displaced – more than half due to cyclones. With climate change intensifying risks, providing timely and effective support through advance assessments and funded early action plans is now a vital component of national disaster management strategy.

When disasters come in clusters

In late 2024, the Philippines experienced an unprecedented climate crisis. Six cyclones – Trami, Kong-rey, Yinxing, Toraji, Usagi, and Man-yi – hit in rapid succession, with some regions struck more than three times in just 30 days. Scientists attribute this 'clustering' to La Niña, a climate pattern characterised by cooler-than-average sea surface temperatures in the central and eastern Pacific Ocean, amplified by climate change, with wind speeds up to 36km/h stronger than historical averages.

Over 9.6 million people were affected, and hundreds of thousands were displaced repeatedly.[1] Already vulnerable communities in coastal, low-lying and hazard-prone areas saw livelihoods collapse under cycles of displacement. Evacuation centres, overcrowded and under-resourced, struggled to provide clean water, sanitation, and healthcare. Families relocated far from jobs, schools and essential services, experiencing heightened economic strain and social isolation.

Disasters erode dignity, agency and resilience for all, but they hit hardest those already vulnerable: women, children, the elderly, indigenous peoples and people with disabilities. Displacement is not only physical; it also undermines safety and fragile process toward stability. As climate hazards strike more frequently and intensely, at-risk populations face increasingly dangerous patterns of displacement that deepen poverty, weaken resilience and widen the socio-economic gap.

What is anticipatory financing?

Anticipatory financing (AF) falls under the umbrella of disaster risk financing and provides the 'fuel' for Anticipatory Action (AA). Anticipatory action is defined as "acting ahead of predicted hazardous events to prevent or reduce acute humanitarian impacts before they fully unfold.[2] Forecast Based Financing (FBF) is one of the most prominent and effective modalities of AF, demonstrating how financing tied to forecast can trigger timely, life-saving action. FBF is the "release of pre-agreed finance for pre-agreed activities to prevent or mitigate the impact of an imminent hazardous event or shock when forecast triggers are reached."

The rise of AF is driven by two trends: the growing frequency of climate-related disasters and the fragmented nature of multilateral funding. At its core, AF ensures families receive support before a disaster strikes. It provides cash or resources days ahead, enabling preparedness choices such as stockpiling, securing shelters, protecting assets or evacuating early. Unlike traditional humanitarian funding, which responds to loss, AF seeks to proactively reduce suffering, speed recovery, and enhance resilience. Most importantly, it aims to uphold dignity and expand choice.

Borrowing practices from parametric insurance and financial markets, AF relies on risk modeling and time-bound data to support assessments and decision-making – approaches significantly different from grant-based humanitarian systems. FBF, as noted, one of the most prominent forms of AF, relies heavily on sourcing, developing, and analysing data to determine the imminent onset of a hazard, the scope and size of funding required, and who should receive it. Yet despite its potential, of the USD 76 billion spent on crisis finance in 2022, only 2% was prearranged and just 1.4% reached lower income countries.[3]

The Philippines' example demonstrates the effectiveness of AA, showing how its impact can be further strengthened when participatory approaches, multi-stakeholder planning and distributed decision-making are integrated.

A turning point in the Philippines

Super Typhoon Haiyan in 2013 marked a turning point in disaster response – it claimed over 6,300 lives, displaced 4 million people, and caused USD 12.9 billion in damages across infrastructure, the social sector and livelihoods. This tragedy exposed the limits of reactive disaster response and spurred the rise of AA.

Following early piloting by the Philippine and German Red Cross, in 2019, Oxfam launched the Building Resilient, Adaptive, and Disaster-Ready Communities or B-READY programme. This linked community-defined forecast triggers to digital financial services, enabling families to receive cash days before a cyclone's landfall to stockpile essentials, reinforce shelters, protect assets or evacuate safely.[4] B-READY demonstrated the effectiveness of AA in reducing disaster impacts, while also showing that embedding local disaster knowledge into early warning systems and activation thresholds – through participatory risk mapping, recognition of indigenous hazard knowledge and community-defined triggers – can further strengthen its outcomes. Independent evaluations showed that this integration significantly improved the timeliness and appropriateness of early action, with households reporting reduced losses and faster recovery after cyclones. In 2021, the UN Central Emergency Response Fund (CERF) introduced an AA framework to support preparedness for potential Category 4-5 typhoons.

In 2023, Start Network launched Start Ready, a risk-financing mechanism that provides rapid, pre-arranged funding for predictable and recurring humanitarian crises, particularly those driven by climate change.[5] By 2024, agencies such as Oxfam, FAO, and Start Network had scaled AA during multiple cyclone clusters.

A family story: from loss to resilience

On Christmas Eve 2019, Super Typhoon Rai was forecast to hit Eastern Samar, a province facing the Pacific. Cristina, a 50-year-old mother, received B-READY anticipatory cash three days before landfall. She secured food and medicine, then evacuated with her children on her own terms, rather than being forced to respond reactively. Cristina explained:

"The cash support was a big help to us. We were able to immediately buy food and medicines as one of us was sick. Before the typhoon arrived, we had to move quickly to a safe place."

Her family endured days of rain and flooding in an emergency shelter with enough supplies to remain independent of delayed aid. B-READY automatically disburses cash through mobile wallets or prepaid cards when thresholds are met. Families can then secure food, medicine, or shelter materials, as well as harvest crops or protect livelihood assets – actions that not only safeguard survival during the crisis but also speed up recovery afterwards.

Cristina's story illustrates the essence of AF: timely, flexible support that gives families agency, enables faster recovery, and prevents deeper losses.

Positive coping mechanisms

During the 2024 cyclone cluster, AF proved transformative. In Cagayan and Catanduanes provinces, ahead of Typhoons Trami and Man-yi, around 21,250 households received cash assistance of USD 56-60 each, amounting to USD 205,300 in total. At-risk households – prioritised based on vulnerability criteria such as poverty levels, high exposure to hazards and residence in geographically isolated and disadvantaged areas with limited access to social services – used funds to buy food, medicine and fuel before markets closed and prices spiked, they harvested crops, secured boats, and evacuated up to 48 hours in advance.

The positive impact of AF lay not only in the timing of assistance but in the power of choice it provided. Unlike top-down relief, anticipatory cash trusted families to decide for themselves how to spend funds. Funds delivered through digital wallets or local remittance centres also arrived without the stress, queues or stigma of traditional aid.

Planning was participatory, involving a wide range of stakeholder-local governments, volunteers, grassroots groups, local traders, financial service providers, NGOs and UN agencies. They co-designed contingency plans and delivery mechanisms so communities knew exactly when and how help would arrive. Local governments provided risk maps and evacuation plans; NGOs and UN agencies managed forecasts and facilitated transfers; and financial service providers ensured cash reached households safely and on time. Forecast triggers were co-designed with communities: fisherfolk identified early signs of storm surges, farmers set rainfall thresholds, and women's groups mapped food supply chains and critical facilities. Finally, affected households provided feedback to strengthen AA systems after each activation.

Benefits and challenges during multiple cyclones

The Philippines offers key lessons for global AA practice, including the following benefits:

Reduction in financial losses and protection of assets. Even in a multiple-cyclone context, AF ensured households had secure access to food, medical supplies and shelter – the critical drivers of displacement. Multipurpose cash, transferred even as late as 24 hours before landfall, reduced financial losses for 99% of affected families compared to past experiences. This prevented harmful coping strategies such as selling assets or taking on debt, both of which often drive longer-term displacement.[6] Protecting livelihood assets such as fishing boats and farming tools also accelerated recovery, enabling households to resume livelihoods quickly without waiting for relief aid.

Cost-effectiveness is striking. In 2024, the Philippine government spent an average

of USD 115 per person on cyclone relief, compared to just USD 10 per person through anticipatory financing from aid actors.[7] AF also helped prevent price spikes, stabilising supply chains by distributing demand before and after disasters.

Greater choice in evacuation. AF also broadened evacuation choices and reduced forced displacement. Early cash allowed families to relocate to preferred destinations or reinforce shelters to safeguard possessions.

Nonetheless, notable challenges remain:

Limits to local capacity. Local capacity is limited, particularly at municipal and local (barangay) levels, leaving AA reliant on humanitarian organisations and UN agencies, which constrains autonomous local action. Targeted training for local government units (LGUs) in multi-hazard analysis, AA protocols and flexible planning is essential to ensure community-led responses become the norm when national systems are stretched.

Confusion over AA models. Coordination is also fragmented. The growing number of AA actors using varying models confuses communities when triggers differ between agencies. For example, some use forecast-based models, while others use 'impact-based' models, which focus on predicting what the impacts of hazards will be. Shared protocols and open data, whether based on indicators or donor requirements, are vital to reduce frustration and build trust, especially when anticipated triggers fail to provide expected support during compounding crises.

The need for partnerships. AA works best when LGUs, NGOs and UN agencies work in close partnership. Collaboration enables timely decisions and targeted aid delivery. Vulnerability-based targeting standards that consider gender, disability and ethnicity ensure more equitable outreach. Localised triggers and pre-disaster risk assessments make programming more flexible and targeted. However, the lack of formal AA policies within national disaster risk reduction and management (DRRM) legislation has created unclear roles between LGUs, civil society and humanitarian organisations, especially during overlapping crises. Although AA aligns with the Philippine DRRM Act, for example, its absence as a legal mandate limits consistency in implementation.

The importance of flexibility. Finally, there is a risk that AF becomes overly complex, technical and over-engineered as it is designed around models and procedures rather than the realities of vulnerable communities. The Philippines faces layered hazards beyond cyclones. Vulnerable households face compounded, everyday risks that demand adaptable and flexible financial instruments. No single mechanism can address all needs, but harmonised collaboration, clearer protocols and distributed responsibilities can ensure households are supported across diverse risks.

Towards a more people-centered AA system

Over 35% of crises globally are modellable, and yet only USD 1 in USD 5000 of crisis finance goes to low-income countries in the form of pre-arranged finance.[8] Processes are fragmented, and recent aid cuts threaten the very architecture required for AF. Currently, AF relies heavily on international donors, underscoring the need to integrate it within national government budgets.

In the Philippines, scaling AA requires two essentials: flexible, pre-arranged financing – made available locally through an advance transparent delivery mechanism – and impact-based triggers co-designed with communities.

Collaboratively developed triggers. Triggers must go beyond narrow metrics like wind speed, which fail to capture cascading risks such as floods, landslides and prolonged rains. Limited triggers also overlook evolving vulnerabilities – for example, households already weakened by food insecurity or recurring floods – resulting in missed opportunities to provide timely support.

A people-centered AA system would mean shifting to multi-hazard, impact-based triggers that combine diverse data points into the trigger framework, including rainfall forecasts, flood risk, geohazard susceptibility (such as exposure to landslides or earthquakes) and community-level vulnerability. When these triggers are developed collaboratively using historical and real-time data, they enable timely cash transfers, increasing households' agency.

Joint planning and knowledge sharing. Preparedness must also be collaborative. Institutionalising NGO–LGU planning hubs for regular joint planning and knowledge-sharing builds ownership and effectiveness. Expanding community-based communication platforms and deploying municipal-level forecasters also strengthens local response capacity, and builds trust, resilience and responsiveness at the local level.

Anticipatory financing is not only about speed or savings. It is about giving people real choices –whether to strengthen their homes, protect their livelihoods or move safely. When displacement is inevitable, AF can help transform it from a desperate flight into a planned, dignified decision.

The Philippine experience shows that no single model fits all contexts, but it offers a pathway to building a more people-centered AA system: one that is timely, flexible and locally driven. Such a system protects dignity, empowers families and transforms survival into resilience. With the right support – delivered at the right time and in ways that expand choice – communities can withstand crises and recover stronger.

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Intergenerational strategies for adaptive livelihoods: evidence from Bangladesh

Bishawjit Mallick, Oishi Rani Saha and **Rup Priodarshini**

Intergenerational strategies among climate-displaced families play a crucial role in facilitating adaptation and livelihood reconstruction, underscoring the need for resilience planning that acknowledges these dynamics.

The processes by which displaced families reconstruct their lives and build adaptive livelihoods in urban and peri-urban settings are poorly understood within environmental migration literature. Faced with climate-induced displacement, families in many climate-vulnerable regions are trapped in cycles of uncertainty, where short-term humanitarian aid offers temporary relief but fails to secure long-term resilience. Such fragmented responses often overlook the complex social, economic and generational dimensions of recovery. Based on empirical evidence from Bangladesh, this article underscores the importance of collaborative intergenerational livelihood strategies in the transition from short-term aid to long-term resilience, enabling evidence-based planning that prioritises family dynamics.

Displacement disrupts traditional rural livelihoods and thrusts families into unstable urban and peri-urban economies characterised by insecure housing, weak infrastructure, limited services and exploitative work.[1] While some aspire to return to their places of origin, many rebuild their lives in challenging settings, both temporarily and permanently. In the absence of structured resettlement policies, displaced families often begin rebuilding with few resources, relying on the informal economy. Marginalised people often benefit from more informal employment opportunities, but the pathways by which households navigate these sectors – who facilitates entry, which networks are mobilised and how constraints and opportunities are distributed among household members – remain underexplored. Livelihood reconstruction is frequently a collaborative enterprise where roles are negotiated and synchronised between men, women, elders and youth. Yet this is often neglected in studies that isolate individual roles from broader intergenerational dynamics. Urban informality literature also frequently aggregates displaced populations under generic 'urban poor' categories, precipitating a need for analytical approaches that recognise the unique circumstances of displaced people.

In precarious displacement contexts, intergenerational livelihood strategies emerge as a crucial pathway for rebuilding lives and strengthening adaptive capacities. Understanding these strategies can help fill the knowledge gaps outlined above. Intergenerational livelihood strategies involve the negotiated transfer and adaptation of knowledge, labour, networks and responsibilities within families across generations, allowing displaced families not only to cope but actively to reconstruct their livelihoods. Older adults contribute experiential expertise and continuity, while younger members foster mobility, innovation and access to emerging labour markets. Such dynamics can support long-term investments that lay the groundwork for sustainable,

inclusive resilience in precarious (peri-)urban areas.

To describe how the interconnectedness of individuals and their socio-cultural and institutional networks shape adaptation capacities, we introduce the concept of 'tethered resilience'. This reframes human mobility beyond the binary of migrating and staying and emphasises a dynamic, future-oriented process of sustaining livelihoods through shared intergenerational practices, cultural norms and institutional negotiations.

Empirical evidence from peri-urban coastal Bangladesh

By 2050, one in seven Bangladeshis may be displaced due to climate-related impacts.[2] Drawing on 70 interviews with three-generation households in peri-urban Khulna displaced by cyclones, we explore how displaced families mobilise both tradition and innovation to build tethered resilience in the absence of formal support.

Reciprocal learning to re-establish livelihoods

In the aftermath of Cyclone Gorky (1991), which devastated coastal Bangladesh, killing around 300,000 people, older generations sustained traditional skills – fishing, boat-making and subsistence farming – as vital survival strategies. These inherited practices provided continuity and cultural grounding amid disruption. A 76-year-old fisherman recalled: "We lost everything, but we knew how to make our own nets and boats. We had to move to this slum, but I didn't know other work, so I started making nets and boats, and fishing in the Rupsha river."

After Cyclone Sidr (2007) salinised farmlands and degraded river ecosystems, younger generations, supported by NGO training, developed these traditional livelihoods, turning to aquaculture. Intergenerational knowledge began flowing in both directions. Grandparents who once taught their children riverine fishing learned from them how to manage brackish ponds. A 38-year-old second-generation farmer reflected: "My grandfather showed me how to read the tide and weather signs traditionally; I taught him how to use the water pump and check the salinity meter. I learned this from the NGO Shushilan."

Cyclone Aila (2009) accelerated these shifts. Younger family members migrated to Khulna for work, often in the informal sectors. "Everyone is working; otherwise, it's difficult to manage the cost of living," the same farmer noted, describing how his family eventually joined him in the slum. This trajectory – from traditional knowledge to reciprocal learning, migration and livelihood diversification – demonstrates how intergenerational cooperation becomes a crucial mechanism for rebuilding resilience amid structural precarity. These families do not passively endure displacement; they actively adapt through knowledge-sharing and collective effort.

Collective household efforts to sustain livelihoods

Interviewees consistently highlighted the importance of collective household strategies in sustaining livelihoods and enabling adaptation. Families acted as cohesive units, sharing labour, knowledge and decision-making across generations and genders. These strategies enhanced flexibility and diffused risk amid repeated climatic shocks. Flexible role-sharing was key: men often engaged in construction or migrated into urban centres for work, while women ran informal businesses. A 35-year-old poultry farmer said: "My husband works at a hatchery. I raise chickens, my daughter helps feed them, and my mother-in-law stays with the little ones. We all play our part. No one could survive alone."

Intergenerational decision-making guided critical choices – debt repayment, migration or land leasing. A 25-year-old mobile vendor noted: "We sold the last cow to send my brother to Chittagong. My father and grandfather decided together." Women were vital agents of reconstruction. A 45-year-old tea-stall owner explained: "We make pickles together – my daughter-in-law cuts; I cook; my granddaughter sells." These practices reflect 'resilience from below', grounded in gendered labour, local knowledge and kin-based cooperation – though not without internal tensions and power asymmetries.[3]

Youth education as a long-term strategy

Despite sustained hardships, many families prioritised education as a key long-term strategy for improving their livelihoods and enabling mobility. This encapsulates aspirational resilience, where education is understood as a strategic investment to disrupt cycles of marginalisation.[4] Older generations, often lacking formal education, redirect scarce resources towards education, motivated by both moral and pragmatic reasoning. One grandmother (62, displaced by Cyclone Sidr) stated: "I cannot read or write, but I sent my grandson to school with the money I earned from poultry farms." Older people take on caregiving and domestic responsibilities to support children's education. One 17-year-old said: "My grandmother takes care of my baby brother when I go to school."

Education is valued not only for facilitating employment but as a buffer against future climate and labour shocks. Families invest in literacy, vocational training and digital skills. A displaced fisherman explained: "I used to catch fish; now my son is learning computers. I know it's better than going to sea." Even when dropping out or hardship interrupts education, families adapt rather than abandon their goals. A 46-year-old mother, a housemaid, said: "My son had to stop school to work, but we kept his books. One day he'll go back." These stories reflect capabilities-based development, showing how intergenerational support and aspiration drive forward-looking resilience, beyond mere survival.[5]

Younger generations as economic migrants

Facing repeated climate-induced displacements, younger generations increasingly engage in seasonal or permanent economic migration to urban centres within Bangladesh as well as to the Gulf States and Malaysia. These movements reflect family-anchored livelihood strategies across multiple locations, aimed at spreading risk and diversifying income. One migrant who moved to Dhaka after Cyclone Aila stated: "I drive a rickshaw and send money home. My father looks after the land; my mother takes care of my children." Older adults, often less mobile due to age and health, or through a desire to maintain connection to ancestral lands, remain behind, managing homesteads and providing care. As one grandmother (57, displaced after Aila) explained: "My sons work far away, but call every day. I look after the house, the cows and the grandchildren. This is my duty." Their roles sustain household presence, continuity and possibilities for reinvestment in their locales following the return migration of their family members. Migration reconfigures, rather than dissolves, family cohesion through economic and emotional interdependence.

This intergenerational and spatial division of labour exemplifies adaptive resilience through 'multilocal households', where family life, economic reproduction and social ties span multiple geographies.[6] These self-organised systems, arising in the absence of institutional protection and adequate resettlement support, have drawbacks.

Remittances do not address underlying issues like landlessness and environmental degradation. Migrants face exploitation and isolation. Older adults and women shoulder unpaid caring responsibilities, reinforcing inequities within the household. One woman (53), whose daughter migrated to Saudi Arabia, said: "She sends money, yes. But her son cries at night. I am tired." Nevertheless, displaced families demonstrate agency by constructing complex, intergenerational livelihood strategies that combine mobility with rootedness, remittances with care work, and youth labour with stewardship by older adults. Migration, therefore, is not a failure to adapt but a vital part of resilience-building.

Community networks across generations

In long-term displacement contexts, community networks help households to reinforce mutual aid and social resilience. These dynamic networks evolve through intergenerational roles, shifting livelihood strategies and the digitalisation of social life. Displaced families maintain and expand social capital in both place-based and translocal forms.

Older adults serve as custodians of local trust and kinship, drawing on marriage alliances, religious institutions, village associations and cooperative labour groups. These embedded networks become critical in post-disaster recovery, particularly where formal aid is delayed or absent. One older adult (65) recalled: "After Cyclone Sidr, no one from the government came quickly. We shared rice and water from house to house. It was my generation who knew who needed help and who could give." Such insights show how older people function as local 'connective tissue', facilitating culturally appropriate mutual aid.[7]

While older adults nurture tight-knit internal community bonds, young people cultivate external linkages, brokering institutional and digital knowledge through NGOs, digital platforms, social media and migrant networks. They connect with external actors to enhance access to aid, services, loans and policy programmes. One 28-year-old woman displaced after Cyclone Aila explained: "I joined a training programme run by [the NGO] BRAC. Now I'm in a WhatsApp group with women from various districts. We share info about jobs and loans. My uncle helps me read the documents." This multi-generational, dual-layered networking expands household capacity to navigate complex institutional landscapes.

Intergenerational networks also create tensions, however. Displacement reshapes hierarchies and can lead to intra-family land disputes and competition for NGO resources. Generational divides in trust and communication can create disconnects: older people may distrust digital tools, while youth see traditional structures as outdated. One 27-year-old man stated: "My grandfather trusts only our mosque committee. But I applied for training through Facebook. We argue about which is better."

Ultimately, community networks are critical forms of social infrastructure that support both daily survival and long-term adaptation. They not only mobilise resources but preserve collective identity, emotional well-being and political voice.

Supporting 'tethered resilience'

Our findings reveal that livelihood resilience is not an individual trait but, as noted, a 'tethered' process. Displaced peri-urban households rely extensively on intergenerational cooperation, with reciprocal learning, education, translocal livelihoods, community networks and digital literacy as pivotal axes.

These multi-generational dynamics are often sidelined in adaptation models. Dominant

climate policies continue to treat displaced populations as atomised beneficiaries, ignoring the embedded roles of age, gender and kinship in shaping resilience. Our findings invite a shift from top-down, technocratic models toward frameworks for climate adaptation that recognise the intergenerational and collective dimensions of livelihood reconstruction under protracted displacement and ecological uncertainty.

We argue for a reframing of adaptation policy along four lines to strengthen tethered resilience, focusing on bridging formal systems with lived community practices:

1. Recognise households as interdependent systems, where members contribute complementary forms of capital – knowledge, labour, care and mobility – to sustain and adapt livelihoods.
2. Adopt age- and gender-sensitive approaches, including digital training for youth, protection and health services for women and girls and recognition of older people as custodians of local knowledge.
3. Support informal systems – mutual aid, rotating credit groups and community-led initiatives – through legal recognition and financial integration.
4. Move beyond emergency responses to cultivate long-term resilience grounded in evolving intergenerational processes, including investments in housing, health and diversified livelihoods.

While this study is grounded in the peri-urban context of Bangladesh, its implications extend globally as climate-induced displacement becomes more widespread. Lessons from peri-urban Khulna, where grassroots adaptation emerges from necessity, show that resilience is not just material, but also relational – based on knowledge sharing, reciprocity, informal networks and cultural and intergenerational continuity. By investing in such tethered resilience as a central component of adaptation planning, climate policy can become more inclusive, just and effective.

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When climate change blows off your roof and nobody comes: a refugee's reality check

Micheal Gumisiriza

One man's story encapsulates the contradictions at the heart of responses to climate-induced migration, which demand resilience but deny refugees the means to shape their own futures. A more imaginative, people-centred approach is urgently needed.

Refugee women till their land in preparation for planting season, in Rwamwanja refugee settlement, Uganda. Credit: COHERE.

In April, 2025, I sat with a man named Chance (name changed to protect his identity) in Mahega zone, Rwamwanja Refugee Settlement, south-western Uganda. He had fled his home in Ishasha, in eastern Democratic Republic of the Congo (DRC), eight years previously after rebels razed it to the ground. When I arrived, I found that the roof of Chance's modest house had just been torn off by a brutal hailstorm that had swept through the zone two days earlier. This came on the heels of a prolonged dry spell that had lasted over five months.

Curious to know if this was connected to climate change-induced extreme weather occurrences, I asked him about what seasons had looked like in Rwamwanja Refugee Settlement before, and whether he had observed any changes over the years that he had lived in the settlement. He told me that seasons are no longer behaving as they

used to: "The rains delay, and when they come, they come like they are angry. They come with a lot of force and end up washing everything away and destroying crops and property." Wanting to know more, I asked if anyone or any organisation had assisted him in rebuilding:

"No person or organisation has come to help me in these difficult circumstances. I was lucky that I have some small savings in our village Savings and Credit Corporative group. That is where I went and borrowed some money that I am going to use to buy new iron sheets to rebuild my house and restore the roof that was blown away," he told me.

I then asked him about his dreams and wishes going forward. He hesitated at first but after some thought, he told me that he wished to have a more resilient, permanent house, one that could stand up to the increasingly violent winds and rains. I asked him whether such a dream was possible to achieve and he answered in the affirmative. He reminded me, however, that the land on which he has built his current house does not belong to him because refugees are not allowed to buy land in Uganda. I asked him whether he knew that he could acquire land through land lease, and he said that he did not have money and did not know how to acquire lease agreements. He also added that in the settlement, refugees had been instructed to put up mud houses or if they were to use bricks, they were to make sure that the bricks were unburnt. This is because refugees are supposed to build temporary not permanent houses.

Chance's story and the challenges he has with owning land and building a safer house for his family, one whose roof would not easily be blown off by hailstorms and strong winds next time, struck at the heart of the contradiction in today's displacement response system.

Firstly, in Uganda, refugees who cannot afford to survive on their own in urban areas like Kampala are sent to live in remote isolated areas, in what we have creatively called 'refugee settlements'. In reality, they have not evolved much from the infamous 'isolation camps'; the government representative who heads these settlements is called a camp 'commandant' to this day. Secondly, we call them 'settlements' but deny people the right to settle. We encourage resilience, then place legal and structural barriers in the way of long-term survival strategies.

Now, climate change is not coming, it is already here. In places like Rwamwanja Refugee Settlement, where the displaced are disproportionately affected, it is laying bare the fragility and dishonesty of our systems. Droughts, floods and hailstorms are all colliding with years of long-term displacement, creating crises within crises. Yet we respond with the same templates, the same short-term projects, and the same outsider-led log frames and theories of change. Many INGOs and host governments are now very vocal about donor cuts to humanitarian aid but very few are talking about the need to end global refugee encampment policies that keep refugees boxed in isolated, climate change-prone areas for decades.

Let me be clear: from my work with Cohere since 2021, building equitable, trust-based partnerships with refugee-led grassroots leaders across Africa, and from growing up in Kisoro; a community that has long hosted refugees fleeing conflict in DR-Congo and Rwanda; I have seen firsthand that displaced people in Uganda do not want free money.

Most refugee leaders I have talked to are unfazed by the decline in humanitarian aid that some of us are quick to point out these days. Instead, they want access – to tools, to decision-making spaces and to rights

that are equal to those of the rest of the population in their host countries. They want full integration, or at least a clear path to integration, that would allow them to access better land, easily move away from drought and flood-prone remote areas and acquire national citizenship, especially those who have been living, for decades, in the country.

What is even more hopeful is that, in spite of all odds, refugees are generally already organising. They just need support from host governments, donors and philanthropic partners to back their agency. I encounter refugee-led agricultural cooperatives, financial associations and small enterprises that are building resilience with whatever they can access refugee settlements across East and Central Africa. For instance, the Climate Resilience Collective and the Sustainable Agriculture Collective, bring together over 21 refugee-led organisations across Kenya, Zimbabwe, Malawi and Uganda. They are responding directly to food insecurity and livelihood challenges in the face of climate change. Yet these organisations often operate in the shadows, marginalised in donor ecosystems that continue to privilege large INGOs and high-level strategies cooked up in capital cities far from the frontlines.

Thinking about all this reminds me of an old African saying, "You cannot send a child to the river, then forbid him from stepping in the water". We ask displaced people to be resilient, then deny them the means to build that resilience. All this then brings me to the question of what would it look like if we took a different approach, one rooted in equity, access and honesty?

First, host governments must reform land and housing policies in protracted displacement contexts. Refugees, especially those displaced for decades, should be allowed to build and own permanent homes. Without this, resilience in the face of climate-induced extreme weather events like those in Rwamwanja will remain a distant dream for the thousands of vulnerable refugee households.

Second, donors and INGOs must reimagine their roles, not as 'saviours' or fixers or sole implementers, but as enablers of leadership from within these communities, whenever they think of implementing or resourcing climate change-related programmes, especially in the refugee space. Let refugee-led and grassroot organisations lead. Let them manage climate mitigation and adaptation funds. Let them define priorities based on lived realities. Donors should also invest in relational, justice and rights-based approaches when engaging with both the host governments and refugees. For instance, they must stop depoliticising the problems that refugee communities in host countries like Uganda are facing.

Yet, despite global recognition for its hospitality toward refugees, Uganda continues to follow a form of global refugee encampment, with some modifications. Refugees are confined to remote settlements that are increasingly experiencing massive deforestation and land degradation, as competition for small, fixed plots of government-allocated land intensifies. They are also denied the right to leave these settlements, buy land, or settle elsewhere in the country. Further donor funding for Uganda's refugee response should therefore be linked to discussions with the government about clear pathways to citizenship, integration, and full rights for refugees who have lived in Uganda for decades, giving them the freedom to move from settlements that can feel like open-air prisons to areas less vulnerable to the destructive impacts of climate change.

Third, we must mainstream financial inclusion in displacement settings. Refugees need access to affordable credit, savings and

insurance services. Village Savings and Loan Associations (VSLAs) are a great starting point, but there is also a need to open up tailored formal banking and microfinance systems to displaced populations to spur business growth and self-reliance. I have seen very many refugee entrepreneurs in refugee settlements in Uganda who are eager to scale their ideas but face financial constraints in terms of affordable and available credit. For instance, at the time that Chance's house was destroyed by a hailstorm, no formal banking institution had officially opened a branch in Rwamwanja Refugee Settlement. This is despite the settlement hosting over 100,000 refugees and asylum seekers. Meanwhile, instead of engaging the private sector to bring such commercial banks into refugee spaces, governments and INGOs focus more on unending humanitarian aid to refugees, which as we know now, is unsustainable.

Finally, we must abandon the outdated assumption that displacement is temporary. Climate change is reshaping migration and settlement patterns in irreversible ways. Displacement response systems must adapt to this new reality, not with slogans, but with structural shifts.

When I left Chance's home, he walked with me to the edge of the muddy path. "I will rebuild," he said. "Because I must. My children must get a shelter." That, right there, is resilience. Not the kind we theorise about in air-conditioned offices. But the real kind, the kind forged by necessity, held together with borrowed money, and driven by a stubborn will to survive.

If we truly want to build climate resilience in displacement settings, we must start there. Not with policies, but with people. Not with plans, but with proximity. And not with pity, but with meaningful partnership with refugees and refugee leaders, built on human connection and enduring trust-based relationships.

And maybe then, when the wind blows next time, Chance's roof will stay on.

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