# Nets, not boxes: a critical typology of climate (im)mobilities policy clusters in oceanic states

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# Abstract

There is an ongoing and increasingly pressing need to better understand the drivers, patterns, and required support structures for people, households, and communities engaging with decisions around climate-related (im)mobilities. Rather than imposing a restrictive or exclusionary framework of mobility types onto this phenomenon, we propose a critical typology of (im)mobility policy clusters. Demonstrating our proposal through examples across Oceania, we engage the powerful metaphor of nets as socially, culturally, and practically important objects to reframe what could be an exclusive typology to one of inclusive, overlapping, and mutually supportive policy clusters. We identify twelve policy clusters where specific provisions could increase the supportive and/or protective capacities of state policies regarding people considering (im)mobility. These clusters are intended to be overlapping nets, where people faced with (im)mobilities can move from interacting with one policy cluster to another, based on their own decision-making and (im)mobility circumstances. Agency is central to this analysis. Making these moves allows us to counter harmful narratives of climate refugees that confer vulnerability and ostracize affected communities, instead embracing the complexities offered by broader terminology like climate mobilities. However, we do so in a practical way so as to enable policy-makers to understand and adapt to the specific protection needs of certain contexts and circumstances to best support people to make their own choices about how they engage in specific forms of (im)mobilities across a range of situations.

Keywords: critical typology; climate mobilities; Pacific Islands; adaptation; migration; policy clusters.

# 1. Introduction

Nets are important in many societies globally—socially, culturally, and practically. This is especially true in the Large Ocean States that constitute the Blue Pacific. In these communities, nets are: tools for fishing, for food security; representations of social connections, maintaining links and identities over time and space, and social safety nets supporting people in need. We envisage nets as the underlying metaphor for a critical typology of climate (im)mobilities—a typology that encapsulates inclusivity, support, and facilitates agency; and is explicitly *not* an exclusive deterministic categorization.

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The puzzle that brought us to this reckoning with the utility and value of typologies was the prescient need to address issues of climate-related human (im)mobility. Mobility is not the failure to adapt, but a proactive adaptation measure. People have long used mobility strategies to adapt to environmental changes and manage the vagaries of climate, security, and Empire. However, with the rapid rate of anthropogenic climate change, there is a new immediacy around climate-induced (im)mobility decisions.<sup>1</sup>

The recent turn away from evocative, yet damaging, narratives of 'climate refugees' towards inclusive terminology like climate (im)mobilities is generally positive. However, both can obfuscate policy needs regarding particular forms of mobility. In remedy, we propose a critical typology of climate (im)mobilities policy clusters, identifying twelve key policy clusters where interventions can help support communities, households, and individuals to make decisions about their mobility, prioritizing their agency.

After addressing the conceptual problems that four key academic debates (temporality and spatiality; causality; agency; and protection) raise, we introduce our critical typology of twelve climate (im)mobility policy clusters, where specific attention is needed to improve options and outcomes for those facing climate-induced (im)mobility decisions. The twelve clusters categorized spatially, spanning local to cross-border, are: in-situ adaptation efforts to prevent unwanted mobilities; voluntary immobility; trapped populations who desire, but are prevented from, moving; emergency evacuations of people at risk of imminent harm; planned short-distance community relocations; internal mobility programs; urban mobility to cities; temporary humanitarian protection for those facing hazards, disasters and related circumstances and thus cross borders; temporary mobilities programs (i.e. education or labour mobility); inter-state free movement agreements; permanent humanitarian protections on complementary/compassionate grounds; and refugee protections on grounds related to climate change.

Our categorizations are not exclusive. They are conceptualized as overlapping nets, where people who are faced with the choice of becoming (im)mobile have a range of options and policies to support and clarify these options, throughout their journey. Any individual, household, or community may be covered by one or many policy clusters, and move between them over time as their circumstances evolve.

For each cluster, we illuminate extant policy examples and suggest areas for improvement. These examples herald from Oceania (the Pacific Islands region) for two reasons. First, the Pacific Islands region is one of the regions most affected by climate change; therefore, Pacific communities are amongst the first predicted to face large-scale sudden and slow-onset climate mobility. This is both a pressing real-world policy problem and an opportunity for piloting approaches for transferable learnings globally.

This opportunity is emphasized by the second reason, that 'Pacific governments are leading proactive policies for climate-related migration worldwide', both domestically and at the international level (Ramsay et al. 2023). Leading on climate issues is not new for the Pacific; the region led the drafting of the Kyoto Agreement, the push for the 1.5degree targets in the Paris Agreement, the loss and damage facility, and most recently, the climate justice advisory opinion at the International Court of Justice (Morgan, Carter, and Manoa 2024). By contrast, carbon-producing states have actively avoided serious discussion and/ or intervention(s) on climate mobilities, and often work to limit or prevent climate-related migration and flight through hostile legalities, solidarities, and (in)hospitalities, which 'operate to blame and control those least responsible for climate change risks while polluting states and corporations fail to pursue the economic, political and technological shifts necessary to prevent climate change harms' (Stanley 2020: 219). Such policies often restrict the choices available to those considering mobility, creating structural barriers to agency in migration—although as Cook Island scholar Elizabeth Wright-Koteka (2006) argues, they could be designed differently. Experience demonstrates that Pacific states are leading the world on managing issues of climate mobilities (Moore 2024a). Therefore, we look towards the Pacific both for solutions and as motivation for reimagining global proposals addressing climate (im)mobilities.

### 2. Conceptualizing climate mobilities: the metaphor of nets

Metaphors are extremely powerful linguistic tools for conceptualizing ideas with 'complexities and fluidity, particularly regarding migration' (McNeill and Williamson, forthcoming: 6). In the Pacific, storytelling and scholarship often use ideas of weaving, flora and fauna for metaphorical and methodological guidance (Powell 2023; Moore 2024a). We therefore draw on the metaphor of the net as a culturally-powerful image to conceptualize our overlapping policy clusters.

Beginning from the metaphor immediately inverts the epistemic focus on territoriality that dominates Western conceptions of states, sovereignty, and the movement of people across and between these polities: reorientating the intent of policy clusters from protecting the state, to protecting individuals. While historically the migration policies of Western states have sought to restrict and exclude, Oceanic politics and diplomacy are centred in reciprocity, respect, and collective belonging.

Therefore, we conceptualize climate (im)mobilities policy clusters as nets—an overlapping net-work of supports that facilitate choice and agency for people facing climateinduced decisions to move or stay. This echoes leaders in the states most affected by climate change, who are proponents of 'migration with dignity': providing climate migrants with choices and opportunities prior to and during their migration, and the ability to stay if they so wish (Tong in APSC 2021; Farbotko 2022). Therefore, we expand our remit beyond the unfortunate and almost-normalized focus on 'protection'-based visas and/or the popularized nomenclature of 'climate refugees': this is because both conjure images of climate migrants as 'victims' destined for camps and potential incarceration, rather than empower the agency of migration with dignity (Stanley 2020; Munoz 2021).

Semantic choices are widely debated in climate mobilities. While phrases like 'climate refugees' are obviously inappropriate, instituting overly broad terms that try to capture the full diversity of movement(s) may also create practical and semantic uncertainties. When applying 'climate change-related migration' or 'climate migrants' terminology (Neef and Benge 2022: 1), scholars were critiqued for not adequately capturing the range of mobilities or in-situ adaptation activities occurring within the sphere of climate (im)mobilities. Therefore, scholarship gravitated towards the nomenclature 'climate mobilities,' which better 'capture[s] the multiple forms, directions and multiplicities of human movement in the context of climate change as well as the transformative character of mobility and its impact on places of origin, transit and destination' (Boas et al. 2019: 2). This is partially a product of shifting from framing migration as a consequence of climate-related effects, to seeing mobility as an *adaptive process* (Vinke et al. 2020). Acknowledging the range of (im)mobilities that can occur in response to the range of pressures, opportunities, hazards, and uncertainties that climate change presents highlights the full continuum of mobilities and recognizes that a 'toolkit of mobility responses' will be required to address the needs of mobile individuals (McAdam 2015: 138–9). It also acknowledges that movement can be adaptive and/or maladaptive, reactionary and/or pre-emptive, voluntary and/or involuntary (Içduygu and Gören 2023: 573).

While the term 'climate (im)mobilities' more accurately encompasses the range of distances, timeframes, motivations, and drivers of human mobility and immobility in the context of climate change and is more nuanced and analytically useful than the 'climate refugee' discourse, we argue that it can also obscure the specifics of policy solutions for particular types of mobility. Specifics are imperative to better recognize the diversity of experiences, drivers, and responses to mobilities. Indeed, the pursuit of a singular term for all mobile

due to climate change is in itself problematic—rather than seeking a single unifying term, we argue that we must reconsider *how* we frame mobility to attain optimal policy outcomes (Morrissey 2021).

To counter both the inaccuracy and potential harm of terms like 'climate refugee' and the uncertainty posed by broader conceptions of 'climate mobilities', we advance a critical typology of climate (im)mobilities policy clusters. It is not an exhaustive list of (im)mobilities, but a collection of policy nets that could be instituted as a way of preparing for, supporting, facilitating, responding to and finding solutions for people facing choices around various forms of climate mobilities.

# 3. The tensions of climate mobilities

Before we outline the policy clusters of our critical typology, it is important to first acknowledge some of the tensions in identifying and responding to climate mobilities. We focus on four key points of contention here: establishing causality between climate change and movement or the provision of solutions to prior mobility; how spatial and temporal variances in mobility shifts responsibility and responses; the difficulties of enhancing agency in significant decision-making forced by global effects like climate change; and the role of protections in reducing exploitation.

# 3.1 Causality

Many argue that establishing causality for climate change or a particular disaster as a discrete trigger for displacement is important, particularly for legal accountability (Cohen and Bradley 2010; Kolmannskog and Trebbi 2010; Mayer 2016). This is especially the case when movement occurs across borders and an individual seeks complementary protection (McAdam 2012: 84). While this consideration is often acknowledged, we attempt to disconnect the purported need to establish causality to 'justify' mobility. While it is likely that establishing causality will remain important for other areas of research and practiceparticularly for specific legal claims—when conceptualizing a suite of policy clusters to operate as nets around those who may need assistance, trying to establish a threshold of causality between climate change, hazards or processes, and peoples' (im)mobilities decisions is both impractical and unhelpful. Therefore, many clusters in our typology do not directly refer to climate change or climate mobilities at all. Our approach works within existing frameworks in the first instance, utilizing established legal pathways and processes to find imminently implementable solutions to improve the experiences of those choosing some form of climate (im)mobility. Where adaptive forms of mobility exist and could improve the lives and livelihoods of people and communities affected by climate change, we suggest there is no need to preclude access only on the basis of being impacted by a particular disaster or climate-related process.

# 3.2 Temporality and space in mobilities and policy responses

Where we see the need to disconnect causality from policy and practice is in discourses of the temporal and spatial dimensions of climate (im)mobilities. Many distinctions between types of climate mobilities focus on where people move and when. Much of this relates to distinctions between sudden and slow-onset impacts; however, it should be noted that both 'force many to migrate or adapt within constrained options' (McNeill et al. 2024: 7). The nature of climate change is not linear, and effects will be felt more severely in different places at different times. Therefore, nets of mobility must encompass both response and recovery after immediate climate-induced disasters, *and* pre-emptive motivations and preparedness for potential disasters or the impacts of slow-onset climate change.

The timing of mobility is central to discussions of voluntariness (Ferris 2011a: 201, 262); binary debates between migration and displacement (Cohen and Bradley 2010: 97;

Marino and Lazrus 2015: 342); and categorizations between emergency flight or an adaptive practice (Gilmore et al. 2024). While the timing and distance of mobility are important, we hesitate at bringing these conceivably academic discussions across to the policy space in wholesale form.

We recognize spatial and temporal aspects of climate (im)mobility by recognizing the specificity of the needs of those who would be engaged by each of these twelve proposed policy clusters. Those moving across different spaces and distances will have varying contextually-centred policy requirements. By distinguishing between spatial distances, particularly international borders, we forge a way that would allow people to navigate the various policy clusters and engage in different types of mobilities without falling through the gaps. We argue that these policy clusters or support nets must be instituted in concert with one another. These allow for a range of temporalities—including pre-emptive adaptive movements—as well as better access to existing mobilities pathways that benefit households and communities in potentially vulnerable areas. Making more forms of mobility accessible to more people could increase opportunities for people to engage in forms of circular mobility—for work, study, and/or other experiential processes—where they can bring back material, economic, and intellectual benefits for their families and home communities for adaptive purposes.

### 3.3 Agency

As Fry (2019: 275) and Ratuva (2022) both note in a Pacific context, agency is the potential for individuals and communities to 'chart their own course' rather than being restricted by imposed structural pathways. More broadly, international power structures (such as colonialism) can empower or hinder the exercise of agency (Mollica et al. 2022; Ratuva 2022). While a deconstruction of the structural inequalities between colonial, colonized, and survivor states and their people is beyond the scope of this paper, a deep recognition of these realities has permeated the conceptualization of this framework. We believe that by creating policies to work as nets, not boxes and stripping away the prescriptive labels associated, there are more opportunities for (potential) migrants to choose their pathway and chart their own course. We recognize that during a migrants' journey their choices, actions, and situations may change (McNeill et al. 2024). If they were trapped into a metaphorical policy box, this could have a detrimental effect and prevent them from choosing potentially adaptative or emancipatory options, to move through phases of mobilities, and/or place them in situations of precarity. By creating nets, we enable fluidity for the migrant during their journey to *choose* their next step.

Charting one's own course is as important for mobility as it is for any other aspect of life. Therefore, we challenge the oft-used continuum of forced versus voluntary movement (Kälin 2013: 40). Binary or even linear distinctions should not be core to conceptualizations of climate (im)mobilities; particularly as people may be in different positions of (in) voluntariness at different points in their journey. While such continuums evolved in response to the deficiencies of binary framings, their linearity often results in discrete points along the continuum being used as empirical measures of the existence/non-existence of specific factors. Despite the valiant efforts of migration and mobilities scholars to combat these framings, they persist in policy and practice.

Instead of gauging the level of 'voluntariness' in initial movements—which raises challenges when considering circular and recurrent mobilities—we create inclusive nets that could support communities, households, and individuals to make choices with agency and options. Even when catastrophic disasters occur, people require options to choose how to manage their response, recovery, and future (mobility) options. Therefore, the net-based policy cluster model moves beyond post-hoc adjudications of how voluntary movement was, and towards pre-emptive construction of viable, realistic, and accessible options that help people, households, and communities to make positive and adaptive choices without re-entrenching disadvantage and/or vulnerabilities.

Thereby, we take a critical approach, challenging traditional conceptualizations of typologies as boxes into which people are (or movement is) categorized. We advance an inclusive typology, considering our identified policy clusters as nets rather than boxes. These nets overlap and intersect at times, casting protections across potential gaps that people may fall through without support, rather than pushing them into boxes that pre-determine and place external labels onto them for how they 'should' interact with policy frameworks.

### 3.4 Protection

Policy clusters must centre migrant's rights and establish support structures in situ and/or in destinations. While 'protection' may semantically play into 'climate refugee' victimization narratives (e.g., Munoz 2021), this is not how we understand protection. We recognize the vast body of literature which highlights that without safe, regular and rights-based migration and in-situ adaptation pathways, individuals are more vulnerable to exploitation, which climate change only exacerbates (Jackson 2023). While we do not mean to suggest that much climate mobility is irregular, individuals without safe, regular and rights-based migration pathways facing food insecurity due to climate-related processes may - and have - sought irregular migration opportunities (UNODC 2024), or become forced into exploitative migration situations (Bharadwaj et al. 2022). Notably in the Pacific region, climateinduced irregular migration has not occurred (Burson et al. 2024), but instances of forced marriage have occurred following disasters, in order for displaced families to relocate and access basic necessities on customary land (Commonwealth Human Rights Initiative et al. 2021: 4). Connectedly, where people choose to remain in-situ, but adaptive support is not provided, individuals, families and communities could face dire consequences. Therefore, in every policy cluster, we highlight the importance of both a metaphorical and real policy support net—one that provides protections for *all* migrants, prevents exploitation, and accounts for specific needs around gender, age, (dis)ability, sexuality, and those who face socio-economic challenges: who are all more severely affected by the impacts of climate change (Howard 2023).

# 4. Typologies as 'critical' and 'critical'

Due to the persisting drivers of climate change and its increasingly disruptive and destructive effects, the world needs to be prepared to manage climate mobilities. This is critical in the sense that there is a pressing need for a better understanding of the range of policy clusters that can be utilized in the context of climate mobilities as states grapple with problems of policy and governance. However, there is also a need to take a more *critical* approach to this type of work. Here, we draw on the broad tradition of critical theory—as an effort to include a variety of ontologies, epistemologies, and approaches to critique from diverse geographical and temporal locations (Bhambra 2021). Therefore, at a methodological level, we need to critically interrogate *what* and *who* typologies are for, their inherent power structures, and what effects bringing clarity to questions of policy and practice may have upon varied experiences of different groups of people across time and space. Doing so could begin repairing the 'inability of the political imagination that underpins global climate change governance to countenance *other ways of moving through a warming world*' (Suliman et al. 2019: 2).

Typologies are well-established analytical tools that sort, categorize, measure, form, refine, or explore underlying dimensions of key concepts, cases, or practices (Collier, LaPorte, and Seawright 2012: 217). This is largely an (oft-mundane, yet necessary) descriptive task in research inquiries aimed at answering questions about phenomena and laying the groundwork for further questions about why this may or may not have occurred (Gerring 2012: 712, 723). Here, foundations are laid for the analysis and deepening of existing theories and the introduction of key conceptual and theoretical innovations (Boucher and Gest 2015: 184). Our typology seeks to reduce uncertainty around the issue by describing the range of supports, responses, and approaches that exist and could apply under the broad umbrella of climate (im)mobilities. This could set the platform for future research, policy, and practice that strives for more complete and useful understandings and solutions to the various problems posed by the effects of climate change on patterns of human movement. We note the existence of similar typological efforts to understand the dynamics and drivers of climate (im)mobilities (see Boas et al. 2018; Kaenzig and Piguet 2021; Savelli et al. 2023). What distinguishes our typology is the focus on the *types of policies* that can support and facilitate (im)mobilities.

Jarvis (1998: 107) critiqued the construction of schematic ideal types on their 'restrictive and exclusionary' nature but noted that these weaknesses need not be terminal. One way to manage these weaknesses is to reject the idea of conducting an entirely objective analysis at the outset and instead build on our depth of familiarity and involvement in discussions of climate (im)mobilities (Nielsen and Wilson 2012: 69). We follow the example of Peel and Lloyd (2006: 322) who also propose a critical typology to understand policy approaches. This acknowledges both the utility for governance in simply describing complex issues and the compounding structures of power that shape everyday political life. The need for both improved governance and a deeper understanding of the structural inequalities and processes of disadvantage can be seen no more clearly than in the case of people in least-emitting states forcibly leaving their homes due to climate-induced devastation.

Therefore, the inherently *critical* aspect of our typology of overlapping policy clusters is the prioritization of individual choice in how people move across and between clusters. This contrasts the more conventional practice of labelling, identifying, and categorizing people or their type of mobility into pre-determined boxes. Pre-assignment into narrow categories strips agency from people, dehumanizes them, and reinforces structural inequalities. On the other hand, avoiding pre-emptive actions entirely by focusing solely on response and post-mobility assistance also results in the reduction of agency, choice, and viable options for people. Therefore, we strongly argue that existing legal, institutional, and policy frameworks should be adapted to create a range of overlapping and interconnected policy clusters that people can choose to move through and between, before their options are restricted and create potentially harmful or maladaptive situations.

The complex multidimensional nature of interactions between climate change and human mobility means individuals will likely interact with multiple policy clusters over their lifetimes, during and/or simultaneously within a journey. Rather than eroding the analytical utility of the typology, this emphasizes that no singular policy will ever be a panacea for managing climate mobilities. A range of broad and targeted policies are required to ensure people, households, and communities can choose between a range of options to adapt to climate impacts, migrate with dignity, find durable solutions to displacement, avoid foreseeable harms, maintain livelihoods, and be adaptively mobile in the face of a rapidlychanging climate. It also demonstrates that what is needed is not strict border control, management, or reduction in mobility, but the facilitation of agency and the maintenance of safe, regular and rights-based options for people facing climate (im)mobility. This is why a critical typology—a typology not of (im)mobilities categories, but of *policy clusters* in concert establishing supportive nets—is needed to support people in (im)mobility decisions.

# 5. A critical typology of climate (im)mobilities policy clusters

We identify twelve variations of climate mobilities (see Table 1): seven primarily occurring within states; and five focussing on cross-border mobilities.<sup>2</sup> The classifications for these

Mobility needs	Policy cluster focus	Types of practices within the cluster
Mobilities within countries Want to remain and adapt	In situ adaptation policies	Development policies, disaster risk reduc- tion, vulnerability reduction, climate
Want to remain despite challenges	Supporting voluntary immobility	adaptation, resilience building. Support both implementation of in situ adaptation programs and facilitate access to other mobility options if people do choose to move
Want to move but cannot	Avoiding trapped populations	In situ adaptation policies, evacuation programs, long-term development initiatives, and increased facilitation of mobility options and access to other pathways
Need to move to avoid immediate harm	Evacuations	Early warning, evacuation coordination, disaster response, disaster recovery, returns coordination
To move locally	Planned relocations	Participatory, rights-based processes for community-led and state-supported planned relocations, land rights issue support, financial support, support for host communities
To move within the country	Internal mobility policies	Internal migration support at the level of rights, livelihoods and employment, social services, housing, and similar.
To move to a city	Urban mobility policies	Specific urban migration support, alongside internal migration support
Cross-border mobilities To seek protection abroad temporarily	Temporary humanitar- ian policies	Temporary emergency protection through existing humanitarian pathways or specifically-created programs.
To move abroad temporarily for employment, education, or similar	Temporary labour, education, and similar mobility policies	Labour mobility programs, education programs, bilateral migration deals, multilateral mobility agreements.
To move freely between associated states and territories	Permanent free movement agreements	Compacts of free association, constitutional associations, bilateral and multilateral agreements
To move abroad permanently on humanitarian grounds	Complimentary humanitarian pathways	Rights-based humanitarian pathways, complementary and compassionate protections from legal entities, special visa categories.
To seek permanent protection abroad on refugee grounds	Refugee protections	Apply existing refugee protections in instances of displacement, persecution, or statelessness due to climate-related factors.

 Table 1. Typology of climate-related mobility needs mapped with types of policy solutions.

clusters were developed abductively through an iterative process of empirically-informed theory building and revision. Following Nielsen and Wilson (2012), we identified policy cluster categories based on our experience and knowledge of existing policy in the area, refining this in conversation with the existing literature, with colleagues in academic and policy spaces, and reflecting the insightful comments of reviewers. By embracing twelve clusters, we highlight the variety of policies required to address varying temporalities and modalities of (im)mobilities, and demonstrate how these can be pre-emptively addressed through broadly targeted clusters. Tackling both complexity *and* simplifying for policy implementation means that twelve clusters is both a lot, and very little. To balance these competing priorities, we highlight carefully-designed clusters which overlap to prevent gaps without coverage, and which are not restrictive or exclusionary.

The clusters reflect extant (im)mobility policies and practises, and are also structured to encompass the types of (im)mobility and responses likely in the future. While we argue forcefully against predefining modes of mobility in binary terms, the legal and institutional frameworks of the state-based international system mean that to accurately reflect policy implementation requirements and legal authority for upholding rights, we must distinguish between cross-border and internal movements. Internally focused clusters are the primary responsibility of states, whilst cross-border mobilities will inevitably involve at least one other state actor and potential additional international institutions. The differences in policy implementation are significant; however, linkages across internal and cross-border clusters would help ensure continuity of protection and support available to people throughout each stage of their potential (im)mobility journey. We maintain that policy clusters should extend across these spaces in a way that assists those on the move to choose without restriction to their protections.

To explain these categorical nets, we provide examples of policy and practice, or highlight a potential future focus. These examples are largely drawn from Oceania—a region that is leading the world on climate mobilities policy development and is also most readily experiencing the effects of climate change.<sup>3</sup> The policy clusters could apply more broadly, across a range of contexts and locations; however, drawing examples from an area with one of the most engaged and experienced policy pools allows us to bring a range of depth and colour to the exposition of the typology.

The distribution of people engaging with, and the resources required to implement, each cluster will not be divided equally. We know that globally, most movement is internal, short distance, and in the case of evacuations for short time frames; therefore, policy focus will likely predominately exist in these spaces (Ferris 2020; Hay et al. 2023; İçduygu and Gören 2023: 573). Other policy clusters, such as the refugee protection cluster, are currently unused (and may never be).

### 5.1 Mobilities within countries

Seven climate (im)mobilities policy clusters occur within territorial borders: in-situ adaptation policies; support for voluntary immobility; attempts to minimize trapped populations; evacuations; planned relocations; internal mobility policies; and urban mobility programs. Even though there is greater clarity around the rights of those moving domestically and the obligations that duty-holders bear, the complexity of climate mobilities necessitates careful planning to account for the needs and rights of vulnerable populations, and their social, cultural, and spiritual wellbeing. States hold the primary responsibility for this protection, but may be constrained by capacity, resources, political will, and experience. This typology provides some clarity to the range of policy clusters that exist and can be employed to support the widely varying needs of differently-(im)mobile populations.

### 5.1.1 In-situ adaption programs

Forms of (im)mobility where people remain in place have their own complexities and requirements for how policy and practice should support those in making mobilities choices. Mobility is often a last resort: when given the option, households and communities almost always choose to remain in-situ (Ferris 2011b: 4; Leckie and Simperingham 2015: 35; Farbotko and McMichael 2019: 156; Yee et al. 2022).

In-situ adaptation efforts can prevent or reduce the chance of future movement, or increase the length of time people can remain in their current location. These efforts vary widely, ranging from planting mangroves to reduce erosion, building seawalls to contain storm surges, to setting up rainwater tanks to increase water security. However, these are often costly projects that may not be feasible or practical for all communities (Boege 2016: 61). Some projects benefit whole communities, while others are criticized for protecting private property thereby increasing the risk to those outside the protection zone. For example, a sea wall built to prevent coastal erosion in Collaroy, in Sydney's north, was criticized for only protecting a select few high-value waterfront properties from storm surges (Lapham 2022). Adaptation projects must focus on engaging communities in policy co-design processes that preference local and traditional knowledge. There are numerous positive—and less-positive—examples of this type of process from across the Pacific (see McNamara et al. 2020).

### 5.1.2 Supporting voluntary immobility

The second policy cluster focuses on people who choose to stay, even when conditions are significantly deteriorating, known as voluntary immobility (Farbotko 2018; Cundill et al. 2021; Piggott-McKellar and McMichael 2021; Yee et al. 2022). Some groups of Pacific Islanders have even suggested 'they are prepared to die ... rather than relocate' in the face of climate-related hazards, demonstrating the strength of feeling around voluntary immobility (Farbotko 2018). Other studies show that Tuvaluans are committed to remaining 'rooted in place,' and resist the idea of permanent migration away from their homes (Farbotko and McMichael 2019: 154; Farbotko 2022). These forms of voluntary immobility occur when the decision to remain comes from agency, not vulnerability. There are strong attachments to the interconnected features of place, land, spirits, and ancestors in Pacific Island communities affecting their willingness to relocate (Koro et al. 2023).

The Fijian community of Togoru is one example of voluntary immobility despite risks. Togoru is a small community of around twenty facing climate-related effects such as salt-water intrusion contaminating wells used for drinking water, and sea-level rise and erosion rapidly encroaching on the community's land. One of the most striking examples is the submergence of the community graveyard—only the tips of the headstones are now observable as they stand surrounded by ocean. Togoru is engaged in numerous adaptation projects and has previously moved inland in a short-distance planned relocation, yet despite the risks the community faces, residents' current preference is to remain in place (Yee et al. 2022).

Just because people hold these views, does not absolve authorities of the protection, governance obligations, and support processes that are required so that as circumstances change voluntarily immobile people can choose to become mobile and even later return to immobility should they wish (Farbotko 2018). Therefore, this policy cluster preferences the right to voluntary movement and against arbitrary displacement, rather than centring on state preferences to move populations. Policies and practices in this space must enable agency and create opportunities for individuals, households, and communities to make informed choices about their future (im)mobilities.

### 5.1.3 Avoiding trapped populations

The ethically-challenging notion of voluntary immobility can be contrasted with a third, more straightforward, form of immobility—when populations are trapped or otherwise rendered involuntarily immobile (Ayeb-Karlsson, Baldwin, and Kniveton 2022). In these instances, there is a clear need for policies to focus on facilitating either mobility or reducing the conditions that are pushing people to choose to move rather than to stay. In some cases, the policy options will be quite straightforward—it may be that people are immediately moved into the following cluster, of emergency evacuation if they are rendered immobile by instances like roads and other transport infrastructure being damaged or inaccessible.<sup>4</sup>

As (Zickgraf 2019: 4) states, 'immobility is never mono-casual' and it is the interaction of context and factors that shape the patterns and outcomes of mobility and immobility.

Communities, households, and individuals can also become trapped if they are without economic means; transport options; are physically impaired; or are restricted by their household, domestic, cultural, or geographical circumstances (Adams 2016; Zickgraf 2019; Ayeb-Karlsson, Baldwin, and Kniveton 2022). For example, people with disabilities may be unable to leave harm's way, or have limited access temporary shelters, evacuation centres, and/or access to information about mobility options—leaving them at risk of becoming trapped, and of exploitation post-disaster (UNHCR 2021). Responses within this cluster may include forms of triage or emergency assistance, but can also manifest as more long-term projects to increase resilience and prevent involuntary immobilities. A key part in avoiding trapped populations is to make other policy clusters more widely available, but in certain circumstances, more targeted interventions and support structures may be required to address the specific needs that communities, households, and individuals facing involuntary immobility have.

### 5.1.4 Evacuations

Sometimes imminent danger compels a population's removal, requiring evacuation measures. Evacuations are 'the rapid physical movement of people away from [an] immediate threat or impact of a hazard to a safer place' (Burson et al. 2018: 383; Thalheimer, Simperingham, and Jjemba 2022: 2), and crucial aspects of climate-related displacement (Kälin 2010: 85). More than one-third of annual internal displacements globally stem from state-led evacuations (McAdam 2021: 584). In acute situations, preventative evacuation orders are a vital emergency tool to protect people and save lives (Burson et al. 2018: 388; McAdam 2022: 1330). However, because of their positive normative quality (aka saving lives), there is little critical analysis of evacuations as forced displacement—even evacuations need to be well planned to ensure they are not harmful or maladaptive. Evacuations can be temporary or longer-term, especially when governments designate areas as too dangerous for habitation and people are prevented from returning (Kälin 2010: 85). Evacuees whose homes are damaged or destroyed while they are sheltering often experience prolonged displacement and associated risks (McAdam 2022: 1331). In these longer-form processes, the type of mobility may shift from evacuation to encompass other internal and/or cross-border clusters.

One illustrative case of climate-related evacuations is Australia's 2019–2020 fires. During the summer period, 64,579 people registered with the Australian Red Cross having fled fires, including pre-emptive evacuations and the evacuation from the New South Wales town of Mallacoota which was notably the largest peacetime evacuation of Australian citizens (Filkov et al. 2020: 49; McAdam 2022: 1239–30). According to the Internal Displacement Monitoring Centre, 3,100 homes were destroyed by fire and an estimated 8,100 people faced longer-term forms of displacement after their initial evacuations. However, these figures are likely severe underestimations: while media reported that over 70,000 people evacuated in the Gippsland and north-eastern region of Victoria in January alone, only 26,000 evacuations were registered with the Red Cross nationally across the whole first two months of 2020 (du Parc and Yasukawa 2020; McAdam 2022: 1329–30). Therefore, the actual number of people who were forced to flee was likely exponentially larger.

The Australian example highlights the vast array of evacuation forms. In the case of Mallacoota, state-led evacuations were required to save lives and intervene to assist a trapped population. In other cases, people were precautionarily advised to 'leave early' in advance of fires that turned and never arrived; and for others, their homes were burned, forcing the decision to either rebuild or seek other forms of mobility (du Parc and Yasukawa 2020: 9). Evacuations are a critical climate mobility policy cluster, as well-managed evacuations have the potential to minimize harm, protect populations, and

mitigate risks. However, poorly designed and implemented evacuations do have the potential to trap populations, arbitrarily displace them, and contribute to compounding risks for displaced persons.

### 5.1.5 Planned relocations

When locations are found unsuitable for long-term habitation, temporary evacuations or voluntary immobility can be inadequate or unsuitable and more permanent solutions are required, including through processes of planned relocation. Planned relocations are:

A planned process in which persons of groups of persons move or are assisted to move away from their homes or places of residence, are settled in a new location, and provided with the conditions for rebuilding their lives. Planned Relocation is carried out under the authority of the State, takes place within national borders, and is undertaken to protect people from risks and impacts related to disasters and environmental change, including the effects of climate change (Brookings Institution, Georgetown University, and UNHCR 2015: 5; for alternate definitions see Bower and Weerasinghe 2021; or Harrington-Abrams and Bower 2025).

The Fijian community of Vunidogoloa was the first in the world to complete a state-led climate-related planned relocation between 2006 and 2014 (Tronquet 2015; Charan, Kaur, and Singh 2017; Moore 2023; Moore and Orchard 2023). Around 150 residents (26 households) relocated approximately two kilometres to higher ground. Planning relocations can be a lengthy, expensive, and difficult process, and when people are unable to source resources to move (or a suitable location), they may be forced to move further afield. In the case of Vunidogoloa, even though it was an eight-year-long planning process, the new dwellings mistakenly did not include kitchens—reminding observers that there is much to learn about how to (co)design, plan, and execute a relocation in practice (see also Monson et al. 2024; Otoiasi 2024; Thuraisingham, Moore, and Neef 2024).

Bower and Weerasinghe (2021: 9) found that of 34 instances where communities had moved from a single point of origin to a single destination, most spanned very short distances—less than 2 km from origin to destination—and involved less than 250 house-holds. This suggests very specific characteristics of planned relocations, including a very limited spatial boundary to the applicability of planned relocations, and the policy clusters associated with them (Harrington-Abrams and Bower 2025: 3). Therefore, if moving further afield, differing policy responses are required.

### 5.1.6 Internal mobilities

Climate mobility within countries occurs but is challenging to comprehensively track. While there may be no state obligation to provide specific assistance when mobility is relatively autonomous and voluntary, internal migrants' rights in their new locations need to be protected in both law and practice—whether the movement is planned or ad hoc. Furthermore, when movement is involuntary, there is an even greater need for state-level intervention and assistance. Internal mobilities in this cluster are not solely linear and may include forms of circular, seasonal, or multidirectional mobility, depending on the choices of migrants.

Fiji followed its adoption of *Planned Relocation Guidelines* in 2018 with a broader set of *Displacement Guidelines* in 2019. The *Displacement Guidelines* extend beyond relocation, considering displacement and mobility governance more broadly (Ministry of Economy: Fiji 2019). Similarly, Vanuatu's *National Policy on Climate Change and Disaster-Induced Displacement* mainstreams migration and mobility considerations into the planning and practice of all government agencies and international partners. The policy explicitly aims to 'facilitate well-managed and safe migration with dignity, focussing on internal migration as an adaptation strategy to climate change' (Vanuatu National Disaster Management Office 2018: 18). While implementation of this policy has been lacking so far (Moore 2023: 13), it demonstrates how internal mobility programs are a key part of the interlocking and overlapping network of nets that serve to assist and protect those faced with climate (im)mobilities decisions.

### 5.1.7 Urban mobilities

Within urban environments, existing policies and practices must be built upon to improve the experiences of migrants, host communities, and the overall ability of cities to manage the effects of climate-related shocks and processes. As people move, some will relocate to major urban areas in search of safety and opportunities; often autonomously as individuals or households, rather than larger communities. Therefore, urban mobility is often assumed to be largely voluntary and exclusive of state responsibility (Geddes et al. 2012: 953, 958). However, urban migrants still require protections related to their mobility. Those who migrate to urban areas—particularly newcomers—likely have increased exposure to various risks, including secondary or recurrent displacement (Adamo 2010: 161).

Those who migrate domestically to urban centres (particularly in an ad hoc manner) are often overlooked in discussions of climate mobilities, and from monitoring, planning, and protection processes (Geddes et al. 2012: 958; Zander, Richerzhagen, and Garnett 2019 p. 23). As Trundle (2020) notes, estimations of urban populations around the Pacific are often flawed; empirical data often reflects sedentary biases and does not reflect the practices of highly-mobile communities and individuals. Those migrating to urban areas cannot be conceptualized as existing exclusively within this urban context. People often are positioned across and between urban and rural settings, meaning they are interacting with multiple policy clusters at once (Trundle 2020).

Across contexts, informal settlements are usually left out of institutional planning and practice—a clear oversight that must addressed in the future (Trundle 2020). This is a particularly under-researched and under-governed issue area that requires further attention as a complementary cluster to the internal mobility cluster.

### 5.2 Cross-border mobilities

Cross-border mobility policy responses have additional complexity, generally due to administrative conditions created by sovereign borders.<sup>5</sup> Policy settings for cross-border mobilities must consider whether the mobility is temporary (and if so, the duration) or permanent; affix visas or citizenship; and determine if mobility comes with financial support and protections while in the host destination. We consider a range of policy clusters for different settings: temporary humanitarian protection programs; temporary labour and education mobility programs; permanent free movement agreements; complementary protection pathways; and refugee protections. While many commentators may jump to discussions of permanent migration and protection in the context of climate mobilities, we identify a range of policy clusters across this varied mobility landscape.

### 5.2.1 Temporary humanitarian protection programs

In response to acute hazards, or slower more progressive processes, some people may be unable to stay where they are and/or find domestic mobility solutions. Particularly—but not exclusively—when people are situated near a land border and/or have access to transport options, they may flee abroad and attempt to seek protection. Protections may be granted on a short-term basis, such as for cross-border evacuation, on a longer-term basis on temporary humanitarian visas, or in extreme cases under the principle of non-refoulement.<sup>6</sup> This cluster focuses on the immediate policy responses available to triage and offer immediate protection as people seek to remove themselves from situations of danger or potential harm.

Globally, temporary protection in the context of hazards and disasters is offered by several countries, including Finland, Sweden, several countries in eastern Africa and the United States (US). While outside of Oceania, Brazil's experience of granting temporary visas to around 85,000 Haitians seeking to move after the 2010 earthquake led to the development and institution of its 2017 Migration Law (No. 13445) (Beekma 2015; Jubilut, de Andrade, and Madureira 2016: 76). This law provided temporary visas for stateless people or those from 'any country in a situation of a serious or imminent institutional instability, armed conflict, major calamity, environmental disaster or serious violations of human rights or international humanitarian law, or on other grounds specified in the regulations,' legally enshrining an extremely broad interpretation of who can claim regularized humanitarian protections across borders (Brazil Migration Law 2017 art. 14 § 3; Serraglio, de Salles Cavedon-Capdeville, and Burni 2022). However, as of 2022, the law had not taken effect, as 'a definition of 'environmental disaster' is still lacking, as are criteria for admission and stay and considerations of the visa's temporary nature' (Huckstep and Clemens 2023). This provides lessons for similar legislative development in other areas.

While similar policies are yet to be extensively implemented in Oceania, the Pacific Islands Forum's *Pacific Regional Framework on Climate Mobilities* did commit to exploring 'opportunities to strengthen, harmonize, and expand policies and practices concerning humanitarian admission and stay of our people displaced in the context of climate change' (Pacific Islands Forum 2023: 7). More specifically, scholars have called for Australia to establish an emergency visa category (Chen 2022; McAdam 2024; McAdam and Jefferies 2024). As well as permitting an individual to stay for (or extend an existing visa by) 12 months, such a visa should include a pathway to permanent residency if the situation in the home country cannot be resolved. Further, such a visa would be designed to sit along-side existing mobility options, like the Pacific Engagement Visa (McAdam 2024; McAdam and Jefferies 2024).

### 5.2.2 Temporary mobility programs

Existing circular labour mobility pathways such as Australia's Pacific Australia Labour Mobility (PALM) scheme and New Zealand's Recognised Seasonal Employer (RSE) scheme have been heralded as potential solutions to climate displacement, where 'Pacific migrants and communities [seek] to benefit from safe labour migration as a sustainable development and climate change adaptation strategy' (Coelho 2020: 2). I-Kiribati scholar Akka Rimon suggests that existing labour mobility models could be a basis for permanent climate mobility: 'We don't want to sensitize the issue and say give us jobs because we're sinking, no ... we're going to migrate with the trade skills and whatever talents that you are short of, so it provides a win-win both for the host country and the [recipient] country' (Australia Pacific Security College 2021). This ties into strategies of 'migration with dignity': developing skills and employment opportunities for individuals, should they wish to migrate. Given the potential for these programs to provide climate mobility pathways—including return migration—we suggest that they comprise a policy cluster, and could incorporate more climate-specific and protection considerations as part of the net they provide for people facing climate mobility decisions.

Seasonal work has been found paradoxically to both assist and be problematic regarding climate change: while remittances, and tools bought overseas can often be helpful to communities rebuilding post-disaster, often the lack of able-bodied men of working age in villages due to many being overseas on seasonal work programmes can affect the communities' ability to undertake clean-up and re-building efforts (Bailey and Shiu 2016). However, seasonal work programmes are 'largely neglected by climate change adaptation mainstreaming otherwise common throughout the development programmes of the [Pacific] region' (Farbotko 2022: 3393). For these programmes to facilitate climate

mobility, they need to consider the specific needs of those displaced or potentially displaced by climate factors. Indeed, the definitive circular nature of existing labour mobility presents problems. Currently, individuals must return to their country of origin after the duration of their contract. Decisions about temporary vs permanent migration will need to take into consideration both the interests of low-lying atoll nations which will likely experience forced and pressured displacement in the future,<sup>7</sup> and those of higher island nations who benefit from labour mobility but also need to protect their public service institutions from 'brain drain' (Koro and McNeill 2024).

It is important to note that circular labour migrants are often in precarious working conditions—in Australia, workers' visas are tied to their employer, which enables exploitation, excessive docking of pay for accommodation and work gear, risks of deportation if a worker absconds due to poor treatment, and even worker deaths (Cockayne, Kagan, and Ng 2024; Stead and Davies 2021). While existing labour mobility pathways may offer a model for skills-based climate mobility, protections against exploitation are required. New Zealand's equivalent scheme has additional pastoral care structures, and more checks on employers to combat the risk of exploitation, demonstrating that these programmes can be established with worker protections.

### 5.2.3 Permanent free movement arrangements

There are existing pathways for more permanent movement, too. Globally, free trade areas often have free movement, such as Europe's Schengen Zone and the Caribbean's CARICOM area (CARICOM 2023)—the Pacific-based Melanesian Spearhead Group<sup>8</sup> also has a free trade agreement that incorporates free movement, particularly for certain industries. While most climate mobility literature relating to Europe is about migration from the Global South (with the exception of Cullen and Scott 2024), existing intraregional mobility within the Schengen will become valuable when European states experience severe climate events or increases in long-term processes like sea-level rise or erosion.

In addition to the long-standing free movement between Australia and New Zealand through the Trans-Tasman Travel Arrangement (TTTA) [1973], New Zealand has two ballot-based quota systems providing permanent residency targeting: (1) Samoan citizens; and (2) citizens of Kiribati, Tuvalu, Tonga, and Fiji. Australia has recently implemented a similar ballot-based Pacific Engagement Visa, which provides Pacific migrants (from Federated States of Micronesia (FSM), Fiji, Nauru, Palau, Papua New Guinea, Solomon Islands, Timor-Leste, Tonga, Tuvalu, and Vanuatu) with permanent residency in Australia. Both systems are pre-conditioned upon having job offers in the host country before travelling. These visas may provide 'a new climate security pathway for small islands' (Rimon 2022: 1), despite them not being directly predicated on applicants being affected by climate change or disasters.

Constitutional recognition provides another model of permanent movement. Across the Pacific, the US engages in Compacts of Free Association (CoFA) with Republic of the Marshall Islands, FSM, and Palau that enable citizens of these states to freely enter, work and study in America, in return for US veto power over CoFA states' foreign and defence decisions and permission for US military forces to operate there. Significant populations of COFA state citizens have relocated to the US through this arrangement, and while is unclear how many have migrated over climate motivations, 1% of Marshallese respondents in one study cited climate change as the reason for relocating to the US (van der Geest et al. 2020). Migrants remain citizens of their home country, and while they have free entry into the US for unlimited duration, the protections available to US citizens are not wholly granted to CoFA citizens residing in the US, a cause for concern under indiscriminate deportation policy environments.

New Zealand also has free association agreements with the independent states of Niue and Cook Islands, which grant New Zealand citizenship automatically. Movement is free, which has been useful in the context of disasters; for example, when more than 10% of the Niuean population moved to New Zealand following Cyclone Heta in 2004. Because of their citizenship, Niueans and Cook Islanders also receive the benefits of the TTTA between Australia and New Zealand—leading to large populations of Cook Islanders in particular living, working and studying in Australia. Within step-migration pathways, it is crucial states follow a model that establishes protections for migrants, regardless of the triggers of their movement.

One recent pre-emptive climate policy solution to mobility in the Pacific region is the Australia-Tuvalu Falepili Union. This agreement aptly deals with the paradoxical problem of facilitating climate-related mobility without directly premising mobility on casually establishing the effects of climate change. The agreement bundled together security cooperation, sovereignty concerns, climate change, and a visa pathway for people from Tuvalu to permanently migrate to Australia. While the agreement has been criticized for its transactional nature and how the security aspect(s) of the deal was constructed (Kitara and Farbotko 2023; Marinaccio 2023), there are specific lessons in how bilateral mobility agreements can acknowledge the role climate change plays in mobility choices, without premising eligibility to move on being materially affected by climate change. Article 2 on climate cooperation and climate change recognizes: the desire of Tuvaluans to remain in Tuvalu; the continued sovereignty of Tuvalu regardless of rising sea levels; and that technological developments produce additional potential avenues for adaptation. Subsequently, Article 3 creates a 'special human mobility pathway for citizens of Tuvalu to access Australia.' This pathway would allow Tuvaluans to 'live, study, and work in Australia' and access services like education, health, and income and family support on arrival-enabling migration with dignity (DFAT 2023). Notably, climate change is not specifically referenced in the Falepili Union mobility pathway-there is no determining factor of eligibility beyond being a citizen of the extremely climate-exposed state of Tuvalu (DFAT 2023). This demonstrates a way forward for states considering similar agreements, as nets that are intended to provide mobility options in the context of climate mobilities. It also is a practical exemplar of the type of practices that can stretch beyond the traditional tensions aforementioned-shifting attention away from establishing causality or the degree to which a movement was forced or voluntary, and instead towards providing a range of solutions that emphasize agency and choice for the people faced with the decisions around mobility.

### 5.2.4 Complementary humanitarian protection pathways

Traditionally, instances of forced migration across international borders have been managed through humanitarian and human rights regimes. While climate mobilities sit largely outside this realm (though not entirely as the next cluster will detail), certain regional or parallel frameworks can apply. This conforms to a broader argument that although those affected by climate change may not have claims to first-order protections from the refugee regime,<sup>9</sup> they are not precluded from being granted similar forms of protection under other complementary pathways (Draper 2024).

An example of complementary protection being granted under an alternative pathway is a 2014 case in New Zealand where a family of four from Tuvalu appealed against deportation in the Immigration and Appeals Tribunal (AD (Tuvalu) 2014). They claimed that, if deported, they would be separated from the family of the husband, who were residents or citizens of New Zealand and they shared particularly close bonds with. Additionally, they claimed that if forced to return to Tuvalu they would suffer 'the adverse impacts of climate change and socio-economic deprivation' (AD (Tuvalu) 2014: 1). The fact that the two infant children were born in New Zealand and included in the humanitarian appeal was also a mitigating factor. The presiding judge, Bruce Burson, noted that although the children were not New Zealand citizens, they were both born in New Zealand, had never been to Tuvalu, and the extended family network they had in New Zealand was 'the only life they have known' (AD (Tuvalu) 2014: 7). Therefore, citing the Convention on the Rights of the Child, it was in the best interests of the children to remain living with their parents in New Zealand. While climate-related factors were mentioned in the claim and ruling, it was found unnecessary to rule on these 'as the Tribunal is satisfied that by reason of the other factors identified in this case, there are exceptional circumstances of a humanitarian ... and it would be unjust or unduly harsh for the appellants to be deported' (AD (Tuvalu) 2014: 9). This case shows that for claimants in particular circumstances, there may be alternative mobilities solutions where they could be granted the right to reside in certain jurisdictions through pathways other than traditional claims of refugee protection. While in this case, the ruling was made due to the long-term residence of the children in New Zealand, alternative pathways could also be through methods like family reunification. For states and judiciaries unwilling to grant protection on the basis of refugee claims, this case provides an example of complementary protection via alternative pathways.

### 5.2.5 Refugee protection

The final policy cluster to highlight is the use of refugee protections. While this practice is unlikely to gain substantial traction or be utilized widely, it could still comprise a cluster due to the possibility of its use.

We begin with a caveat on nomenclature. There is a long history of the use of the 'refugee' label in climate and environmental contexts. First coined in the 1970s (Boano, Zetter, and Morris 2008: 7), 'environmental refugee' described those 'forced to leave their traditional habitat, temporarily or permanently, because of a marked environmental disruption' (El-Hinnawi 1985: 4). By 1988, the term was used broadly, and it was claimed that environmental refugees had 'become the single largest class of displaced persons in the world' (Jacobson, 1988). However, by 2001 there was still no legal or analytical clarity about who qualified as an 'environmental refugee' and the term was largely written off for being 'overly simplistic and environmentally deterministic' (de Sherbinin et al. 2022: 2), with 'little agreement on, or understanding of what these categories might really mean' (Black 2001: 13). These inaccuracies have persisted, including more recent applications of the term 'refugee' to climate change contexts. Conceptions of environmental or climate 'refugees' are neither rooted in legal understandings, nor confer protected status on the individuals in question (Cohen and Bradley 2010: 105; McAdam 2012: 3; Mallick 2024). Despite this, the nomenclature is still popularly used as a catch-all descriptive term for those who move both within and outside of their states for climate-related reasons (Boano, Zetter, and Morris 2008; Biermann and Boas 2010: 62). Beyond the inaccuracies, terminology like 'climate refugee' can serve to reinforce racial and colonial conceptions of displacement, mobility, vulnerability and victimhood relating to who is affected by climate change (Shea, Painter, and Osaka 2020; Munoz 2021; Baldwin 2022); therefore, its use should currently be avoided in policy and practice.

However, there remains the possibility of formal refugee protections being offered in climate-related situations in the future (McAdam 2015; Scott 2020; Jastram et al. 2025). Many scholars have asserted that as currently applied, the 1951 Refugee Convention and 1967 Protocol do not apply to instances of climate-related displacement due, in part, to the difficulty of establishing whether climate change or climate-related hazards can trigger the persecution clause of the Refugee Convention (Kibreab 1997; Cohen and Bradley 2010; McAdam 2011). A series of failed cases going as far back as 1995 from Australia and New Zealand confirm that this view is held in practice as well (McAdam 2015: 132). However, the broad concept of refugee protection has gradually evolved in response to a range of circumstances and different triggers of forced mobility (Goodwin-Gill 1989: 7; Ferris 2011a). While at the time of writing, no claims seeking refugee protection based on climate-related circumstances have been successful, jurisprudence from a landmark case in New Zealand

shows that it is possible for individuals to make claims based on the effects of climate change and that people could be granted refugee status due to climate-related circumstances in the future.

In 2013, i-Kiribati applicant Ioane Teitiota sought protection in New Zealand. Teitiota was working in New Zealand legally until his visa expired, after which he faced deportation (Baker-Jones and Baker-Jones 2015; BBC Staff 2015; Godin 2020; Neef and Benge 2022). His lawyers claimed that climate change and sea-level rise were so detrimental to lives and livelihoods in Kiribati that he could not return. Teitiota's initial claim, as well as subsequent appeals to higher courts, were all rejected (Ioane Teitiota v. The Chief Executive of the Ministry of Business, Innovation and Employment 2015; Baker-Jones and Baker-Jones 2015; Steenmans and Cooper 2020; Foster and McAdam 2022; Neef and Benge 2022). Following his deportation in September 2015 (Weiss 2023), Teitiota complained to the UN Human Rights Committee. While the Committee upheld the ruling, they supported a notation in the initial decision that while there was not a valid claim for protection in this specific case, climate change could still potentially trigger protection obligations in other circumstances where displacement and harm were more imminent (Human Rights Committee 2020; Neef and Benge 2022).

Often, the claims of those applying for protection due to climate-related reasons in their home country could more accurately be described as a bid to not be refouled—they are already within the state they wish to reside in and are applying to not be removed to a place where climate change would put them at risk of harm. Therefore, the strict barriers of the Refugee Convention may not always apply. Individuals could potentially be redirected to complementary protection pathways, as aforementioned, or the Refugee Convention could be interpreted more broadly to include specific instances like this, as Scott (2020) and McAdam (2015) suggest it may eventually be. Therefore, while climate-related refugee protections are unlikely to make up a significant proportion of people who move across borders, it may be an important backstop or failsafe to ensure that if people fall through cracks between or within policy clusters, there is still some form of safety net to provide them with protection or assistance.

# 6. Now what? Future utility and next steps

We utilize the metaphor of nets as important social, cultural, and practical entities—things that connect, ground, and provide for people and communities. This critical typology has been conceptualized with similar goals in mind. We created a list of complimentary and sometimes overlapping policy clusters around different forms of (im)mobilities across various times and spaces. In some ways these reflect an amalgamation of existing research in the field, synthesizing it and translating it for use in a network of policy clusters. However, in four specific areas, we challenge and highlight tensions in the existing literature and discourse—jettisoning attempts to causally link climate change to decisions to move; diverting from binary divisions of mobility forms; reorientating the discussion around agency; and prioritizing safe, regular and rights-based pathways that emphasize protection for migrants.

The reality of climate change and the material effects it has on the lives and livelihoods of communities around the world means there is a pressing need to increase the range of policies provided and improve their implementation. This is not an easy task: it is time intensive, economically expensive, requires high levels of technical expertise and experience, and even with the best planning, difficult to implement. However, instead of developing massively complex policies to address all aspects of climate (im)mobilities, a more appropriate response would be a series of interconnected clusters—nets of support and assistance, based in existing frameworks and institutions, that inspire agency in people to make informed choices about their mobility futures. At its core, these nets of policy clusters intend to support the agency of communities and enable them to make calculated decisions about what type of mobility or immobility suits their needs at a given time. Therefore, despite being focused on state-level policy, it is structured to not impose prescriptions on individuals or communities. To improve outcomes and experiences, it is important that authorities work towards weaving these nets of overlapping clusters, creating a range of options for those facing decisions around whether, when, where, and how to potentially move.

In conclusion, we have developed a critical typology of climate (im)mobilities policy clusters to aid scholars and policymakers in understanding the various approaches to assistance, support, and protection that can apply to different forms and contexts of (im) mobility. We identified twelve policy clusters: in situ adaptation; voluntary immobility; trapped populations; evacuations; planned relocations; internal mobilities; urban mobilities; temporary humanitarian protection; temporary mobility programs; free movement agreements; complementary protection pathways; and refugee protections. Examples from the Pacific were utilized to illustrate these clusters as Pacific states are at the forefront of the effects of climate change and global policy leadership on climate mobilities. More research is essential in this space to understand which policies are successful and why, but we also note that as people are already experiencing the detrimental effects of unsupported and maladaptive climate-related (im)mobilities policy makers and practitioners must ramp up action as well.

# **Conflict of interest statement**

None declared.

# Notes

- 1. While some policy clusters refer specifically to one type or the other due to a discrete policy focus, we generally use the term climate mobilities as it refers to instances of movement and immobility. Climate mobilities are 'the multiplicity of climate change-related human mobility (involving immobility, relocation, circular mobility, etc.), its embedding in ongoing patterns and histories of movement, and the material and political conditions under which it takes place' (Boas et al. 2022, p. 2), and immobilities as the inextricably-linked reverse of the same coin (Wiegel, Boas, and Warner 2019).
- We make this distinction because crossing borders effects the rights people hold and the actors who are obligated to uphold these rights. However, even when (im)mobility occurs within states, it does not absolve the international community of responsibility (see Moore 2024b).
- 3. Defined broadly as the Pacific Islands region inclusive of independent states as well as territories, and Australia and New Zealand (Hau'ofa 1994).
- 4. In the case of Pacific populations, immobility is also seen in cross-border stranded populations—people stuck in one country on labour mobility schemes but trying to get home to assist their community affected by disaster.
- In many areas most affected by climate change, colonially-imposed borders do not take into account historical and traditional movements (Banivanua Mar 2016).
- 6. The principle of non-refoulement would occur if an individual was unwilling or unable to return to their country of origin due to well-founded fears.
- 7. While pressures and influences on mobility decisions are complex (Mortreux et al. 2023), we argue that establishing causal links between climate and mobility should not be a qualifier for mobility or protection.
- Comprising Papua New Guinea, Fiji, Vanuatu, and Solomon Islands (the free trade agreement excludes the non-sovereign member Front de Libération Nationale Kanake et Socialiste of New Caledonia).
- 9. This includes the 1951 Convention Relation to the Status of Refugees, the 1967 Protocol Relating to the Status of Refugees and the broader set of institutions, norms, principles, and governance instruments around refugees and their protection (Betts 2015; Orchard 2014).

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