

# Brazil needs a new approach to measure climate migration

July 10 2024, by Robert Muggah

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Devastating floods led to more than 175 deaths and 423,000 people displaced in the southern Brazilian state of Rio Grande do Sul in May. It was the state's [worst natural catastrophe](#) in almost a century, but Brazil is

no stranger to mass population movements triggered by climate change.

Over the [past two decades](#) at least eight million Brazilians have fled or migrated due to storms, floods, forest fires, drought, and [sea-level rise](#). In 2023 alone, around [745,000 people](#) were displaced by [extreme climate events](#) combined with the effects of El Niña and El Niño. These events not only reveal the perils of a changing climate, but also a public that is unprepared for the coming storms.

Whether in Brazil or elsewhere, the decision to stay or leave is not only informed by increasingly intense and frequent climate shocks and stresses. In fact, persistent [socio-economic risks](#) such as food insecurity, poverty, inequality, and access to basic services also play a central role.

The truth is that [no one actually knows](#) how many Brazilians are moving because of climate change for the simple reason that there are no centralized monitoring or registration systems in place.

While spectacular crises periodically draw attention to the issue, people involuntarily displaced, voluntarily migrating, or relocated due to natural disasters and environmental degradation, as well as vulnerable populations who are "trapped" and unable to move, are generally invisible.

Scientific [studies](#) show that Latin America and Caribbean countries face a future of increasing climate threats ranging from floods and forest fires to droughts and rising sea levels. In Brazil, temperatures are projected to rise between 1.7°C and 5.3°C by the end of the century.

Annual [precipitation](#) is also expected to increase in the northern, center-west and southern areas while [drought risks](#) are worsening in the north and northeast. At least 2,000 municipalities are "[extremely vulnerable](#)" and urgently need "climate emergency" plans. Yet just [14 of Brazil's 26](#)

[states](#) have prepared such strategies. Notwithstanding growing [public concern](#), national and state authorities have simply not prioritized climate-related adaptation and resilience strategies.

Brazil's federal, state and municipal leaders need to develop and implement a national strategy and coordinated interagency response that is commensurate with the scale of the threat. The forthcoming National Plan on Climate Change and Green Climate Fund must include clear provisions for addressing climate mobility, including pilots in the most vulnerable areas. Likewise, Brazil's [National Adaptation Plan](#) (NAP) was drafted a decade ago and urgently needs an upgrade. The National Center for Monitoring and Alert of Natural Disasters (CEMADE) should also start monitoring climate mobility as part of its mandate.

Brazil needs to shift its posture from one that reacts to climate-related crises to one that proactively mitigates their impacts by strengthening resilience. This will require expanding the country's early warning and response capabilities, including at the state and municipal levels. Investment in ecosystem-based adaptation strategies should be directed toward both expulsion and relocation areas to minimize risks before, during and after people move.

Priorities include targeted infrastructure upgrades in flood-prone and coastal communities, expanded access to drought resistant crops and livestock, and measures to upskill and retrain people whose livelihoods will be impacted by a changing climate.

Brazilian authorities could also accelerate action by updating the Nationally Determined Contribution (NDC) and NAP to reflect the rapidly evolving risks of climate mobility. To its credit, the last version of the NAP underlines the threats posed by increasingly frequent extreme events and the risks of changing weather to job opportunities and migration patterns, especially among the poor.

The NAP also singles out the increase in so-called "environmental refugees" and migration to cities. It also features a [national sectoral strategy](#) with provisions for relocating and redistributing populations in priority areas. These strategies should be upgraded and accelerated, including with adequate financing from the Brazilian National Development Bank and potentially the Inter-American Development Bank and World Bank.

Faced with the certainty that climate shocks and stresses are set to increase, bolder steps are warranted. Brazil could draw inspiration from Colombia which is set to approve a new ["climate mobility" law](#) that specifies the rights of affected populations, proposes a unified registry to monitor population movements, and assigns clear responsibilities for action from the federal to the municipal level.

Brazil could also look to the [experience of Chile](#) which has already invested in preparatory planning for climate displaced and migrant populations, including identifying areas for potential relocation of climate displaced populations based on their absorptive capacity. And in several Caribbean states, [including Saint Lucia](#), [local authorities](#) are investing in restoring coastal land to reduce the likelihood of relocation. And to build local resilience, Brazil should expand efforts to formalize precarious settlements, invest in safe and sustainable housing, and regularize land tenure.

As the implications of a warming world becomes clearer, Brazil faces complex trade-offs in how it prepares for people on the move. Like major cities from [China and Indonesia to the US and Europe](#) that are being overwhelmed by rising sea levels, Brazil may have to build entirely new cities.

In Rio Grande do Sul, this is already a real possibility. The state's Vice Governor [explained](#) that "we cannot rule out having to remove entire

cities from where they are and rebuild cities in other locations." With over half of all Brazilians living within 150km of the coast, these challenges may be closer to home than many understand.

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