

Climate change and migration patterns

Today's evidence, tomorrow's projections



Climatic shock events

- floods
- droughts
- storms
- short-term temperature and precipitation fluctuations



Long-term climatic and related changes

- long-term heating
- precipitation changes
- sea level rise
- changes in water availability



Adaptation and mitigation responses

- in-place adaptation
- maladaptation
- reduced fossil fuel production
- green economies



Perceptions and narratives

- local experiences, capabilities and attachments
- 'climate crisis' and 'climate refugee' narratives and migration politics




This is the framework and findings of a 2021 Rapid Evidence Assessment of more than 270 studies. Selby J, Daoust G (2021) Rapid evidence assessment on the impacts of climate change on migration patterns. London: Foreign, Commonwealth and Development Office. www.gov.uk/research-for-development-outputs/rapid-evidence-assessment-on-the-impacts-of-climate-change-on-migration-patterns

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Climatic shock events

Climatic shocks contribute to displacement and migration 

Climatic shocks influence people to stay in place 

Associated with both increased and reduced migration, depending on context

Pressure to migrate when property, agriculture or infrastructure is damaged or destroyed...

...but may reduce migration or even trap populations due to depletion of household resources

Movement is mainly in-country and temporary or short-term



Vulnerability to climate-related displacement and migration:

- Young people and people in regions reliant on agricultural production are more likely to move in response to shocks
- Women are more likely to face barriers to migration
- The poorest people face migration pressures and barriers to movement



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Long-term climatic and related changes

Long-term climatic changes contribute to displacement and migration 



Little evidence so far of impacts of long-term sea level rise and temperature and precipitation change on migration levels

Coastal hazards (e.g. flooding, erosion, storm surges, and salinisation) contribute to migration pressures

Future long-term changes may cause large-scale migration – though how much is highly uncertain



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Adaptation responses to climate change

Adaptations can enable people to stay 

Some adaptation responses contribute to displacement and migration 

No direct evidence on the influence of mitigation responses on migration 

In-place adaptations to climatic shocks and hazards, such as protective infrastructure and adjustments to agricultural practices, can enable people to stay in place

Certain adaptations like coastal defences, dams and agricultural development projects can contribute to displacement and migration through maladaptation

Changes in employment opportunities in fossil fuel producer states and green economies might contribute to migration

Maladaptation occurs when an adaptation policy or measure leads to negative outcomes, by increasing vulnerability, causing harm, and affecting coping capacities and opportunities



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Perceptions and narratives

of the current and likely future impacts of climate change, weather shocks and local environments

Perceptions of local climate and environment influence people to stay in place ✓

'Crisis' narratives contribute to migration pressures ✓

Perceptions and narratives contribute to migration pressures and influence people to stay in place

Local experiences of and attachments to place influence people to stay in place and make migration less likely

'Climate crisis' and 'climate refugee' narratives may contribute to people thinking that migration may be necessary or inevitable



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What do the numbers say?



An estimated 30 million people were displaced by weather disasters in 2020, compared to 9.8 million displaced by conflict



However, most shock displacement is temporary, and there is no clear evidence of an upward trend in weather shock-related migration



Projections of future migration resulting from long-term climatic changes range from the tens of thousands to several hundred million



High-end projections of climate-related migration are not credible as predictions, as they do not allow for in-place adaptation



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