Briefing

WKR. Adviesraad Migratie

Start to move

How climate change influences migration and what this means for the Netherlands



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Table of contents

Visual summary **3**

1. Introduction **4**
1.1 Background 4
1.2 Purpose, approach, and guide to the briefing 6

2. How climate change affects migration and displacement **7**
2.1 How migration and displacement occur 7
2.2 What climate change is 10
2.3 Six ways in which climate change affects migration and displacement 11
2.4 The role of climate adaptation 16
2.5 How people fare after migration 17

3. The scale and challenge of climate-related migration **21**
3.1 Scale and trends 21
3.1.1 Current state of monitoring and research 21
3.1.2 Worldwide 24
3.1.3 Europe and the Netherlands 26
3.2 The national and international challenge 29
3.2.1 National challenge 29
3.2.2 Role of the international community 30
3.2.3 International legal protection of climate-related migrants and displaced people 31

4. What the Netherlands can do **33**
4.1 The Netherlands' interests and responsibilities 33
4.2 Four areas for action at the national and international levels 33
4.2.1 National: preparing for climate-related migration within the Kingdom 34
4.2.2 European: gaining insight and developing a strategy for climate-related migration within and to Europe 36
4.2.3 International: contributing to the climate resilience of low- and middle-income countries 36
4.2.4 International: legal protection for people displaced by climate change and residence options for climate-related migrants 38
4.3 Finally 39

Experts consulted **41**

References **42**

Colophon **56**

Start to move

How climate change influences migration

- More and more people worldwide live in areas where living conditions are deteriorating due to climate change
- Most people remain where they are, but some people will migrate due to the consequences of climate change

Impact of climate change on migration

Loss of income
For example due to loss of crops and cattle as a consequence of drought

Loss of (usable) land
For example due to desertification, coastal erosion or sea level rise

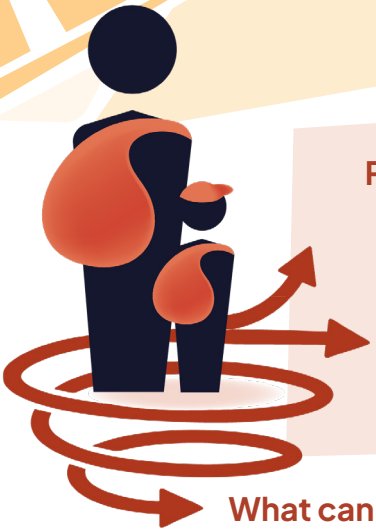


Risks to health
For example due to heat stress and the spread of infectious diseases

Rising instability and conflict
For example due to tensions around the division of scarce resources

More extreme weather
For example hurricanes and floods

Pressure on basic needs
For example due to water and food shortages



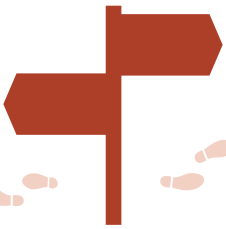
Preparing for a future with more climate-related migration

Climate-related migration already occurs worldwide, but there are no reliable figures on the global scale

Most climate-related migration occurs across short distances, within countries or regions

As the impacts of climate change intensify, the risk of migration increases for tens to hundreds of millions of people worldwide

What can the Netherlands do?



Preparing for climate-related migration within the Netherlands and the Dutch Caribbean

Advancing the (global) legal protection of people migrating due to climate change

Promoting research and monitoring of climate-related migration and displacement within and towards Europe

Strengthening contributions climate resilience in low- and middle-income countries

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1. Introduction

1.1 Background

As climate change accelerates, the likelihood that people around the world will move away from their homes increases. Climate-related migration (defined in Box A) is not new. Migration is a universal strategy that people have used throughout history to improve their living conditions. Climate, the availability of water, and access to fertile land have always helped determine where people live and where they move.[1]

The current pace of climate change poses major challenges. The climate is changing at an accelerating rate, and the impacts on people and nature are becoming increasingly visible.[2] At the same time, more people are living on Earth than ever before, and the global population is expected to continue growing for more than another fifty years.[3] This combination of population growth and climate change means that, in the coming decades, hundreds of millions or even billions of people will be living in areas where climate change is severely affecting living conditions.[4] Not everyone will leave, but the likelihood of migration will increase.

Multiple governments and international organizations are preparing for climate-related migration and displacement. The issue has been on the agenda of negotiations under the United Nations Framework Convention on Climate Change[5] for years, and in 2022 climate-related migration was recognized as a form of "loss and damage."[6] In 2024, the UN Refugee Agency (UNHCR) established a fund for climate-related migrants and displaced people.[7] Some governments, such as that of Bangladesh, are preparing for climate-related migration by supporting people moving from rural areas to cities. Some countries are also experimenting with new forms of legal protection for climate-related migrants who cross international borders. Australia, for example, offers residents of the small island state of Tuvalu access to special visas that allow them to live, work, and study in Australia.[8] This is because there are currently no binding global agreements on the legal protection of climate-related migrants.[9]

These developments are also relevant to the Netherlands. Under international agreements, the Netherlands has a responsibility to promote the well-being of migrants and displaced people worldwide.[10] The Netherlands also has an interest in gaining a better understanding of climate-related migration, because migration, including internal migration, can contribute to instability in countries with which the Netherlands trades (see Section 4.1).[11] In addition, the Netherlands needs to prepare for climate-related migration closer to home, as it is already occurring in the European Netherlands, the Caribbean parts of the Kingdom of the Netherlands, and elsewhere in Europe.[12]

National politics and policy have so far paid limited attention to climate-related migration. This may be due to the complexity, uncertainty, and political sensitivity of the issue.[13] However, it is possible to build knowledge and develop insights that can inform action. A certain degree of uncertainty is unavoidable given the complex relationship between climate change and

[1] For example, substantial migration occurred between approximately the 9th and 14th centuries as a result of the warm period in the Northern Hemisphere.Barnett & McMichael (2018); Degroot et al. (2022); Hattem (2026); Hongtao & Ting (2021); Kummu et al. (2011); Ruyssen (2025); Small & Cohen (2004); Xu et al. (2020).
[2] Foster & Rahmstorf (2026); Xu et al. (2020).
[3] UNDESA (2024).
[4] IPCC (2022b); Smirnov et al. (2023); Xu et al. (2020).
[5] IPCC (2022b); Schewel et al. (2024); World Bank (2021).
[6] Pill (2022); UNFCCC (z.d.).
[7] EPRS (2023); UNHCR (2024).
[8] Australia-Tuvalu Falepili Union (2023).
[9] Climate-related migrants and displaced people are not covered by the UN Refugee Convention; legally speaking, there is therefore no such category as a "climate refugee." Climate change in itself consequently does not constitute grounds for asylum in another country. Subsidiary protection may, however, apply indirectly if the impacts of climate change lead to violent conflict. See Brouwer (2020a) and EPRS (2023).
[10] EPRS (2023); ICJ (2025).
[11] Ministerie van Justitie en Veiligheid (2023).
[12] Boas et al. (2023).
[13] Bettini et al. (2017); Farbotko (2022).

migration. This uncertainty cannot be eliminated entirely. That is precisely why it is important to anticipate the different ways in which climate-related migration may occur and to explore options for addressing it.[14]

Box A: Definitions of climate-related migration, displacement, and planned relocation

***Climate-related migration* is the movement of one or more people away from their habitual place of residence, at least partially due to sudden or gradual changes in their living conditions resulting from climate change.** We use a broad definition: climate-related migration may be voluntary or forced, temporary or permanent, and may take place within countries (internal) or across national borders (international).[15] We use the term climate-related migration, rather than climate migration, because climate change is almost never the sole driver of migration. Many factors determine whether people migrate, including the socioeconomic, cultural, and political environment in which they live, as well as household and individual characteristics (see Section 2.1).

Climate-related migration may be voluntary or forced. Forced migration is also referred to as displacement. In practice, however, the distinction between voluntary and forced migration is difficult to make, particularly in the context of climate-related migration. This is because the effects of climate change often influence migration indirectly, for example through water and food availability and loss of income. As a result, it is not possible to determine whether a person was forced to leave because of climate change or for other socioeconomic reasons, or how much freedom of choice they had in making that decision.[16] This is particularly difficult to determine in the case of the gradual effects of climate change.[17] We therefore use the term *climate-related displacement* only in cases of displacement by extreme weather events related to climate change. In such cases, people are forced to leave suddenly and with little preparation. In all other cases, we use *climate-related migration* as the umbrella term. This includes climate-related migration involving greater or lesser degrees of voluntariness and more or less preparation (see also Section 2.1).

Our definition also includes migration within the Netherlands and Europe. People within Europe are also experiencing the effects of climate change that may contribute to climate-related migration and displacement, although these movements are often not described as such (see, for example, Box B).[18] At the same time, we recognize that the scale, nature, and impact of climate-related migration vary considerably across regions and depend on the context in which these changes occur. The most severe consequences of climate-related migration are seen in low- and middle-income countries and small island states.[19]

We also use the terms *climate-related migrant* and *displaced person*. We do not use the term "climate refugee," because refugee is a legal term that does not apply to people who migrate because of climate change (see Section 3.2.3).

Planned relocation is a form of climate-related migration in which entire communities are relocated with government support. In planned relocation, the decision to migrate is made collectively because climate risks in certain areas are considered too high. This decision is often made by the government in consultation with local communities. People and infrastructure are then relocated through a planned process to areas with lower climate risks. Planned relocation is often used following repeated damage and displacement caused by climate change (see Box D), but it can also be used proactively to reduce future damage and displacement (see Box H).

The debate in politics and policy is complicated by the narrative that climate change will lead to large-scale migration to Europe. Both the left and right side of the political spectrum regularly claim that climate change will lead to mass international migration, including to Europe. This view also receives attention from journalists, climate activists, international organizations, researchers, and governments.[20] The narrative is used for a variety of purposes. For example, it is invoked to draw attention to the need to reduce greenhouse gas emissions or mobilize funding, but also to underscore the importance of restrictive migration policies. This view is insufficiently supported by the evidence.[21] Based on current knowledge, large-scale climate-

[14] Haasnoot et al. (2013); Stirling (2003).
[15] IOM (2019). There is no universally accepted definition of "climate-related migration and displacement." Different terms are used in both research and policy to describe human movement resulting from climate change. The definition does not imply that it refers only to migration and displacement resulting from human-induced climate change, although this is often the focus in international political discourse.
[16] Bakewell (2021); Ruyssen (2025).
[17] Link et al. (2025).
[18] Boas et al. (2023).
[19] According to the World Bank, in 2026 a low-income economy has a gross national income (GNI) per capita of $1,135 or less. "Lower-middle-income economies" have a GNI per capita of between $1,136 and $4,495. See World Bank (z.d.).
[20] Bonneux & Van Praag (2024); De Haas (2023); Sakellari (2021).
[21] APPG (2026); De Haas (2023); MMC (2022b, 2022c).

related migration to Europe is not expected (see Section 3.1.3). This underscores the importance of careful language and a sound knowledge base in the debate on this issue.

1.2 Purpose, approach, and guide to the briefing

The purpose of this briefing is to consolidate knowledge, provide insight into the underlying mechanisms, risks, and uncertainties of climate-related migration, and identify areas in which the Netherlands can take action. Climate-related migration is a complex issue. An understanding of the underlying mechanisms, risks, uncertainties, and options for action helps support a nuanced and informed discussion of the issue in politics and policymaking, as well as in society more broadly. In this briefing, we consolidate existing knowledge and identify areas that are relevant to Dutch policymakers, practitioners, and civil society.

For this briefing, we reviewed the literature and consulted national and international experts. The briefing was produced through collaboration between the Advisory Council on Migration (Adviesraad Migratie) and the Netherlands Scientific Climate Council (Wetenschappelijke Klimaatraad). An overview of the literature and experts consulted is provided at the end of the briefing.

The briefing consists of four chapters. This introductory chapter is followed by two chapters in which we bring together the most recent available knowledge. Chapter 2 describes how climate-related migration occurs. We discuss how migration and displacement are affected by climate change and illustrate these processes with examples from different countries. Finally, we examine what happens to people after they migrate. Chapter 3 discusses the challenges associated with climate-related migration. Using trends, we describe the estimated impact on the world, Europe, and the Netherlands. This shows the scale of the shared global challenge. Chapter 4 focuses on the options available to the Netherlands for taking action. We argue that politicians and policymakers should devote greater attention to climate-related migration. In doing so, we identify four areas in which further development of policy and knowledge is relevant.

2. How climate change affects migration and displacement

In this chapter, we describe how climate change affects migration and displacement. We first establish a common knowledge base on migration and climate change. We then discuss how climate change can lead to migration. Finally, we examine what typically happens to climate-related migrants and displaced people in their new place of residence.

2.1 How migration and displacement occur

Migration is an umbrella term for the movement of people and generally involves a departure that is planned to a greater or lesser extent, with the aim of improving living conditions. Migration is voluntary when people have the freedom to choose whether to stay or leave and decide to leave. That decision is sometimes made by individuals, but more often within households or communities. People who choose to migrate may, for example, seek to reduce risks (push factors) or take advantage of opportunities elsewhere (pull factors). Migration can also contribute to the well-being of family members and communities who remain behind, for example through remittances sent by migrants.[22] Migration can also be involuntary. Some people have limited or very limited opportunities to improve living conditions where they live. In such cases, the decision to leave is only voluntary to a limited extent. In practice, the distinction between voluntary and forced migration is not black and white, but rather exists along a spectrum.[23]

In cases of displacement, people have no choice but to leave, sometimes suddenly. Displaced people leave their place of residence because living conditions deteriorate to such an extent that they are forced to leave, for example due to war, violence, or extreme weather such as severe drought, wildfires, storms, or floods (see Box A). Displacement often involves little or no preparation or freedom of choice: people leave against their will, taking only what they can carry at the time, with no clear idea of where they will go and no prospect of returning.

For migration, not only the desire but also the ability to leave is important. This ability is influenced by a range of factors (Figure 1).[24] The physical living environment plays a role, as does the socioeconomic, cultural, and political environment.[25] Personal characteristics, ambitions, and expectations about the future also have an influence. Improving living conditions is often the objective, with migration being one of the possible strategies. The decision to migrate or stay also depends on the opportunities and barriers people perceive in their current place of residence and elsewhere. Examples include access to basic services, education, employment, land, and migration laws at the destination. The expected opportunities and risks along the way also play a role in the decision to stay or leave.[26] Migration infrastructure is another factor, including the presence of intermediaries or migrant smugglers, means of transportation and communication, regulations, humanitarian organizations, and diaspora networks.[27]

Not everyone wants to or is able to leave. People who do not want to leave stay voluntarily; those who are unable to leave are forced to stay behind. Most people prefer to remain in the region where they grew up and where they are socially, culturally, and economically rooted.[28] When leaving nevertheless becomes necessary or desirable, it usually takes place over a short distance, and there is often a desire to return in the longer term. Some people, families, or communities consciously choose to stay, for example because of family ties or their connection

[22] ACMI & GCCM (2022); EPC (2023); IPCC (2022b); Ruyssen (2025).
[23] Bakewell (2021); Ruyssen (2025).
[24] Carling (2017, 2002); De Haas (2021).
[25] Carling et al. (2024).
[26] Banda et al. (2026).
[27] Ruyssen (2025).
[28] IPCC (2022b); McMichael et al. (2021).

to the community. Others want to leave but lack the means to do so and are therefore forced to stay behind.[29] An attempt to leave may also fail, for example if someone is stopped or sent back along the way (see Box E on immobility).

[29] Düvell (2025); Ruyssen (2025); Schewel (2020).

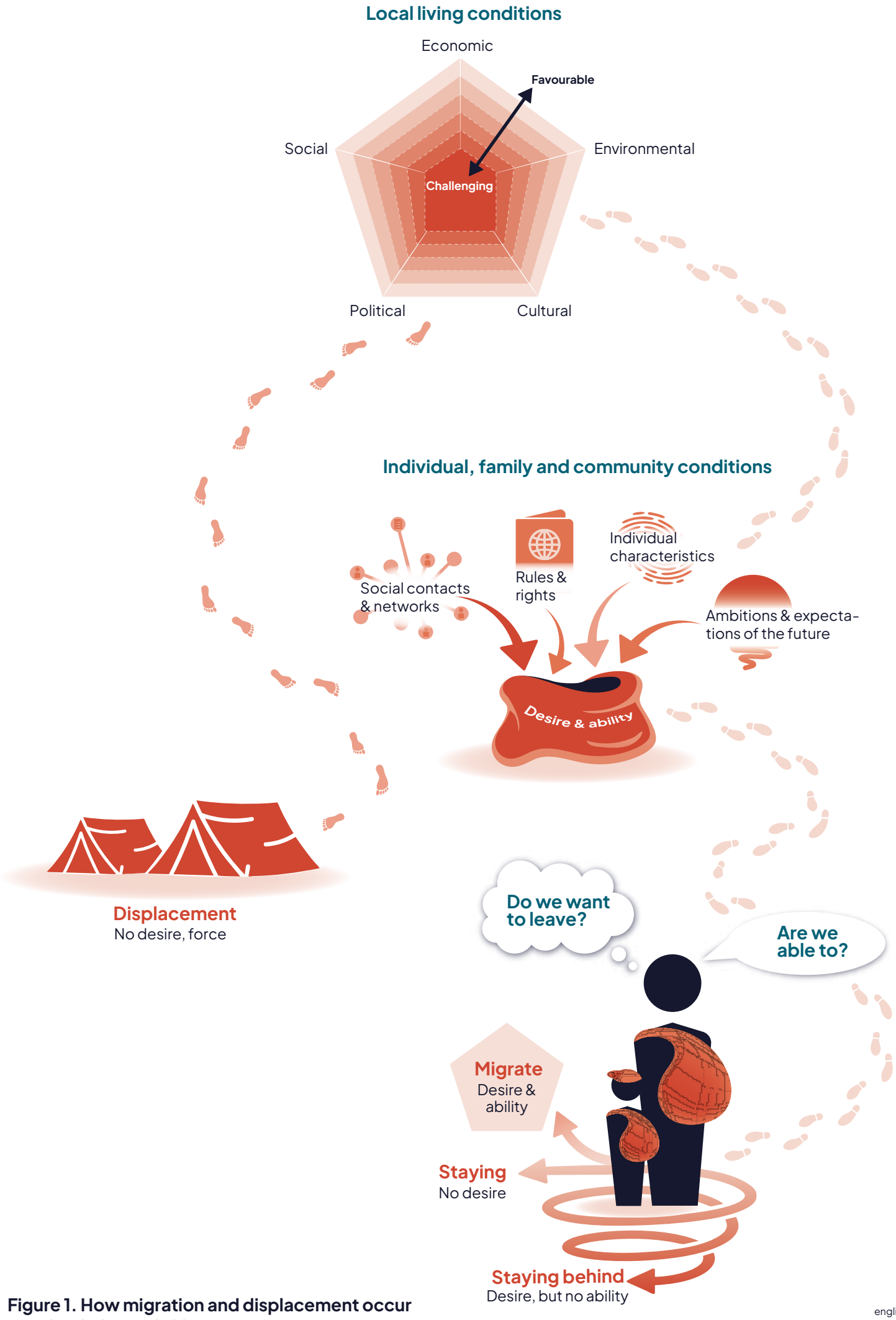


Figure 1. How migration and displacement occur
Based on Carling et al. (2014)

2.2 What climate change is

The world is getting warmer. In 2025, the global average temperature was 1.43 °C (uncertainty range ± 0.13 °C) above the pre-industrial level of 1850–1900, just below the record of 1.55 °C set in 2024 (uncertainty range ± 0.13 °C). The past eleven years have been the eleven warmest years globally since records began in 1850.[30] As the Earth warms, the climate is changing worldwide. With every tenth of a degree of warming, the impacts of climate change increase.[31]

The impacts of climate change are diverse. A distinction can be made between sudden and gradual impacts. Sudden impacts include more severe or more frequent extreme weather, such as heat, drought, storms, heavy precipitation, and flooding. Gradual impacts unfold more slowly and include warming, increasing aridity, desertification, salinization, sea-level rise, and biodiversity loss. Some of these impacts are irreversible.[32]

The climate is changing at an accelerating pace. Global warming,[33] sea-level rise,[34] and glacier loss[35] are all accelerating. This acceleration means that people and nature have less time to adapt, resulting in additional damage and loss.[36] At the same time, some measures to adapt the living environment to a changing climate become less effective as the impacts of climate change become more severe.[37]

The pace and severity of further climate change depend on future greenhouse gas emissions and on how the climate system responds to them. Both are subject to uncertainty, meaning that the way climate change will unfold over the coming decades can only be predicted approximately.[38] There is broad scientific consensus that every additional increment of warming increases the severity of the impacts. Moreover, risks, damage, and losses do not increase gradually, but exponentially.[39] The impacts of climate change can also reinforce and follow one another: more severe weather extremes increasingly occur simultaneously or in quick succession. In addition, the risk of abrupt and difficult-to-reverse changes in the climate system, known as tipping points, is increasing. Examples include a weakening of the AMOC[40], the collapse of parts of the West Antarctic Ice Sheet, and the widespread die-off of coral reefs. Such tipping points may already occur at a global temperature increase of 1.5 to 2 °C.[41] A weakening of the AMOC could substantially alter temperatures and precipitation in Europe, with major consequences for food production and nature.

[30] WMO (2026)
[31] IPCC (2023).
[32] IPCC (2023).
[33] Witze (2026).
[34] EEA (2025).
[35] The GlaMBIE Team (2025); Witze (2026).
[36] Martin et al. (2022).
[37] Carbon Brief (2024a).
[38] Climate change may accelerate further due to so-called feedback mechanisms. These are processes in which changes in the climate system reinforce themselves, for example when thawing permafrost releases additional CO_2 and methane. Important feedback mechanisms operate slowly, and their full impact will only become visible over the coming decades to centuries. These feedback mechanisms are expected to shape the Earth's climate far beyond the year 2100. However, scientific understanding is currently insufficient to anticipate their full impact.
[39] IPCC (2023).
[40] Full name: *Atlantic Meridional Overturning Circulation*, a large-scale ocean circulation system in the Atlantic Ocean.
[41] McKay et al. (2023).

2.3 Six ways in which climate change affects migration and displacement

The impact of climate change on migration depends strongly on local climate risks, local context, and policy. The effects of climate change vary by region: temperatures in Europe, for example, are rising almost twice as fast as the global average.[42] Precipitation is increasing in some parts of the world and decreasing in others.[43] The impact on living conditions also varies by location: for example, a modest increase in drought and heat in the extremely dry Sahel region has a greater impact on how physically habitable the area is than the same increase would have in the Netherlands. The capacity to cope with these impacts also varies by region: where sufficient resources are available, at either the societal or individual level, the effects of climate change can often be effectively addressed or even prevented (see Section 2.4). Where such resources are lacking, the likelihood of displacement and migration increases, as does the risk of being forced to stay behind.[44] Individual and group characteristics also play an important role here, as they do in migration more generally (see Section 2.1). People living in poverty, older people, children, and women are generally more severely affected by climate change, yet are less likely to migrate (see Box E).[45]

Below, we examine six ways in which climate change can contribute to migration. These six pathways are not exhaustive, but represent the main links between climate change and migration (see Figure 2). We illustrate these six pathways, as well as the importance of local context, using examples from different countries.

1. **Extreme weather leads to displacement, and repeated extreme weather can lead to migration.** The increase in heat, drought, wildfires, floods, and storms due to climate change contributes to displacement.[46] Scientists are increasingly able to link extreme weather events directly to climate change.[47] Displacement following extreme weather usually occurs over short distances and within a short period of time.[48] Displacement due to extreme weather occurs around the world. Examples include the monsoon floods in Pakistan in 2022, which displaced an estimated 1.2 million people,[49] and Cyclone Idai in Mozambique in 2019, which forced nearly half a million people to leave their homes (see Box D). In the United States, 266,000 people were displaced by wildfires over the course of 2024, most of them in California.[50] Brazil was struck by severe floods in *Rio Grande do Sul* in 2024, displacing 775,000 people.[51] Displacement due to extreme weather also occurs closer to home. Examples include the floods in Valencia in 2024, which displaced 15,000 people, and the 2021 floods in the Netherlands, Belgium, and Germany (see Box B). Wildfires can also result in temporary displacement or migration. Wildfires are becoming more frequent and more severe, partly as a result of climate change.[52] In July 2026, more than 200,000 people were evacuated in Spain and France because of wildfires.[53] Displacement is often temporary, but damage to the living environment can mean that return is not always straightforward, desirable, or possible. Repeated displacement may also contribute to a growing desire to settle permanently elsewhere.[54]

[42] C3S/ECMWF & WMO (2026); Rantanen et al. (2022).
[43] Nazeri Tahroudi (2025).
[44] IPCC (2022b).
[45] Carling et al. (2024); IPCC (2022b); Vinke et al. (2020).
[46] IPCC (2022b); Sciences et al. (2016).
[47] Fischer & Knutti (2015); Liu et al. (2026).
[48] Carbon Brief (2024b); EPC (2023); IPCC (2022b).
[49] IDMC (2025); World Weather Attribution (2022).
[50] IDMC (2025). Climate change has increased both the likelihood and severity of wildfires in California, see World Weather Attribution (2025a).
[51] IDMC (2025). Climate change has increased the likelihood of large-scale flooding in Brazil, see World Weather Attribution (2024).
[52] WKR (2025a); World Weather Attribution (2025b).
[53] World Weather Attribution (2026).
[54] de Sherbinin et al. (2024); MPI & IDB (2023); World Bank (2021). de Sherbinin et al. (2024); World Bank (2021); MPI & IDB (2023).

Box B. Displacement and the aftermath of severe flooding in the Netherlands, Belgium, and Germany, 2021

In the summer of 2021, parts of Western Europe were severely affected by heavy rainfall that caused flooding. More than twice the amount of rain that normally falls during the entire month of July fell within 48 hours.[55] Climate change has increased the likelihood of such extreme precipitation.[56] Despite strong water management and emergency response capacity, the rainfall was so exceptional that rivers and streams overflowed their banks. This caused flooding in the Netherlands, Belgium, Germany, Luxembourg, and Switzerland.

In the Netherlands, 50,000 people were evacuated, and some were unable to return home for an extended period.[57] Evacuees stayed with family or friends or in temporary housing, such as construction trailers, vacation parks, social housing, or private rental housing.[58] Most people were able to return home relatively quickly, but approximately 700 homes were declared uninhabitable.[59] Some residents therefore had to live elsewhere for years and suffered substantial financial losses.[60]

The impact was even greater in Belgium and Germany, where more than 230 people died in total. In Belgium, 41 people died and an estimated 45,000 homes were damaged.[61] Recovery and compensation took years.[62] In addition, not all homes could be repaired. Several dozen homes were declared uninhabitable, and not all residents were able or willing to return and rebuild their homes.[63] In Germany, 190 people died, more than 40,000 people were affected, and a hospital had to be evacuated.[64]

Following the floods, the Dutch government conducted research and developed policies to limit the impacts of similar events in the future. Various measures have been taken to make the region more resilient to such disasters. For example, the Water Safety and Spatial Planning Program for Limburg (Programma Waterveiligheid en Ruimte Limburg) was developed in cooperation with provinces, municipalities, water authorities, and the national government. The program combines various adaptation measures, such as retaining, storing, and draining water and strengthening protective infrastructure. It also focuses on spatial planning, for example by keeping space available for water storage and drainage and exercising restraint when building in vulnerable locations. Attention is also given to water awareness and resilience, including through risk assessments, civil protection, and public awareness.[65] Various knowledge institutions are developing scenarios for the impacts of a so-called extreme precipitation event such as the one that occurred in Limburg and other regions in 2021.[66] Such stress tests help governments and other stakeholders prepare more effectively for future extreme weather events.

2. **Land becomes unusable or disappears as a result of climate change.** Sea-level rise, coastal erosion, or desertification can render land where people currently live nearly or completely unusable, or cause it to disappear altogether.[67] One example is the village of Niugtaq (Newtok) in Alaska, which is threatened by subsidence and erosion caused by thawing permafrost. Its residents are being relocated to another area through a planned relocation process with government support (see Box A).[68] In Vanuatu, an island nation in the Pacific, the coastal village of Lateu had to relocate to higher ground in 2005 because of coastal erosion and increasing flooding.[69] Along the French and British coasts, people have moved away because of increasing flood risks and coastal erosion.[70] Parts of the Carteret Islands in Papua New Guinea have also become uninhabitable due to sea-level rise, forcing residents to leave.[71]

[55] Thompson et al. (2025).
[56] World Weather Attribution (2021).
[57] HKV (2022).
[58] Aedes (2021).
[59] HKV (2022).
[60] De Limburger (2023); EenVandaag (2023)
[61] De Maeyer et al. (2025); Schüttrumpf (2026).
[62] Schüttrumpf (2026).
[63] VRT (2025).
[64] Fekete & Sandholz (2021).
[65] Provincie Limburg (2023).
[66] See, for example, Deltares (2022b).
[67] IPCC (2022b).
[68] Carbon Brief (2024b).
[69] Ruyssen (2025).
[70] Wolff et al. (2026).
[71] Ruyssen (2025).

3. **Climate change puts pressure on the availability of basic necessities such as water and food.** Food insecurity and water scarcity are major drivers of migration.[72] Various impacts of climate change, such as heat, increasing aridity, salinization, and changing precipitation patterns, disrupt local and global food systems and limit the availability of sufficient clean water. When food and water are scarce, people may have little choice but to leave. This occurred, for example, following prolonged drought in the Horn of Africa between 2021 and 2023 (see Box C). Climate change affects food availability in several ways, including through crop yields, water availability and quality, soil quality, pests and diseases, and crop pollination.[73] Climate change also affects livestock systems, including through changes in animals' susceptibility to disease and growth rates. Fisheries and aquaculture are affected as well: higher water temperatures shift fish populations and affect catch volumes and composition, with consequences for both the quantity and nutritional value of available fish.[74] In addition to food production, climate change can disrupt food storage, processing, distribution, and trade. This can put further pressure on food security for certain groups, for example by driving up food prices.[75]

4. **Climate change leads to loss of income.** Income plays an important role in migration. It affects both vulnerability to risks and people's ability to adapt where they live or establish a new life elsewhere.[76] Low-income households are relatively often dependent on climate-sensitive sectors such as agriculture, livestock farming, fisheries, forestry, and tourism. As a result, they are affected by climate change sooner and more severely.[77] In Sub-Saharan Africa, for example, which is home to nearly 60% of the world's poorest people, more than 60% of the population depends on agriculture for food and income.[78] Single or repeated crop failures, or livestock deaths caused by extreme heat and drought, can reduce farmers' incomes and undermine food security in the region. Income can also decline as labour productivity falls because heat makes physical work more demanding.[79] This can make moving to areas with better economic prospects attractive or even necessary.[80] In Bangladesh, for example, people are moving to cities because life in rural areas is becoming increasingly difficult, partly as a result of climate change (see Box G).

5. **Climate change poses a risk to health.** Climate change is increasingly giving rise to health risks. These risks, the associated disease burden, and the related economic and social consequences are expected to increase further.[81] The World Health Organization (WHO) therefore describes climate change as a health crisis.[82] Health problems can prompt people to move to safer or better-equipped areas. In one coastal community in Bangladesh, for example, there are indications that a lack of clean drinking water and the salinization of water, including drinking water, are contributing to health problems such as high blood pressure and kidney disease. This increases people's desire to leave.[83] However, serious or prolonged illness can limit people's physical and financial ability to migrate.[84]

6. **Climate change contributes to instability and conflict, but this relationship depends heavily on local political action.** Scarcity of basic necessities such as water, food, and energy is a well-known risk factor for tensions and conflict. Climate change can intensify such scarcity and thereby contribute to increasing political instability and conflict worldwide.[85] These two factors, in turn, are major drivers of migration. Migration itself can also exacerbate social unrest, both in areas of origin and in receiving regions, and thus contribute to further escalation or prolongation of conflict.[86] People who migrate because of climate change, or who become trapped and are unable to move, are also vulnerable to exploitation by

[72] Castelli (2018).
[73] IPCC (2019); Ter Haar et al. (2025).
[74] Cheung et al. (2023).
[75] IPCC (2019).
[76] Mucha et al. (2026).
[77] Msimanga & Mukwada (2022).
[78] Szaboova et al. (2025).
[79] Dell et al. (2014).
[80] FAO (2023).
[81] Gezondheidsraad & WKR (2026).
[82] PECCH (2026).
[83] Rakib et al. (2019).
[84] Ruyssen (2025); Schwerdtle et al. (2020).
[85] Burke et al. (2015); Koubi (2019); HCSS (2026).
[86] HCSS (2022, 2026).

organized crime and armed or extremist groups.[87] In settings with weak institutions, limited government capacity, or low levels of trust in government, armed groups can gain support by providing basic services. Particularly for young people, joining such groups may therefore become an acceptable or even attractive alternative.[88] Crises can also create opportunities for criminal networks in the Netherlands. For example, hospitality business owners affected by the floods in Limburg (see Box B) were approached with offers of financial assistance from criminal networks, with the aim of involving them in money laundering and drug trafficking.[89] The relationship between climate change and instability and conflict, however, depends heavily on local institutions, the political system, and broader socioeconomic conditions. These factors determine whether tensions over scarce resources escalate into unrest or conflict, or whether the situation instead de-escalates.[90] Climate change may, for example, have played a role in the run-up to the Syrian civil war in 2011 by worsening the drought in the preceding years.[91] This prolonged drought undermined agriculture in the northeast of the country and was an important factor in large-scale migration to, and growing pressure on, cities such as Aleppo and Damascus.[92] However, failures of political governance were a more decisive factor in the conflict. Government intervention drove food prices up further, worsened scarcity, and increased discontent.[93]

[87] Based on expert interviews.
[88] Bourekba (2021); Silke & Morrison (2022).
[89] Trouw (2023).
[90] Koubi (2019).
[91] Gleick (2014).
[92] Kelley et al. (2017); Kelley et al. (2015); López Bremme & Regilme (2025); MedGlobal (2022); Ruyssen (2025).
[93] Dietz (2018); Selby (2019); Selby et al. (2017).

Impact of climate change

on local living conditions

Loss of income
For example due to loss of crops and cattle as a consequence of drought

Loss of (usable) land
For example due to desertification, coastal erosion or sea-level rise

Risks to health
For example due to heat stress and the spread of infectious diseases

Rising instability and conflict
For example due to tensions around the division of scarce resources

More extreme weather
For example hurricanes and floods

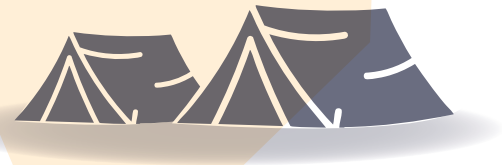
Pressure on basic needs
For example due to water and food shortages

Individual, family and community conditions



Previous experiences, for example with extreme weather events, influence people's desire and ability to leave

Displaced people are particularly vulnerable to climate change



Displacement



People who stay behind are increasingly vulnerable to climate change and face the risk of future displacement

Figure 2. How climate change impacts migration

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2.4 The role of climate adaptation

The aim of climate adaptation is to reduce climate risks, but this does not necessarily reduce the likelihood of migration. Climate adaptation can improve living conditions. Most people would prefer not to leave where they live (see also Box E), and climate adaptation can therefore help people stay if that is what they want.[94] Adaptation does not necessarily lead to less migration, however. If living conditions improve as a result of climate adaptation, people may have greater opportunities to migrate, for example because of higher incomes. Improved living conditions may also increase the desire to migrate, for example if better access to information makes people more aware of better conditions and opportunities elsewhere.[95] Adaptation therefore primarily helps people improve their living conditions and retain control over the choice of whether to stay or migrate.[96]

Migration can also be a form of climate adaptation, but only if people have control over the choice to migrate or to stay. When local adaptation measures are not feasible, affordable, or sufficiently effective, migration can still be a way to reduce climate risks. Migration therefore does not automatically mean that adaptation has failed. Migration as an adaptation strategy is only successful if climate risks at the destination are in fact lower. Temporary or permanent migration can supplement household income and ease pressure on local resources. In addition, remittances sent by migrants often provide an important source of income for family members and communities who remain behind, who can use these resources for adaptation.[97] Migration can thus form part of how households and communities respond to climate change.[98] Adaptation can also help vulnerable and marginalized groups remain or become mobile: some groups want to migrate but are unable to do so because climate change causes damage and loss of income. These groups may become trapped in increasingly poor living conditions (see Box E). Combined with a broader approach aimed at strengthening livelihood security, adaptation can expand people's room for manoeuvre, including their ability to migrate when necessary or desirable. In many low- and middle-income countries, lack of money is a major barrier to migration. By limiting damage and stabilizing or increasing incomes, adaptation can lower this barrier.

Adaptation can take many different forms. By adapting to a changing climate, people can improve living conditions where they live. Adaptation can take a variety of forms. It may involve technical measures such as strengthening dikes, spatial interventions such as improving water retention in the soil, or socioeconomic strategies such as income diversification, insurance, and early warning systems (see Box C). Measures may focus on raising awareness of risks and solutions, prevention, emergency response, or recovery, as well as on strengthening both physical resilience (for example, the resilience of critical infrastructure such as roads, hospitals, and energy supply) and social resilience.[99]

The scope for climate adaptation varies depending on the impact of climate change, the location, the group, and the individual. In the case of systemic risks such as persistent drought or sea-level rise, effective adaptation depends heavily on public institutions and infrastructure, because individuals and communities often have limited room for manoeuvre. For other impacts, people have greater scope to take measures themselves. Heat, for example, is a risk that some people can avoid relatively effectively because they have access to green spaces or air conditioning. Whether people actually take measures themselves depends on individual factors. For example, people are more likely to take adaptation measures if they are confident that they can do so (self-efficacy) and that the measures will be effective. Perceptions of climate risks, risk tolerance, the extent to which others in their surroundings take measures, and the extent to which people rely on government support also influence whether people take adaptation measures themselves.[100] There are therefore substantial differences in exposure, vulnerability, and adaptive capacity between groups of people.

[94] IPCC (2022b).
[95] De Haas (2010).
[96] MPI (2025).
[97] Warner & Afifi (2014).
[98] Vinke et al. (2020); APPG (2026); HCSS (2022, 2026); Vinke et al. (2022).
[99] IPCC (2023).
[100] Botzen et al. (2013); Duijndam et al. (2023); Van Valkengoed & Steg (2019).

There are limits to adaptation, and vulnerable groups and countries reach those limits sooner. These limits may be physical, but more often they are socioeconomic, political, or institutional. Measures may become too expensive, or people may lack the knowledge, time, and resources needed to plan them properly and implement them effectively. In low- and middle-income countries in particular, a lack of financing is a major obstacle to adapting to climate change.[101] The limits may also be cultural. In parts of South Asia, rising temperatures could severely constrain or even make rice production impossible by the end of this century. Shifting rice production to cooler areas, such as parts of southern Russia, is technically possible, but this overlooks the fact that rice cultivation is part of a food culture and a way of life. If rice production becomes impossible in South Asia, it will not simply emerge in Russia.[102]

Box C. Preventing displacement by anticipating extreme weather in Somalia

Somalia is severely affected by climate change. The country is located in the Horn of Africa, one of the poorest regions in the world. Its climate is dry, with desert and steppe areas and high temperatures throughout the year. Climate change is making the long rainy season drier and the short rainy season wetter. Rising temperatures increase evaporation, making severe drought up to one hundred times more likely than in the past.[103] Weather phenomena such as *El Niño* and *La Niña* also play a role; La Niña in particular increases the likelihood of drought.[104]

Between 2021 and 2023, Somalia was hit by its worst drought in forty years, interspersed with devastating floods. Crops failed and livestock died, forcing many families to leave their homes in search of food and water. Around 70% of the population depends on small-scale agriculture and nomadic pastoralism, making the impact of the drought particularly severe.[105]

Political instability, extremism, and clan rivalry exacerbated the crisis. These factors also restricted access for aid organizations. Drought and conflict have displaced an estimated 1.7 million people in Somalia and Ethiopia. In addition, more than 180,000 refugees from Somalia and South Sudan have moved to arid areas in Kenya and Ethiopia, where the problems continue to mount.[106]

***Early warning* for extreme weather, combined with anticipatory cash transfers, can increase people's resilience and reduce the need for humanitarian assistance.**[107] In a country such as Somalia, providing assistance before a disaster occurs is effective because periods of drought occur regularly and can be partly predicted. This creates opportunities to support people through relatively small interventions, while the consequences of failing to provide assistance are often severe. In 2024, for example, the Food and Agriculture Organization (FAO) in Somalia provided anticipatory cash transfers to 2,400 households based on drought forecasts from the Somalia Water and Land Information Management system. Families received either a one-time payment of $210 or three monthly payments of $70. This covered up to 80% of the minimum cost of basic food. The results show that this approach is an effective form of adaptation that can also prevent displacement: households had greater purchasing power, were better able to protect their crops, and were less likely to have to leave their homes. A one-time payment proved more effective than monthly payments, particularly in preventing livestock losses. Timely intervention can thus help break the vicious cycle of escalating need and rising aid costs.

2.5 How people fare after migration

After leaving, migrants find themselves in a new environment, where climate risks and living conditions may be better, but may also be worse. When migrants gain access to employment in their new place of residence, their financial situation can improve substantially. Family members and communities in the region of origin generally benefit as well through remittances sent by migrants.[108] Migration does not always have positive outcomes, however: people who move from rural areas to cities do not always have the right knowledge or experience to find work in urban areas.[109] Some people end up in a worse socioeconomic position and in places where climate risks remain high. This is particularly the case in informal

[101] UNEP (2025). UNEP (2025). Adaptation Gap Report 2025.
[102] Trouw (2026).
[103] Kimutai et al. (2025); Verhoeven (2024).
[104] El Niño refers to the warming of the area along the equator extending into the central Pacific Ocean, whereas La Niña refers to cooling of the same area, with sea surface temperatures that are lower than average. These are irregular weather phenomena that occur every few years.
[105] FAO (2025).
[106] UNHCR (2023).
[107] FAO (2025).
[108] Diniega & Sakdapolrak (2025); Entzinger & Scholten (2022).
[109] Vinke et al. (2022).

settlements. These consist of housing built without formal building permits and without access to basic services such as water and electricity (see Section 3.1.2). At the same time, migrants are often under pressure to provide financial support to family members who remain behind.[110] Climate-related migration can therefore also constitute a form of maladaptation[111]: in such cases, migrants increase their exposure to climate risks and their living conditions deteriorate.[112]

The likelihood of a better life after migration increases when both departure and arrival are carefully prepared. Future prospects depend in part on access to employment, housing, and social services, on the rights people have, and on how they are integrated into the receiving society. Financial resources and social networks can help,[113] as can policies that take account of the additional influx of people resulting from migration, including climate-related migration (see Box G and Box H). People with limited resources are more likely to end up in places where it is difficult to build a new and dignified life.

Displaced people are more likely to end up in locations where conditions are poor and climate risks remain persistently high. When people are displaced (by extreme weather or for other reasons, such as conflict), they often end up living in very poor conditions. This is particularly the case in low- and middle-income countries, where resources to accommodate displaced people are limited. People may end up in informal settlements, temporary shelters, and refugee camps. After a disaster, shelter must often be arranged quickly, which means that locations are not always safe or adequately equipped.[114] There are exceptions to this pattern, such as the Kutupalong refugee camp in Cox's Bazar, Bangladesh, where ecosystem restoration is being used to strengthen resilience to flooding.[115] However, exposure to climate risks generally remains high in shelters and refugee camps. Refugees and displaced people may, for example, be exposed to high temperatures (Ethiopia, Kenya, Uganda, Rwanda, and Sudan), low temperatures (Jordan and Pakistan), water shortages (Ethiopia, Kenya, Uganda, and Rwanda), and heavy rainfall (Bangladesh[116]). In addition, overcrowding, unsafe electricity and gas connections, and unstable structures pose physical risks to residents. Vulnerable groups in particular, such as women and people with disabilities, are at risk of social exclusion and marginalization in such camps and shelters.[117] Displaced people who end up in informal settlements often live in difficult conditions. Adequate housing and basic services such as water and sanitation are often lacking.[118] Because these informal neighbourhoods are often located in vulnerable areas, such as steep slopes or areas that are regularly affected by flooding, exposure to climate risks is especially high.[119]

Displaced people risk becoming trapped in a vicious cycle of repeated displacement and marginalization. When, after leaving their homes, people once again find themselves in vulnerable circumstances, they are at greater risk of being displaced again or remaining trapped in poor living conditions for an extended period. Examples include residents of informal settlements in Mozambique who are repeatedly affected by flooding (see Box D), and displaced people in the Horn of Africa who were again exposed to extreme conditions during the 2021–2023 drought.[120]

[110] Gemenne & Blocher (2017).
[111] Maladaptation is an adjustment to the effects of climate change that has positive effects in the short term but is counterproductive in the long term.
[112] Jacobson et al. (2019).
[113] Jacobson et al. (2019).
[114] Fransen et al. (2024).
[115] FAO (2022).
[116] Alam et al. (2018).
[117] Fransen et al. (2025).
[118] UN-Habitat (2024).
[119] Satterthwaite et al. (2020).
[120] Fransen et al. (2025).

Box D. Repeated displacement caused by cyclones, with little prospect of improved living conditions in Mozambique

Mozambique is vulnerable to climate change. The delta country has several major rivers and a coastline stretching 2,800 kilometres.[121] Flooding occurs regularly, including as a result of severe storms and cyclones. Climate change is further increasing the risk of flooding.[122] At the same time, exposure is high: more than 60% of the population lives in flood-prone areas, often in homes and near infrastructure that are poorly equipped to withstand such natural hazards.[123] Increasing periods of drought also pose a threat, as around 70% of the population depends for its livelihood on rain-fed agriculture.[124]

On March 14, 2019, Cyclone Idai struck the coastal city of Beira. The Category 4 cyclone brought wind speeds of up to 180 km/h, heavy rainfall, and a 4.4-meter storm surge. The impacts were severe: around 600 people were killed, damage exceeded $2.1 billion, and infrastructure such as roads and water and energy systems was destroyed on a large scale.[125] Agriculture was also severely affected, with an estimated 80% of agricultural land lost. In total, approximately 478,000 people were displaced.[126] Most displaced people found shelter with relatives or in reception centres run by humanitarian organizations and depended on emergency assistance for basic necessities such as water, food, and clothing.[127] When the reception centres closed, people were relocated to new places to live, often with limited access to services and separated from their social networks.[128]

The impact on residents of the informal fishing settlement of Praia Nova was severe.[129] Many residents rely on informal work, have no savings, and have difficulty finding work or housing elsewhere.[130] Most homes consist of temporary structures that provide little protection against the regular flooding.[131] Idai destroyed around 90% of the settlement, but residents quickly returned to rebuild their homes. Although residents would like to move to safer parts of the city (and some have done so), not everyone has the means to do so.[132] The government is attempting to relocate residents in a planned manner to locations outside the city, but for a community dependent on fishing, this is not a viable alternative. As a result, residents remain “trapped” in vulnerable Praia Nova.[133]

Mozambique is working on climate adaptation, but implementation is lagging because of limited resources and capacity. The *National Adaptation Plan (NAP)* includes plans for early warning systems, climate-resilient agriculture, water management, and the protection of vulnerable groups. Implementation remains difficult, however, because of a lack of funding, knowledge, and institutional capacity.[134] The financing required for climate adaptation is estimated at $7.2 billion.[135]

[121] Gallego-Ayala & Juízo (2011).
[122] Lin et al. (2012).
[123] Artur & Hilhorst (2012); Knutson et al. (2020); Schubert (2024).
[124] FAO (2026).
[125] Domingos Lequechane et al. (2020); Mester et al. (2023).
[126] Domingos Lequechane et al. (2020); Mester et al. (2023).
[127] UNOCHA (2019).
[128] Sunu (2025).
[129] MMC (2023).
[130] ACMI & GCCM (2022); Anderson & Silva (2020).
[131] MMC (2023).
[132] Anderson & Silva (2020); MMC (2023).
[133] Jacobs & Almeida (2020).
[134] Ministry of Land and Environment Mozambique (2023); PreventionWeb (2025).
[135] UNEP (2025).

Box E. Choosing to stay or being forced to remain under poor conditions

Some people also remain, either voluntarily or involuntarily, in areas where living conditions are deteriorating due to climate change. This is also referred to as immobility.[136] It concerns people who are unable or unwilling to leave for economic, cultural, or social reasons.[137] Because these groups do not migrate, they receive limited attention in this briefing. Internationally, there is limited visibility into this group of people who stay, due to a lack of data collection; they are less visible and even more difficult to monitor than migrants. Policy and research tend to focus more on groups that do migrate.[138] It is nevertheless important to recognize people who want or have to stay.

The reasons why people stay are highly diverse. They may stay because of ties to family or the community, or because of a strong attachment to the place where they live. A person's physical condition, religion, or role within the household or wider community may also play a part.[139] Within families, for example, decisions may be made about who migrates for better-paid work and who stays behind to care for the family or community. Others lack the money to migrate or consider migration too risky. Weak land tenure rights, for example, may mean that people receive no compensation or are not allocated new land if they leave, making them less inclined to leave their homes.[140]

People from vulnerable groups are more likely to remain behind: women, children, and low-income households. Worldwide, tens of millions of people are at risk of remaining in areas where living conditions are deteriorating due to climate change, although this estimate is uncertain because of poor data collection and the limited visibility of this group.[141] These are generally highly vulnerable groups: women, children, older people, and people from low-income households.[142] Compared with wealthier households (which often have both more financial resources and stronger networks), poorer households have fewer opportunities to migrate.[143] Women and girls are vulnerable because of social norms, lack of financial resources, and safety concerns. While traveling, for example, they do not always have access to adequate sanitation facilities and are more often exposed to gender-based violence.[144] Older people are also less likely to leave than younger people because they more often have local and family responsibilities.

Communities around the world emphasize their desire and right to remain in places where they have sometimes lived for generations. Around the world, communities and individuals affected by climate change emphasize the importance of robust measures to mitigate climate change and adapt to its impacts so that they can continue living in the same place in the future.[145] They reject the assumption that migration is inevitable (see Box F).[146] In effect, these people are asserting a right to stay. Although this right is not explicitly set out in national or international laws and regulations, provisions in human rights law can support claims to such a right. Support for the right to stay is often criticized because it is seen as support for restricting migration. The core issue, however, is to promote the well-being of those whose living conditions are affected by climate change and to preserve their freedom to choose whether or not to migrate.[147]

[136] IPCC (2022b); Schewel et al. (2024).
[137] Boas et al. (2022); IPCC (2022b).
[138] Benveniste et al. (2022); Huss et al. (2024); Thalheimer et al. (2025).
[139] Sengupta (2025).
[140] Almeida & Jacobs (2022); Düvell (2025); Ruyssen (2025); Schewel (2020).
[141] Link et al. (2025); Sengupta (2025).
[142] De Haas et al. (2019); Ruyssen (2025).
[143] Ruyssen (2025).
[144] Fransen et al. (2025).
[145] Boas et al. (2025); Huss et al. (2024); Iyer & Schewel (2023).
[146] Boas et al. (2025); Iyer & Schewel (2023).
[147] Iyer & Schewel (2023).

3. The scale and challenge of climate-related migration

This chapter describes what is known about the scale of and trends in climate-related migration worldwide, in Europe, and in the Netherlands, and the challenges this poses. We describe what knowledge and data are currently available and what information is lacking. This is important for properly assessing figures on the scale of climate-related migration. We then discuss trends in migration movements resulting from climate change worldwide, in Europe, and in the Netherlands. Taken together, this outlines the challenge facing the international community.

3.1 Scale and trends

3.1.1 Current state of monitoring and research

Climate change affects migration worldwide, but reliable global figures on its scale are lacking. At the regional level, there is sufficient evidence that climate change influences migration movements (see Section 2.3 and Figure 3).[148] At the global level, however, there is still no clear picture of how many people migrate as a result of climate change.

Displacement caused by extreme weather is monitored, but the data contain significant gaps. The *Internal Displacement Monitoring Centre (IDMC)* collects data on displacement worldwide. The IDMC distinguishes between displacement caused by conflict and violence and displacement caused by extreme weather. Although this is the most comprehensive dataset of its kind, it does not provide a complete picture. For example, the IDMC records only short-term displacement caused by sudden-onset extreme weather events, not movements of people resulting from the indirect and gradual impacts of climate change. Moreover, data are not available for all extreme weather events, because the IDMC depends on the capacity of governments and aid organizations to collect and provide these data.[149] Nor can every extreme weather event in the IDMC dataset be linked to climate change.[150]

There are no reliable figures on global migration resulting from the indirect and gradual impacts of climate change. Moreover, such figures are unlikely to become available in the near future. The way climate change interacts with other reasons for migration makes it difficult to determine—let alone quantify—what proportion of migration is driven in part by climate change.[151] An additional difficulty is that people rarely spontaneously mention climate change as a reason for leaving, but do mention its effects, such as drought, loss of income, or water scarcity.[152] In addition, there is no internationally agreed definition of climate-related migration, nor is there a common methodology for measuring it. This compounds a general shortage of migration data worldwide. International migration is tracked in most countries, but data on internal migration are not available everywhere, even though most migration—including climate-related migration—is internal.[153]

Modelling studies and social science research help improve our understanding of climate-related migration and assess possible future developments. Both approaches have their own strengths and limitations and are partly complementary.

[148] IOM (2024b); IPCC (2022b).
[149] IDMC (2018).
[150] See et al. (2026).
[151] Zickgraf (2021).
[152] Kaczan & Orgill-Meyer (2020); MMC (2022a); Schewel et al. (2024).
[153] EU-JRC (2025); IDMC (2025); IOM (2024b); IPCC (2022b); McLeman (2025); MMC (2022c); Nguyen et al. (2024); UNDESA (2013).

Modelling studies combine data on land use and demographics with climate scenarios to estimate the potential scale of future migration. Land suitability and availability are central to these studies. Researchers map where climate risks are expected to increase and which areas may become uninhabitable, for example as a result of sea-level rise or desertification.[154] It is estimated, for instance, that around 900 million people worldwide live in low-lying coastal areas that are vulnerable to the impacts of climate change.[155] A substantial share of the Dutch population also lives in such areas. Information on land suitability and availability is then combined with projections of socioeconomic and demographic developments in areas of origin and destination. This produces estimates of the number of climate-related migrants and the migration routes they may use.[156]

These modelling studies are a valuable tool for strategy and policy development, provided their results are interpreted carefully. The strength of these scenarios lies in their systematic exploration of uncertainties, risks, and opportunities against the backdrop of different societal and climate developments. They show how developments interact, what extremes are conceivable, and how sensitive the outcomes are to different assumptions. However, these scenarios are not exact predictions, and the estimated migration numbers should therefore not be interpreted as such. Factors that in practice have a major influence on migration—such as local living conditions, opportunities for adaptation, and future policy—can only be incorporated into these models to a limited extent, if at all.

In the social sciences, the focus is on people: researchers examine how individuals and communities respond to climate change and whether migration forms part of that response. Researchers use surveys and interviews to identify motivations for migration, such as work and income, politics, health, and expectations about the future, including the future climate. These data are linked to information on the local impacts of climate change, opportunities for adaptation, and local living conditions.[157] This provides insight into how people respond to a changing climate and which factors influence the decision whether or not to migrate.

Social science research is rich in detail and context, but is less well suited to determining the global scale of climate-related migration. Precisely because this research is small-scale and emphasizes local context, its findings are difficult to extrapolate to global estimates of climate-related migration.

Combining social science research with modelling and scenario studies can provide a more complete picture of climate-related migration. Scenarios provide insight into climate risks and broader socioeconomic developments, while local knowledge shows how climate change affects living conditions, which adaptation options are feasible and desirable, and which political, economic, physical, cultural, and social considerations play a role in migration.[158] From the perspective of recognition justice (which values, perspectives, and interests are taken into account?) and procedural justice (who is listened to, and what is done with their input?), it is also desirable to involve local communities in research that may affect their living environment (see Box F).

[154] Horton et al. (2021); Xu et al. (2020).
[155] IPCC (2022c).
[156] Horton et al. (2021); Milan & Standardi (2025); Schewel et al. (2024); Xu et al. (2020).
[157] Boas et al. (2021); Boas et al. (2025); Meijer et al. (2024); Schewel et al. (2024).
[158] Boas et al. (2021); Boas et al. (2025); Meijer et al. (2024); Schewel et al. (2024).

Box F. When is an area habitable or uninhabitable? A scientific and political debate

Different academic disciplines approach the assessment of habitability of areas in different ways. Assessing the current and future habitability of areas is an essential part of determining where people may migrate from and to as a result of climate change. In modelling studies, researchers use projections of climate risks to assess the future habitability of an area.[159] In such studies, habitability is assessed on the basis of projected climatic conditions, such as temperature, rainfall, and sea level, and their expected effects on people, for example through agricultural potential and the availability of drinking water. The limits of what is considered habitable are determined on the basis of the conditions under which most people have lived in recent decades.[160] This approach has been criticized, including by social scientists and civil society organizations. They argue that people have lived for centuries in places where living conditions are harsh and have continually found ways to adapt. They therefore consider it premature—or even problematic—to label areas as habitable or uninhabitable on the basis of projections of climate change and societal developments.[161] There may be more scope for adapting to climate change than we currently think, and even in 2026, millions of people live in climatic conditions that are far from optimal.[162] Not everyone will be able or willing to leave such areas (see Box E). Their interests risk being overlooked within the habitability framework. Social scientists and civil society organizations therefore emphasize that local communities and local knowledge should play an important role in determining what is considered habitable or uninhabitable. Local sociocultural factors, adaptation options, and the right to stay should also be taken into account.[163]

Identifying areas that are becoming uninhabitable can provide essential information for developing an adaptation strategy. The findings of scientific studies on habitability can help determine which areas should continue to receive investment in the future. This allows politicians and policymakers to make strategic decisions about how to respond to a changing climate. There is not always enough funding to invest in local adaptation, particularly in low- and middle-income countries. There are also areas around the world where there are physical limits to what adaptation can achieve. In such cases, “abandoning” areas can be an effective adaptation strategy (see Box H).[164] An understanding of the habitability of particular regions is essential to developing a timely, effective, and equitable approach to the resettlement of communities.

However, designating areas as uninhabitable or as “areas of departure” also risks becoming a self-fulfilling prophecy if decisions are made without involving local authorities and residents. This is particularly problematic in the context of development cooperation and international climate finance. Governments and funders in high-income countries have considerable influence over the scope for climate adaptation in low- and middle-income countries, for example by sharing knowledge and through climate and debt financing.[165] There are already areas, such as in the Marshall Islands, where providers of development finance have deliberately stopped investing because they consider such investments too costly or ineffective. In doing so, they disregard the wishes and adaptation plans of national governments and residents to adapt in the places where they live, while assuming that residents will eventually leave these areas of their own accord.[166] This can create a downward spiral: the less investment there is in climate adaptation and broader development, the faster an area may in fact become uninhabitable. Areas are also “given up on” without consulting local communities within high-income countries, leaving behind people with limited options.[167]

From the perspective of recognition and procedural justice, it is essential that countries and local communities themselves have a say in any decision to ‘give up’ particular areas of land. This creates a responsibility not only for policy, but also for the research on which such policy decisions are based. The right of people to make their own choices about their lives is enshrined in various international human rights treaties and extends to the right to stay in or leave a place, including in the context of a changing climate.[168]

[159] Horton et al. (2021); Xu et al. (2020).
[160] Lenton et al. (2023); Xu et al. (2020).
[161] Boas et al. (2025); Farbotko (2022); Farbotko & Campbell (2022); Sterly et al. (2025).
[162] Lenton et al. (2023).
[163] Sterly et al. (2025).
[164] Barnett & McMichael (2018); Degroot et al. (2022).
[165] Anguelovski et al. (2016).
[166] Bordner et al. (2020).
[167] Boas et al. (2025); IOM (2024b, 2024a). One example is the village of Fairbourne in the United Kingdom. In 2014, the local authority decided to stop actively protecting the coastal village from the effects of coastal erosion. Residents still live there, feel that their voices were not heard in the decision-making process, and have no clear prospect of resettlement. See Buser (2020).
[168] Boas et al. (2025); Bordner et al. (2020); Farbotko (2022).

3.1.2 Worldwide

On average, around 24 million people are displaced by extreme weather each year, primarily in Africa, East Asia, and the Pacific. Displacement caused by extreme weather occurs around the world (see Section 2.3). The number of people displaced by extreme weather varies from year to year. In 2024, an estimated 45.8 million people were displaced within their own country or region (internally displaced) by extreme weather, an exceptionally high number. By comparison, an estimated 20.1 million people were internally displaced by war and violence that same year. Most displacement caused by extreme weather occurs in East Asia and the Pacific, particularly as a result of flooding in low-lying coastal areas. People generally then seek temporary shelter elsewhere within their own country.[169]

Estimates of the future number of climate-related migrants range from several tens of millions to hundreds of millions of people by 2050. The literature also cites higher figures, reaching as many as 1.4 billion people by 2060.[170] However, this estimate is based on a worst-case scenario involving relatively high population growth and rapid sea-level rise, without taking policy measures or adaptation into account.[171] The wide range of estimates shows that the number of people who will migrate or be displaced as a result of climate change depends on many different factors and is therefore difficult to predict.

One of the most comprehensive modelling studies of climate-related migration at the global level was conducted by the World Bank. In its *Groundswell* reports, the World Bank projects a range of 44 million to 216 million internal migrants by 2050 (the reports do not address international migration).[172] The lower bound corresponds to a scenario involving rapid emissions reductions (RCP2.6), increasing global inequality (SSP4), and limited progress on adaptation. The upper bound corresponds to a scenario in which both emissions and inequality remain high (SSP4 and RCP8.5). The analysis is limited to migration associated with a small number of climate impacts: water scarcity, declining agricultural yields, and sea-level rise. In addition, several regions are excluded, including the Middle East, Europe, North America, Oceania, parts of East Asia such as Japan, and small island states worldwide. The World Bank therefore considers its own estimates conservative. The high-emissions scenario (RCP8.5) used in the reports will no longer be used as a reference scenario in the next assessment cycle of the Intergovernmental Panel on Climate Change (IPCC) because this emissions pathway is now considered unlikely.[173] This does not mean that the findings of studies using this scenario are immediately outdated. The climate impacts expected under a high-emissions scenario (RCP8.5) could still occur, but possibly later or to a lesser extent.

This extensive World Bank modelling study has been criticized. Researchers have pointed out that the models take only limited account of insights from the social sciences regarding local living conditions and people's ability and preferences to migrate or remain where they are. The influence of future policies and adaptation measures is also incorporated only to a limited extent. In addition, concerns have been raised about the limited transparency of the underlying model calculations and assumptions.[174]

Additional insight into the nature and patterns of climate-related migration can be gained by looking at trends. We identify four here:

1. **Most climate-related migration takes place over short distances, within people's own country or to neighbouring countries in the region.** People migrate both between rural areas and from rural to urban areas.[175]

2. **Climate change reinforces the global trend toward urbanization.** Climate change is not the only cause of increasing migration to cities worldwide, but it can reinforce this trend. More than half of the world's population already lives in urban areas. The urban population is

[169] IDMC (2025).
[170] EU-JRC (2025).
[171] Geisler & Currens (2017).
[172] World Bank (2018, 2021).
[173] van Vuuren et al. (2025).
[174] Daoust & Selby (2024); De Haas (2023).
[175] Hoffmann et al. (2020); IPCC (2022b); Van der Borght et al. (2025).

expected to increase by around 2.5 billion people by 2050, with approximately 90% of this growth expected in Asia and Africa.[176] This creates challenges for urban planning and service provision, as housing, employment, water, sanitation, health care, and transportation must also be provided for these new residents.[177] Cities are also particularly vulnerable to the impacts of climate change: they are vulnerable to the impacts of heat (because they often have little green space and a large amount of paved or built-up surface), smog formation, and flooding (because there is limited space for water infiltration and drainage). In addition, a growing number of people live in informal settlements in and around cities, where basic services are lacking or inadequate and exposure to climate risks is high.[178]

3. **Climate change already plays an important role in migration in Africa, and substantial climate-related migration within the continent is also expected in the future.** In a 2022 study of migrants in West and Central Africa, 2% of migrants in West Africa and 5% of migrants in Central Africa spontaneously cited "climate" as a reason for migrating. Economic, sociocultural, and security-related reasons were cited much more often. However, when specifically asked whether climate and environmental factors had also played a role in their decision to migrate, 41% in West Africa and 50% in Central Africa said that they had.[179] Climate change thus appears to play an important role in migration in Africa, although it is intertwined with other reasons for migrating. Modelling studies also indicate that Africa will be relatively heavily affected by climate-related migration. The World Bank estimates that the number of internal climate migrants in Africa will be between 20 million and 105 million by 2050.[180] In addition, the World Bank expects cities along the North African coast, including Algiers, Casablanca, Rabat, Tangier, Tripoli, and Tunis, to become major destinations for climate-related migration as early as around 2030.[181] This will mainly involve internal migration from rural to urban areas, supplemented by cross-border migration from Southern Africa.[182] The Africa Climate Mobility Initiative (ACMI) builds on the World Bank's modelling and supplements it with data from interviews, country studies, and surveys. Based on this, ACMI estimates that approximately 22.5 million people—around 1.5% of Africa's population—are currently on the move because of climate change. Here too, the finding is that most people migrate within national borders and that existing migration flows from rural to urban areas are being reinforced.[183] It is difficult to compare these figures with current migration on the African continent because no consistent figures are available.[184] The most recent estimate of the number of internal migrants on the African continent dates from 2005 and puts the figure at 113.5 million people living in a place other than where they were born and who have therefore migrated at some point. ACMI further estimates that between 46.5 million and 133.5 million people on the continent will migrate as a result of climate change by 2050.[185] ACMI also identifies cities in Sub-Saharan Africa as major destinations, including Goma, Khartoum, Kigali, and Maputo. It also identifies cities expected to experience out-migration as a result of climate change, including Abidjan, Accra, and Casablanca.

4. **Climate-related migration is also expected from small island states; in this case, it will involve international migration.** Small island states are highly vulnerable to climate change.[186] By the end of this century, some atoll states, such as Tuvalu, Kiribati, and the Marshall Islands, may become extremely difficult to inhabit as a result of sea-level rise, salinization, more frequent extreme weather, and the degradation of coral reefs and mangroves—even if global greenhouse gas emissions decline rapidly. At the same time, climate change is currently rarely the direct reason why residents of these islands migrate. A 2019 study of migrants from Micronesia, Kiribati, and the Marshall Islands shows that education and work are the main reasons for leaving; only 3% to 4% mention climate change as a direct reason. Sea-level rise and other impacts of climate change are, however, regularly

[176] IPCC (2022a).
[177] Armiero et al. (2023).
[178] UN-Habitat (2024).
[179] MMC (2022a).
[180] This figure is the combined total for the regions of Sub-Saharan Africa and North Africa. See: World Bank (2021).
[181] IPCC (2022b).
[182] ACMI & GCCM (2022); ECFR (2024); World Bank (2021).
[183] Hoffmann et al. (2020); IPCC (2022b); Van der Borght et al. (2025).
[184] IOM (2024b); UNDESA (2013).
[185] ACMI & GCCM (2022).
[186] Vousdoukas et al. (2023).

mentioned as reasons for not returning after migration.[187] In the future, migration may be one of the few responses available to the residents of these islands as the climate changes. However, there are still no global agreements on what will happen to these people's citizenship (see Section 3.2.3).[188]

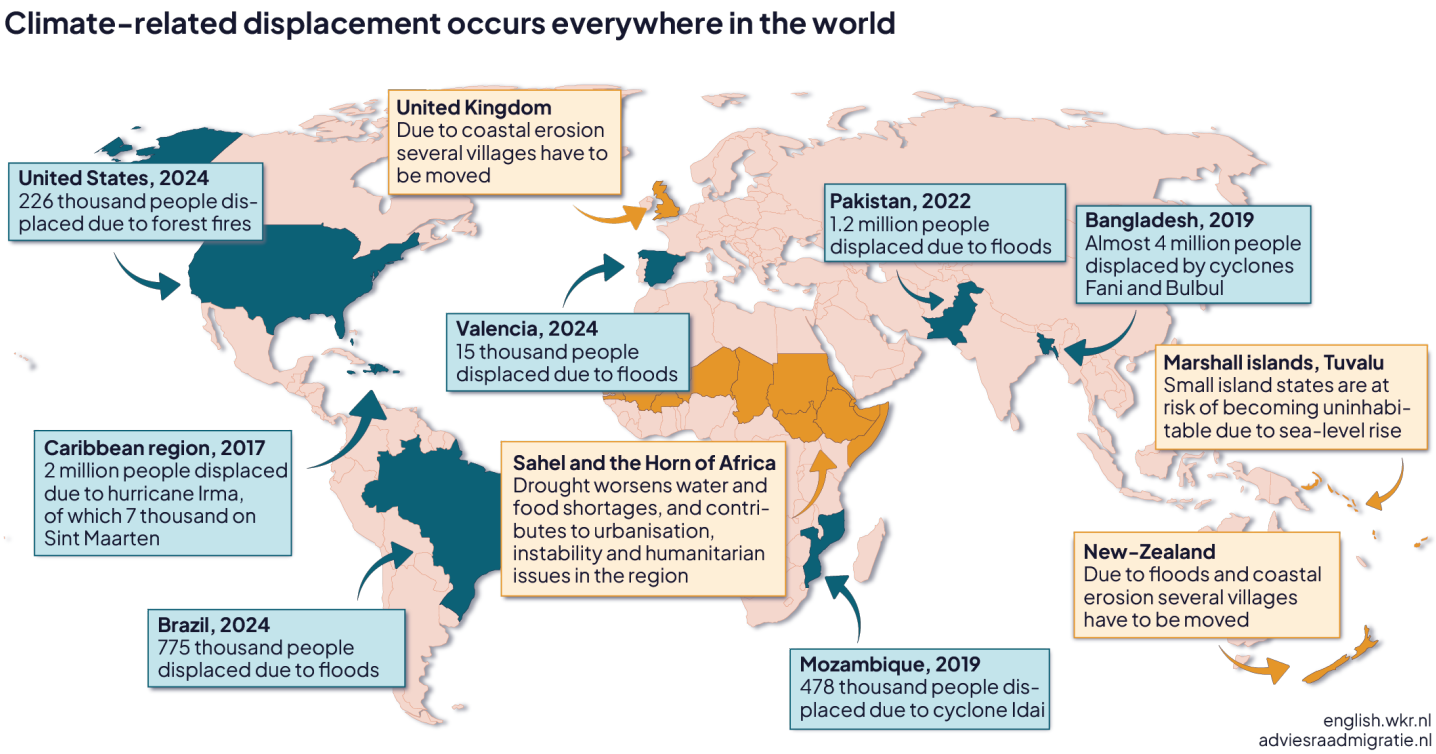


Figure 3: Examples of climate-related migration on the map.

3.1.3 Europe and the Netherlands

Climate-related displacement caused by extreme weather is becoming increasingly common in Europe. Displacement caused by extreme weather also occurs in Europe, although on a smaller scale than in Asia or Africa. An estimated 358,000 people across Europe were displaced by extreme weather in 2024.[189] There is no comprehensive study of displacement caused by extreme weather in Europe, but studies of individual events are available. For example, in Slovenia, Croatia, and Austria, around 8,000 people were evacuated in August 2023, and six people died, as a result of flooding and landslides caused by extreme rainfall.[190] In July 2026, thousands of people were also evacuated in Spain and France because of wildfires in those countries.[191] Thanks to strong government capacity and available resources, high-income countries are generally better able to cope with the impacts of climate change. Climate-related displacement caused by extreme weather can therefore often be prevented, for example through early warning systems, effective forest management, and water management. Not all climate-related displacement can be prevented, but when people are displaced in Europe, it is usually for a short period, and governments can support reconstruction and return (see Box B).[192] At the same time, there are physical and financial limits to adaptation and to accommodating climate-related migration here as well: during the wildfires in Southern Europe in the summer of 2022, not everyone was able to return to their original place of residence because their living environment and infrastructure had been destroyed.[193]

[187] Nakayama et al. (2019).
[188] Rothe et al. (2024).
[189] IDMC (2025).
[190] ReliefWeb (2023).
[191] Ruyssen (2025); World Weather Attribution (2026).
[192] Gil et al. (2022).
[193] Ruyssen (2025).

Migration caused by the indirect and gradual impacts of climate change also occurs within Europe. Experts point out that increasing climate risks in Europe may also lead to an increase in climate-related migration within Europe.[194] However, little research has been conducted on this so far. A recent study shows that drought in Italy has already led to internal migration, but does not provide specific figures.[195] Several studies indicate that climate-related migration within Europe is likely to increase in the future, particularly in Southern Europe.[196] Research among residents of low-lying coastal areas in France, for example, shows that moving inland is a realistic way for people to adapt to increasing flood risks and sea-level rise resulting from climate change. In countries around the Mediterranean, people are likewise expected to migrate to higher ground for the same reasons.[197] It is not yet clear whether this will mainly result in migration within individual countries or also between European countries. Citizens of the European Union are free to move within the Union for the purposes of travel, residence, work, or study, provided they meet the applicable conditions.[198]

No sharp increase in climate-related migration to Europe is currently expected because the vast majority of climate-related migration is internal, although such an increase cannot be ruled out entirely in the longer term. Some experts point out that, over the longer term, climate change could reinforce existing migration patterns, for example from Africa to Europe.[199] The reasoning is that if cities along the North African coast become major destinations for climate-related migration in the coming decades, this could potentially also lead to more migration—or attempted migration—to Europe.[200] For example, a study of 103 countries of origin of asylum seekers shows that temperature fluctuations in countries of origin are associated with higher numbers of asylum applications in Europe.[201] However, this study was criticized because it did not establish a causal relationship.[202] Another study shows that extreme weather, particularly droughts and floods, is increasingly referred to in asylum decisions by the court of appeal in Austria. These decisions concerned asylum applications from Somalia, Afghanistan, and Pakistan.[203] A study of migrants in Greece from various countries in Asia and Africa concludes that the effects of climate change played a role in the decision to migrate for half of the 70 migrants interviewed.[204] These studies are small-scale, but they point to a role for climate change in migration from outside Europe to Europe. By contrast, many studies show that climate-related migration mainly takes place over short distances, within countries (see Section 3.1.2). The IPCC likewise concludes that climate-related migration will primarily be internal rather than intercontinental.[205] A study of asylum applications in Europe shows that variations in temperature and drought have only a very limited effect on such applications.[206] Experts emphasize that the people most severely affected by climate change often do not have the financial means to make the relatively expensive journey to Europe, even if they wanted to.[207] In short, although some studies show that climate change plays a role in migration to Europe, they do not yet show that a sharp increase in migration to Europe can therefore be expected. Moreover, there is substantial evidence that climate-related migration is primarily internal. However, as long as large-scale studies and monitoring specifically focused on climate-related migration to Europe are lacking, it remains difficult to draw definitive conclusions.

Climate-related migration also occurs in the European part of the Netherlands and may become more common in the future, but research on this remains limited. There is no comprehensive research or monitoring on climate-related migration in the Netherlands, but it is clear that such migration also occurs here. In 2024, a severe rainstorm caused extensive damage in the low-lying Enschede neighbourhoods of Pathmos and Stadsveld. A total of 57 households had to be accommodated elsewhere. This was intended to be temporary, but the residents were ultimately unable to return because there were no short-term options for

[194] Based on expert interviews. See also EEA (2024).
[195] Karabulutoğlu et al. (2026).
[196] Boas et al. (2025); EEA (2024); EPC (2023).
[197] EEA (2024).
[198] Article 21, Verdrag betreffende werking van de Europese Unie (2017).
[199] EPRS (2022) and expert interviews.
[200] ECFR (2024).
[201] Missirian & Schlenker (2017).
[202] Schutte et al. (2021).
[203] Mayrhofer & Ammer (2022).
[204] Nantsou et al. (2026).
[205] IPCC (2022b).
[206] Schutte et al. (2021).
[207] Cottier & Salehyan (2021); Ruyssen (2025) and expert interviews.

preventing a recurrence.[208] The Netherlands has 47 neighbourhoods that are similarly vulnerable to Pathmos, both because of their location and because of the vulnerable position of their residents.[209] In the longer term, the planned relocation of people may be necessary to protect against flooding; for example, homes may need to be moved to allow dikes to be widened.[210] Communities have previously been relocated in a planned manner under the Room for the River (Ruimte voor de Rivier) program to reduce flood risks.[211] In addition, some people in the Netherlands choose to move voluntarily because of the gradual and indirect impacts of climate change.[212] A 2022 survey found that 11% of people in the Netherlands were considering moving because of flood risks.[213] There are also indications that climate risks play a role in home-buying decisions, particularly among younger people.[214]

The Caribbean part of the Kingdom of the Netherlands is highly vulnerable to the impacts of climate change; extreme weather has already led to temporary displacement on Sint Maarten. The impacts of climate change in the Caribbean part of the Kingdom include heat, drought, sea-level rise, ocean acidification, the loss of coral reefs and mangroves, coastal erosion, and stronger and wetter tropical storms and hurricanes. The Leeward Islands (Saba, Sint Eustatius, and Sint Maarten) are also located in the hurricane belt and are therefore at greatest risk of hurricane damage. The Leeward Antilles (Aruba, Bonaire, and Curaçao) are particularly vulnerable to heavy rainfall, strong winds, and storm surges.[215] Hurricane Irma in 2017 is one example. This hurricane was exceptionally severe and brought more rainfall and a higher storm surge than would have occurred without climate change.[216] The storm displaced around 2 million people, mainly in Haiti, Dominica, and the Bahamas.[217] On Sint Maarten, around 7,000 people (more than 15% of the population) were displaced. Severe damage to infrastructure temporarily isolated the island after the hurricane.[218] Supply routes for relief goods were cut off, communications barely functioned, and social unrest arose.[219]

Little is known about climate-related migration in the Caribbean, particularly in the Caribbean parts of the Kingdom. The Caribbean has long experienced high levels of migration driven by employment, education, health care, family, and safety. This migration takes place between the islands, as well as to and from Latin America, the United States, and former colonial powers such as France, the United Kingdom, and the Netherlands.[220] At present, the population of the Caribbean parts of the Kingdom is growing as a result of migration, and this trend is expected to continue toward 2050. [221] The pattern differs from island to island. The populations of Aruba, Bonaire, Curaçao, and Sint Maarten are growing faster than those of Saba and Sint Eustatius.[222] The capacity to accommodate new residents also varies between the islands. There is still very little research on how climate change affects these migration patterns. One study points to the possibility that climate change has put pressure on livelihoods in Venezuela, particularly through the loss of income among small-scale farmers. This indirectly contributed to instability and migration from the country, although political and economic conditions were more decisive.[223] Several thousand migrants from Venezuela currently live on Aruba, Bonaire, and Curaçao.[224] Because of the regional and social differences between the islands, the nature and scale of climate-related migration are also likely to differ from one island to another. No island-specific analyses are available.

In the Caribbean parts of the Kingdom, the emphasis for now is on adapting to the impacts of climate change rather than on migration. This is evident, among other things,

[208] Oost Nieuws (2025).
[209] Onderzoeksraad voor Veiligheid (2026).
[210] Deltares (2022a); Kennisprogramma Zeespiegelstijging (2024).
[211] Wolff et al. (2026).
[212] De Volkskrant (2024); Vrij Nederland (2025).
[213] Hoogwaterbeschermingsprogramma (2020).
[214] Caribisch Netwerk (2019); De Volkskrant (2024); Hoogwaterbeschermingsprogramma (2022); Stadszaken (2022); Vrij Nederland (2025).
[215] IPDC (2024); KNMI (2023); MPI & IDB (2023).
[216] Patricola-DiRosario & Wehner (2018).
[217] Francis (2019); MPI & IDB (2023).
[218] ANV (2022).
[219] Ministerie van Justitie en Veiligheid (2023).
[220] MPI & IDB (2023).
[221] Rijksdienst Caribisch Nederland (2025); NIDI (2024).
[222] CBS Aruba (2025); CBS Curacao (2025); NIDI (2024).
[223] Madurga Lopez et al. (2021).
[224] R4V (2025).

from the recent court case brought by residents of Bonaire against the Dutch State. The case was brought in an effort to compel the Dutch government to do more to support climate adaptation on Bonaire. The emphasis on climate adaptation is also reflected in the many local initiatives in this area and in the development of national adaptation strategies and climate plans on all six islands.[225] However, local climate adaptation is only possible if sufficient institutional, infrastructural, and financial resources are available.[226]

Without climate adaptation, living conditions in the Caribbean could deteriorate significantly in the medium term, potentially increasing the desire to leave. In parts of Bonaire, for example, flood risks are expected to increase sharply by 2050 if no additional measures are taken.[227] The extent to which the islands remain attractive places to live depends in part on investment in climate adaptation and on the availability of basic services, such as education, employment, health care, and adequate housing.[228] Particular attention should be paid to the resilience of housing and infrastructure to extreme weather. Research in the Caribbean suggests that repeated displacement or a highly disruptive disaster may increase people's desire to leave.[229] Whether this actually results in migration, however, depends on the opportunities to rebuild locally, the support available, and broader socioeconomic and political conditions.[230] An illustrative example—though one that cannot automatically be applied to the Caribbean parts of the Kingdom—is Hurricane Maria in Puerto Rico in 2017.[231] After the hurricane, an estimated 4% to 14% of the population moved to the mainland United States; one year later, about half were still living there.[232] Although no comprehensive research has been conducted, there are also reports that some residents of Sint Maarten moved permanently to the European part of the Netherlands after Hurricane Irma.[233]

3.2 The national and international challenge

3.2.1 National challenge

Addressing climate-related migration is primarily a national matter because it mainly involves internal migration. It is therefore primarily up to countries themselves to prepare for climate-related migration. Many are already doing so. Dozens of countries incorporate migration into their national climate adaptation strategies, including Bangladesh, Costa Rica, Fiji, Cameroon, Morocco, Niger, Samoa, Sudan, and South Africa.[234] This can involve, for example, taking account in spatial planning of accelerated urbanization caused by climate change (see Box G), or developing policies for the planned relocation of vulnerable communities (see Box H).[235] In some regions, policies are being developed to facilitate cross-border migration in the context of climate change.[236] For example, the Economic Community of West African States (ECOWAS) and the Intergovernmental Authority on Development (IGAD), an organization of East African states, are working together to facilitate the free movement of climate-related and other migrants and displaced people.[237]

[225] IPDC (2024); Rechtbank Den Haag (2026).
[226] Gruber et al. (2025); IPDC (2024).
[227] Ministerie van Justitie en Veiligheid (2023).
[228] Gezondheidsraad & WKR (2026); IPDC (2024); NIDI (2024).
[229] de Sherbinin et al. (2024); MPI & IDB (2023); World Bank (2021).
[230] Kaenzig & Piguet (2014).
[231] Research shows that Hurricane Maria was more intense as a result of climate change; see Keellings & Hernández Ayala (2019).
[232] DeWaard et al. (2020); Martín et al. (2020).
[233] Caribisch Netwerk (2019).
[234] Hardee & Mutunga (2010); NAP Global Network (2025).
[235] Khan et al. (2021); NAP Global Network (2025).
[236] Vinke et al. (2020).
[237] ECOWAS (2022); IGAD (2020); SWP (2025).

Box G. Addressing climate-related migration in Bangladesh

Climate change has a major impact on Bangladesh, particularly its coastal areas. The country is facing, among other things, an increase in extreme weather, greater variation in rainfall throughout the year, rising temperatures, and sea-level rise. These developments have a major impact on coastal areas, where flooding is becoming more frequent, the land is subsiding, the coast is eroding, and the soil is becoming more saline.[238]

Life in rural coastal areas is becoming more difficult, and some people are migrating to nearby cities. Extreme weather events such as cyclones and floods have led to the displacement of people, as seen after Cyclones Fani and Bulbul in 2019.[239] Climate change is causing problems with the availability of drinking water and is affecting agriculture, aquaculture, and fisheries. As a result, incomes are falling or disappearing altogether. Life in rural areas is becoming more difficult, leading to climate-related migration. Migrants often move to nearby cities.[240] Bangladesh is considered one of the countries where climate-related migration is relatively common. An estimated 13 million people in Bangladesh are expected to be displaced by 2050 and ultimately migrate to the capital, Dhaka, and other major cities. There, climate-related migrants will probably outnumber other internal migrants.[241]

Authorities in Bangladesh have begun taking measures to prevent climate-related migration and are making plans for how to manage it when it does occur. Bangladesh's National Adaptation Plan and the Bangladesh Delta Plan 2100 (to which Dutch expertise contributed[242]) both address climate-related migration extensively.[243] Bangladesh has adopted multi-year policies on climate-related migration that aim not only to prevent migration but also to facilitate it. For example, the adaptation strategy is designed to offer people in coastal areas a viable future. One way of doing this is by training young people for occupations that are in greater demand in cities, so that in the future they do not have to become farmers or fishers like their parents, as these are highly vulnerable occupations. The adaptation strategy also aims to ensure that migration to cities is well managed. This includes assessing which cities have the capacity to accommodate growth caused by migration. Large cities such as Dhaka are already under pressure, with the result that migrants often end up in informal settlements where climate risks are high and access to education, employment, and health care is limited.[244] The government is therefore pursuing policies aimed at attracting climate-related and other migrants to medium-sized cities.[245]

3.2.2 Role of the international community

The international community also has a role and responsibility in addressing climate-related migration, particularly in relation to low- and middle-income countries. In 2018, UN Member States adopted the UN Global Compact for Migration (*Global Compact for Safe, Orderly and Regular Migration*). In this legally non-binding agreement, UN Member States recognize that the impacts of climate change can be an important driver of migration. The Compact expresses the ambition that UN Member States work together to enable people to remain sustainably in their countries of origin. They also aim to develop a coherent approach to displacement caused by extreme weather through the development and harmonization of regional and subregional approaches. Where adaptation or return to the country of origin proves impossible, countries intend to make efforts to provide climate-related displaced people with legal migration pathways, for example through planned relocation or visa options (which have so far been introduced only to a limited extent; see the next section).[246]

The UN Framework Convention on Climate Change (UNFCCC) also entails a responsibility for the international community to support climate-related migrants and displaced people. At the 2023 Climate Conference (COP28), climate-related migration was recognized as a form of "loss" caused by climate change.[247] It is thereby included among the impacts of climate change for which countries worldwide share responsibility.[248] Under the Paris Agreement, this responsibility lies particularly with industrialized, high-income countries because of their large historical contribution to the greenhouse gas emissions that cause climate change.[249] At the

[238] Chowdhury et al. (2022); Gupta et al. (2025).
[239] IDMC (2026).
[240] Rana & Ilina (2021).
[241] Alam et al. (2018); World Bank (2021).
[242] Hasan et al. (2020).
[243] Government of Bangladesh (2018, 2022).
[244] Rana & Ilina (2021).
[245] Alam et al. (2018).
[246] Objectives 2 and 5 of the UN Global Compact for Migration. See: UNGA (2018).
[247] EPRS (2022).
[248] ICJ (2025).
[249] PBL (2024); UNFCCC (2015).

same time, action by all countries is needed to address the impacts of climate change worldwide.[250] Support between countries can take the form, for example, of development cooperation, the sharing of knowledge and expertise, or contributions to UN climate funds such as the Fund for Responding to Loss and Damage, which low- and middle-income countries and small island states can draw on for financial support related to climate-related migration.[251]

So far, this responsibility has mainly been implemented through non-binding arrangements. As noted above, the UN Global Compact for Migration is not legally binding. Agreements under the Paris Agreement are legally binding, but financial contributions to the UN Fund for Responding to Loss and Damage are voluntary. Other initiatives are voluntary as well. For example, in 2024 the UN Refugee Agency (UNHCR) established a climate resilience fund to protect refugees and displaced people (who have fled or been displaced for a wide range of reasons and constitute a vulnerable group) from further marginalization as a result of climate change.[252] Contributions to this fund are also voluntary. For both the UN Fund for Responding to Loss and Damage and UNHCR's climate resilience fund, funding needs far exceed the funding currently available or pledged.[253] Nor have any globally binding agreements yet been reached on the legal protection of climate-related migrants and displaced people (see the next section).

3.2.3 International legal protection of climate-related migrants and displaced people

No binding global agreements have yet been reached on the international legal protection of climate-related migrants. Although most climate-related migration is expected to take place within countries, some people will migrate across borders. No binding global agreements have yet been reached on the legal protection of climate-related migrants.

Climate-related migrants do not qualify for refugee status under the UN Refugee Convention. The term "refugee" is a legal term for a person who leaves their country owing to a well-founded fear of persecution on the grounds of race, religion, nationality, political opinion, or membership of a particular social group.[254] Where this applies, the UN Refugee Convention provides protection.[255] Climate change is not included in the UN Refugee Convention, and a "climate refugee" therefore does not exist as a legal category.[256] Within the EU, however, there is what is known as subsidiary protection status. This is intended for people who do not fall within the definition of a refugee but who would face a real risk of serious harm if returned to their country. Examples include the death penalty, execution, torture, inhuman or degrading treatment or punishment, or a serious and individual threat to life as a result of indiscriminate violence in situations of armed conflict.[257] In practice, "serious harm" is understood primarily to mean violence. Migration to another country because of climate change therefore does not fall under subsidiary protection under EU law either.[258] Subsidiary protection may apply indirectly if the impacts of climate change lead to violent conflict.[259]

There have, however, been developments in the international legal protection of climate-related migrants. In 2020, for example, the UN Human Rights Committee issued a decision in a case brought by a resident of Kiribati against New Zealand.[260] The resident argued that New Zealand had violated his right to life by deporting him to his home country after rejecting his

[250] There is growing debate about how responsibilities should be shared in combating climate change and protecting people from its impacts. For example, there is debate about the responsibilities of emerging states within the UNFCCC framework because of their rapid industrialization. Some of these states already contribute to UNFCCC funds. In 2025, the International Court of Justice advised that all states have an obligation to cooperate to mitigate climate change and protect people worldwide from its impacts. See: ICJ (2025); McAdam (2026); Michaelowa & Michaelowa (2015).
[251] EPRS (2023).
[252] EPRS (2023); UNHCR (2024).
[253] ECDPM (2025).
[254] This concerns persecution by the authorities on these grounds.
[255] All EU Member States are parties to the UN Refugee Convention. See: UNGA (1954) and Verdrag betreffende de status van vluchtelingen BWBV0001002 (1954).
[256] Brouwer (2020a, 2020b); EPRS (2023).
[257] Article 15, Richtlijn 2011/95/EU van het Europees Parlement en de Raad (2011). According to some, the Temporary Protection Directive, which was activated for the first time for people displaced from Ukraine, may potentially provide protection for people displaced by climate change. See also: Motte-Baumvol et al. (2025).
[258] SVR (2023).
[259] Brouwer (2020a, 2020b).
[260] The Human Rights Committee monitors compliance with the Internationaal Verdrag inzake burgerrechten en politieke rechten (1979). Although the Committee's views are formally not binding, it can be argued that in practice they are. The ICCPR is binding on states that have ratified it, such as the Netherlands. Under public international law, they are required to interpret and perform treaties in good faith (Articles 26 and 31 of the Vienna Convention on the Law of Treaties). See also: Brouwer (2020a).

asylum application, because the small island state was becoming increasingly uninhabitable as a result of climate change. Although the Committee did not rule in favour of the resident of Kiribati, it recognized that, without a change in the global course of action, climate change could in the future become a reason why states may not return people to countries where they would be at risk.[261] Building on this case, the International Court of Justice stated in a 2025 advisory opinion that people may sometimes flee to another country, or be unable to return to their home country, because of the potentially life-threatening impacts of climate change. Under the principle of non-refoulement, states may not remove anyone where there are substantial grounds for believing that there is a real risk of irreparable harm to the right to life, according to the United Nations' highest judicial body.[262]

Steps are also being taken at the continental level to provide greater protection for climate-related migrants and displaced people. The OAU Convention[263], signed by 46 Member States of the African Union, and the Cartagena Declaration on Refugees, signed by ten countries in Latin America, may provide opportunities to protect climate-related migrants and displaced people. Both regional instruments use a broader definition of "refugee" than the UN Refugee Convention, extending it to people fleeing "events seriously disturbing public order." To date, however, there are no known cases in which people fleeing natural hazards have received legal protection under these treaties.[264]

In 2025, the Inter-American Court of Human Rights advised that states should develop appropriate legal frameworks to protect people who have been internationally displaced as a result of climate change. This could include humanitarian visas, temporary residence permits, or protection under refugee status or a similar status.[265] The Court advised that states[266] should develop legal, policy, institutional, and budgetary instruments for climate-related displacement and cooperate with regional, international, and local stakeholders in doing so.[267] In the same advisory opinion, the Court also addresses the prevention of climate-related migration. It states that countries should prevent climate-related migration and displacement and protect sectors and population groups exposed to the impacts of climate change. This should be done through measures aimed at protecting sources of income, food and water security, and adequate housing, as part of policies aimed at sustainable development, as well as through mitigation and adaptation targets.[268]

The European Court of Human Rights has not yet expressly ruled on this issue. In a 2011 judgment, however, the Court left open the possibility that natural phenomena, such as drought, could in very exceptional circumstances mean that a person may not be returned to their country of origin.[269]

[261] (2020). According to the Committee, states parties to the ICCPR may not remove a person where there are substantial grounds for believing that there is a "real risk" of irreparable harm within the meaning of Articles 6 and 7. The Committee stated that the threshold for establishing such substantial grounds is high. The risk of harm must be personal and cannot be based solely on conditions in the receiving country, except in extreme cases. See also: Carbon Brief (2024b).
[262] See para. 378, ICJ (2025). This prohibition is set out in Article 3 of the Europees Verdrag voor de Rechten van de Mens (1950) and Article 4 of the Handvest van de Grondrechten van de Europese Unie 2000/C 364/01 (2000).
[263] Full title: Organisation of African Unity Convention Governing the Specific Aspects of Refugee Problems in Africa.
[264] Adeola (2022); Mishra & Singh (2023).
[265] Inter-American Court of Human Rights (2025), para. 433.
[266] The Inter-American Court of Human Rights exercises judicial functions in countries that are parties to the American Convention on Human Rights and recognize the jurisdiction of the Court. These are Argentina, Barbados, Bolivia, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, and Uruguay.
[267] Inter-American Court of Human Rights (2025), para. 424.
[268] Inter-American Court of Human Rights (2025), para. 422.
[269] Europees Hof voor de Rechten van de Mens (2011), paras. 282–283 and Brouwer (2020b).

4. What the Netherlands can do

This chapter explains why it is important for the Netherlands to address climate-related migration and what additional steps it can take. We identify four areas in which Dutch politicians, policymakers, researchers, and civil society can take further action.

4.1 The Netherlands' interests and responsibilities

The Netherlands may itself be affected by climate-related migration. The impacts of climate change have already led to displacement in the European part of the Netherlands and in the Caribbean part of the Kingdom (see Box B and Section 3.1.3). At present, this mainly involves temporary displacement caused by extreme weather. In the longer term, the Netherlands should take into account the possibility that climate-related migration may become more common throughout the Kingdom, including as a result of the indirect and gradual impacts of climate change. The same applies to Europe.

The Netherlands has an international responsibility to address climate-related migration. Although climate-related migration is primarily a national matter (see Section 3.2.1), the Netherlands also has a role to play as part of the international community. This follows from agreements made under the UN climate agreement (see Section 3.2.2). The Netherlands is among the high-income countries with high historical emissions,[270] which entails a responsibility to support climate-related migrants and displaced people worldwide. In the UN Global Compact for Migration, the Netherlands also expressed its ambition to support migrants. This is in keeping with the efforts the Netherlands has made for decades to protect human rights worldwide.[271]

It is also in the Netherlands' interest to address climate-related migration "far away": instability and conflict resulting from climate-related migration in other countries may affect global security and trade relations. Climate-related migration is expected to have the greatest impact on countries "far away," but it may still affect the Netherlands indirectly. Climate change and climate-related migration may increase instability, social tensions, and possibly extremism worldwide (see Section 2.3). This indirectly poses a threat to Dutch security.[272] Instability in partner countries may also affect the Netherlands, for example because it depends on these countries for access to critical raw materials, migrant workers, technology, or knowledge. One example is the recently concluded partnership between the EU and the Democratic Republic of the Congo (DRC), through which the EU aims to strengthen access to the raw materials needed for the energy transition.[273] This access is under pressure because of prolonged conflict and displacement in the region, and there are indications that climate change is increasing the risks of conflict and displacement in the DRC.[274]

4.2 Four areas for action at the national and international levels

The Netherlands can build knowledge and take action on climate-related migration in several areas. We discuss four areas in which the Netherlands can take action at the national, European, and international levels. These areas are relevant to the government and parliament, as well as to research institutions and civil society actors. For all four areas, further knowledge development on climate-related migration is an important step, because many knowledge gaps remain. At the same time, it is important to start taking action even under conditions of uncertainty. This can be done, for example, through an adaptive approach in which policies are regularly evaluated and adjusted, and by acting in accordance with the precautionary principle.

[270] EPRS (2023); ICJ (2025).
[271] Minister voor Buitenlandse Handel en Ontwikkelingshulp (2025).
[272] AIV (2025); APPG (2026); HCSS (2026); Ministerie van Defensie (2026); Ministerie van Justitie en Veiligheid (2023); WRR (2024).
[273] European Commission (2024).
[274] Nagabhatla et al. (2021); Vinke et al. (2023).

In addressing climate-related migration, people's freedom of choice, dignity, and safety should come first. People have the right to self-determination, including in how they respond to climate change (see Box F).[275] It is therefore important to increase people's freedom to choose whether to stay or leave. Creating legal migration pathways (which is one of the objectives of the UN Global Compact for Migration) therefore cannot be separated from helping to ensure that people can remain safely and with dignity in the places where they live, for example through climate adaptation. Migration can be an adaptation strategy, but only if people are free to choose whether to stay or migrate. This also requires attention to the right and the ability to stay (see Box E).[276]

4.2.1 National: preparing for climate-related migration within the Kingdom

In the short term, it is important to be well prepared for disasters throughout the Kingdom in order to prevent temporary or lasting displacement. Extreme weather is expected to become more frequent both in the European part of the Netherlands and in the Caribbean part of the Kingdom, with potentially serious impacts on people's lives and living conditions.[277] The European part of the Netherlands is vulnerable, for example, to extreme rainfall. Large-scale evacuations and serious damage to homes caused by extreme rainfall are a real risk.[278] Although measures are being taken to improve preparedness for extreme rainfall, these measures are not keeping pace with the rate at which the risk of extreme rainfall is increasing.[279] Disaster preparedness can also be strengthened in the Caribbean parts of the Kingdom.[280]

It is desirable to gain a better understanding of climate change as a driver of migration within the European part of the Netherlands and within the Kingdom. As noted above, there is little research on climate change as a driver of migration within the European part of the Netherlands or within the Kingdom (see Section 3.1.3). It would be useful to study and monitor this systematically. This could be done, for example, by linking data on climate risks and progress on adaptation with data on residential moves and migration. In particular, monitoring of progress on adaptation is still lacking at the local level.[281]

To remain climate-resilient in the future, it is necessary to start the debate now about where people in the Netherlands will still be able to live in the future and whether this may require the planned relocation of people. Current adaptation policy in the European part of the Netherlands is strong, but not sufficient everywhere to address rapidly increasing climate risks.[282] Good adaptation policy can substantially reduce damage and risks, but requires clear spatial choices. This includes the question of which areas will remain suitable for housing and infrastructure in the longer term.[283] In recent decades, extensive construction has taken place in areas vulnerable to flooding and land subsidence, often without sufficient account being taken of a more volatile climate.[284] At the same time, additional space is needed to manage the impacts of climate change, for example for water storage, river widening, nature development, and dike reinforcement. This may mean that existing buildings have to make way. Long-term strategies for dealing with sea-level rise also have a major spatial dimension and may provide grounds for the planned relocation of people and activities.[285] Without timely choices, the risk of costly and socially disruptive relocations increases, often following climate-related damage (see Box B and Box H). To stay ahead of this, the government can choose planned relocation as a policy instrument (see Section 2.3). Planned relocations can form one of the tools in a broader adaptation portfolio aimed at allowing the function of an area (such as housing or infrastructure) to evolve along with the climate.[286]

[275] Boas et al. (2025); Bordner et al. (2020); Farbotko (2022).
[276] De Haas (2021).
[277] Inspectie Justitie en Veiligheid (2025); KNMI (2023); Ministerie van Defensie (2026); PBL (2026).
[278] Deltares (2021).
[279] Onderzoeksraad voor Veiligheid (2026).
[280] Inspectie Justitie en Veiligheid (2025).
[281] WKR (2025b).
[282] PBL (2026); WKR (2025b).
[283] PBL (2026); WKR (2025b).
[284] Rli (2024).
[285] Kennisprogramma Zeespiegelstijging (2024).
[286] WKR (2025b).

Box H. Planned relocation in New Zealand

New Zealand has extensive experience with the planned relocation of people and communities after natural disasters and extreme weather. Because of its location, long coastline, and active geology (volcanic activity and earthquakes), storms, floods, landslides, and coastal erosion occur regularly. In recent years, decisions have repeatedly been made after disasters to relocate people and facilities temporarily or permanently—often involving a number of homes,[287] or, in one case, an entire village.[288] A larger-scale example is the *red zones* in Ōtautahi/Christchurch, which were cleared following the 2010–2013 earthquakes because of severe land subsidence and damage.[289] A buyout scheme was introduced for around 8,000 homes, and more than 20,000 people made use of it. To date, relocation in New Zealand has mainly been reactive, often taking place after a disaster and involving substantial government intervention.[290] The scale of planned relocation remains limited.[291]

As climate change increases risks in many areas, calls are growing in both politics and society for a planned relocation strategy. This is due in part to rising projected damage, poor experiences with ad hoc approaches following disasters, and concerns about what is known as *insurance retreat*: rising insurance premiums or the withdrawal of insurance coverage and financing from high-risk areas. For example, a large and growing share of the population lives in areas at high risk of flooding.[292]

Policies for planned relocation are already being developed locally, while work is underway on a long-term strategy at the national level. At the national level, a framework for planned relocation has been considered by a specially established working group[293], the Ministry for the Environment,[294] and civil society organizations and think tanks.[295] Following two major extreme weather events in 2023—Cyclone Gabrielle and the *Auckland Anniversary Weekend floods*—the government at the time decided to include a national planned relocation strategy in the Climate Change Adaptation Bill. The strategy is intended to provide clarity on the rules and processes for reactive and proactive relocation. This includes questions such as who decides whether relocation should take place, what criteria are used, how the process is structured, and how costs and responsibilities are allocated. Because work on the national framework is currently on hold, local authorities are taking their own initiatives, for example by introducing voluntary buyout schemes[296] or developing plans to gradually relocate residents to lower-risk areas.[297]

New Zealand's experience offers valuable insights. It shows that a careful process is crucial because planned relocation has a major impact on the people affected. Important lessons include providing transparent and adequate compensation and engaging early and continuously with households and communities that have been or will be relocated. The way planned relocation is discussed also matters for public support and acceptance: is the emphasis on loss, or also on what can be gained? And is sufficient attention paid to the social and cultural dimensions of that loss? Tellingly, the Expert Working Group on Managed Retreat chose the Māori term *te hekenga rauora*, meaning "relocation with positive outcomes."[298] Māori also see relocation as an opportunity for restorative justice: returning land and decision-making authority, restoring ecosystems, and supporting Māori-led adaptation strategies that strengthen their cultural traditions.[299]

Planned relocation is receiving increasing attention worldwide, and the Netherlands can learn from other countries in this area. The Netherlands already has some experience with the planned relocation of people and activities, for example under the Room for the River (Ruimte voor de Rivier) program and, more recently, in Enschede. Nevertheless, use of this strategy remains limited, and where it does occur, it is small-scale and incidental. In the Netherlands, planned relocation is generally regarded as a controversial measure of last resort.[300] In other countries, planned relocation already forms a more explicit part of spatial planning policy.[301] In New Zealand, for example, planned relocation is already incorporated into many local spatial planning policies (see Box H).[302] Initiatives are also under way in Portugal,

[287] Pawson & Blakie (2025).
[288] Radio New Zealand (2026).
[289] Cloke et al. (2023).
[290] Pawson & Blakie (2025).
[291] Ministry for the Environment & Stats NZ (2019).
[292] Paulik et al. (2023).
[293] Expert Working Group on Managed Retreat New Zealand (2024).
[294] Ministry for the Environment NZ (2023).
[295] Environmental Defence Society (z.d.).
[296] Byrnes & Thangavelu (2026).
[297] Resilient Westport (z.d.)
[298] Expert Working Group on Managed Retreat New Zealand (2024).
[299] Parsons & Jayawardena (2026).
[300] Kraan et al. (2025); PBL (2026); Wolff et al. (2026).
[301] Ocean and Climate Platform (2025).
[302] Hanna et al. (2017).

France (both in Europe and its overseas territories), and Senegal to relocate coastal villages because of increasing climate risks.[303] The Netherlands can draw on these international experiences to strengthen its own knowledge base. Previous examples offer important lessons about planned relocation. For example, it is important to anticipate the climate risks people face in order to prevent disasters and displacement or disruptive last-minute planned relocation. A careful process is also needed in which local communities are involved in decisions to abandon areas, are adequately compensated, and have a say in how the "abandoned" area can continue to be used or commemorated in ways that do justice to people's cultural attachment to the area.[304]

4.2.2 European: gaining insight and developing a strategy for climate-related migration within and to Europe

It would be prudent for the Netherlands to invest in building knowledge about climate-related migration within and to Europe, both independently and at the European level. As noted above, there is still insufficient understanding of climate-related migration within and to Europe (see Section 3.1.3). In the UN Global Compact for Migration, countries expressed the ambition to strengthen joint analysis and information sharing in order to better map, understand, predict, and address migration movements—for example, those related to climate change.[305] This ambition was reiterated in the May 2026 update of the commitments under the UN Global Compact for Migration.[306] To help fulfil this ambition, the Netherlands could promote monitoring and research into climate-related migration within and to Europe, for example in cooperation with the European Union Agency for Asylum (EUAA), the European Migration Network (EMN), and the European Commission. The Netherlands can also take action independently, for example by conducting research. Migration researchers and research institutions can build greater knowledge about climate-related migration and the factors that drive it. Research should also examine people who choose not to migrate or who are forced to remain, and the reasons why (see Box E).

The Netherlands could, for example through the European Pact on Migration and Asylum, help drive discussions on a joint EU strategy for climate-related migrants and displaced people and the protection of their rights. There is currently no such strategy.[307] The European Pact on Migration and Asylum entered into force in June 2026. If EU Member States succeed in implementing it effectively in their national legal systems, this could lead to fewer differences between national procedures, more efficient procedures, stronger border management, greater solidarity between Member States, and increased cooperation. It offers opportunities for greater control over migration.[308] Climate-related migration is not currently covered by the Pact. The Netherlands could build on the improvements in European cooperation to place climate-related migration more firmly on the European agenda and promote monitoring and the development of regulation.

4.2.3 International: contributing to the climate resilience of low- and middle-income countries

It is important for the Netherlands to continue supporting adaptation and socioeconomic development in low- and middle-income countries in order to improve local living conditions. The Netherlands already does so, including through bilateral development cooperation, multilateral cooperation, and contributions to international climate funds.[309] It is important for the Netherlands to be a reliable partner and honour existing commitments on development and climate finance.[310] Countries rely on these commitments, and adaptation can improve people's living conditions. The Netherlands can also work to ensure that international funds receive the financing that has been pledged. This applies in particular to funds that low- and middle-income countries can draw on for support with climate-related migration, such as the

[303] Calliari et al. (2026); Dalla Fontana (2025); Ocean and Climate Platform (2025); Wolff et al. (2026)
[304] Wolff et al. (2026).
[305] UNGA (2018), Objective 2, para. 18(h).
[306] UNGA (2026).
[307] Bozkaya (2025); EPC (2023).
[308] Adviesraad Migratie (2025).
[309] Minister voor Buitenlandse Handel en Ontwikkelingshulp (2025).
[310] AIV (2025); IOB (2024).

Fund for Responding to Loss and Damage under the UN Framework Convention on Climate Change and the UNHCR Climate Resilience Fund.[311]

The Netherlands can strengthen its ties with low- and middle-income countries by cooperating on climate-related migration. The Netherlands is increasingly focusing on cooperation with low- and middle-income countries for geopolitical and trade-related reasons.[312] Preparing for and responding to climate-related migration can be one way to strengthen that cooperation.[313] In addition to its existing efforts in the areas of climate adaptation, water, and food, the Netherlands can use its expertise in scenario analysis to help low- and middle-income countries gain a better understanding of climate-related migration and thereby strengthen local and national adaptation strategies (see Box I). It is important that both knowledge development and decision-making take place locally, particularly when it comes to decisions about whether to continue supporting adaptation and habitability in certain areas (see Box F). The Netherlands can also continue to use its expertise to help prevent climate-related displacement through early warning systems for extreme weather. It already contributes to this, including through the *World Meteorological Organization's* Early Warnings for All initiative.[314] At the same time, the adaptation gap in low- and middle-income countries remains wide, so additional efforts by the international community are needed.[315]

This calls for a coherent approach across climate and migration programs. In the area of migration, the Netherlands cooperates with low- and middle-income countries mainly at the European level through migration partnerships. These partnerships focus, among other things, on reducing irregular migration through stricter border controls in North and West African countries. Restricting migration within and between partner countries may conflict with those countries' own objectives if they see migration, including regional migration, as a means of strengthening their development and climate resilience.[316] This is the case, for example, in the Member States of ECOWAS[317] and IGAD[318], where freedom of movement within the region is also seen as a way of responding to climate-related migration (see Section 3.2.1). The African Union also called attention at the most recent UN Climate Change Conference to regional migration as a way of responding to climate change.[319] If the Netherlands and the EU want to deepen cooperation with low- and middle-income countries, it is essential that the interests and objectives of partner countries are transparent and taken into account on an equal footing.[320] One of those interests may be facilitating regional climate-related migration. For now, migration policy and efforts to strengthen climate resilience in partner countries appear to remain largely separate, particularly at the EU level.[321]

The Netherlands can play a role in strengthening climate resilience in the most fragile states. Fragile states are highly vulnerable to the impacts of climate change. In these countries, the effects of climate change may lead to or exacerbate instability and conflict. Climate adaptation in fragile settings, combined with efforts to strengthen institutions, can contribute to stability.[322] However, support from international climate funds reaches the most fragile countries only to a limited extent.[323] The Netherlands has expertise in peacebuilding and security, in strengthening institutions, and in areas relevant to climate adaptation, such as water and food security. So far, however, these still appear to be relatively separate policy areas within Dutch foreign policy. There may be scope for an approach in fragile states that brings these areas of Dutch expertise together. At the same time, working in fragile states is highly challenging, and results can only be achieved through long-term engagement and incremental steps.[324] A local approach is crucial, because the effects of living conditions, conflict, and potential migration can only be properly assessed at the local level (see Box I).

[311] EPRS (2023); UNHCR (2024).
[312] AIV (2025); Minister voor Buitenlandse Handel en Ontwikkelingshulp (2026).
[313] Papagianni (2022); SWP (2025).
[314] Bisong (2026); Marghidan et al. (2024).
[315] UNEP (2025).
[316] Castillejo (2017).
[317] ECOWAS stands for the Economic Community of West African States, an intergovernmental organization of West African countries.
[318] IGAD stands for the Intergovernmental Authority on Development, an intergovernmental organization of countries in the Horn of Africa.
[319] African Union et al. (2025).
[320] AIV & Adviesraad Migratie (2026).
[321] Lietaer & Durand-Delacre (2021); Velluti (2026).
[322] Adaptation Fund (2024); Council on Strategic Risks (2025); Ruyssen (2025).
[323] Garschagen & Doshi (2022).
[324] IOB (2023, 2025); Minister voor Buitenlandse Handel en Ontwikkelingshulp (2026).

Box I. Dutch expertise in scenario analysis can strengthen local understanding of climate-related migration

The impact of climate change on migration can be assessed by supplementing scenario studies with local data and research. Combining scenario studies with social science knowledge of local dynamics can provide a clearer picture of climate-related migration (see Section 3.1.1). Local knowledge, including non-academic knowledge, can provide insight into how climate change affects living conditions, what adaptation options are available locally, and which political, economic, cultural, and social considerations play a role in migration.[325]

The Netherlands has the expertise to support studies of this kind and thereby strengthen local and national adaptation plans. Deltares, for example, is involved in the Africa Climate Mobility Initiative's scenario research on climate-related migration across the African continent.[326] Several Dutch knowledge institutions are involved in the Water, Peace and Security Partnership, where water, climate change, conflict, and migration are studied in an integrated manner.[327] The Netherlands was also involved in developing the Bangladesh Delta Plan 2100 (see Box G). Greater insight into local climate-related migration can help countries and other authorities develop national and other adaptation plans.

4.2.4 International: legal protection for people displaced by climate change and residence options for climate-related migrants

The Netherlands can promote the rights of climate-related migrants and displaced people at the global level. First and foremost, facilitating international climate-related migration is a political choice for states. The Netherlands could encourage global discussion of the rights of climate-related migrants.[328] One option would be to amend the UN Refugee Convention. However, this raises several concerns, such as the risk that the Convention could be weakened if reopened for negotiation and the possibility of increased pressure on the asylum system.[329] The question of political feasibility also arises in relation to an agreement separate from the Refugee Convention[330] or an additional protocol[331]. The Netherlands could explore the extent to which existing human rights treaties, such as the International Covenant on Civil and Political Rights, may in future give climate-related migrants a right to remain. The Netherlands could also consider whether, and to what extent, it wishes to provide protection to climate-related migrants through national policy.

At the national level, the Netherlands could consider offering climate-related visas, including work visas, to climate-related migrants; the desirability, feasibility, and limitations of such visas have not yet been studied. Because climate-related migration is currently not a ground for an asylum residence permit, people from outside the EU who wish to migrate to the Netherlands will have to rely on other migration pathways, such as labour migration. The Netherlands currently has a relatively accessible admissions policy for people whose skills are in economic demand, for example under the "knowledge and talent" category, while its policy toward other migrants from outside the EU is more restrictive.[332] One of the objectives of the UN Global Compact for Migration is to promote pathways for regular migration, including in the context of climate-related migration.[333] Given the relatively low threshold for highly skilled migration and the restrictive policy toward other migrants from outside the EU, there may be scope to develop (temporary) residence options for climate-related migrants through labour migration. It would be useful to further examine the desirability of such an approach, as well as the associated opportunities and limitations, including within the Kingdom itself. Through cooperation with a country whose population is severely affected by climate change, the Netherlands could, for example, enter into agreements on climate adaptation and mitigation. It could also make agreements on ethical migration, facilitating remittances, and investing in education and capacity building for migrants, those who remain behind, and people who wish to return after a period of time. In doing so, the Netherlands could draw on the policy

[325] Boas et al. (2021); Boas et al. (2025); Meijer et al. (2024); Schewel et al. (2024).
[326] Deltares (z.d.).
[327] Water Peace and Security Partnership (z.d.).
[328] Donner & den Heijer (2020); Hattem (2026); ICJ (2025); Ruyssen (2025).
[329] Bisong (2026); Donner & den Heijer (2020); Hattem (2026); Ruyssen (2025).
[330] Ruyssen (2025).
[331] Donner & den Heijer (2020).
[332] Lodder (2019).
[333] UNGA (2018), UNGA (2018), Objective 5, para. 21(h).

frameworks of the UN International Organization for Migration (IOM) and the UN International Labour Organization (ILO).[334]

The Netherlands can learn from and work together with countries and organizations that are already seeking to support climate-related migrants and displaced people. In 2017, New Zealand announced a plan to grant humanitarian visas to 100 Pacific Islanders each year. The plan was not successful, however, because many islanders preferred not to leave, while those who did want to leave viewed the term "refugee" negatively.[335] In 2023, Australia concluded a bilateral treaty with Tuvalu under which it offers up to 280 permanent visas each year to Tuvaluans for work, study, and residence.[336] The agreement stems from recognition that Tuvalu's long-term future is threatened by climate change and is intended to facilitate voluntary migration.[337] Whereas Tuvalu's interest in the treaty lies in protection from climate change, Australia's interest lies in countering China's growing influence in the South Pacific. In exchange for migration opportunities and cooperation on climate change, Tuvalu will enter into partnerships or arrangements with another state in the areas of security and defence only in consultation with Australia.[338] This provision has raised considerable concern, and several Tuvaluan political leaders therefore do not support the treaty. It has even been suggested that the issue played a role in the then prime minister's electoral defeat in January 2024. Tuvaluans are generally positive about the new migration pathway. However, they expressed concern that they had not been consulted, that details about how the arrangement would operate were lacking, and that Australia was not meeting its obligations to reduce greenhouse gas emissions.[339]

There are also ideas in Europe for supporting climate-related migrants. Spain has an agreement with Colombia on temporary labour migration for people who are vulnerable to the impacts of climate change and who may, for example, wish to leave temporarily because of a natural disaster.[340] In 2023, the German Expert Council on Integration and Migration (SVR) proposed three instruments for addressing the challenges of climate-related migration. First, a permanent "climate passport" for residents of countries that are rapidly disappearing as a result of climate change. Second, a "climate card" in the form of a temporary humanitarian visa, available to a maximum number of residents from a limited number of countries that are severely affected by climate change. Finally, a climate work visa for residents of countries that are affected by climate change to a lesser extent than in the first two cases. The SVR's recommendations were ultimately not implemented by policymakers. The Netherlands can draw inspiration from these existing arrangements, initiatives, and ideas and take the lessons learned into account.

4.3 Finally

The impact of climate change on migration can be limited if countries invest in adaptation, mitigation, and broader socioeconomic development. The influence of climate change on migration will depend on many factors that can be influenced through interventions, including policy measures, such as improving physical and economic living conditions, strengthening political stability, and preventing and mitigating conflict. How countries act over the coming decades will therefore largely determine how many people worldwide migrate or are displaced as a result of climate change, and the extent to which they end up in or remain in poor living conditions.[341] Reducing global greenhouse gas emissions therefore remains just as important as ever. Higher greenhouse gas emissions lead not only to greater risks, but also to greater uncertainty about the impacts of climate change, and therefore to greater uncertainty about the future of climate-related migration.

At the same time, the world will have to address climate-related migration; this requires a proactive role from all countries, including the Netherlands. The various uncertainties surrounding this issue call for proactive, adaptive, and well-prepared policymaking. This requires

[334] Adviesraad Migratie (2022).
[335] Hattem (2026).
[336] The treaty was signed in November 2023 and entered into force in August 2024. See: Australia-Tuvalu Falepili Union (2023).
[337] CGD (2023); Hattem (2026).
[338] Australia-Tuvalu Falepili Union (2023).
[339] Barnett et al. (2025).
[340] de Moor (2011); GCA (2019).
[341] IPCC (2022b); World Bank (2021).

expanding knowledge of climate-related migration worldwide. It is also necessary to foster discussion within and between countries about how climate-related migration should be addressed and how countries can cooperate at both the international and national levels. The Netherlands can choose to take an anticipatory role in shaping this agenda and to take steps domestically, or it can wait, at the risk that climate-related migration will pose major challenges in the future.

Experts consulted

Several experts were interviewed for this briefing. This briefing does not necessarily reflect their views.

- Maarten van Aalst, Royal Netherlands Meteorological Institute (KNMI)
- Laura Birkman, The Hague Centre for Strategic Studies
- Ingrid Boas, Wageningen University & Research
- Ruben Dahm, Deltares
- Gersom van der Elst, Dutch Ministry of Foreign Affairs
- Sonja Fransen, Erasmus University Rotterdam
- Kees van der Geest, *independent expert*
- Bastiaan Hassing, Dutch Ministry of Climate Policy and Green Growth
- Rik den Hoedt, Dutch Ministry of Infrastructure and Water Management
- Roman Hoffmann, International Institute for Applied Systems Analysis
- Jasper Hoogendoorn, Dutch Ministry of Justice and Security
- Carolien Jacobs, Leiden University
- Raymond Jessurun, University of Sint Maarten
- Dirk Krijgsman, Ministry of Infrastructure and Water Management
- Tom Middendorp, International Military Council on Climate and Security
- Saket Pande, TU Delft
- Sara Rabie, *independent expert*
- Bernardo Ribeiro de Almeida, Leiden University
- Joëlla van Rijn, Dutch Ministry of Foreign Affairs
- Louise van Schaik, Clingendael Institute
- Nelleke van de Walle, Dutch Ministry of Defence
- Margaretha Wewerinke-Singh, University of Amsterdam
- *Anonymous expert*, IHE Delft

References

ACMI & GCCM. (2022). *African Shifts*. Africa Climate Mobility Initiative (ACMI) & The Global Centre for Climate Mobility (GCCM). https://africa.climatemobility.org

Adaptation Fund. (2024). *Addressing climate change adaptation in fragile settings and conflict-affected countries: Lessons learned from the Adaptation Fund's portfolio*. https://www.adaptation-fund.org/wp-content/uploads/2024/02/climate-change-adaptation-in-fragile-settings-02.15.2024.pdf

Adeola, A. (2022). Protecting 'Climate Refugees' Under the OAU 1969 Refugee Convention. In *The Palgrave Handbook of Democracy, Governance and Justice in Africa* (pp. 361-374). Springer.

Adviesraad Migratie. (2022). *Zorgvuldig arbeidsmigratiebeleid: hoe de langdurige zorg profijt kan hebben van vakmigranten*. Adviesraad Migratie. https://www.adviesraadmigratie.nl/documenten/2022/09/27/adviesrapport-zorgvuldig-arbeidsmigratiebeleid

Adviesraad Migratie. (2025). *Uitvoerings- en implementatiewet Asiel- en migratiepact 2026*. Adviesraad Migratie. https://www.adviesraadmigratie.nl/documenten/2025/06/25/advies-over-uitvoerings--en-implementatiewet-asiel--en-migratiepact

Aedes. (2021). *Watersnood in Limburg: zo helpen corporaties huurders*. Geraadpleegd op 17-20-2026 van https://aedes.nl/regionale-woningmarkten/watersnood-limburg-zo-helpen-corporaties-huurders

African Union, IOM & the COP30 Special Envoy for Africa. (2025). *Joint Statement on Climate Mobility in Africa at COP30*. Geraadpleegd op 05-08-2026 van https://www.iom.int/news/joint-statement-climate-mobility-africa-cop30-african-union-cop30-special-envoy-africa-and-iom

AIV. (2025). *Nederland, Europa en het mondiale Zuiden in een veranderende wereldorde*. Adviesraad Internationale Vraagstukken. https://www.adviesraadinternationalevraagstukken.nl/documenten/2025/09/10/nederland-europa-en-het-mondiale-zuiden

AIV & Adviesraad Migratie. (2026). *Migratie in partnerschap: sturen op recht en resultaat*. Adviesraad Internationale Vraagstukken & Adviesraad Migratie. https://www.adviesraadinternationalevraagstukken.nl/documenten/2026/06/22/migratie-in-partnerschap-sturen-op-recht-en-resultaat

Alam, S. S., Huq, S., Islam, F. B. & Hoque, H. M. A. (2018). Building climate-resilient, migrant-friendly cities and towns. *International Centre for Climate Change and Development*. https://icccad.net/publications/policy-briefs/building-climate-resilient-migrant-friendly-cities-and-towns/

Almeida, B. & Jacobs, C. (2022). Land expropriation–The hidden danger of climate change response in Mozambique. *Land Use Policy*, *123*, 106408. https://doi.org/10.1016/j.landusepol.2022.106408

Anderson, K. J. & Silva, J. A. (2020). Weather-related influences on rural-to-urban migration: a spectrum of attribution in Beira, Mozambique. *Global Environmental Change*, *65*, 102193. https://doi.org/10.1016/j.gloenvcha.2020.102193

Anguelovski, I., Shi, L., Chu, E., Gallagher, D., Goh, K., Lamb, Z., Reeve, K. & Teicher, H. (2016). Equity impacts of urban land use planning for climate adaptation: critical perspectives from the global north and south. *Journal of Planning Education and Research*, *36*(3), 333-348. https://doi.org/10.1177/0739456X16645166

ANV. (2022). *Themarapportage Rijksbrede Risicoanalyse Caribisch deel van het Koninkrijk der Nederlanden*. Analisten Nationale Veiligheid.

APPG. (2026). *Before the border: climate migration & UK national security. Inquiry report 2026.* All-Party Parliamentary Group for Climate, Nature & Security. https://static1.squarespace.com/static/637a3dfa024e782f45bcf8a0/t/6a53ec04b344bf6935ee0a68/1783884804874/*FINAL+BEFORE+THE+BORDER*.pdf

Armiero, M., De Rosa, S. P. & Turhan, E. (2023). Occupy climate change! An introduction. In *Urban movements and climate change: Loss, damage and radical adaptation* (pp. 19-33). Amsterdam University Press.

Artur, L. & Hilhorst, D. (2012). Everyday realities of climate change adaptation in Mozambique. *Global Environmental Change*, *22*(2), 529-536. https://doi.org/10.1016/j.gloenvcha.2011.11.013

Australia-Tuvalu Falepili Union (2023). https://www.dfat.gov.au/sites/default/files/australia-tuvalu-falepili-union-treaty.pdf

Bakewell, O. (2021). Unsettling the boundaries between forced and voluntary migration. In *Handbook on the Governance and Politics of Migration* (pp. 124-136). Edward Elgar Publishing.

Banda, M. M., Trambauer, P. & Fransen, S. (2026). Migration decisions in the face of climate change: insights from Malawi. In *The climate, migration and healthnexus: opportunities for interregional cooperation* (pp. 43-66). Springer.

Barnett, J., Farbotko, C., Kitara, T. & Aselu, B. (2025). Migration as adaptation? The Falepili Union between Australia and Tuvalu. *Wiley Interdisciplinary Reviews: Climate Change*, *16*(1), e924. https://wires.onlinelibrary.wiley.com/doi/full/10.1002/wcc.924

Barnett, J. & McMichael, C. (2018). The effects of climate change on the geography and timing of human mobility. *Population and Environment*, *39*(4), 339-356. https://doi.org/10.1007/s11111-018-0295-5

Benveniste, H., Oppenheimer, M. & Fleurbaey, M. (2022). Climate change increases resource-constrained international immobility. *Nature Climate Change*, *12*(7), 634-641. https://doi.org/10.1038/s41558-022-01401-w

Bettini, G., Nash, S. L. & Gioli, G. (2017). One step forward, two steps back? The fading contours of (in) justice in competing discourses on climate migration. *The Geographical Journal*, *183*(4), 348-358. https://doi.org/10.1111/geoj.12192

Bisong, A. (2026). Asielbeleid in een tijd van megatrends: wat als we in 2050 daadwerkelijk de oorzaken van gedwongen migratie aanpakken? In M. Kremer & E. v. Roemburg (Eds.), *Vlucht naar voren: asielvergezichten voor 2050*. Van Gennep. https://vangennep-boeken.nl/vlucht-naar-voren-asielvergezichten-voor-2050-monique-kremer-evelien-van-roemburg-red?srsltid=AfmBOopABusXRtrkI3ZSI5WRGy4W7G3uyitjya6ZQHs3_PVmbI1nYLEX

Boas, I., Dahm, R. & Wrathall, D. (2021). Grounding big data on climate-induced human mobility. In *Geographical Fieldwork in the 21st Century* (pp. 195-209). Routledge.

Boas, I., Gautam, A. & Olayiwola, A. (2023). Climate change and human mobility in the global south. In *The Palgrave Handbook of South–South Migration and Inequality* (pp. 435-453). Springer.

Boas, I., Sterly, H., Farbotko, C., Hulme, M., Benveniste, H., Schewel, K. D., Bettini, G., Borderon, M., Hoffmann, R. & van der Geest, K. (2025). Climate-induced redistribution of people is not inevitable. *Environmental Research Letters*, *20*(10), 101001. https://doi.org/10.1088/1748-9326/ad71eb

Boas, I., Wiegel, H., Farbotko, C., Warner, J. & Sheller, M. (2022). Climate mobilities: migration, im/mobilities and mobility regimes in a changing climate. *Journal of Ethnic and Migration Studies*, *48*(14), 3365-3379. https://doi.org/10.1088/1748-9326/14/11/114006

Bonneux, I. & Van Praag, L. (2024). Millions of climate refugees are coming!'A critical media discourse analysis on climate change-induced migrants in Flemish press. *Environmental Sociology*, *10*(4), 486-498. https://doi.org/10.1080/23251042.2024.2374668

Bordner, A. S., Ferguson, C. E. & Ortolano, L. (2020). Colonial dynamics limit climate adaptation in Oceania: perspectives from the Marshall Islands. *Global Environmental Change*, *61*, 102054. https://doi.org/10.1016/j.gloenvcha.2020.102054

Botzen, W. J., Aerts, J. C. & Van den Bergh, J. C. (2013). Individual preferences for reducing flood risk to near zero through elevation. *Mitigation and Adaptation Strategies for Global Change*, *18*(2), 229-244. https://doi.org/10.1007/s11027-012-9359-5

Bourekba, M. (2021). Climate change and violent extremism in North Africa. *Barcelona: Barcelona Centre for International Affairs*.

Bozkaya, Ö. (2025). The European Union's governmentality of climate-induced migration: a need for reconceptualisation. *International Migration*, *63*(5), e70095. https://onlinelibrary.wiley.com/doi/full/10.1111/imig.70095

Brouwer, E. (2020a). Gevolgen klimaatverandering en recht op leven: terugzenden mag: annotatie Mensenrechtencomité-VN, 7 januari 2020, IT tegen Nieuw-Zeeland. *Jurisprudentie Vreemdelingenrecht (JV)*, *25*(5), 453-471. https://www.stichtingmigratierecht.nl/jurisprudentie-vreemdelingenrecht

Brouwer, E. (2020b). *Kunnen de gevolgen van klimaatverandering een reden voor asiel zijn?* Geraadpleegd op 20-08-2026 van https://verblijfblog.nl/kunnen-de-gevolgen-van-klimaatverandering-een-reden-voor-asiel-zijn/

Burke, M., Hsiang, S. M. & Miguel, E. (2015). Climate and conflict. *Annu. Rev. Econ.*, *7*(1), 577-617. https://doi.org/10.1146/annurev-economics-080614-115430

Buser, M. (2020). Coastal adaptation planning in Fairbourne, Wales: lessons for climate change adaptation. *Planning Practice & Research*, *35*(2), 127-147. https://doi.org/10.1080/02697459.2019.1696145

Byrnes, N. & Thangavelu, S. (2026). *Planning for resilience: addressing the challenges of managed retreat in New Zealand*. Geraadpleegd op 05-08-2026 van https://www.dlapiper.com/en/insights/publications/2026/02/planning-for-resilience

C3S/ECMWF & WMO. (2026). *European state of the climate 2025*. Copernicus Climate Change Service (C3S) at ECMWF & World Meteorological Organization (WMO). https://doi.org/10.24381/zy93-sb27

Calliari, E., Dalla Fontana, M., Vink, H., Thaler, T., Schinko, T. & Boas, I. (2026). Planning for just relocations in Europe in times of climate change: a comparative study. *Regional Environmental Change*, *26*(1), 29. https://doi.org/10.1007/s10113-026-02523-z

Carbon Brief. (2024a). *Climate adaptation becomes less effective as the world warms*. Geraadpleegd op 17-07-2026 van https://www.carbonbrief.org/guest-post-climate-adaptation-becomes-less-effective-as-the-world-warms/

Carbon Brief. (2024b). *In-depth Q&A: How does climate change drive human migration?* Geraadpleegd op 17-07-2026 van https://interactive.carbonbrief.org/climate-migration/

Caribisch Netwerk. (2019). *Anderhalf jaar in Nederland na orkaan Irma: een leven met financiele problemen, vooroordelen en trauma's*. Geraadpleegd op 17-07-2026 van https://caribischnetwerk.ntr.nl/2019/03/19/anderhalf-jaar-in-nederland-na-orkaan-irma-een-leven-met-financiele-problemen-vooroordelen-en-traumas/

Carling, J. (2002). Migration in the age of involuntary immobility: theoretical reflections and Cape Verdean experiences. *Journal of Ethnic and Migration Studies*, *28*(1), 5-42. https://doi.org/10.1080/13691830120103930

Carling, J. (2017). How does migration arise? *Ideas to inform international cooperation on safe, orderly and regular migration*, 19-26. https://publications.iom.int/books/how-does-migration-arise

Carling, J., Hagen-Zanker, J. & Weisner, Z. (2024). *MIGNEX report D6: new insights on the causes of migration*. Peace Research Institute Oslo. https://doi.org/10.5281/zenodo.13374298

Castelli, F. (2018). Drivers of migration: why do people move? *Journal of travel medicine*, *25*(1), tay040. https://doi.org/10.1093/jtm/tay040

Castillejo, C. (2017). *The EU Migration Partnership Framework: time for a rethink?* Discussion paper. https://www.econstor.eu/bitstream/10419/199518/1/die-dp-2017-28.pdf

CBS Aruba. (2025). *The development of the population of Aruba*. Geraadpleegd op 30-07-2026 van https://cbs.aw/wp/index.php/2025/12/15/test-births/

CBS Curacao. (2025). *Demografie van Curacao 2023: publicatiereeks census 2023*. Centraal Bureau voor de Statistiek Curacao. https://senso.cbs.cw/demografie-van-curacao-publicatiereeks-census-2023

CGD. (2023). *The Australia-Tuvalu climate and migration agreement: takeaways and next steps*. https://www.cgdev.org/publication/australia-tuvalu-climate-and-migration-agreement-takeaways-and-next-steps

Cheung, W. W., Maire, E., Oyinlola, M. A., Robinson, J. P., Graham, N. A., Lam, V. W., MacNeil, M. A. & Hicks, C. C. (2023). Climate change exacerbates nutrient disparities from seafood. *Nature Climate Change*, *13*(11), 1242-1249. https://doi.org/10.1038/s41558-023-01822-1

Chowdhury, M. A., Hasan, M. K. & Islam, S. L. U. (2022). Climate change adaptation in Bangladesh: current practices, challenges and the way forward. *The Journal of Climate Change and Health*, *6*, 100108. https://doi.org/10.1016/j.joclim.2022.100108

Cloke, P., Conradson, D., Pawson, E. & Perkins, H. C. (2023). *The post-earthquake city: disaster and recovery in Christchurch, New Zealand*. Routledge. https://doi.org/10.4324/9781003167198

Cottier, F. & Salehyan, I. (2021). Climate variability and irregular migration to the European Union. *Global Environmental Change*, *69*, 102275. https://doi.org/10.1016/j.gloenvcha.2021.102275

Council on Strategic Risks. (2025). *Climate adaptation in high-security risk countries: a practicioner-focused evaluation of key cases*. https://councilonstrategicrisks.org/2025/11/05/climate-adaptation-in-high-security-risk-countries/

Dalla Fontana, M. (2025). Unpacking opposition to planned relocation: insight from Pedrinhas and Cedovém, Portugal. *Regional Environmental Change*, *25*(3), 77. https://doi.org/10.1007/s10113-025-02423-8

Daoust, G. & Selby, J. (2024). Climate change and migration: a review and new framework for analysis. *Wiley Interdisciplinary Reviews: Climate Change*, *15*(4), e886. https://doi.org/10.1002/wcc.886

De Haas, H. (2010). *Migration transitions: a theoretical and empirical inquiry into the developmental drivers of international migration*. International Migration Institute. https://ora.ox.ac.uk/objects/uuid:63b0a544-2b39-45a5-b9fe-cffdb5f4c654/files/m31b9304a60c9179142f29b7a6467a696

De Haas, H. (2021). A theory of migration: the aspirations-capabilities framework. *Comparative migration studies*, *9*(1), 8. https://doi.org/10.1186/s40878-020-00210-4

De Haas, H. (2023). *How migration really works: a factful guide to the most divisive issue in politics*. Random House. https://doi.org/10.1111/imre.12702

De Haas, H., Castles, S. & Miller, M. J. (2019). *The age of migration: international population movements in the modern world*. Bloomsbury Publishing. https://doi.org/10.1007/978-1-352-00713-8

De Limburger. (2023). *Veel Limburgers zitten na watersnood met restschade van soms tienduizenden euro's en in een enkel geval zelfs tonnen*. Geraadpleegd op 17-07-2026 van https://www.limburger.nl/regio/valkenburg-aan-de-geul/veel-limburgers-zitten-na-watersnood-met-restschade-van-soms-tienduizenden-euro-s-en-in-een-enkel-geval-zelfs-tonnen/22278335.html

De Maeyer, N., Nagabhatla, N., Toles, O. M., Reubens, D. G. & Scheerens, C. (2025). The medium-term psychosocial impact of the 2021 floods in Belgium: a survey-based study. *Climate*, *13*(3), 61. https://doi.org/10.3390/climate13030061

de Moor, N. (2011). Temporary labour migration for victims of natural disasters: the Columbia-Spain model. In *Climate change and migration: Rethinking policies for adaptation and disaster risk reduction* (Vol. 15, pp. 90-103). United Nations University-Institute for Environment and Human Security (UNU-EHS). https://biblio.ugent.be/publication/1209019

de Sherbinin, A., Adamo, S., Husain-Naviatti, A., Cottier, F., Das, E., van Duijne, R. J. & Gibson, J. (2024). *Climate mobility in the Greater Caribbean region: a literature review*. Center for Integrated Earth System Information (CIESIN), Columbia University. https://greatercaribbean.climatemobility.org/

De Volkskrant. (2024). *Deze klimaatverhuizers zijn er op tijd bij, ze nemen geen risico*. Geraadpleegd op 17-07-2026 van https://www.volkskrant.nl/binnenland/deze-klimaatverhuizers-zijn-er-op-tijd-bij-ze-nemen-geen-risico

Degroot, D., Anchukaitis, K. J., Tierney, J. E., Riede, F., Manica, A., Moesswilde, E. & Gauthier, N. (2022). The history of climate and society: a review of the influence of climate change on the human past. *Environmental Research Letters*, *17*(10), 103001. https://doi.org/10.1088/1748-9326/ac8b13

Dell, M., Jones, B. F. & Olken, B. A. (2014). What do we learn from the weather? The new climate-economy literature. *Journal of Economic literature*, *52*(3), 740-798. https://doi.org/10.1257/jel.52.3.740

Deltares. (2021). *Wat als 'de waterbom' elders in Nederland was gevallen?* Deltares. https://publications.deltares.nl/11206890_010_0006.pdf

Deltares. (2022a). *Analyse van bouwstenen en adaptatiepaden voor aanpassen aan zeespiegelstijging in Nederland*. Deltares. https://www.deltares.nl/expertise/publicaties/analyse-van-bouwstenen-en-adaptatiepaden-voor-aanpassen-aan-zeespiegelstijging-in-nederland

Deltares. (2022b). *Case studie Zuid-Holland: analyse grootschalige wateroverlast*. Deltares. https://publications.deltares.nl/11208520_000_0008.pdf

Deltares. (z.d.). *Supporting the Africa Climate Mobility Initiative*. Geraadpleegd op 01-03-2026 van https://www.deltares.nl/en/expertise/projects/african-climate-mobility-initiative

DeWaard, J., Johnson, J. E. & Whitaker, S. D. (2020). Out-migration from and return migration to Puerto Rico after Hurricane Maria: evidence from the consumer credit panel. *Population and Environment*, *42*(1), 28-42. https://doi.org/10.1007/s11111-020-00354-y

Dietz, A. J. (2018). Klimaatverandering en migratie. In D. van Soest, S. Sulders, R. Gerlagh, & R. Kleinknecht (Eds.), *Klimaatbeleid: kosten, kansen en keuzes*. Economische Statistische Berichten (ESB). https://esb.nu/wp-content/uploads/2022/11/eEKCOBA8iUmkdG-RnjWeoB3P3Cg.pdf

Diniega, R. & Sakdapolrak, P. (2025). Social remittances and the environment in the context of climate change: what do we know? Where do we go? *Climate and Development*, *17*(8), 709-729. https://doi.org/10.1080/17565529.2024.2449121

Domingos Lequechane, J., Mahumane, A., Chale, F., Nhabomba, C., Salomão, C., Lameira, C., Chicumbe, S. & Semá Baltazar, C. (2020). Mozambique's response to cyclone Idai: how collaboration and surveillance with water, sanitation and hygiene (WASH) interventions were used to control a cholera epidemic. *Infectious Diseases of Poverty*, *9*(03), 121-124. https://doi.org/10.1186/s40249-020-00692-5

Donner, J. & den Heijer, M. (2020). Terechte zorg, verkeerd aanknopingspunt: Ministerie van Justitie en Veiligheid. https://pure.uva.nl/ws/files/187161901/tk-bijlage-advies-vluchtelingenverdrag-april-2020.pdf

Duijndam, S. J., Botzen, W. W., Hagedoorn, L. C., Bubeck, P., Haer, T., Pham, M. & Aerts, J. C. (2023). Drivers of migration intentions in coastal Vietnam under increased flood risk from sea level rise. *Climatic Change*, *176*(2), 12. https://doi.org/10.1007/s10584-022-03473-w

Düvell, F. (2025). Migration, mobility and immobility: a call for the right to stay - challenging the mobility bias in migration studies. *Current Issues in Migration Research*, *2*(2), 46-53. https://doi.org/10.54825/DZZK1296

ECDPM. (2025). *The broken promise of loss and damage finance: can Europe help?* Geraadpleegd op 30-07-2026 van https://ecdpm.org/work/broken-promise-loss-and-damage-finance-can-europe-help

ECFR. (2024). *Maghreb migrations: how North Africa and Europe can work together on Sub-Saharan migration*. European Council on Foreign Relations. https://ecfr.eu/publication/maghreb-migrations-how-north-africa-and-europe-can-work-together-on-sub-saharan-migration/

ECOWAS. (2022). *Regional climate strategy (RCS) and action plan (2022-2030)*. Economic Community of West-African States. https://ecowap.ecowas.int/see-document/277

EEA. (2024). *European Climate Risk Assessment*. European Environment Agency. https://www.eea.europa.eu/en/newsroom/news/europe-is-not-prepared-for

EEA. (2025). *Global and European sea level rise*. Geraadpleegd op 17-07-2027 van https://www.eea.europa.eu/en/analysis/indicators/global-and-european-sea-level-rise

EenVandaag. (2023). *Chris en Chris wonen 2 jaar na overstormingen in Limburg nog steeds in container: 'Traumatisch geweest'*. Geraadpleegd op 17-07-2026 van https://eenvandaag.avrotros.nl/artikelen/chris-en-chris-wonen-2-jaar-na-overstromingen-in-limburg-nog-steeds-in-container-traumatisch-geweest-145076

Entzinger, H. & Scholten, P. (2022). The role of migration in enhancing resilience to climate change: how non-financial remittances through domestic migration corridors make the Vietnamese Mekong River Delta more resilient. *Migration studies*, *10*(1), 24-40. https://doi.org/10.1093/migration/mnaa033

Environmental Defence Society. (z.d.). *Climate Change Adaptation*. Geraadpleegd op 05-08-2026 van https://eds.org.nz/our-work/policy/projects/climate-change-adaptation/

EPC. (2023). *The EU's approach to climate mobility: which way forward?* European Policy Centre. https://www.epc.eu/publication/The-EUs-approach-to-climate-mobility-Which-way-forward-553098/

EPRS. (2022). *The future of climate migration*. European Parliamentary Research Service. https://doi.org/10.2861/708688

EPRS. (2023). *The concept of 'climate refugee': towards a possible definition*. European Parliamentary Research Service. https://doi.org/10.2861/068135
EU-JRC. (2025). *Forecasting climate migration - How much do we really know?* European Commission Joint Research Centre. https://doi.org/10.2760/912165
European Commission. (2024). *Global Gateway: EU endorses roadmap for strategic partnership on raw materials with the democratic Republic of Congo*. Geraadpleegd op 05-08-2026 van https://international-partnerships.ec.europa.eu/news-and-events/news/global-gateway-eu-endorses-roadmap-strategic-partnership-raw-materials-democratic-republic-congo-2024-12-11_en
EHRM zaak van Sufi en Elmi v. het Verenigd Koninkrijk. Zaaknummers 8319/07 en 11449/07 (2011). https://hudoc.echr.coe.int/eng?i=001-105434
Europees Verdrag voor de Rechten van de Mens (1950). https://www.echr.coe.int/documents/d/echr/convention_nld
Expert Working Group on Managed Retreat New Zealand. (2024). *Report of the Expert Working Group on Managed Retreat: a proposed system for te hekenga rauora/planned relocation*. Expert Group on Managed Retreat. https://environment.govt.nz/publications/report-of-the-expert-working-group-on-managed-retreat-a-proposed-system-for-te hekenga-rauora/
FAO. (2022). *Restoring degraded land in Rohingya refugee camps in Cox's Bazar, Bangladesh*. Food and Agriculture Organization of the United Nations. https://openknowledge.fao.org/server/api/core/bitstreams/64716592-d871-46a8-81d9-4759f72dd951/content
FAO. (2023). *Loss and damage and agrifood systems: addressing gaps and challenges*. Food and Agriculture Organization of the United Nations. https://openknowledge.fao.org/items/83184aed-f907-4edc-8377-63516635c406
FAO. (2025). *Evidence in action: how anticipatory cash transfers reduce humanitarian needs and strengthen resilience in Somalia*. Food and Agriculture Organization of the United Nations. https://openknowledge.fao.org/items/b2d34af7-b363-44e4-85e8-08a6cf8eca64
FAO. (2026). *Mozambique emergency and resilience plan 2026-2028*. Food and Agriculture Organization of the United Nations. https://openknowledge.fao.org/items/61ce48be-f72b-4a6e-bb40-6451db7b6bea
Farbotko, C. (2022). The specter of mass climate migration across international borders: dismantling an unscientific expectation. *One Earth*, *5*(8), 841-844. https://doi.org/10.1016/j.oneear.2022.07.006
Farbotko, C. & Campbell, J. (2022). Who defines atoll 'uninhabitability'? *Environmental Science & Policy*, *138*, 182-190. https://doi.org/10.1016/j.envsci.2022.10.003
Fekete, A. & Sandholz, S. (2021). Here comes the flood, but not failure? Lessons to learn after the heavy rain and pluvial floods in Germany 2021. *Water*, *13*(21), 3016. https://doi.org/10.3390/w13213016
Fischer, E. M. & Knutti, R. (2015). Anthropogenic contribution to global occurrence of heavy-precipitation and high-temperature extremes. *Nature Climate Change*, *5*(6), 560-564. https://doi.org/10.1038/nclimate2617
Foster, G. & Rahmstorf, S. (2026). Global warming has accelerated significantly. *Geophysical Research Letters*, *53*(5), e2025GL118804. https://doi.org/10.1029/2025GL118804
Francis, A. (2019). *Free movement agreements and climate-induced migration: a Caribbean case study*. https://scholarship.law.columbia.edu/cgi/viewcontent.cgi?article=1061&context=sabin_climate_change
Fransen, S., Hunns, A., Jaber, T. & Janz, T. (2025). Climate risks for displaced populations: a scoping review and research agenda. *Journal of Refugee Studies*, *38*(3), 722-741. https://doi.org/10.1093/jrs/feae074
Fransen, S., Werntges, A., Hunns, A., Sirenko, M. & Comes, T. (2024). Refugee settlements are highly exposed to extreme weather conditions. *Proceedings of the National Academy of Sciences*, *121*(3), e2206189120. https://doi.org/10.1073/pnas.2206189120
Gallego-Ayala, J. & Juízo, D. (2011). Strategic implementation of integrated water resources management in Mozambique: an AWOT analysis. *Physics and Chemistry of the Earth, Parts A/B/C*, *36*(14-15), 1103-1111. https://doi.org/10.1016/j.pce.2011.08.005
Garschagen, M. & Doshi, D. (2022). Does funds-based adaptation finance reach the most vulnerable countries? *Global Environmental Change*, *73*, 102450. https://www.sciencedirect.com/science/article/pii/S0959378021002296
GCA. (2019). *Climate change migration is a huge challenge. But it can also be an opportunity*. https://gca.org/climate-change-migration-is-a-huge-challenge-but-it-can-also-be-an-opportunity/
Geisler, C. & Currens, B. (2017). Impediments to inland resettlement under conditions of accelerated sea level rise. *Land Use Policy*, *66*, 322-330. https://doi.org/10.1016/j.landusepol.2017.04.044
Gemenne, F. & Blocher, J. (2017). How can migration serve adaptation to climate change? Challenges to fleshing out a policy ideal. *The Geographical Journal*, *183*(4), 336-347. https://doi.org/10.1111/geoj.12247
Gezondheidsraad & WKR. (2026). *Klimaatverandering en gezondheid: richtingen voor beleid*. Gezondheidsraad en Wetenschappelijke Klimaatraad.
Gil, L., Karpos, P., Karpodini, N., Rodriguez, M. & Reinbacher, S. (2022). *Climate change and environmental migration case studies that indicate potential future movements due to climate*

events: Austria, Greece, Spain, and the United States. https://www.uvu.edu/global/docs/wim22/sdg13/sdg13-gil.pdf
Gleick, P. H. (2014). Water, drought, climate change, and conflict in Syria. *Weather, climate, and society*, *6*(3), 331-340. https://doi.org/10.1175/WCAS-D-13-00059.1
Government of Bangladesh. (2018). *The Bangladesh Delta Plan 2100*. http://bdp2100kp.gov.bd
Government of Bangladesh. (2022). *National Adaptation Plan of Bangladesh (2023-2050)*. https://www.undp.org/bangladesh/publications/national-adaptation-plan-bangladesh-2023-2050
Gruber, C., Fiertz, N., Rouleau, T., MacMurray, M. & Herzer Risi, L. (2025). *CORVI: Measuring multidimensional climate risks in Aruba*. Stimson Center. https://www.stimson.org/2025/corvi-measuring-multidimensional-climate-risks-in-aruba/
Gupta, D., Kumar, P., Okano, N. & Sharma, M. (2025). Climate-induced migration in India and Bangladesh: a systematic review of drivers, impacts, and adaptation mechanisms. *Climate*, *13*(4), 81. https://doi.org/10.3390/climate13040081
Haasnoot, M., Kwakkel, J. H., Walker, W. E. & Ter Maat, J. (2013). Dynamic adaptive policy pathways: A method for crafting robust decisions for a deeply uncertain world. *Global Environmental Change*, *23*(2), 485-498. https://doi.org/10.1016/j.gloenvcha.2012.12.006
Handvest van de Grondrechten van de Europese Unie (2000/C 364/01) (2000). https://www.europarl.europa.eu/charter/pdf/text_nl.pdf
Hanna, C. J., White, I. & Glavovic, B. (2017). *Managed retreat in New Zealand: revealing the terminology, approaches and direction of local planning instruments*. https://researchcommons.waikato.ac.nz/entities/publication/91696662-d7a1-475a-a9d1-961aff565412
Hardee, K. & Mutunga, C. (2010). Strengthening the link between climate change adaptation and national development plans: lessons from the case of population in National Adaptation Programmes of Action (NAPAs). *Mitigation and Adaptation Strategies for Global Change*, *15*(2), 113-126. https://doi.org/10.1007/s11027-009-9208-1
Hasan, S., Evers, J. & Zwarteveen, M. (2020). The transfer of Dutch Delta Planning expertise to Bangladesh: a process of policy translation. *Environmental Science & Policy*, *104*, 161-173. https://doi.org/10.1016/j.envsci.2019.11.011
Hattem, J. (2026). *Shelter from the storm: how climate change is creating a new era of migration*. The New Press.
HCSS. (2022). *Unpacking the climate security nexus: seven pathologies linking climate change to violent conflict*. The Hague Centre for Strategic Studies. https://hcss.nl/report/unpacking-the-climate-security-nexus/
HCSS. (2026). *Intersecting futures: global trends shaping and shaped by climate change over the next century*. The Hague Centre for Strategic Studies. https://hcss.nl/report/intersecting-futures-global-trends-shaping-and-shaped-by-climate-change-over-the-next-century/
HKV. (2022). *Evacuatiegedrag van getroffenen tijdens de overstromingen in Limburg in juli 2021*. HKV lijn in water. https://open.rijkswaterstaat.nl/@257015/evacuatiegedrag-getroffenen-tijdens/
Hoffmann, R., Dimitrova, A., Muttarak, R., Crespo Cuaresma, J. & Peisker, J. (2020). A meta-analysis of country-level studies on environmental change and migration. *Nature Climate Change*, *10*(10), 904-912. https://doi.org/10.1038/s41558-020-0898-6
Hongtao, Y. & Ting, M. (2021). Changes in the geographical distributions of global human settlements. *Journal of Resources and Ecology*, *12*(6), 829-839. https://doi.org/10.11821/dlyxb202106011
Hoogwaterbeschermingsprogramma. (2020). *Waterbewustzijn van de Nederlandse bevolking*. Kantar, Hoogwaterbeschermingsprogramma. https://www.hwbp.nl/actueel/nieuws/2023/02/06/nederlander-banger-voor-waterramp-dan-drie-jaar-geleden
Hoogwaterbeschermingsprogramma. (2022). *Onderzoeksresultaten bewustzijn waterveiligheid*. Hoogwaterbeschermingsprogramma. https://www.hwbp.nl/documenten/2022/03/22/onderzoeksresultaten-bewustzijn-overstromingsrisicos-waterveiligheid
Horton, R. M., De Sherbinin, A., Wrathall, D. & Oppenheimer, M. (2021). Assessing human habitability and migration. *Science*, *372*(6548), 1279-1283. https://doi.org/10.1126/science.abi8603
Huss, M., Bustamante, M., Roy, J., Ospina, D., Achakulwisut, P., Aggarwal, A., Bastos, A., Broadgate, W., Canadell, J. G. & Carr, E. R. (2024). Ten new insights in climate science 2023/2024. *Global Sustainability*, *7*, e19. https://doi.org/10.1017/plc.2023.17
ICJ. (2025). *Obligations of states in respect of climate change. Summary of the advisory opinion of 23 July 2025*. International Court of Justice. https://www.icj-cij.org/sites/default/files/case-related/187/187-20250723-sum-01-00-en.pdf
IDMC. (2018). *Systematic data collection and monitoring of displacement and its impacts at local, national, regional and international level to inform comprehensive needs and risk assessments for the formulation of policy and plans.* Internal Displacement Monitoring Centre. https://unfccc.int/documents/181430
IDMC. (2025). *Global report on internal displacement 2025*. Internal Displacement Monitoring Centre. https://www.internal-displacement.org/global-report/grid2025/

IDMC. (2026). *Disaster displacement risk in Bangladesh: an overview of the risk of future displacement by riverine floods, storm surges, cyclonic winds and droughts at the national and sub-national levels*. Internal Displacement Monitoring Centre. https://www.internal-displacement.org/publications/disaster-displacement-risk-in-bangladesh-an-overview-of-the-risk-of-future/

Protocol of free movement of persons in the IGAD region (2020). https://migrationnetwork.un.org/policy-repository/igad-protocol-free-movement-persons

Inspectie Justitie en Veiligheid. (2025). *Brief Stand van zaken opvolging aanbevelingen rampenbestrijding en brandweerzorg Caribisch Nederland/6878629*. https://open.overheid.nl/documenten/d3d1566e-b6d8-46d2-b787-898c5582b7bb/file

Advisory opinion AO-32/25 of May 29, 2025: climate emergency and human rights. Verzocht door de republiek Chili en de republiek Colombia (2025). https://jurisprudencia.corteidh.or.cr/en/vid/1084981967

Internationaal Verdrag inzake burgerrechten en politieke rechten (1979). https://wetten.overheid.nl/BWBV0001017/1979-03-11/?g=2026-04-15&z=2026-04-15#Verdrag_1

IOB. (2023). *Inconvenient realities: an evaluation of Dutch contributions to stability, security and rule of law in fragile and conflict-affected contexts*. Directie Internationaal Onderzoek en Beleidsevaluatie. https://english.iob-evaluatie.nl/documents/2023/08/28/dutch-contribution-to-stability-in-fragile-contexts

IOB. (2024). *Een goed klimaat voor ontwikkeling: periodieke rapportage internationaal klimaatbeleid 2016-2022*. Directie Internationaal Onderzoek en Beleidsevaluatie. https://www.iob-evaluatie.nl/documenten/2024/04/30/klimaatbeleid

IOB. (2025). *Vrede, veiligheid en duurzame ontwikkeling: periodieke rapportage BHOS-artikel 4*. Directie Internationaal Onderzoek en Beleidsevaluatie. https://www.iob-evaluatie.nl/resultaten/vrede-veiligheid-en-duurzame-ontwikkeling

IOM. (2019). *Glossary on migration*. International Organization for Migration. https://publications.iom.int/books/international-migration-law-ndeg34-glossary-migration

IOM. (2024a). *Estudio de diagnóstico de la movilidad por cambio climático en la comunidad de Caldera, Esparza, Puntarenas*. International Organization for Migration. https://costarica.iom.int/sites/g/files/tmzbdl1016/files/documents/2024-07/diagnostico-de-movilidad-por-cambio-climatico.-caldera.pdf

IOM. (2024b). *World migration report 2024*. International Organization for Migration. https://publications.iom.int/books/world-migration-report-2024

IPCC. (2019). Chapter 5: food security. In P. R. Shukla, J. Skea, E. Calvo Buendia, V. Masson-Delmotte, H. O. Pörtner, D. C. Roberts, P. Zhai, R. Slade, S. Connors, R. van Diemen, M. Ferrat, E. Haughey, S. Luz, S. Neogi, M. Pathak, J. Petzold, J. Portugal Pereira, P. Vyas, E. Huntley, K. Kissick, M. Belkacemi, & J. Malley (Eds.), *Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems*. https://doi.org/10.1017/9781009157988.007

IPCC. (2022a). Chapter 6: Cities, settlements and key infrastructure. In *Climate Change 2022: Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press. https://doi.org/10.1017/9781009325844

IPCC. (2022b). Chapter 7: health, wellbeing and the changing structure of communities. In *Climate Change 2022: Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press. https://doi.org/10.1017/9781009325844

IPCC. (2022c). Cross-Chapter Paper 2: Cities and Settlements by the Sea. In *Climate Change 2022: Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge University Press. https://doi.org/10.1017/9781009325844

IPCC. (2023). *IPCC, 2023: Climate Change 2023: Synthesis Report, Summary for Policymakers. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change.* https://doi.org/10.59327/IPCC/AR6-9789291691647.001

IPDC. (2024). *Climate adaptation in deltas, coasts, and islands: introducing the IPDC guidance framework and the climate adaptation context of the IPDC members.* International Panel on Deltas and Coastal Areas. https://ipdc-climate-action.org/resources/2024-ipdc-report/

Iyer, M. V. & Schewel, K. (2023). Articulating and claiming the right to stay in the context of climate change. *Geo. Immigr. LJ*, *38*, 207. https://ssrn.com/abstract=4763724

Jacobs, C. & Almeida, B. (2020). *Land and climate change: rights and environmental displacement in Mozambique*. https://www.universiteitleiden.nl/en/research/research-projects/law/land-rights-and-environmental-displacement-in-central-mozambique

Jacobson, C. L., Crevello, S., Chea, C. & Jarihani, B. (2019). When is migration a maladaptive response to climate change? *Regional Environmental Change*, *19*(1), 101-112. https://doi.org/10.1007/s10113-018-1380-y

Kaczan, D. J. & Orgill-Meyer, J. (2020). The impact of climate change on migration: a synthesis of recent empirical insights. *Climatic Change*, *158*(3), 281-300. https://doi.org/10.1007/s10584-019-02616-6
Kaenzig, R. & Piguet, E. (2014). Migration and climate change in Latin America and the Caribbean. In E. Piguet & F. Lackzo (Eds.), *People on the Move in a Changing Climate: The Regional Impact of Environmental Change on Migration* (Vol. 2, pp. 155-176). https://doi.org/10.1007/978-94-017-8628-7_7
Karabulutoğlu, E., Casprini, L. & Muttarak, R. (2026). Climate migration in Europe? Evidence from drought exposure and internal migration in Italy. https://doi.org/10.1016/j.popspace.2025.102830
Keellings, D. & Hernández Ayala, J. J. (2019). Extreme rainfall associated with Hurricane Maria over Puerto Rico and its connections to climate variability and change. *Geophysical Research Letters*, *46*(5), 2964-2973. https://doi.org/10.1029/2019GL082077
Kelley, C., Mohtadi, S., Cane, M., Seager, R. & Kushnir, Y. (2017). Commentary on the Syria case: climate as a contributing factor. *Political Geography*, *60*(1), 245-247. https://doi.org/10.1016/j.polgeo.2017.06.009
Kelley, C. P., Mohtadi, S., Cane, M. A., Seager, R. & Kushnir, Y. (2015). Climate change in the Fertile Crescent and implications of the recent Syrian drought. *Proceedings of the National Academy of Sciences*, *112*(11), 3241-3246. https://doi.org/10.1073/pnas.1421533112
Kennisprogramma Zeespiegelstijging. (2024). *Ruimte voor zeespiegelstijging: een verkenning van denkrichtingen om Nederland ook op de lange termijn veilig en leefbaar te houden bij zeespiegelstijging*. Ministerie van Infrastructuur & Waterstaat, Deltacommissaris. https://open.overheid.nl/documenten/dpc-d8ad2f75a8fd4a8983e4d7ab7701a739ff61eae5/pdf
Khan, M. R., Chowdhury, M. & Huq, S. (2021). *Climate-resilient migrant-friendly towns: a conceptual framework*. https://icccad.net/publications/policy-brief/crmft-pb-2021/
Kimutai, J., Barnes, C., Zachariah, M., Philip, S. Y., Kew, S. F., Pinto, I., Wolski, P., Koren, G., Vecchi, G. & Yang, W. (2025). Human-induced climate change increased 2021–2022 drought severity in horn of Africa. *Weather and Climate Extremes*, *47*, 100745. https://doi.org/10.1016/j.wace.2024.100745
KNMI. (2023). *KNMI'23 klimaatscenario's voor Nederland*. Koninklijk Nederlands Meteorologisch Instituut. https://doi.org/10.21945/KNMI-2023-01
Knutson, T., Camargo, S. J., Chan, J. C., Emanuel, K., Ho, C.-H., Kossin, J., Mohapatra, M., Satoh, M., Sugi, M. & Walsh, K. (2020). Tropical cyclones and climate change assessment part II: projected response to anthropogenic warming. *Bulletin of the American Meteorological Society*, *101*(3), E303-E322. https://doi.org/10.1175/BAMS-D-18-0194.1
Koubi, V. (2019). Climate change and conflict. *Annual review of political science*, *22*(1), 343-360. https://doi.org/10.1146/annurev-polisci-050317-070800
Kraan, C. M., Haasnoot, M. & Mach, K. J. (2025). Expert perspectives on living with water (meebewegen) as climate adaptation in the Netherlands. *Environmental Research: Climate*, *4*(1), 015009. https://doi.org/10.1088/2752-5295/ad8e75
Kummu, M., De Moel, H., Ward, P. J. & Varis, O. (2011). How close do we live to water? A global analysis of population distance to freshwater bodies. *Plos one*, *6*(6), e20578. https://doi.org/10.1371/journal.pone.0020578
Lenton, T. M., Xu, C., Abrams, J. F., Ghadiali, A., Loriani, S., Sakschewski, B., Zimm, C., Ebi, K. L., Dunn, R. R., Svenning, J.-C. & Scheffer, M. (2023). Quantifying the human cost of global warming. *Nature Sustainability*, *6*(10), 1237-1247. https://doi.org/10.1038/s41893-023-01132-6
Lietaer, S. & Durand-Delacre, D. (2021). Situating 'migration as adaptation'discourse and appraising its relevance to Senegal's development sector. *Environmental Science & Policy*, *126*, 11-21. https://doi.org/10.1016/j.envsci.2021.09.006
Lin, N., Emanuel, K., Oppenheimer, M. & Vanmarcke, E. (2012). Physically based assessment of hurricane surge threat under climate change. *Nature Climate Change*, *2*(6), 462-467. https://doi.org/10.1038/nclimate1389
Link, A.-C., Oakes, R., Durand-Delacre, D., Thalheimer-Prezyna, L. & van der Geest, K. (2025). To what extent do climatic stressors drive human mobility in the world's drylands? A systematic review of empirical evidence. *Population and Environment*, *47*(1), 16. https://doi.org/10.1007/s11111-024-00465-w
Liu, Q., Fu, C., Xu, Z. & Ding, A. (2026). Global warming intensifies extreme day-to-day temperature changes in mid–low latitudes. *Nature Climate Change*, *16*(1), 69-76. https://doi.org/10.1038/s41558-025-02486-9
Lodder, G. (2019). Selectief naast restrictief. https://repository.wodc.nl/entities/publication/1964eeae-2f31-4e30-99e5-12724f0153fa
López Bremme, M. & Regilme, S. S. (2025). Climate change, ecocide, and the rise of environmental refugees: the case of Syria. *Political Studies*, 00323217251382404. https://doi.org/10.1177/00323217251382404
Madurga Lopez, I. M., Dutta Gupta, T., Castellanos, A., Martínez Barón, D. & Pacillo, G. (2021). *Climate security nexus in Latin America and the Caribbean: Venezuela and Colombia*. https://hdl.handle.net/10568/116674
Marghidan, C. P., van der Schee, M., Kraai, A., Verver, G., Wijngaard, J., Struijk, S., Konijn, R. & van Aalst, M. (2024). *KNMI-Global: lessons learned during the first phase of the SOFF as a peer advisor to 5*

countries. Copernicus Meetings. https://meetingorganizer.copernicus.org/EMS2024/EMS2024-656.html
Martin, M. A., Boakye, E. A., Boyd, E., Broadgate, W., Bustamante, M., Canadell, J. G., Carr, E. R., Chu, E. K., Cleugh, H. & Csevár, S. (2022). Ten new insights in climate science 2022. *Global Sustainability*, *5*, e20.
Martín, Y., Cutter, S. L., Li, Z., Emrich, C. T. & Mitchell, J. T. (2020). Using geotagged tweets to track population movements to and from Puerto Rico after Hurricane Maria. *Population and Environment*, *42*(1), 4-27. https://doi.org/10.1007/s11111-020-00337-z
Mayrhofer, M. & Ammer, M. (2022). Climate mobility to Europe: the case of disaster displacement in Austrian asylum procedures. *Frontiers in Climate*, *4*, 990558. https://doi.org/10.3389/fclim.2022.990558
McAdam, J. (2026). Displacement in the ICJ's Advisory Opinion on climate change. *Environmental Policy and Law*, *56*(1-2), 39-46. https://doi.org/10.3233/EPL-260004
McKay, D. I. A., Sakschewski, B., Roman-Cuesta, R. M., Dakos, V., Flores, B. M. & Kosten, S. (2023). *Tipping points in the biosphere*.
McLeman, R. (2025). Coming to terms with deep uncertainty in the study of climate-related displacement. *Cosmopolitan Civil Societies: An Interdisciplinary Journal*, *17*(1), 14-34. https://doi.org/10.5130/ccs.v17i1.9213
McMichael, C., Farbotko, C., Piggott-McKellar, A., Powell, T. & Kitara, M. (2021). Rising seas, immobilities, and translocality in small island states: case studies from Fiji and Tuvalu. *Population and Environment*, *43*(1), 82-107. https://doi.org/10.1007/s11111-021-00388-2
MedGlobal. (2022). *Climate change, war, displacement and health: the impact on Syrian refugee camps*. MedGlobal. https://medglobal.org/medglobal-launches-an-advocacy-report-on-the-impact-of-climate-change-on-syrian-refugee-camps/
Meijer, K. S., ter Horst, R., Mackway-Jones, E., Ferrini, L., Zongo, B., Diallo, M., Fofana, I. S. & Keïta, K. (2024). Participatory analysis of water-related conflict risks in complex adaptive systems–the case of the Inner Niger Delta in Mali. *Water International*, *49*(1), 104-127. https://doi.org/10.1080/02508060.2023.2289456
Mester, B., Vogt, T., Bryant, S., Otto, C., Frieler, K. & Schewe, J. (2023). Human displacements from Tropical Cyclone Idai attributable to climate change. *Natural Hazards and Earth System Sciences*, *23*(11), 3467-3485. https://doi.org/10.5194/nhess-23-3467-2023
Michaelowa, A. & Michaelowa, K. (2015). Do rapidly developing countries take up new responsibilities for climate change mitigation? *Climatic Change*, *133*(3), 499-510. https://doi.org/10.1007/s10584-015-1493-2
Milan, A. & Standardi, G. (2025). Climate mobility modeling: methodological advances and future prospects. *Frontiers in Climate*, *7*, 1704343. https://doi.org/10.3389/fclim.2025.1704343
Minister voor Buitenlandse Handel en Ontwikkelingshulp. (2025). *Beleidsbrief ontwikkelingshulp/BZ2512336*. Den Haag. https://www.rijksoverheid.nl/documenten/2025/02/20/beleidsbrief-ontwikkelingshulp
Minister voor Buitenlandse Handel en Ontwikkelingshulp. (2026). *Kamerbrief internationaal klimaatbeleid/BZ2625819*. https://www.rijksoverheid.nl/documenten/2026/03/10/kamerbrief-inzake-internationaal-klimaatbeleid
Ministerie van Defensie. (2026). *Klimaatparaat: defensiestrategie voor klimaatverandering en veiligheid*. https://open.overheid.nl/details/6b0b7fcd-da49-4e4e-9453-df91c23fbfc5
Ministerie van Justitie en Veiligheid. (2023). *Veiligheidsstrategie voor het Koninkrijk der Nederlanden*. https://www.rijksoverheid.nl/themas/recht-veiligheid-en-defensie/veiligheidsstrategie-voor-het-koninkrijk-der-nederlanden
Ministry for the Environment & Stats NZ. (2019). *New Zealand's environmental reporting reries: our marine environment 2019*. New Zealand Government. https://environment.govt.nz/publications/our-marine-environment-2019/
Ministry for the Environment NZ. (2023). *Community-led retreat and adaptation funding: issues and options*. New Zealand Government. https://environment.govt.nz/publications/community-led-retreat-and-adaptation-funding-issues-and-options/
Ministry of Land and Environment Mozambique. (2023). *Mozambique national adaptation plan*. National Directorate of climate change. https://unfccc.int/documents/630508
Mishra, A. & Singh, S. (2023). Historical evolution of climate refugee concepts. In *Global Climate Change and Environmental Refugees: Nature, Framework and Legality* (pp. 19-33). Springer. https://doi.org/10.1007/978-3-031-29479-2_2
Missirian, A. & Schlenker, W. (2017). Asylum applications respond to temperature fluctuations. *Science*, *358*(6370), 1610-1614. https://doi.org/10.1126/science.aao0432
MMC. (2022a). *Climate-related events and environmental stressors' roles in driving migration in West and North Africa*. Mixed Migration Centre. https://mixedmigration.org/resources/climate-related-events-and-environmental-stressors-roles-in-driving-migration-in-west-and-north-africa/
MMC. (2022b). *Climate change, environmental stressors, and mixed migration*. Mixed Migration Centre. https://mixedmigration.org/resources/climate-change-environmental-stressors-mixed-migration/

MMC. (2022c). *Stories of climate mobility: understanding the impacts, informing effective response*. Mixed Migration Centre. https://mixedmigration.org/articles/stories-of-climate-mobility-understanding-the-impacts-informing-effective-response/
MMC. (2023). *Beira, Mozambique: Praia Nova. Climate and mobility case study*. Mixed Migration Centre. https://mixedmigration.org/resources/climate-and-mobility-case-studies/
Motte-Baumvol, J., Mont'Alverne, T. C. F. & Braga, G. (2025). Climate change, migration, and the limits of EU solidarity: rethinking the temporary protection directive. *European Journal of Migration and Law*, *27*(4), 435-457. https://doi.org/10.1163/15718166-27040003
MPI. (2025). *Adaptation efforts may reduce harms amid significant climate-linked displacement in Sub-Saharan Africa*. Migration Policy Institute. Geraadpleegd op 17-07-2026 van https://www.migrationpolicy.org/journal/feature/adaptation-efforts-may-reduce-harms-amid-significant-climate-linked-displacement
MPI & IDB. (2023). *Migration, integration, and diaspora engagement in the Caribbean*. Migration Policy Institute and Inter-American Development Bank. https://publications.iadb.org/en/migration-integration-and-diaspora-engagement-caribbean-policy-review
Msimanga, L. & Mukwada, G. (2022). Themes in climate change and variability within the context of rural livelihoods. A systematic literature review. *Research in Globalization*, *5*, 100101. https://doi.org/10.1016/j.resglo.2022.100101
Mucha, F. G., Legesse, S. A., Amare, Z. Y. & Ahmed, M. E. (2026). Rural households' adaptation strategies, determinants and constraints to climate change adaptation strategies in ethiopia: a review. *Mitigation and Adaptation Strategies for Global Change*, *31*(1), 9. https://doi.org/10.1007/s11027-025-10196-z
Nagabhatla, N., Cassidy-Neumiller, M., Francine, N. N. & Maatta, N. (2021). Water, conflicts and migration and the role of regional diplomacy: Lake Chad, Congo Basin, and the Mbororo pastoralist. *Environmental Science & Policy*, *122*, 35-48. https://doi.org/10.1016/j.envsci.2021.03.019
Nakayama, M., Drinkall, S. & Sasaki, D. (2019). Climate change, migration, and vulnerability: overview of the special issue. *Journal of Disaster Research*, *14*(9), 1246-1253. https://doi.org/10.20965/jdr.2019.p1246
Nantsou, T., Vlachopoulos, K., Doussis, E. & Nizami, N. (2026). From ravaged livelihoods in the Global South to Mediterranean crossings: the reality of climate migration. *Ocean and Society*, *3*. https://doi.org/10.17645/oas.11445
NAP Global Network. (2025). *Climate-related human mobility across different levels of adaptation governance: lessons from adaptation planning and implementation in Costa Rica, Senegal, Sri Lanka, and around the world*. https://napglobalnetwork.org/resource/climate-related-human-mobility-across-different-levels-of-adaptation-governance-2025/
Nazeri Tahroudi, M. (2025). Comprehensive global assessment of precipitation trend and pattern variability considering their distribution dynamics. *Scientific reports*, *15*(1), 22458. https://doi.org/10.1038/s41598-025-06050-5
Nguyen, Q., Spilker, G., Koubi, V. & Böhmelt, T. (2024). How sudden-versus slow-onset environmental events affect self-identification as an environmental migrant: evidence from Vietnamese and Kenyan survey data. *Plos one*, *19*(1), e0297079. https://doi.org/10.1371/journal.pone.0297079
NIDI. (2024). *Bevolking Caribisch Nederland 2050 in beeld: opleiding, arbeid, gezondheid en wonen*. Nederlands Interdisciplinair Demografisch Instituut. https://nidi.nl/project/verkenning-bevolking-2050/
Ocean and Climate Platform. (2025). *Managed retreat: preparing coastal cities for sea level rise*. https://ocean-climate.org/en/special-report-managed-retreat-preparing-coastal-cities-to-sea-level-rise/
Onderzoeksraad voor Veiligheid. (2026). *Onveiligheid door extreme regen*. https://onderzoeksraad.nl/onderzoek/veiligheidsrisicos-rond-wateroverlast/
Oost Nieuws. (2025). *Na extreme regenval verliezen tientallen gezinnen in Enschede definitief hun huis: "Hard gelag"*. Geraadpleegd op 17-07-2026 van https://www.oost.nl/nieuws/3505649/na-extreme-regenval-verliezen-tientallen-gezinnen-in-enschede-definitief-hun-huis-hard-gelag
Papagianni, G. (2022). The challenges and opportunities of the EU migration partnerships: a North African perspective. *International Migration*, *60*(4), 61-72. https://onlinelibrary.wiley.com/doi/full/10.1111/imig.12979
Parsons, M. & Jayawardena, I. (2026). Advancing Indigenous climate justice: Māori perspectives on managed retreat and climate adaptation policy in Aotearoa New Zealand. *Environment and Planning E: Nature and Space*, *9*(1), 452-482. https://journals.sagepub.com/doi/full/10.1177/25148486251388972
Patricola-DiRosario, C. M. & Wehner, M. F. (2018). Anthropogenic influences on major tropical cyclone events. *Nature*, *563*(7731), 339-346. https://doi.org/10.1038/s41586-018-0673-2
Paulik, R., Zorn, C., Wotherspoon, L. & Sturman, J. (2023). Modelling national residential building exposure to flooding hazards. *International Journal of Disaster Risk Reduction*, *94*, 103826. https://doi.org/10.1016/j.ijdrr.2023.103826

Pawson, E. & Blakie, T. (2025). Managed retreat and experimentation: realising opportunity in the Ōtautahi Christchurch residential red zone, Aotearoa New Zealand. *Kōtuitui: New Zealand Journal of Social Sciences Online*, *20*(2), 206-226. https://doi.org/10.1080/1177083X.2024.2357546
PBL. (2024). *Wat zijn rechtvaardige en haalbare klimaatdoelen voor Nederland?* Planbureau voor de Leefomgeving. https://www.pbl.nl/publicaties/wat-zijn-rechtvaardige-en-haalbare-klimaatdoelen-voor-nederland
PBL. (2026). *Voorbij de risico's: keuzes voor een klimaatbestendige leefomgeving*. Planbureau voor de Leefomgeving. https://www.pbl.nl/publicaties/voorbij-de-risicos-keuzes-voor-een-klimaatbestendige-leefomgeving
PECCH. (2026). *Call to action*. Pan-European Commission on Climate and Health. https://www.who.int/europe/publications/m/item/pan-european-commission-on-climate-and-health--call-to-action
Pill, M. (2022). Towards a funding mechanism for loss and damage from climate change impacts. *Climate Risk Management*, *35*, 100391. https://doi.org/10.1016/j.crm.2021.100391
PreventionWeb. (2025). *The three big reasons why Mozambique is not adapting to climate change and what needs to be done*. Geraadpleegd op 17-07-2026 van https://www.preventionweb.net/news/three-big-reasons-why-mozambique-not-adapting-climate-change-and-what-needs-be-done
Provincie Limburg. (2023). *Opbouwplan programma WRL: gericht aan de slag!* Programma waterveiligheid en ruimte Limburg. https://www.limburg.nl/onderwerpen/water/waterveiligheid/programma-waterveiligheid-en-ruimte-limburg/
R4V. (2025). *Latin America and the Caribbean, Venezuelan refugees and migrants in the region - november 2025*. R4V Inter-Agency Coordination Platform for Refugees and Migrants from Venezuela. https://www.r4v.info/en/refugeeandmigrants
Radio New Zealand. (2026). *Far North settlement could be first place in NZ to entirely relocate*. Geraadpleegd op 05-08-2026 van https://www.rnz.co.nz/news/community/594787/far-north-settlement-could-be-first-place-in-nz-to-entirely-relocate
Rakib, M., Sasaki, J., Matsuda, H. & Fukunaga, M. (2019). Severe salinity contamination in drinking water and associated human health hazards increase migration risk in the southwestern coastal part of Bangladesh. *Journal of Environmental Management*, *240*, 238-248. https://doi.org/10.1016/j.jenvman.2019.03.101
Rana, M. M. P. & Ilina, I. N. (2021). Climate change and migration impacts on cities: lessons from Bangladesh. *Environmental Challenges*, *5*, 100242. https://doi.org/10.1016/j.envc.2021.100242
Rantanen, M., Karpechko, A. Y., Lipponen, A., Nordling, K., Hyvärinen, O., Ruosteenoja, K., Vihma, T. & Laaksonen, A. (2022). The Arctic has warmed nearly four times faster than the globe since 1979. *Communications Earth & Environment*, *3*(1), 168. https://doi.org/10.1038/s43247-022-00498-3
'Klimaatzaak Bonaire': uitspraak van de Rechtbank Den Haag van 28 januari 2026 in de zaak van Stichting Greenpeace Nederland tegen de Staat der Nederlanden (2026). https://uitspraken.rechtspraak.nl/details?id=ECLI:NL:RBDHA:2026:1344
ReliefWeb. (2023). *Slovenia: floods - Aug 2023*. https://reliefweb.int/disaster/fl-2023-000144-svn
Resilient Westport. (z.d.). *Master planning*. Geraadpleegd op 05-08-2026 van https://www.resilientwestport.co.nz/master-planning
Richtlijn 2011/95/EU van het Europees Parlement en de Raad (2011). https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:337:0009:0026:nl:PDF
Rijksdienst Caribisch Nederland. (2025). *Bevolking Nederlandse Caraïben in vijftien jaar gegroeid*. Geraadpleegd op 30-07-2026 van https://www.rijksdienstcn.com/actueel/nieuws/2025/november/18/bevolking-nederlandse-caraiben-in-vijftien-jaar-gegroeid
Rli. (2024). *Ruimtelijke ordening in een veranderend klimaat*. Raad voor de Leefomgeving en Infrastructuur. https://www.rli.nl/publicaties/2024/advies/ruimtelijke-ordening-in-een-veranderend-klimaat
Rothe, D., Boas, I., Farbotko, C. & Kitara, T. (2024). Digital Tuvalu: state sovereignty in a world of climate loss. *International Affairs*, *100*(4), 1491-1509. https://doi.org/10.1093/ia/iiae060
Ruyssen, I. (2025). *Vloedgolf? De complexiteit van klimaatgerelateerde migratie ontrafeld*. Owl Press. https://www.owlpress.be/boek/vloedgolf
Sakellari, M. (2021). Climate change and migration in the UK news media: how the story is told. *International Communication Gazette*, *83*(1), 63-80. https://doi.org/10.1177/1748048519883518
Satterthwaite, D., Archer, D., Colenbrander, S., Dodman, D., Hardoy, J., Mitlin, D. & Patel, S. (2020). Building resilience to climate change in informal settlements. *One Earth*, *2*(2), 143-156. https://doi.org/10.1016/j.oneear.2020.02.002
Schewel, K. (2020). Understanding immobility: moving beyond the mobility bias in migration studies. *International Migration Review*, *54*(2), 328-355. https://doi.org/10.1177/0197918319831952
Schewel, K., Dickerson, S., Madson, B. & Nagle Alverio, G. (2024). How well can we predict climate migration? A review of forecasting models. *Frontiers in Climate*, *5*, 1189125. https://doi.org/10.3389/fclim.2023.1189125
Schubert, J. (2024). Maintaining a city against nature: climate adaptation in Beira. *Buildings & Cities*, *5*(1). https://doi.org/10.5334/bc.378

Schutte, S., Vestby, J., Carling, J. & Buhaug, H. (2021). Climatic conditions are weak predictors of asylum migration. *Nature Communications*, *12*(1), 2067. https://doi.org/10.1038/s41467-021-22255-4
Schüttrumpf, H. (2026). The flood event in July 2021 in Europe: observations, conclusions, challenges. https://doi.org/10.1111/jfr3.70175
Schwerdtle, P. N., McMichael, C., Mank, I., Sauerborn, R., Danquah, I. & Bowen, K. J. (2020). Health and migration in the context of a changing climate: a systematic literature assessment. *Environmental Research Letters*, *15*(10), 103006. https://doi.org/10.1088/1748-9326/ab9ece
Sciences, N. A. o., Medicine, Earth, D. o., Studies, L., Sciences, B. o. A., Events, C. o. E. W. & Attribution, C. C. (2016). *Attribution of extreme weather events in the context of climate change*. National Academies Press. https://doi.org/10.17226/21852
See, S., Opdyke, A. & Banki, S. (2026). A review of the climate change-disaster-conflict nexus and humanitarian framing of complex displacement contexts. *Climate and Development*, *18*(3), 240-253. https://doi.org/10.1080/17565529.2025.2514027
Selby, J. (2019). Climate change and the Syrian civil war, part II: the Jazira's agrarian crisis. *Geoforum*, *101*, 260-274. https://doi.org/10.1016/j.geoforum.2018.06.010
Selby, J., Dahi, O. S., Fröhlich, C. & Hulme, M. (2017). Climate change and the Syrian civil war revisited. *Political Geography*, *60*, 232-244. https://doi.org/10.1016/j.polgeo.2017.08.001
Sengupta, M. (2025). Environmental immobility: a systematic review of empirical research. *Ambio*, *54*(11), 1729-1756. https://doi.org/10.1007/s13280-025-02195-9
Silke, A. & Morrison, J. (2022). Gathering storm: an introduction to the special issue on climate change and terrorism (Vol. 34, pp. 883-893): Taylor & Francis. https://doi.org/10.1080/09546553.2022.2069444
Small, C. & Cohen, J. (2004). Continental physiography, climate, and the global distribution of human population. *Current Anthropology*, *45*(2), 269-277. https://doi.org/10.1086/382255
Smirnov, O., Lahav, G., Orbell, J., Zhang, M. & Xiao, T. (2023). Climate change, drought, and potential environmental migration flows under different policy scenarios. *International Migration Review*, *57*(1), 36-67. https://doi.org/10.1177/01979183221079850
Stadszaken. (2022). *Starters houden meer rekening met klimaatrisico's bij aankoop eerste huis*. Geraadpleegd op 17-07-2026 van https://stadszaken.nl/artikel/4167/starters-houden-meer-rekening-met-klimaatrisico-s-bij-aankoop-eerste-huis
Sterly, H., Borderon, M., Sakdapolrak, P., Adger, N., Ayanlade, A., Bah, A., Blocher, J., Blondin, S., Boly, S. & Brochier, T. (2025). Habitability for a connected, unequal and changing world. *Global Environmental Change*, *90*, 102953. https://doi.org/10.1016/j.gloenvcha.2024.102953
Stirling, A. (2003). Risk, uncertainty and precaution: some instrumental implications from the social sciences. In *Negotiating environmental change*. Edward Elgar Publishing. https://doi.org/10.4337/9781843765653.00008
Sunu, N. (2025). Navigating climate-related displacements: insights from cyclone Idai in Mozambique. *African Journal of Governance and Development*, *14*(1.2), 100-122. https://doi.org/10.36369/2616-9045/2025/v14i1.2a6
SVR. (2023). *Climate change and migration: what we know about the connection and what options there are for action*. The Expert Council on Integration and Migration. https://www.svr-migration.de/en/publications/annual-assessment/annual-report-2023/
SWP. (2025). *Regional free movement of persons as an opportunity in dealing with climate mobility*. German Institute for International and Security Affairs. https://doi.org/10.18449/2025C07
Szaboova, L., Link, A.-C., van der Geest, K., Demeranville, J. & Prati, G. (2025). *Acting on loss and damage: linking rural livelihoods and climate mobility in adaptation and mitigation planning*. https://researchinginternaldisplacement.org/short_pieces/acting-on-loss-and-damage-linking-rural-livelihoods-and-climate-mobility-in-adaptation-and-mitigation-planning/
Ter Haar, S. F., Van Bodegom, P. M. & Scherer, L. (2025). CO2 rise directly impairs crop nutritional quality. *Global Change Biology*, *31*(11), e70568. https://doi.org/10.1111/gcb.70568
Thalheimer, L., Cottier, F., Kruczkiewicz, A., Hultquist, C., Tuholske, C., Benveniste, H., Freihardt, J., Hemmati, M., Kam, P. M. & Pricope, N. G. (2025). Prioritizing involuntary immobility in climate policy and disaster planning. *Nature Communications*, *16*(1), 2581. https://doi.org/10.1038/s41467-025-57679-9
The GlaMBIE Team. (2025). Community estimate of global glacier mass changes from 2000 to 2023. *Nature*, *639*(8054), 382-388. https://doi.org/10.1038/s41586-024-08545-z
Thompson, V., Coumou, D., Beyerle, U., Ommer, J., Cloke, H. L. & Fischer, E. (2025). Alternative rainfall storylines for the Western European July 2021 floods from ensemble boosting. *Communications Earth & Environment*, *6*(1), 427. https://doi.org/10.1038/s43247-025-02386-y
Trouw. (2023). *Criminelen willen horecabazen 'helpen' bij hun geldnood na de overstroming in Zuid-Limburg*. Geraadpleegd op 17-07-2026 van https://www.trouw.nl/binnenland/criminelen-willen-horecabazen-helpen-bij-hun-geldnood-na-de-overstroming-in-zuid-limburg~b9089dbe/
Trouw. (2026). *We eten massaal rijst, maar stijgende temperaturen in Azië bedreigen de productie*. Geraadpleegd op 17-07-2026 van https://www.trouw.nl/duurzaamheid-economie/we-eten-massaal-rijst-maar-stijgende-temperaturen-in-azie-bedreigen-de-productie~b3580ed6/
UN-Habitat. (2024). *World cities report 2024: cities and climate action*. United Nations Human Settlements Programme. https://unhabitat.org/world-cities-report-2024-cities-and-climate-action

UNDESA. (2013). *Cross-national comparisons of internal migration: an update on global patterns and trends*. United Nations Department of Economic and Social Affairs. https://www.un.org/development/desa/pd/content/cross-national-comparisons-internal-migration-update-global-patterns-and-trends
UNDESA. (2024). *World population prospects 2024: summary of results*. United Nations Department of Economic and Social Affairs. https://desapublications.un.org/publications/world-population-prospects-2024-summary-results
UNEP. (2025). *Adaptation gap report 2025*. United Nations Environment Programme. https://www.unep.org/resources/adaptation-gap-report-2025
UNFCCC. (2015). *Parijs Akkoord*. https://unfccc.int/process-and-meetings/the-paris-agreement
UNFCCC. (z.d.). *Approaches to address loss and damage associated with climate change impacts in developing countries*. Geraadpleegd op 17-07-2026 van https://unfccc.int/topics/adaptation-and-resilience/workstreams/approaches-to-address-loss-and-damage-associated-with-climate-change-impacts-in-developing-countries
UNGA. (1954). *Convention relating to the status of refugees 189 UNTS 137*. United Nations General Assembly. https://www.unhcr.org/refugee-statistics/insights/explainers/1951-refugee-convention.html
UNGA. (2018). *Global compact for safe, orderly and regular migration (Resolution A/RES/73/195)*. United Nations General Assembly. https://docs.un.org/A/RES/73/195
UNGA. (2026). *Progress declaration of the international migration review forum (Resolution A/RES/80/258)*. https://docs.un.org/A/RES/80/258
UNHCR. (2023). *As the Horn of Africa drought enters a sixth failed rainy season, UNHCR calls for urgent assistance*. Geraadpleegd op 17-07-2026 van https://www.unhcr.org/news/briefing-notes/horn-africa-drought-enters-sixth-failed-rainy-season-unhcr-calls-urgent
UNHCR. (2024). *UNHCR launches fund to shield refugees and other displaced people from climate shocks*. Geraadpleegd op 17-07-2026 van https://www.unhcr.org/news/press-releases/unhcr-launches-fund-shield-refugees-and-other-displaced-people-climate-shocks
UNOCHA. (2019). *Mozambique humanitarian response plan 2018-2020*. United Nations Office for the Coordination of Humanitarian Affairs. https://reliefweb.int/report/mozambique/mozambique-humanitarian-response-plan-2018-2020-revised-august-2019
Van der Borght, R., Ishizawa, O. A., Muñoz, J. & Thuret, J. (2025). *Dry spells, urban swells*. World Bank. https://doi.org/10.1596/1813-9450-11099
Van Valkengoed, A. M. & Steg, L. (2019). Meta-analyses of factors motivating climate change adaptation behaviour. *Nature Climate Change*, *9*(2), 158-163. https://doi.org/10.1038/s41558-018-0371-y
van Vuuren, D., O'Neill, B., Tebaldi, C., Chini, L., Friedlingstein, P., Hasegawa, T., Riahi, K., Sanderson, B., Govindasamy, B. & Bauer, N. (2025). The scenario model intercomparison project for CMIP7 (scenariomip-CMIP7). *EGUsphere*, *2025*, 1-38. https://doi.org/10.5194/gmd-19-2627-2026
Velluti, S. (2026). *The European Union policy and normative framework in addressing climate mobility*. https://hdl.handle.net/10779/uos.27859509
Verdrag betreffende de status van vluchtelingen (BWBV0001002) (1954). https://wetten.overheid.nl/BWBV0001002/1956-08-01?g=2026-08-03&z=2026-08-03
Verdrag betreffende werking van de Europese Unie (2017). https://eur-lex.europa.eu/NL/legal-content/summary/treaty-on-the-functioning-of-the-european-union.html
Verhoeven, H. (2024). *Drought, conflict, and the circulation of climate knowledge in Somalia*. Harvard Center for International Development. https://www.hks.harvard.edu/centers/cid/voices/drought-conflict-and-circulation-climate-knowledge-somalia
Vinke, K., Bergmann, J., Blocher, J., Upadhyay, H. & Hoffmann, R. (2020). Migration as adaptation? *Migration studies*, *8*(4), 626-634. https://doi.org/10.1093/migration/mnaa029
Vinke, K., Campbell, L., Schirwon, D., Seyuba, K., Krampe, F., Maalim, H. & Isulu Mbungwal, G. (2023). *Climate and environmental security in the democratic republic of Congo: competing over abundant resources-adapting to change*. https://dgap.org/en/research/publications/climate-and-environmental-security-democratic-republic-congo
Vinke, K., Rottmann, S., Gornott, C., Zabre, P., Nayna Schwerdtle, P. & Sauerborn, R. (2022). Is migration an effective adaptation to climate-related agricultural distress in sub-Saharan Africa? *Population and Environment*, *43*(3), 319-345. https://doi.org/10.1007/s11111-021-00393-7
VN-Mensenrechtencomité. (2020). *Uitspraak van het VN-Mensenrechtencomité van 7 januari 2020 in de zaak Ioane Teitiota tegen de Staat van Nieuw Zeeland (CCPR/C/127/D/2728/2016)*. https://docs.un.org/en/CCPR/C/127/D/2728/2016
Vousdoukas, M. I., Athanasiou, P., Giardino, A., Mentaschi, L., Stocchino, A., Kopp, R. E., Menéndez, P., Beck, M. W., Ranasinghe, R. & Feyen, L. (2023). Small Island Developing States under threat by rising seas even in a 1.5 C warming world. *Nature Sustainability*, *6*(12), 1552-1564. https://doi.org/10.1038/s41893-023-01230-5
Vrij Nederland. (2025). *Steeds meer Nederlanders verhuizen vanwege overstromingsgevaar*. Geraadpleegd op 17-07-2026 van https://www.vn.nl/verhuizen-vanwege-overstromingsgevaar

VRT. (2025). *Wallonië herdenkt de waterbom, precies 4 jaar geleden: "We zijn beter voorbereid, maar nooit helemaal veilig"*. Geraadpleegd op 05-08-2026 van https://www.vrt.be/vrtnws/nl/2025/07/11/vier-jaar-na-de-waterbom-in-wallonie/
Warner, K. & Afifi, T. (2014). Where the rain falls: evidence from 8 countries on how vulnerable households use migration to manage the risk of rainfall variability and food insecurity. *Climate and Development*, *6*(1), 1-17. https://doi.org/10.1080/17565529.2013.835707
Water Peace and Security Partnership. (z.d.). Geraadpleegd op 01-03-2026 van https://waterpeacesecurity.org/
Witze, A. (2026). Climate change is speeding up-the pace nearly doubled in ten years. *Nature*, *651*(8106), 569-570. https://doi.org/10.1038/d41586-026-00745-z
WKR. (2025a). *Bossen en bodems in zwaar weer*. Wetenschappelijke Klimaatraad. https://www.wkr.nl/adviezen/overige-publicaties/bossen-en-bodems
WKR. (2025b). *Meeveranderen met het klimaat: ruimtelijke en maatschappelijke keuzes voor klimaatadaptatie*. Wetenschappelijke Klimaatraad. https://www.wkr.nl/documenten/2025/06/19/advies-meeveranderen-met-het-klimaat
WMO. (2026). *State of the global climate 2025*. World Meteorological Organization. https://wmo.int/publication-series/state-of-global-climate/state-of-global-climate-2025
Wolff, C., Bade, F. & Kraan, C. (2026). Insights from managed retreat projects in Europe. *Earth's Future*, *14*(3), e2025EF007012. https://doi.org/10.1029/2025EF007012
World Bank. (2018). *Groundswell: preparing for internal climate migration*. The World Bank. https://doi.org/10.1596/29461
World Bank. (2021). *Groundswell Part 2: acting on internal climate migration*. The World Bank. https://doi.org/10.1596/36248
World Bank. (z.d.). *World Bank country and lending groups*. The World Bank. Geraadpleegd op 17-07-2026 van https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups
World Weather Attribution. (2021). *Western Europe floods 2021 scientific report*. https://www.worldweatherattribution.org/western-europe-floods-2021/
World Weather Attribution. (2022). *Pakistan floods 2022 scientific report*. https://www.worldweatherattribution.org/climate-change-likely-increased-extreme-monsoon-rainfall-flooding-highly-vulnerable-communities-in-pakistan/
World Weather Attribution. (2024). *Climate change, El Niño and infrastructure failures behind massive floods in southern Brazil*. Geraadpleegd op 05-08-2026 van https://www.worldweatherattribution.org/climate-change-made-the-floods-in-southern-brazil-twice-as-likely/
World Weather Attribution. (2025a). *Climate change increased the likelihood of wildfire disaster in highly exposed Los Angeles area*. Geraadpleegd op 30-07-2026 van https://www.worldweatherattribution.org/climate-change-increased-the-likelihood-of-wildfire-disaster-in-highly-exposed-los-angeles-area/
World Weather Attribution. (2025b). *Extreme fire weather conditions in Spain and Portugal now common due to climate change*. Geraadpleegd op 30-07-2027 van https://www.worldweatherattribution.org/extreme-fire-weather-conditions-in-spain-and-portugal-now-common-due-to-climate-change/
World Weather Attribution. (2026). *Climate change increases likelihood of compounding drivers of severe wildfire conditions in France and Spain*. Geraadpleegd op 05-08-2026 van https://www.worldweatherattribution.org/climate-change-increases-likelihood-of-compounding-drivers-of-severe-wildfire-conditions-in-france-and-spain/
WRR. (2024). *Nederland in een fragmenterende wereldorde*. Wetenschappelijke Raad voor het Regeringsbeleid. https://www.wrr.nl/documenten/2024/07/01/nederland-in-een-fragmenterende-wereldorde
Xu, C., Kohler, T. A., Lenton, T. M., Svenning, J.-C. & Scheffer, M. (2020). Future of the human climate niche. *Proceedings of the National Academy of Sciences*, *117*(21), 11350-11355. https://doi.org/10.1073/pnas.1910114117
Zickgraf, C. (2021). Climate change, slow onset events and human mobility: reviewing the evidence. *Current Opinion in Environmental Sustainability*, *50*, 21-30. https://doi.org/10.1016/j.cosust.2020.11.007

Colophon

Start to move: How climate change influences migration and what this means for the Netherlands (original Dutch title: *In beweging komen. Over de invloed van klimaatverandering op migratie en wat dit betekent voor Nederland*) is a briefing by the Advisory Council on Migration and the Netherlands Scientific Climate Council for the Dutch government and parliament.

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The Advisory Council on Migration is an independent advisory body established by law. The Council advises the government and parliament on migration in a broad sense. Its advisory and knowledge products address legislation, policy, and strategy.

The Advisory Council on Migration is composed as follows: Prof. M. Kremer (Chair), Prof. M. van der Woude, J. Wienen, H. Fernandes Mendes, Dr. K. Rusinovic, Prof. P. de Beer, M. Sie Dhian Ho, M. Pastors, and Dr. V. Bex-Reimert. S. Vergeer is Acting Secretary-Director. During the preparation of this briefing, Mr. T. van Loon, Prof. H. de Valk, Dr. M. Klaassen, and M. Chébti were still members of the Advisory Council on Migration.

The Netherlands Scientific Climate Council advises the government and parliament on the development of a climate-neutral and climate-resilient society, drawing on broad scientific insights and taking account of other societal challenges.

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This briefing was prepared and written by council members and staff of both councils. The council members involved were Prof. B. Taebi (Chair on behalf of the Netherlands Scientific Climate Council), Mr. T. van Loon (Chair on behalf of the Advisory Council on Migration), Prof. H. de Valk, and Prof. P. de Beer. The staff members involved were Dr. M.J. Bogers (project lead), mr. C. Otten (project lead), Dr. A. Strockmeijer, Dr. L. Baan Hofman, D.M. van Herpen, MSc, M. Kampschoër, MSc, and L.L. Lont, BSc. The visualizations were produced by staff members D.M. van Herpen, MSc, and N.A. Draaijer, MSc.

This briefing is based on current knowledge from the scientific literature. It also incorporates insights from discussions with experts and policymakers. See the appendix.

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