



Human Mobility in the Context of Climate Change

Migration, Displacement and Planned Relocation in the Eastern Caribbean,
the Pacific and the Philippines

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Human Mobility in the Context of Climate Change

The movement of people from one area to another is an integral feature of many societies around the globe. Generally, people move in response to a variety of factors. While conflicts, persecution and disasters (natural or climate- or development-induced) have been major causes of displacement and migration, other people move as labour migrants or in response to changing environmental conditions. Migration and displacement are therefore complex phenomena driven by many different interlinked factors, so the term ‘human mobility’ includes different types of movement.

Human mobility in the context of climate change has continued to attract substantial attention in international research and policy circles. In particular, the most recent assessment by the Intergovernmental Panel on Climate Change (IPCC) notes observed and ongoing changes in global climatic and ecological systems. These slow-onset changes, such as rising sea levels, salinisation and increasing temperatures, are having an adverse impact on the ability of populations to secure a livelihood and on their survival, especially in marginal areas. An increase in the frequency and intensity of extreme events such as floods, typhoons, drought

and heatwaves will adversely affect human populations. This is likely to contribute to an increase in water shortages, food insecurity and disease and create new vulnerabilities with the potential for displacement, emergence of new patterns of migration and a higher probability of planned relocation.

While the exact extent of climate change impact on migration remains a subject of ongoing debate, there is widespread consensus that climate change has already had – and will undoubtedly continue to have – adverse effects on socio-economic conditions and thus undermine individuals’ and societies’ capacity to manage or adapt to the risks of climate change. Specifically, resilience is reduced as livelihoods are compromised, with adverse impact on food, water and economic security: it is projected that in the near future, growing numbers of people are likely to be displaced or to decide to migrate or relocate as a response. Potential competition for scarce resources in host regions for displaced persons and migrants may heighten the risk of violent conflict, with implications for human security. An understanding of different mobility patterns and the ways in which they relate to climate-induced shocks and stressors will therefore be critical

to developing strategic and effective policy responses and adaptation measures.

Climate change impacts may therefore also make ‘trapped populations’ more likely, resulting in immobility. This may occur when loss of capital or disruption of social networks undermines individuals’ capacity to move. As a result, significant proportion of a population may become trapped in vulnerable areas and unable to move. Climate change in itself may therefore be a barrier to, as well as a catalyst for, human mobility.

Migration and displacement are complex multi-causal phenomena that need to be addressed and understood in the context of climate change, among many other socioeconomic factors.

Migration, displacement, and planned relocation may lead to disruption of traditional livelihoods and, if not managed properly, trigger human trafficking, forced labour, general discontent and violent conflict.

Effective management of human mobility, by contrast, may contribute to social, economic and cultural development and effective adaptation to climate change.

Key terms

► **Human mobility:** Human mobility results from multiple factors. In the context of the UNFCCC different types of climate-induced human mobility are differentiated: migration, displacement and planned relocation.

► **Migration:** People migrate for multiple reasons and when they have accumulated the necessary resources and capabilities to do so. By contrast with displacement, migration is a more or less voluntary decision taken by an individual or family. Climate-induced migration is usually internal. Even where slow-onset climate-related changes and extreme events cause cross-border migration, most people migrate regionally.

► **Displacement:** This is a frequently temporary process in which people are forced to move from their normal place of residence in response to a change in the political, social or economic environment. In the case of environmental change, displacement is associated mainly with extreme weather events. Communities, rather than individual households, are affected.

► **Planned relocation:** Planned relocation is a process driven by an affected community and organised by a government. It may be large-scale or small-scale. In some instances, these processes are initiated by communities that face the threat of losing their place of residence because of the negative impact of climate change. The close involvement of the affected communities and host communities is crucial to successful planned relocation.

International Frameworks

In general terms, international policy has long given only limited recognition to migration and displacement induced by climate change, disasters and other environmental processes.

However, renewed international efforts have culminated in the recognition of climate change impacts on human mobility under the 2010 Cancun Agreement as part of the UNFCC Adaptation Framework.

Specifically, the 2010 Cancun Agreement emphasised the need for critical understanding of and coordination and

cooperation on issues of climate change-induced displacement, migration and planned relocation at all levels.

In 2015, at COP21, the Task Force on Displacement was created under the Warsaw International Mechanism for Loss and Damage Associated with Climate Change Impacts to formulate recommendations for addressing the adverse effects of climate change on displacement.

The Sendai Framework for Disaster Risk Reduction (2015-2030), formulated with the assistance of the United Nations Office for Disaster Risk Reduction (UNDRR, formerly

UNISDR), is a non-binding agreement that seeks to tackle climate change-related disasters, displacement and migration in countries of origin. It aims to do so by minimising climate and disaster impacts in vulnerable countries. In particular, the Sendai Framework recognises migrants and displaced persons as key stakeholders in planning disaster risk reduction.

The Nansen Initiative and the Platform on Disaster Displacement are non-binding, state-led international processes. The Nansen Initiative was a bottom-up consultative process involving diverse stakeholders in developing recommendations to protect cross-border displaced persons in the context of disasters and the effects of climate change. The Platform on Disaster Displacement is the follow-up process to the Nansen Initiative and has a coordinating function in assisting states to tackle knowledge gaps, promote policy coherence and mainstream human mobility within policy formulation.

The UN Sustainable Development Goals (SDGs) also identify the management of displacement as crucial to their achievement. Specifically, SDG 13.1 calls for strengthening resilience and adaptive capacity to climate-related hazards and natural disasters in all countries. Despite its recognition of and calls for safe, orderly and regular migration, there is no explicit reference to climate-related human mobility. The Global Compact for Safe, Orderly and Regular Migration (GCM) is rooted in the 2030 Agenda and the New York Declaration for Refugees and Migrants and is perhaps

the most comprehensive intergovernmental framework that holistically covers all dimensions of migration, including climate-induced migration. Although the GCM is not legally binding, its objectives recognise changing socio-economic and environmental conditions and the implications they may have for migration.

Renewed international efforts have culminated in the recognition of climate change impacts on human mobility under the 2010 Cancun Agreement as part of the UNFCC Adaptation Framework.



The Global Programme on Sustainable Management of Human Mobility in the Context of Climate Change

On behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ), the GIZ Global Programme on Sustainable Management of Human Mobility in the Context of Climate Change (GP HMCCC) is working to support its partners in addressing and better understanding the complex, multi-causal interrelations between different forms of human mobility and climate change and their reciprocal effects, especially in small atoll and island states in the Pacific and Caribbean regions and in the Philippines. In collaboration with national and regional partners, non-governmental organisations and universities, GP HMCCC promotes exchange between all the actors involved. It aims at improving applied knowledge relating to the sustainable management of human mobility in the context of climate change in its partner regions.

Fields of action

The programme is focusing on:

- Supporting its partners at regional, national and sub-national level in managing human mobility in the context of climate change through participatory approaches.
- Developing information and resources on climate-induced human mobility. These processes will involve relevant

stakeholders from partner countries and regions in identifying existing knowledge and closing subject-related gaps, e.g. through capacity building and institutionalising exchange platforms.

- Supporting international processes by feeding knowledge and experiences from the partner regions into German and international development cooperation.

The GP HMCCC approach includes the following measures:

- Working with local and regional partners for regional integration, strengthening integrated approaches to better managing climate change-induced mobility.
- Supporting capacity development by conducting training courses and workshops on climate change-induced mobility and climate risk management.
- Promoting long-term planning and strategic inclusion of human mobility and climate change aspects in development planning.
- Supporting capacity development and knowledge management by creating media tools such as short public information video clips.
- Piloting activities in local communities to raise awareness and increase resilience.





The Caribbean

Human mobility in the context of climate change in the Caribbean

Climate projections for the Caribbean indicate that extreme events such as hurricanes¹, floods, droughts and heatwaves will become more frequent and severe. This will have implications for vulnerable states and populations, especially in coastal and flood-prone areas. Climate change impacts are also thought to interact with other complex socioeconomic factors.

In the Caribbean, the impact of climate-related events, particularly hurricanes, has often led directly to displacement. In some instances, climate change impacts have the potential to intensify underlying environmental challenges, as well as fragile social, economic and political conditions.

The Caribbean region has a long history of migration. Since the late 19th century, the region has experienced significant movement of people in response to labour demands and other

opportunities arising both within and outside the region. Alongside other notable socioeconomic drivers, however, environmental factors have always had an impact on human mobility across the region and will continue to do so.

The Intergovernmental Panel on Climate Change (IPCC) confirms that small island states in the Caribbean are highly vulnerable to climate and non-climate stressors, including floods, droughts, hurricanes, volcanic eruptions and earthquakes. Over half of the population in the region live within 1.5 kilometres of the coast and are therefore particularly exposed to the risks of climate-related and natural disasters. In recent decades, the Caribbean region has experienced an increasing number of Category 4 and 5 hurricanes, recurrent and prolonged droughts, rising sea levels, more frequent flooding and changes in weather patterns, as well as rising temperatures and unusually intense rainfall. While hurricanes and extreme weather events have been a familiar occurrence in the region, these events have grown more intense and increasingly unpredictable. In some cases, tropical storms have evolved into Category 5 hurricanes in less than 24 hours, as was the case with Hurricane Irma in

¹ Hurricanes are tropical cyclones that form over the North Atlantic Ocean and Northeast Pacific.

2017. This shift in intensity and variability has impacted on livelihoods and placed pressure on national economies, leading to increasing internal and intraregional displacement of persons as well as outmigration.

In 2017, several hurricanes hit the Caribbean islands with devastating consequences. The island state of the Commonwealth of Dominica was devastated by the direct impact of Hurricane Maria. Most houses were destroyed, and around one fifth of the population was displaced. Heavy rains and the destruction of large areas of forests and other vegetation led to flooding, landslides and loss of agricultural crops. Following Hurricane Irma's destruction of about 95% of the housing on the island of Barbuda, the island's entire population was relocated to Antigua, its sister island in the two-island state of Antigua and Barbuda; this was the first time in 300 years that Barbuda had been evacuated.

Climate change is considered an existential threat to the Caribbean and will influence the dynamics of human mobility in the region. This calls for urgent action to develop an integrated approach to the needs of climate-related human mobility.

Overview of Eastern Caribbean states supranational memberships

The Caribbean island states are members of various regional supranational organisations, including the Caribbean Community (CARICOM) and the Organisation of Eastern Caribbean States (OECS), which is the implementing partner of the GP HMCCC in the Caribbean. Across the Caribbean, 16 island states are classified by the UN as Small Island Developing States (SIDS); these include 6 of the 12 Member States of the OECS (see map below). Although each island is unique, the OECS Member States are comparable in many aspects, such as landmass, culture and socioeconomic and political systems. They also face similar constraints in their efforts to develop, such as a scarcity of natural resources, susceptibility to natural disasters, geographic remoteness, vulnerability to external shocks, fragile natural environments, and strong dependence on international trade. Moreover, as small islands with similar geographies and socioeconomic conditions, OECS Member States tend to face similar climate-related impacts. The St. George's Declaration of Principles for Environmental Sustainability in the OECS notes that environmentally sustainable development is essential to the creation of jobs, a stable society, a healthy economy and natural systems. Since the Revised Treaty of Basseterre established the OECS economic union in 2011, the Organisation has sought to create a congenial socioeconomic space that facilitates the free movement of persons, goods, capital and cooperation in other sectors like agriculture and tourism to promote socioeconomic development across the region.

In view of the similarities between OECS Member States, many programmes that target a particular sector could simultaneously be extended to multiple Member States. This has the potential to deliver significant benefits. Collaboration on climate action within the context of the OECS as an economic union could therefore present enormous benefits across the region as well as the potential to increase regional integration.



Fig. 1: Map of OECS Member States and Associate Members
Source: OECS Commission 2019

Regional Migration Policies

Citizens of OECS Member States are permitted to move, reside and work freely in Member States without the need for a work permit or skills certificate. The Free Movement of Persons policy aims at enhancing economic prosperity within Member States. This policy has proved effective in the event of natural disasters as it allows OECS citizens easily to move to other Member States and benefit from the ability to work and access social services there. Further work needs to be done to monitor the movement of people, create flexible capacities for schools, hospitals and correctional facilities, and simplify ID documents to facilitate access in cases where individuals have lost all their belongings.

The CARICOM Free Movement Protocol (not yet fully implemented) allows free movement for seven categories of

Each island is unique, the OECS Member States are comparable in many aspects, such as landmass, culture and socio-economic and political systems.

skilled persons and their dependants. The Commonwealth of Nations facilitates migration to some degree between the United Kingdom and the current UK Overseas Territories that are Member States.

The existing national and regional policies do not explicitly mention displacement as a result of environmental hazards within home countries or abroad.

Activities of the Global Programme on Human Mobility in the Context of Climate Change

The following selected activities are currently under way or have recently been implemented:

- A series of workshops on strategic planning addressing, inter alia, regional integration of OECS Member States
- A workshop on climate change, environment and migration in cooperation with the International Organization for Migration (IOM)
- Generation of knowledge regarding human mobility in the context of climate change, baseline studies, a short documentary film and two video statements
- Awareness raising on the topic of human mobility

A selection of activities is currently being planned:

- Supporting the creation of an intergovernmental working group on human mobility in the context of climate change
- Increasing resilience through pilot projects
- Awareness-raising campaigns in three OECS Member States
- Creating a platform for knowledge exchange for stakeholders of the GP HMCCC.

The Pacific Island Region

Human mobility in the context of climate change in the Pacific Island region

Pacific Island countries are experiencing increasing internal and international migration, displacement and, as a last resort, planned relocation as a result of multiple phenomena, including natural disasters, labour mobility and rapid urbanisation. Migration has always been important to the development of the Pacific region and, if well managed, can be beneficial to the people and their families.

In the Pacific region, the impacts of climate-related events have often directly induced migration. In some instances, however, climate change impacts intensify underlying environmental challenges and fragile social, economic and political conditions. It therefore reduces resilience and

exposes people to greater risk of displacement or motivates them to move elsewhere. In the future, the negative consequences of climate change will continue to have significant impact on human mobility and will shape migration, displacement and planned relocation.

Unmanaged climate risks are projected to slow economic growth, compromise livelihoods, erode food security and create new forms of poverty. In coastal, urban and agriculture-dependent areas and emerging hotspots, including many Pacific Island nations, the impacts of climate change are already felt significantly.ⁱⁱ In the Pacific region, densely populated coastal areas, which are highly exposed to climate events, would face losses of land and coastal infrastructure as a result of storm surges, flooding, shoreline erosion and general rises in sea levels. The failure of subsistence crops and coastal fisheries would also increase food insecurity.



In the Pacific, 13 island countries are classified by the UN as Small Island Developing States (SIDS). They share similar constraints on development, such as growing populations, susceptibility to natural disasters, limited resources, remoteness, vulnerability to external shocks, fragile natural environments, and strong dependence on international trade.ⁱⁱⁱ

Climate change is projected to cause more sudden-onset disasters in the Pacific, such as intense cyclones, which immediately displace people. Slow-onset events such as rising sea levels and droughts will also increase in frequency and may have an impact on human mobility. The Intergovernmental Panel on Climate Change (IPCC) confirms that small islands are recognised as being very sensitive to the impacts of climate change-related events such as rising sea levels, oceanic warming, rainfall, cyclones and coral bleaching (on which there is a high level of agreement and for which there is robust evidence). Small island nations will be disproportionately affected by rising sea levels, and some face the prospect of being entirely inundated. The IPCC Special Report (10/2018) highlights that some climate change impacts could be avoided if global warming were limited to 1.5°C (rather than 2°C). For the Pacific region, this would

mean a slower rate of rise in sea levels, providing greater opportunities for adaptation. Fewer people would then need to leave their homes or countries.^{iv}

Country and regional context

GIZ is active in all Pacific Island states negatively affected by climate change through various programmes. The GP HMCCC focusses especially on four countries, Fiji, Kiribati, Tuvalu and Vanuatu.

Because of differences in factors such as geological conditions, size, economic structures and distance to markets, history and government, among others, each of the four Island states has followed a unique development and deals differently with climate change and human mobility.

As a result, the GP HMCCC adapts to national and local needs in order to tackle a range of topics within the three different types of climate-induced human mobility.

Fiji

Fiji consists of two large mountainous islands of volcanic origin, Viti Levu and Vanua Levu, and over 300 smaller islands. About three quarters of Fijians live on Viti Levu's coasts, either in Suva or in smaller urban centres like Nadi and Lautoka, where coastal regions face an existential threat from rising sea levels. Because of its geographic conditions, relocation on higher ground may be an option in Fiji. In 2014, Vunidogoloa village was entirely relocated two kilometres inland, making it the only village in Fiji to have moved its entire population. The Government is pioneering policy development to provide equal support to all its coastal communities, whether they choose to stay or to relocate. In 2016, the Fijian Government had identified 830 climate-vulnerable communities⁹, and the option of planned relocation is currently being evaluated in 48 of them. With support from the GP HMCCC, its Climate Change & International Cooperation Division has finalised the National Planned Relocation Guidelines to assist with the planned relocation of ready-to-move communities. Furthermore, the EU-GIZ Adapting to Climate Change and Sustainable Energy programme is supporting two communities in their planned relocation activity with infrastructure and house building.

Kiribati

The country's economic development is constrained by climatic factors but also by its remoteness from international markets and the limited availability of natural resources. For 20 years, Kiribati has been working actively on adaptation to climate change. Given its extremely high vulnerability, climate change threatens the very existence of Kiribati and its population. The country has developed widely acknowledged and pioneering climate change adaptation tools and methodologies. It has made a considerable contribution to

the process of global and regional adaptation planning and management and to the development of a pool of knowledge on building climate resilience.

Tuvalu

By contrast with the larger mountainous states, Tuvalu is a low-lying small island state and classified as a Least Developed Country (LDC). Tuvalu is one of the smallest countries in the world with a total surface area of 26 km². Its highest point is 4.6 metres above sea level. This makes Tuvalu extremely vulnerable to climate change and rising sea levels. The country has limited natural resources, and its economy is based on subsistence agriculture and fishing. Despite the population being extremely vulnerable, Tuvalu's Climate Change Policy aims at improving the living conditions of the population through in-situ adaptation to make them more resilient and ultimately maintain national sovereignty. Relocation is considered as an option of last resort. However, labour migration schemes exist for Tuvaluan citizens.

Vanuatu

Vanuatu is one of the most vulnerable countries to climate change and natural disasters in the Pacific Island region. Its terrain is mostly mountainous and of volcanic origin, exposing it substantially to geological hazards such as volcanic eruptions. Vanuatu's economy is based primarily on subsistence agriculture and suffers from the negative effects of climate change. The country's major climate change concerns are rising sea levels and sea temperatures and the possible increase in the intensity of cyclones and other major storm events. Climate variability and extremes will put more pressure on the prevalent small-scale agriculture.



By setting up its National Advisory Board for Climate Change and Disaster Risk Reduction (NAB), Vanuatu has been able to integrate best practice in the areas of climate change and disaster risk reduction. Setting up the NAB has helped to significantly improve coordination and governance in climate change and disaster risk management, improving implementation of the United Nations Framework Convention on Climate Change (UNFCCC).

Each country has designed country-specific policies. At the regional level, policies and programmes have often been developed with the support of international organisations, development cooperation institutions and academic partners.

Regional and national policy responses and actions

While progress has been made at international level in addressing climate change-induced migration, most existing regional and national frameworks focus on climate change mitigation and adaptation and disaster risk reduction. At regional level, the GP HMCCC works with the Pacific Islands Forum Secretariat (PIFS) to establish a range of regional support mechanisms to support the Framework on Resilient Development in the Pacific (FRDP) and the Boe Declaration of the Pacific Island states. There is wide-ranging research and technical cooperation with the Secretariat of the Pacific Community (SPC) and the University of the South Pacific (USP) in the thematic areas of climate-induced human mobility and human security with a focus on exploring the security dimensions of migration, displacement and relocation under the aegis of the expanded security concept in the Boe Declaration.

The Secretariat of the Pacific Regional Environment Programme (SPREP) coordinates Pacific climate change action. For its members, SPREP is a key conduit for making use of

UNFCCC and Conference of the Parties processes, the Paris Agreement, and other global climate initiatives.

Pacific states in particular have established policies and guidelines for addressing human mobility. Fiji, Kiribati, Tuvalu and Vanuatu have led the way in incorporating planned relocation, the human rights of internally displaced persons and cross-border movements into their governance arrangements. Some of the existing frameworks include:

National	Republic of Fiji National Adaptation Plan (NAP) 2018
	Fiji National Planned Relocation Guidelines (with support from GIZ) 2018
	Vanuatu Climate Change and Disaster Risk Reduction Policy 2016-2030
	Vanuatu National Policy on Climate Change- and Disaster-Induced Displacement 2018 (with support from the IOM)
	Tuvalu Climate Change Policy (TCCP) 2012-2021 National Strategic Action Plan for Climate Change and Disaster Risk Management (NSAP) 2012-2016
	Kiribati National Framework for Climate Change and Climate Change Adaptation Kiribati Joint Implementation Plan for Climate Change and Disaster Risk Management 2014-2023
Regional	Framework for Pacific Regionalism 2014 (PIFS)
	The 'Blue Pacific' identity 2017 (PIFS)
	Framework on Resilient Development in the Pacific: An Integrated Approach to Climate Change and Disaster Risk Management (FRDP) 2017-2030
	The United Nations Pacific Strategy (UNPS) 2018-2022
	Boe Declaration on Regional Security - The Pacific Islands Forum Leaders in Nauru endorsed the Declaration in September 2018.

Vanuatu is one of the first countries globally to prepare a policy on internal displacement resulting from climate change and disaster. The Vanuatu National Policy on Climate Change- and Disaster- Induced Displacement includes 1) recommended actions on local integration and planned relocation, 2) recommended actions on return and reintegration, and 3) integrating human mobility into development planning process. Through a common framework, the policy aims at assisting all people affected by displacement, whether triggered by a natural hazard or crisis (e.g. eviction).

The Framework for Pacific Regionalism (2014) is a regional approach addressing climate change and human mobility issues. The Framework has four objectives: 1) sustainable development, 2) economic growth, 3) strengthened systems, and 4) security for all. The economic and political integration it envisages enables the free movement of persons and goods within and among countries. Since 2017, the Framework also promotes a common identity, the 'Blue Pacific' identity, as a core driver of collective action in order to advance the Framework's vision.

The Framework on Resilient Development in the Pacific: An Integrated Approach to Climate Change and Disaster





Risk Management (FRDP) 2017-2030^{vi} provides high-level strategic guidance for different stakeholder groups on how to enhance resilience to climate change and disasters. The Framework's three inter-related goals are: 1) to strengthen integrated adaptation and risk reduction to enhance resilience to climate change and disasters; 2) low-carbon development; and 3) to strengthen disaster preparedness, response and recovery. The FDRP also encourages Pacific countries and development partners to tackle human mobility considerations by creating targeted national policies and actions, such as labour migration policies and planned relocation.

Migration policies in the Pacific region

There are a number of national, bilateral and regional migration policies within the Pacific. Historical ties with Australia, New Zealand, the United States and France mean that Pacific nations have varying degrees of privileged entry.

New Zealand recognises the special relationship between New Zealand and the Pacific Access Category countries of Fiji, Kiribati, Tonga and Tuvalu. Each year, up to 250 Fijian citizens and 75 Kiribati and 75 Tuvaluan citizens are selected by ballot to be granted permanent residence. In addition, New Zealand's Recognised Seasonal Employer scheme and Australia's Seasonal Worker Programme are open to citizens of selected Pacific islands. The government of New Zealand is considering changes in its immigration policy to include

climate change-induced migration, but it is unclear if this will happen in the near future.^{vii}

In the 2015 Tuvalu National Labour Migration Policy, for example, climate change is identified as one reason for increasing efforts to find labour mobility options abroad. The Policy promotes continued bilateral and regional dialogue and cooperation on labour migration to strengthen existing labour migration arrangements and develop new opportunities.

Ongoing GIZ activities in the four countries

The GP HMCCC provides technical, advisory, knowledge management and awareness raising support in the four focus countries (Fiji, Kiribati Tuvalu, and Vanuatu). On the basis of in-country national consultations and regional baseline assessment results, the GP HMCCC works on the development of national policies and guidelines to institutionalise the human mobility concepts within the legal frameworks of the focus countries.

Awareness raising and knowledge sharing at national, sub-national and community level (e.g. photo exhibitions and videos) cover the areas of climate-induced human mobility and human security to explore the security dimensions of migration, displacement and relocation. To further promote socially inclusive communities, engagement methods, assessment, and gender tools are being revised to make human mobility inclusive.

Through the Adapting to Climate Change and Sustainable Energy (ACSE) Programme implemented and administered by GIZ, the EU is assisting Pacific Island Countries to enhance sustainable livelihoods and strengthen countries' capacity to adapt to the adverse effects of climate change. The GIZ-led component in Fiji is supporting the relocation of a district school in Lakeba, Lau province, while households in the village of Narikoso are being assisted to move to new climate-proof houses with solar-home systems. In

addition, solar hybrid electric systems are being developed in three island communities. Relocation guidelines have been drawn up on the basis of experiences acquired during these relocation processes.

The Planned Relocation Guidelines - A Framework To Undertake Climate Change-Related Relocation document was presented in 2017 at the UN climate conference COP23 and published the following year.^{viii}

The Philippines

Human mobility in the context of climate change in the Philippines

The Philippines is an archipelago of 7,641 islands with a population of more than 100 million^{ix} and ranks as one of the most vulnerable states to climate change and extreme weather events. According to the latest Climate Risk Index (CRI), the Philippines was the fifth most risk-prone country in 2018^x. The country's location in the western Pacific Ocean, within the cyclone belt and what is known as the 'ring of fire', exposes the population to the risks of natural disasters, climate variability and a barrage of extreme climatic events, including tropical cyclones (typhoons²), floods, rising sea levels and drought.

On average, 20 tropical cyclones enter the Philippine Area of Responsibility (PAR) each year^{xi}, more than anywhere else in the world. 50.3% of the total land area and 81.3% of the population are at risk from climate-related disasters. As in most parts of South-East Asia, the Caribbean and the Pacific, tropical cyclones in the Philippines have become more frequent and destructive, with an observed increase in intensity of 20 mph since 1981. Between 2006 and 2016 alone, about 65% of tropical cyclones (99) that entered the PAR made landfall^{xiii}; 10 were ranked as highly devastating in terms of the number of casualties and total damage recorded. The devastation that these climate-related hazards often leave in their wake includes loss of human life, property and livelihoods and the displacement of millions of people.

Aside from tropical cyclones, the northern part of the country has also witnessed an increase in the intensity of rainfall activity, while 40% of the country (especially the southern part) has persistently been hit by long periods of drought as a result of rising temperatures and El Niño effects. The island of Mindanao has been particularly severely affected.

² Typhoons are tropical cyclones formed over the Northwest Pacific Ocean.

In 2015, for example, the Department of Social Welfare and Development recorded that 676,465 people were severely affected by drought in Mindanao^{xiv}. The Zamboanga peninsula was also reportedly hit by water shortages. Cagayan Province, Palawan, Iloilo and Zamboanga Sibugay are further areas identified as highly susceptible to climate-induced rises in sea level.

Overall, the complex interplay of climate change and geographic and socio-economic factors makes the Philippines highly vulnerable to climate-related events. In particular, global warming has contributed to an increase in sea surface temperatures in the northwest Pacific Ocean. As the surface water warms, the ocean gathers more energy to convert storms into devastating tropical cyclones in the region. In November 2013, typhoon Haiyan hit the region and was recorded as one of the strongest and deadliest storms to hit land. The 1-minute sustained wind surge of 315 km/h was considerably aggravated by the rise in sea surface temperatures and elevated sea levels in the region.^{xv}

The warming of the sea surface water is further compounded by an apparent sea level rise at a rate of 5-7 mm/year over the past 20 years. This is more than the global average of 2.8-3.6 mm/year^{xvi}. Recent studies have suggested that a 1-metre rise in sea level will lead to 13,134 hectares^{xvii} of seashore in 16 Cagayan towns being submerged. Yet the Philippines' lack of natural barriers, which is due in part to the morphology of the country and the loss of more than half of mangrove forest to deforestation since 1918, has further heightened its vulnerability to destructive tropical cyclones and sea water inundation across the country.

Sustained population growth and protracted conflict in the Philippines have also contributed to unregulated settlement and a concentration of populations in high-risk coastal zones, as exemplified by the significant number of casualties that were recorded in the city of Tacloban following typhoon

Haiyan in 2013. It is estimated that more than 60% of the country's population live in disaster-prone coastal zones^{xviii}.

The country's vulnerability to climate-related disasters is further exacerbated by high levels of poverty, sub-standard construction of housing and poor social infrastructure. Disasters substantially affect the economy of the Philippines: almost 5% of its GDP is lost to disasters every year. The economic impact also hampers the ability of the Government to respond adequately to disasters and enhance adaptation measures.^{xix}

Nonetheless, the Philippines has made remarkable economic progress in the Southeast Asia region with growth in GDP of 7.3% in 2010 after recording just 1.1% in 2009. But even with expected economic growth of 6.6% in 2020, vulnerability and climate change effects are likely to erode the relative gains of any economic development.^{xx} The agricultural sector accounts for about 18% of GDP^{xxi} and employs about a third of the population, so the impact on rice production and fisheries of climate-related hazards such as drought and rising temperatures could increase the risk of displacement and migration.

The extent of future climate change impacts in the Southeast Asia region remains uncertain. Moreover, migration has long been an integral part of the social life of people in the Asia and Pacific regions. Data on the expected effects of climate change on migration therefore remain unclear.

Nevertheless, the available empirical evidence on migration dynamics in the Philippines suggests a pattern of rural-rural and rural-urban migration as a coping or adaptation strategy in response to years of climate change impacts. Recent flows are marked by interprovincial migration, with a shift towards metropolitan Manila and Cebu City. Between 2005 and 2010, 2.9 million Filipinos were recorded as changing residence, of whom 50.4% had moved from one province to another^{xxii}. About 45.4% were migrants who had changed cities, and the remaining 4.2% were international migrants.^{xxiii}

Recent studies have suggested a correlation between increasing temperatures, drought and cyclones as catalysts for outmigration in the Philippines. While protracted conflict in the country may have contributed to some extent to large-scale internal migration, climate change has been identified as a catalyst for increased outmigration, especially of unskilled female agricultural labour to urban centres in search of livelihood opportunities. In particular, the climate change-induced decline in rice production has exacerbated vulnerabilities and, hence, contributed to increasing rates of outmigration from agriculture-dependent provinces. Increases have also been reported in human trafficking of displaced persons, especially women and children, in affected areas following typhoon Haiyan in 2013.

The Philippines is an archipelago of 7,641 islands with a population of more than 100 million and ranks as one of the most vulnerable states to climate change and extreme weather events

With ongoing changes in climatic and environmental conditions already manifesting strongly across the Philippines, more people will continue to be at high risk from climate-related disasters. This would exacerbate vulnerabilities and increase the number of people likely to be displaced in the near future. As a result, the country may be faced with the challenge of having to deal with an influx of rural migrants into cities and the concomitant challenges of urbanisation and congestion in informal settlements around risk-prone coastal margins of big cities. Potential mass displacement may also put a strain on the Philippine economy, as planned relocation comes at considerable cost.

Strategic action and support are therefore crucial to bolstering disaster risk reduction and adaptation measures to build climate resilience across major sectors in the country. Concerted efforts to reduce disaster risk, build climate resilient infrastructure and adaptive human settlements, and put agriculture on a climate-resilient and sustainable footing could help to reduce adverse impacts in the Philippines. Although the outflow of young people and the active population to cities presents enormous challenges to agricultural production, the increasing inflow of remittances has helped families and boosted agricultural production in many rural marginal areas.

Regional and national policy responses and actions

The need to protect displaced persons and migrants has assumed wide international prominence. While some progress has been made towards addressing climate-related displacement and migration at international level, most of the existing regional and national frameworks focus on climate



change mitigation and adaptation and disaster risk reduction, with little or only indirect reference to climate-induced human mobility. Even for regional arrangements, such as the ASEAN Economic Community, which allows for visa-free movement, there is no special treatment for climate/disaster-related migrants. Some of the existing frameworks include:

Activities of the Global Programme Human Mobility in the Context of Climate Change

The GP HMCCC supports the Philippines Commission on Population and Development (POPCOM) and other relevant government stakeholders in addressing human mobility in the context of climate change. The following selected activities are currently under way or planned:

National	*The Philippine Disaster Risk Reduction Management Act (2010)
	*Climate Change Act (Act 9729): – Provides the legal framework for addressing climate change impacts and threats to communities and the environment
	* National Climate Change Action Plan (NCCAP): – Outlines the national agenda for adaptation and mitigation between 2011–2028 – Seeks to develop a long-term plan for adaptation of highly climate change vulnerable population and climate refugees
Regional	*Association of Southeast Asian Nations (ASEAN): – Vision 2025 Agreement on Disaster Management and Emergency Response: focuses on disaster risk reduction and also response to climate change and protection of migrant workers – Joint response to disaster emergencies in order to reduce disaster losses
	*Asia Dialogue on Forced Migration: – Seeks to pursue a durable, effective & dignified approach to forced migration in the region

- A workshop on climate change, environment and migration in cooperation with the International Organization for Migration (IOM)
- Pilot integration of migration data into local development plans and climate and disaster risk analyses
- National comparative study on the influence on migration decision-making of access to disaster risk financing
- Scenario development workshop for wider POPCOM national and regional offices
- A study on the impacts of climate-induced risks (especially slow-onset events) on migration decisions of selected households and communities across the country.

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