

The Warsaw International Mechanism for LOSS AND DAMAGE Executive Committee

Technical guide on integrating human mobility and climate change linkages into relevant national climate change planning processes

Addressing Human Mobility Related Challenges and Opportunities in the Context of Climate Change: A Supplement to the UNFCCC National Adaptation Plan Technical Guidelines

## Acknowledgments

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#### Preface by the Co-chairs of the Executive Committee of the Warsaw International Mechanism for Loss and Damage

Established in 2013 at COP 19, the Executive Committee (ExCom) guides the functions of the Warsaw International Mechanism for Loss and Damage (WIM). The Committee, comprising 20 representatives from Parties, is empowered to establish expert groups, subcommittees, panels, thematic advisory groups or task-focused ad hoc working groups to help execute its work. Currently, five such expert bodies exist that work in an advisory role and report to the Committee.

The WIM promotes the implementation of approaches to address loss and damage associated with the adverse effects of climate change through the following functions:

1. Enhancing knowledge and understanding of comprehensive risk management approaches;

2. Strengthening dialogue, coordination, coherence and synergies among relevant stakeholders;

3. Enhancing action and support, including, finance, technology and capacity-building.

Since it was established in 2015 at COP 21, the WIM ExCom Task Force on Displacement, has been providing support to enhance understanding on the impacts of climate change on human mobility and has developed recommendations for integrated approaches to avert, minimize and address displacement related to the adverse impacts of climate change. As part of the Third Plan of Action of the Task Force on Displacement, its members, have developed this technical guide to support the mainstreaming of human mobility into adaptation planning and communication tools, while recognising the need for tailored approach which responds to the national context, institutional needs and priorities.

Human mobility from the impacts of climate change, is a pressing challenge that increasingly affects the most vulnerable communities in a variety of ways, including internal displacement, cross border displacement, the movement patterns of pastoralists and transhumance, labour migration and permanent planned relocations. As climate change increasingly influences human mobility, there is a need to integrate related considerations into national policy and planning tools, including National Adaptation Plans.

On behalf of the WIM ExCom, we hope the technical guide will be a useful resource to countries as they respond to the unprecedented challenges posed by human mobility due to the impacts of climate change. The WIM ExCom remains committed to enhancing cooperation and facilitation in relation to human mobility, including migration, displacement, and planned relocation.



**CAMILA RODRIGUEZ TAVAREZ** Co-chair of the Executive Committee Committee of the Warsaw International Mechanism for Loss and Damage



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## Abbreviations and acronyms

AC	Adaptation Committee
adcom	adaptation communication
AR	Assessment Report of the Intergovernmental Panel on Climate Change
CAF	Cancun Adaptation Framework
СВТ	climate budget tagging
ССС	Climate Change Commission of the Government of the Philippines
СССМ	Camp Coordination and Camp Management
CLIMB Database	Human Mobility in the Context of Disasters, Climate Change and Environmental Degradation Database
СМА	Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
СОР	Conference of the Parties
CSO	civil society organization
DENR	Department of Environment and Natural Resources of the Government of the Philippines
DRM	disaster risk management
DRR	disaster risk reduction
ECOSOC	United Nations Economic and Social Council
FAO	Food and Agriculture Organization of the United Nations
GCF	Green Climate Fund
IDMC	Internal Displacement Monitoring Centre
ILO	International Labour Organization
IOM	International Organization for Migration
IPCC	Intergovernmental Panel on Climate Change
LEG	Least Developed Countries Expert Group
LPG	liquefied petroleum gas
M&E	monitoring and evaluation
MAATE	Ministerio del Ambiente, Agua y Transición Ecológica

MMR	mixed methods research
NAP	national adaptation plan
NCCAP	National Climate Change Action Plan
NDC	nationally determined contribution
NGO	non-governmental organization
NRC	Norwegian Refugee Council
OAU	Organisation of African Unity
OHCHR	Office of the United Nations High Commissioner for Human Rights
PDD	Platform on Disaster Displacement
Santiago Network	Santiago network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change
SDG	Sustainable Development Goal
Sendai Framework	Sendai Framework for Disaster Risk Reduction 2015–2030
SLR	Sea level rise
TFD	Task Force on Displacement
Transitional Committee	Transitional committee on the operationalization of the new funding arrangements for responding to loss and damage and the fund established in paragraph 3 of decisions 2/CP.27 and 2/CMA.4
UN	United Nations
UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction (formerly UNISDR)
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
UNHCR	Office of the United Nations High Commissioner for Refugees
UNISDR	United Nations International Strategy for Disaster Reduction
WIM	Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts

## **Glossary of terms**

### 1. Key climate change related terminology

Adaptation	"In <i>human systems</i> , the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. In <i>natural systems</i> , the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate and its effects." (IPCC, 2022a)
Adaptive capacity	"The ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities or to respond to consequences." (Millennium Ecosystems Assessment, 2005, cited in IPCC, 2022a)
Climate change	"A change in the state of the climate that can be identified (such as by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forces such as modulations of the solar cycles, volcanic eruptions and persistent anthropogenic changes in the composition of the atmosphere or land use. Note that UNFCCC, in its Article 1, defines, for the purpose of that Convention, climate change as 'a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods'. UNFCCC thus makes a distinction between climate change attributable to natural causes." (IPCC, 2021)
Disaster	"A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability, and capacity, leading to one or more of the following: human, material, economic, and environmental losses and impacts." (UNGA A/71/644)
Environmental change	"[C]hanges in the physical and biogeochemical environment, over a large scale, either caused naturally or influenced by human activities." (Foresight, 2011) Environmental change includes both environmental degradation and climate change.
Environmental degradation	"The reduction of the capacity of the environment to meet social and ecological objectives and needs Degradation of the environment can alter the frequency and intensity of natural hazards and increase the vulnerability of communities. The types of human-induced degradation are varied and include land misuse, soil erosion and loss, desertification, wildland fires, loss of biodiversity, deforestation, mangrove destruction, land, water and air pollution, climate change, sea level rise and ozone depletion." (UNISDR, 2009)
Exposure	"The presence of people; livelihoods; species or ecosystems; environmental functions, services, and resources; infrastructure; or economic, social, or cultural assets in places and settings that could be adversely affected." (IPCC, 2022a)

Extreme weather event	"An event that is rare at a particular place and time of year. Definitions of 'rare' vary, but an extreme weather event would normally be as rare as or rarer than the 10 <sup>th</sup> or 90 <sup>th</sup> percentile of a probability density function estimated from observations. By definition, the characteristics of what is called extreme weather may vary from place to place in an absolute sense." (IPCC, 2022a)
Hazard	"The potential occurrence of a natural or human-induced physical event or trend that may cause loss of life, injury or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems and environmental resources." (IPCC, 2022a)
Just transition	"It means greening the economy in a way that is as fair and inclusive as possible to everyone concerned, creating decent work opportunities and leaving no one behind. A Just Transition involves maximizing the social and economic opportunities of climate action, while minimizing and carefully managing any challenges – including through effective social dialogue among all groups impacted, and respect for fundamental labour principles and rights." (ILO, n.d.)
NAP	The national adaptation plan (NAP) under the UNFCCC is a statement of what is known and prioritized for a country, a given time period, to guide planning and inform implementation of actions to reduce vulnerability, manage climate risk and build resilience to climate change. The NAP was created under Decision 1/CP.16, and initial guidelines for formulation of NAPs were adopted in Decision 5/CP.17. In this document, the first NAP that a country formulates is referred to as 'NAP1', and the second NAP is referred to as 'NAP2', etc.
NAP Process	The COP defined a continuous, progressive and iterative process and follows a country- driven, gender-sensitive, participatory and fully transparent approach to producing the NAP and supporting its implementation (FCCC/CP/2010/7/Add.1, Decision 1/CP.16). The process to formulate and implement NAPs, or NAP process in short, comprises four elements, namely; laying the groundwork and addressing gaps; preparatory elements (assessments); implementation strategies; and reporting, monitoring and review (Decision 5/CP.17, annex).
NDCs	The Paris Agreement (Article 4, paragraph 2) requires each Party to prepare, communicate and maintain successive nationally determined contributions that it intends to achieve. Parties shall pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions.
Sensitivity	"The degree to which a system or species is affected, either adversely or beneficially, by climate variability or change. The effect may be direct (e.g., a change in crop yield in response to a change in the mean, range, or variability of temperature) or indirect (e.g., damages caused by an increase in the frequency of coastal flooding due to sea level rise)." (IPCC, 2022a)
Sudden onset events	"Include hydrometeorological hazards, such as flooding, windstorms or mudslides and geophysical hazards including earthquakes, tsunamis or volcanic eruptions" (UNISDR, 2009).
Extreme climate event	The occurrence of a value of a weather or climate variable above (or below) a threshold value near the upper (or lower) ends of the range of observed values of the variable (IPCC, 2022a).
Slow onset events	Include "sea level rise, increasing temperatures, ocean acidification, glacial retreat and related impacts, salinization, land and forest degradation, loss of biodiversity and desertification" (FCCC/TP/2012/7).

TFD	COP 21 requested the Executive Committee of the WIM to establish a task force "to develop recommendations for integrated approaches to avert, minimize and address displacement related to the adverse impacts of climate change" (FCCC/CP/2015/10/Add.1, Decision 1/ CP.21, para. 49). The mandate of the TFD was later extended in 2019 to assist the Executive Committee in implementing its five-year rolling workplan and new mandates related to human mobility, including with regard to facilitating the uptake of the recommendations.
Vulnerability	"The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements, including sensitivity or susceptibility to harm and lack of capacity to cope and adapt." (IPCC, 2022a)

### 2. Key human mobility related terminology

Diaspora	International migrants and refugees or descendants of migrants and refugees whose identity and sense of belonging, either real or symbolic, have been shaped by their migration experience and background. They maintain links with their homelands, and to each other, based on a shared sense of history, identity, or mutual experiences in the destination country (adapted from IOM, 2019).
Displacement	The movement of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-induced disasters. This may refer to forced movements within a country ( <b>internal</b> <b>displacement</b> ) or across international borders ( <b>cross-border displacement</b> ) (adapted from UNCHR E/CN.4/1998/53/Add.2).
Disaster displacement	Refers to situations where people are forced or obliged to leave their homes or places of habitual residence as a result of a disaster or in order to avoid the impact of an immediate and foreseeable natural hazard. Such displacement results from the fact that affected persons are (i) exposed to (ii) a natural hazard in a situation where (iii) they are too vulnerable and lack the resilience to withstand the impacts of that hazard. It is the effects of natural hazards, including the adverse impacts of climate change, that may overwhelm the resilience or adaptive capacity of an affected community or society, thus leading to a disaster that potentially results in displacement (adapted from Nansen Initiative, 2015b). Note: The Nansen Initiative definition refers to natural hazards, some of which are climate related. Disaster may refer to the impacts of broader categories of hazards that may be related to the effects of climate change.
Evacuation	Means "moving people and assets temporarily to safer places before, during or after the occurrence of a hazardous event in order to protect them" (UNGA A/71/644). Note: Evacuation also constitutes a form of necessary, life-saving displacement that is intended to be temporary, and requires physical and social infrastructure in order to be able to respond to the protection and service needs of the affected population. Effective adaptation requires that Governments include these requirements in their planning process, taking into account national context and international humanitarian architecture.

Fair recruitment	Refers to recruitment which takes place in a way that respects, protects and fulfils internationally recognized human rights, including those expressed in international labour standards, and in particular the right to freedom of association and collective bargaining, and prevention and elimination of forced labour, child labour and discrimination in respect of employment and occupation. No recruitment fees or related costs should be charged to, or otherwise borne by, workers or jobseekers (adapted from ILO, 2019, general principles 1 and 7).
Human mobility	'Human mobility' is a descriptive term that is increasingly used under the UNFCCC processes to collectively refer to the three forms of population movement set out under paragraph 14(f) of the Cancun Agreement (FCCC/CP/2010/7/Add.1, Decision 1/CP.16): (i) Displacement – the primarily forced movement of persons; (ii) Migration – the primarily voluntary movement of persons, (iii) Planned relocation – the process of settling persons or communities in a new location. Note: In other contexts, the term 'human mobility' is used by some to refer to other movements such as tourism, to emphasize inner-urban movements, or to refer to commuting and other temporary or short-term movements of persons for employment-related purposes.
Internally displaced persons	Described in the <i>Guiding Principles on Internal Displacement</i> as "persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-induced disasters, and who have not crossed an internationally recognized State border" (ECOSOC, 1998).
Internal migrant	Any person who is moving or has moved within a State for the purpose of establishing a new temporary or permanent residence or because of an inability to return to the place of residence after displacement (adapted from IOM, 2019). For the purpose of this document, the term refers to population movements that are primarily voluntary in nature (see <i>'human mobility'</i> ).
International migrant	"Any person who is outside a State of which he or she is a citizen or national, or in the case of a stateless person, his or her State of birth or habitual residence. The term includes migrants who intend to move permanently or temporarily, and those who move in a regular or documented manner as well as migrants in irregular situations" (OHCHR, 2014). For statistical purposes, the United Nations Department of Economic and Social Affairs defines an international migrant as "any person who changes his or her country of usual residence" (United Nations Department of Economic and Social Affairs, 1998). For the purpose of this document, the term refers to population movements that are primarily voluntary in nature (see 'human mobility').
Labour migration	Labour migration is defined as "covering both migrants moving within the country and across international borders. This choice is also justified by the significant number of persons moving within the same country for work purposes who sometimes face the same barriers or challenges faced by international migrants, such as discrimination and difficulties in integration. Although such challenges may be greater for migrants moving across borders they are not totally absent also for internal migrants" (IOM, 2019).
Migrants and just transition	"A just transition requires bespoke actions within a common framework, centred on the interest and dignity of migrant workers and based on international labour standards. Well-managed and rights-based labour mobility and adaptation strategies can provide opportunities to increase resilience and adaptation, avoid the loss of assets and livelihoods and improve the skills base in receiving countries and in home communities when migrants return" (ILO, 2022a).

Migration	"The movement of persons away from their place of usual residence, either across an international border or within a State" (IOM, 2019). For the purpose of this document, the term refers to population movements that are primarily voluntary in nature (see 'human mobility').					
Migrant in a vulnerable situation	"'Migrants in vulnerable situations' are thus persons who are unable effectively to enjoy their human rights, are at increased risk of violations and abuse and who, accordingly, are entitled to call on a duty bearer's heightened duty of care." (OHCHR and Global Migrant Group, 2018)					
Migrant worker	"A person who is to be engaged, is engaged or has been engaged in a remunerated activity in a State of which he or she is not a national" (UNGA A/RES/45/158).					
Planned relocation	Planned relocation in the context of disasters or environmental degradation, including when due to the effects of climate change, is a planned process in which persons or groups of persons move or are assisted to move away from their homes or place of temporary residence, are settled in a new location and provided with the conditions for rebuilding their lives (adapted from Brookings, Georgetown, and UNHCR, 2015).					
Refugee	According to the 1951 Convention Relating to the Status of Refugees, 'refugee' applies to any person who, "owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of his nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country" (UNGA A/CONF.2/108). 'Refugees' within wider regional definitions – under the 1969 OAU Convention Governing the Specific Aspects of Refugee Problems in Africa, or the 1984 Cartagena Declaration on Refugees – encompasses people who are compelled to leave their countries in the context of events or circumstances "seriously disturbing/disturbed public order", including climate change impact or disasters (Colloquium on the International Protection of Refugees in Central America, Mexico and Panama, 1984, Organization of African Unity, 1969). The need for international protection arises because they are unable to avail themselves of the protection of their own country against these threats. For example, people may be refugees under the 1951 Convention Relating to the Status of Refugees where they are fleeing conflict or violence, which may in some cases be caused or exacerbated by the effects of climate change or disaster, rendering the State unable or unwilling to protect them (PDD and UNHCR, 2023).					
Stateless person	A person who is not considered as a national by any State under the operation of its law, either because they never had a nationality, or because they lost it without acquiring a new one (see UNGA, 1954). Note: the vulnerability and potential 'disappearance' of small island States due to sea level rise will not inevitably lead to statelessness, and the greatest risks of statelessness in the context of climate change is related rather to the significant number of people displaced in the context of climate change related disasters (UNHCR et al. , 2021).					
Trapped populations	Populations inhabiting areas of high risk and thus vulnerable to environmental shocks and impoverishment who want to flee or migrate but are unable to do so. Note: the notion of trapped populations applies in particular to poorer households who may not have the resources to move and whose livelihoods are affected, or to people whose freedom of movement is limited for other reasons (adapted from Foresight, 2011).					

## Introduction

1.

What is this Technical Guide about, who is the intended audience, and how is it structured?

#### Purpose

This Technical Guide is intended to provide userfriendly operational information and tools to stakeholders interested in incorporating the topic of human mobility related challenges and opportunities into relevant national climate change planning processes, in particular, the NAP process. It is a supplement to the UNFCCC National adaptation plans: technical guidelines for the national adaptation plan process produced by the LEG, hereinafter referred to as the NAP technical guidelines. The development of this Technical Guide has been informed by the NAP readiness proposals of the following countries to ensure the relevance of the Guide: Armenia, Egypt, Ethiopia, Kyrgyzstan, Republic of Moldova, Tajikistan, Turkmenistan and Uganda. It further incorporates experience related to mainstreaming human mobility into the NAPs of Ecuador, Ethiopia, the Marshall Islands, Pakistan, the Philippines, the Republic of Moldova, Tajikistan, Turkmenistan and Uzbekistan.<sup>1</sup> This Technical Guide also incorporates feedback from international experts and stakeholders, including members of the WIM Executive Committee and its TFD. The feasibility of testing this Technical Guide in countries in various regions is being explored, and therefore, this will be considered a living document that may be updated to incorporate further knowledge and learning.

This Technical Guide provides a **step-by-step guide for relevant stakeholders for mainstreaming human mobility into adaptation planning and communication tools**. It provides reasons for stakeholders to consider including human mobility elements in adaptation planning and communication and suggests key steps for mainstreaming human mobility into NAPs and adaptation communications (adcoms) in particular. However, as there is no onesize-fits-all approach for mainstreaming, the entry points and approaches of this Technical Guide may be adapted to specific contexts and institutional needs. The Technical Guide was designed with a global scope under the leadership of IOM, ILO and UNHCR, with feedback from experts and stakeholders from around the world, including the members of the TFD of the Executive Committee of the WIM and the LEG, which are constituted bodies under the UNFCCC. This Technical Guide is a deliverable in the second rolling workplan of the WIM Executive Committee, and in accordance with the third plan of action of the TFD. It has been developed to support Parties' implementation of the WIM Executive Committee's recommendations on including human mobility into adaptation planning adopted by the TFD (FCCC/CP/2018/10/ Add.1, Part II, Decision 10/CP.24, Annex, para. 1).

#### Audience

This Technical Guide is designed for use by all stakeholders involved in the process of formulating and implementing NAPs; this includes:

- The government agency and relevant focal points coordinating the NAP process (formulation of the NAP, implementation, and maintaining the process to produce updated and subsequent new versions of the NAP);
- The sectoral government entities involved in the NAP formulation;
- The local government entities involved in the NAP formulation;
- Policy stakeholders (e.g. UN agencies, international organizations, academia, think tanks, CSOs, employers' and workers' organizations) interested in supporting the mainstreaming of human mobility into the NAP;
- Migrants, internally displaced persons, refugees and community-level stakeholders.

<sup>1</sup> IOM closely worked with the Ministry of Environment, Water and Ecological Transition of the Government of Ecuador, the Ministry of Climate Change and Environmental Coordination of the Government of Pakistan, the Ministry of Environment of the Government of the Marshall Islands, the Ministry of Environment of the Government of the Republic of Moldova, CCC and DENR, the Agency of Hydrometeorology under the Committee for Environmental Protection of the Government of Tajikistan, the Ministry of Agriculture and Environmental Protection of the Government of Turkmenistan, and the Hydrometeorological Service Agency under the Ministry of Ecology, Environmental Protection and Climate Change of the Government of Uzbekistan.

#### Structure

The document is divided into four sections:

**1. Introduction:** A brief outline of the goals, intended audience and structure of the document.

2. Background: How are human mobility and climate change linked, and why does that matter for adaptation and climate-resilient development? Section 2 explains the interlinkages between human mobility and climate change, and why that matters for climate change adaptation. In this part, 11 distinct dimensions of human mobility in the context of climate change are described (see table 2.1). This section will be especially helpful for stakeholders who are less familiar with the nexus of human mobility and climate change.

**3. NAPs and human mobility:** Section 3 gives a brief overview of the NAP process, how it relates to other adaptation instruments and processes, and why it is important to consider human mobility in NAPs. This section will be especially helpful for human mobility or other sectoral experts who are less familiar with the institutional adaptation landscape and the NAP process and documents.

#### 4. Key steps for mainstreaming human

mobility into NAPs: Section 4 is the 'heart' of the Technical Guide - it gives concrete actions on including human mobility in the NAP process; for example, within establishing national coordination and steering mechanisms, strengthening evidence and knowledge bases, developing a NAP implementation strategy, and within reporting, monitoring and evaluation. The concrete actions are categorized as (i) shorter suggestions (action points, strategies, sectoral approaches) and (ii) more detailed descriptions of tools, templates and moderation plans (activities). As the document addresses a diverse range of stakeholders involved in the NAP process, it is structured in accordance with the NAP Readiness and Preparatory Support Programme Proposals (hereafter 'NAP Readiness Proposals') from selected States (GCF, 2023), which have a slightly different nomenclature to but correspond with the NAP technical guidelines (see the beginning of section 4 for details). This section will guide stakeholders in an actionable way in mainstreaming human mobility into the NAPs.

# 2.

## Background

How are human mobility and climate change linked, and why does that matter for adaptation and climate-resilient development?

## 2.1 How are human mobility and climate change linked?

As climate change increasingly influences displacement, migration and planned relocation, NAPs must address human mobility related challenges and opportunities in the context of climate change. In addition to the growing knowledge base about human mobility in the context of climate change, the implications of the relationship between the two elements are increasingly acknowledged in global policy frameworks such as the UNFCCC, the Sendai Framework, the Global Compact for Safe, Orderly and Regular Migration (UNGA A/ RES/73/195, Annex) and the Global Compact on Refugees (UNGA A/73/12 Part II).

Effective adaptation plans recognize that human mobility in the context of climate change is **multidirectional**: climate change impacts human mobility, and the situation with regard to human mobility also influences vulnerability to climate risks. It is **multidimensional** as human mobility and immobility are linked with a variety of climate change shocks, stresses and processes.

The IPCC underscores these multifaceted relationships between climate change and human mobility in the context of climate change. The AR6 acknowledges a range of human mobility dimensions influenced by climate and environmental changes, including displacement, managed retreat, labour migration, planned relocation, refugee situations and various forms of migration, such as internal, international, rural-to-urban, and seasonal (IPCC, 2022b). The report clarifies that changes in mobility are not solely determined by climatic factors, but that these are intertwined with other environmental (e.g. land degradation), economic, social, political and demographic factors. The report also emphasizes that enhancing adaptive capacities is crucial to minimizing the adverse impacts of climate-related displacement and 'involuntary migration' for both migrants and the communities of origin and destination, implying

the need for integrated approaches to managing the multi-local and complex challenges of human mobility in the context of climate change.

Human mobility, when people have freedom of movement and that movement is safe, informed, voluntary and effectively managed, can contribute to, or be a **form of adaptation** to, climate change, as stated in the AR5 (Adger et al., 2014) and further elaborated in the AR6 (IPCC, 2022b, Cissé et al., 2022). It can facilitate building adaptive capacities through financial and social remittances, the diversification of livelihoods, the enhancement of income, the improvement of food security, and the reduction of vulnerability; and it can play a role as an insurance mechanism against climate risks. However, human mobility can also have **negative** implications for vulnerability. The AR6 explains that "the **circumstances** under which migration occurs and the degree of agency under which household migration decisions are made are important determinants of whether migration outcomes are successful in terms of advancing the wellbeing of the household and providing benefits to sending and receiving communities (high confidence)" (Cissé et al., 2022, p.1116).

This calls for a nuanced understanding of the **role that human mobility**, in its different forms and contexts in relation to the adverse effects of climate change, can play for adaptation and vulnerability reduction, and the **creation of policies and plans that enable** adaptation benefits, respect human rights, and avert and minimize adverse effects.

In order to develop solutions that strengthen adaptive capacity through measures that enable people **to move safely, voluntarily and with dignity**; protect and support people **on the move or who have already moved (including migrants, internally displaced persons and refugees)**; and enable people **to stay where adaptation in situ is still**  **possible**, this Technical Guide highlights **11** human mobility dimensions that are relevant to climate change adaptation (see table 2.1 for an overview). There can be overlap within these human mobility dimensions in various circumstances.

All of these dimensions – where relevant in a given national or regional context – need to be addressed

and considered in adaptation planning in order to avoid leaving certain groups of people behind. National stakeholders, including policymakers, need guidelines in order to better integrate human mobility considerations in NAPs; they require technical advice and operational guidance, data and an inventory of good practices (Warner et al., 2015, Mombauer et al., 2023).

#### TABLE 2.1: RELEVANT HUMAN MOBILITY DIMENSIONS IN THE CONTEXT OF CLIMATE CHANGE

Internal displacement (e.g. disaster displacement and planned or spontaneous evacuation)

Migrants in vulnerable situations (e.g. migrants in reception centres, migrants moving through irregular pathways)

Cross-border displacement (including refugees, persons who do not meet legal refugee category definitions but may be in need of international protection, and cross-border evacuations)

Refugees

Pastoralism and transhumance

Labour migration and remittances

Diaspora

Planned relocation (permanent)

Migrants and just transition (e.g. migrant workers in the circular economy; or those in fossil fuel industries not to be left behind)

Displacement due to climate change mitigation or adaptation measures or projects

Trapped population

Internal displacement is the movement of people who have been forced or obliged to flee or to leave their homes or places of habitual residence as a result of or in order to avoid various threats, including the effects of armed conflict, situations of generalized violence, violations of human rights, or natural or human-made disasters, and who have not crossed an internationally recognized state border (ECOSOC, 1998). The number of people living in internal displacement related to conflict and disasters reached 76 million at the end of 2023. Of these, 68.3 million people were displaced as a result of conflicts, and 7.7 million as a result of disasters brought on by geophysical and weather-related hazards. A total of 46.9 million people were newly displaced over the course of 2023, of which 20.5 million were displaced by conflicts and 26.4 million by disasters (IDMC, 2024).

**Disaster displacement** is the movement of persons who have been forced or obliged to leave their homes or places of habitual residence as a result of a disaster or in order to avoid the impact of an immediate and foreseeable natural hazard (Nansen Initiative, 2015b). Extreme climate events could act as both direct (e.g. destruction of houses by tropical cyclones) and indirect (e.g. loss of income in rural areas during prolonged droughts) drivers of displacement. Even with moderate climate change, disaster displacement is likely to increase (Birkmann et al., 2022). Most instances of disaster displacement are within national borders (IPCC, 2022b).

Displacement violates basic human rights and erodes adaptive capacity and can be averted and minimized by building institutional adaptive capacity, improving early warning systems, and including all stakeholders in effective DRR strategies. With increasing intensity and frequency of sudden onset events, human exposure to climate hazards is expected to rise, and therefore, **planned** and autonomous evacuation from disasteraffected areas to safe places (e.g. camps, host families or managed evacuation sites or camps) is likely to become increasingly important (Cissé et al., 2022). However, evacuations also pose a number of challenges that need to be addressed; for example, the unequal ability of people to follow evacuation orders (United States Global Change Research Program, 2016) and the trauma and additional health risks faced by evacuees (Dodd et al., 2018).

Migrants in vulnerable situations include

international migrants in reception centres or living in informal settlements or overcrowded camps located in areas that are prone to climatic hazards, like flood plains, or areas with limited natural resources. Often, migrants face hazardous or abusive conditions during their trajectory, or at their places of transit or destination, owing to lack of protection and recognition of their human rights ( OHCHR and Global Migrant Group, 2018). The infrastructure in these informal settlements often lacks resilience against extreme weather conditions like floods, storms or extreme heat. Harmful effects of heat on migrants are documented along migration corridors, such as the border crossings from Mexico to the United States of America (Issa et al., 2023). The informal settlements in the Bahamas were most affected by Hurricane Dorian in 2019, and within some of those settlements, Haitians represented 85 per cent of inhabitants (Deopersad et al., 2020).

Cross-border displacement may refer to situations where people flee or are displaced across borders. In the context of adverse climate change effects, this may be brought on by sudden and slow onset disasters or hazardous weather events (Nansen Initiative, 2015c). Climatic hazards like floods, storms, and droughts, as well as gradual processes such as sea level rise and desertification, compound the other complex drivers of crossborder displacement, including in conflict-affected contexts, by aggravating ongoing conflict situations and existing persecution of affected populations (PDD and UNHCR, 2023). While displacement occurs mostly within countries, when cross-border displacement occurs, it predominantly involves movements between neighbouring countries (IPCC, 2022b). This highlights the importance of regional cooperation in preparing for potential cross-border displacement as part of adaptation planning. When people displaced across borders are unable to return because their Government would be unable or unwilling to protect them, they may qualify for international protection as **refugees** under international and regional law or on the basis of human rights law (i.e. when their lives would be at risk or they would face the threat of serious harm upon returning to their country), and they should be protected from forcible return or 'refoulement' (UNHCR, 2020). When refugee status does not apply, or in humanitarian crises involving large-scale

displacement where individual status determination is not feasible, complementary instruments may be used to provide subsidiary protection or temporary stay arrangements, such as humanitarian visas and free movement protocols (PDD and UNHCR, 2023) (for more information see box 2.1). Preparedness for **cross-border evacuations** in anticipation of or in response to disasters brought on by climate-related hazards may also be highly relevant to transboundary cooperation on adaptation. Cross-border evacuation is associated with special challenges, including legal and policy barriers, coordinating logistics and ensuring human rights protection (IOM, 2023).

**Refugees** are especially vulnerable to climate hazards, as they typically have restricted mobility and fewer options to relocate in response to environmental threats. Unlike internally displaced persons, who are still within their country and may have more freedom to move, refugees often rely on the permissions and assistance of host countries and international organizations. Refugees might face legal restrictions in host countries, limiting their access to aid, resources and services that are essential for adapting to and coping with climate risks. Additionally, social barriers, including language differences and discrimination, could further impede their ability to seek help or integrate into safer communities. For example, hundreds of thousands of Rohingya refugees living in overcrowded camps in the south of Bangladesh were repeatedly hit by devastating floods and landslides, making thousands homeless and killing and injuring others (UNHCR, 2021). Furthermore, most refugees come from highly climate-vulnerable countries, where their lack of adaptive capacity adds more barriers to the possibility of sustainably returning and reintegrating.

**Pastoralism and transhumance** are, on the one hand, considered a productive, profitable and sustainable form of livelihood that is suited to dealing with environmental variability precisely through mobility (e.g. Rodgers, 2022, for pastoralists in Eastern Africa). Owing to the marginalization of pastoralists, privatization of land, restrictions on mobility and increasing land degradation, their capacity to adapt to climate change is generally low and tends to decrease over time (Cissé et al., 2022). For example, environmental change is exacerbating existing vulnerabilities of pastoralists in South-East Türkiye (Thevenin, 2011). However, the traditional knowledge of pastoralists and their livelihood's capacity for dealing with climate variability also yields considerable potential in terms of supporting adaptation to climate change.

Labour migration and remittances are wellestablished risk management strategies for many families and households, including with regard to managing climatic risks. Labour migration is often an important factor that contributes to climateresilient development pathways (Cissé et al., 2022). However, for labour migration to perform this function, it must be voluntary and well governed, in line with international labour standards, with migrant workers enjoying fair recruitment at zero cost and decent work (ILO, 2022a). Otherwise, labour migration could expose migrant workers to new risks, with migrant workers moving into more riskprone situations owing to risks such as high levels of debt, unsafe working conditions or inadequate housing. Key protection issues include unequal treatment of migrant workers in the workplace, lack of workplace safety, limited access to health care and work in informal conditions, all of which negatively affect migrants and their ability to provide support to their places of origin (ILO, 2021, and ILO, 2017). Financial remittances, and the transfer of knowledge and skills, and especially the combination of both, can contribute to adaptation and innovation (Rockenbauch et al., 2019). In the Naryn River Basin in Kyrgyzstan, transitioning from farm-based income to labour migration was one of the responses to changes in the water supply (Hill et al., 2017). In Tajikistan, women staying behind play an important role in decision-making on household-level climate change adaptation measures (IOM, 2022). Whether and to what extent migration and remittances contribute to adaptation depends on a combination of factors, including the level of choice involved in migrating, the poverty/wealth level of the household at origin, and the working and living situation of the migrant at the destination (Sakdapolrak et al., 2024), as well as the impacts of migration on inequality and longer-term sustainability (Szaboova et al., 2023).

**Diaspora** communities, through remittances, investments, philanthropy and skill-sharing, provide important contributions to economic, social and political development in both their home and host countries. They also play important roles in responding to disasters and supporting communities in coping with and adapting to climate risks in their home countries (IOM, 2024). With their expertise, skills and international networks, diaspora communities have considerable potential to contribute to climate action both in their countries of origin and globally. Donors and Governments could support and leverage this potential; for example, by recognizing the role of the diaspora in climate action, by including diaspora communities in policy processes, and by facilitating pooled diaspora investments (Gagnon and Khoudour, 2023).

### Planned (permanent) relocation (also referred to as managed retreat in the context of coastal

areas) involves the moving or assisted movement of people away from their places of residence, and their resettlement in a new location, including the provision of the conditions for rebuilding their lives (Brookings, Georgetown, and UNHCR, 2015). Relocations may be an option of last resort for communities and a critical policy concern for global authorities in areas that are increasingly exposed to climatic hazards and where settlements are becoming, or have already become, permanently uninhabitable owing to the impacts of climatic hazards (Cissé et al., 2022). Relocations are associated with challenges related to livelihoods, psychosocial impacts and a wide range of human rights considerations, among others; they are more likely to be successful if conducted in a participatory, strategic and long-term way (Hino et al., 2017). Fiji has developed a set of planned relocation guidelines through a collaboration between the Government, civil society and representatives of various communities (Ministry of Economy of the Government of Fiji, 2018).

Migrants and just transition to green economies and societies will create new income opportunities, make some jobs redundant, and increase demand for certain resources. It is essential to create enabling conditions for migrants and their families to benefit from decent work in the green economy. This will include ensuring fair recruitment at zero cost for all workers. In the sectors affected by redundancies, it will be necessary to ensure that all workers, including migrants and their families, are included in social protection measures and skill development efforts. A rights-based approach is required to ensure that all benefit from the transition. The planning process needs to unpack human mobility in the context of climate change and acknowledge different outcomes and consequences, including through social dialogue with employers' and workers' organizations (ILO, 2022).

Displacement due to climate change mitigation or adaptation measures or projects: Both mitigation and adaptation policies and measures can lead to the (intended and unintended) displacement of people when they fail to respect the human rights of affected persons. Planning for any climate change mitigation or adaptation activity must seek to ensure that displacement does not occur. At the same time if planned movements or relocations are requested by customary communities or deemed needed by authorities and experts, they must be developed in a participatory way with affected populations to preserve their human rights, by minimizing the foreseeable impacts in line with the applicable Environmental Impact Assessment policies and legal frameworks of countries or implementing entities. Planned movements or relocations should only be considered with the development and application of adequate Environmental and Social Safeguards measures and plans. For example, the movement of communities may be analysed within the planning for clean energy infrastructure on the lands of customary communities or Indigenous People, or loss of livelihoods through changes in land use to implement carbon sinks. Further examples include the displacement of customary communities or Indigenous People owing to land transformation and acquisition for biofuel production, or large-scale nature conservation projects (Vigil, 2018), and the introduction of 'green' solutions or nature-based approaches such as climate buffer infrastructure (Warner and Wiegel, 2021).

While some people choose not to move in spite of growing climate-related risks owing to strong attachments to place, culture or other people, others are physically or financially unable to move away from hazardous areas (**"trapped populations"**); this poses a unique challenge in the context of climate change (Cissé et al., 2022). Human mobility requires financial, human and social capital, and pathways for human mobility may be limited or exclude certain groups. The most vulnerable to climate impacts may be the least able to move. The combination of a lack of resources to adapt in situ and an inability to move contribute to increasing climate vulnerability among people and households (Zickgraf, 2018).

#### BOX 2.1: WHAT DO REFUGEES AND PEOPLE INTERNALLY DISPLACED BY CONFLICT HAVE TO DO WITH CLIMATE CHANGE RELATED DISPLACEMENT, AND WHAT IS THE ROLE OF INTERNATIONAL PROTECTION AND NAPS?

As highlighted in successive IPCC reports, climate change is a systemic risk multiplier, and so it follows that the ways in which adverse climate change effects may contribute to the displacement of people within and across international borders are diverse and context specific. This may include situations where disasters are directly triggered by sudden climate-related shocks such as cyclones or floods, or more indirectly and gradually through cumulative and cascading effects and slow onset processes such as sea level rise and desertification. These effects may stress critical natural resources that communities are dependent on for their survival and well-being such as food, water and land; these situations can decimate livelihoods and exacerbate social tensions and conflict. Under such conditions, the risk of persecution may increase, particularly where communities are already living in fragile, impoverished or marginalised situations. While most displacement is internal, some people displaced across borders may need international protection in specific circumstances.

In such circumstances, people might meet the refugee definition and receive legal protection according to the 1951 Refugee Convention and/or regional refugee instruments, including the 1969 OAU Convention Governing the Specific Aspects of Refugee Problems in Africa and the 1984 Cartagena Declaration on Refugees. In addition, complementary forms of protection under international human rights law might apply based on the principle of non-refoulement; that is, the prohibition on returning a person to a country where they have a real risk of facing serious harm. Temporary protection or stay arrangements, such as humanitarian visas, may also provide a pragmatic way of providing protection to those in need, especially after a sudden onset disaster. These arrangements must be made without prejudice to the granting of refugee protection and be linked to longer-term strategies.

Considering that most refugees and displaced people in need come from highly climate-vulnerable countries, and a significant proportion of them are also hosted in such countries, legal protection, together with their inclusion in NAPs, may play a critical and complementary role in ensuring that these particularly vulnerable populations are not left behind.

(Source: UNHCR, 2020)

## 2.2 Why does human mobility matter for adaptation and climate-resilient development?

There are at least **three important reasons** why human mobility needs to be integrated into adaptation and climate-resilient development planning:

Firstly, climate change and increased climate risks and impacts contribute – directly and indirectly – to the conditions for **displacement**. This is associated with material and immaterial losses, and further erodes adaptive capacity and increases vulnerability. Therefore, one important aspect of **adaptation** is to **avert, minimize and address displacement** in the context of climate change, environmental degradation and disasters.

Secondly, other dimensions of human mobility could also enhance adaptive capacity and contribute to adaptation measures. For example, migration allows for the sectoral and geographical/locational diversification of income, risks and opportunities and could be key for adaptation. Remittances from migrant workers who enjoy decent work could help families in origin communities to adapt. Migrating allows pastoralists to manage the impacts of seasonal changes in temperature, precipitation and natural resources (e.g., pasture, water). Additionally, planned relocation could help people to move out of potential risk areas or areas at immediate risk and rebuild communities in a sustainable and resilient way. It is therefore important to identify how people involved in human mobility could be positive agents of change.

Thirdly, **migrants**, **internally displaced persons** and **refugees** need to be included and considered in adaptation planning, financing and programming to promote equitable processes and outcomes.

Additionally, integrating human mobility into NAPs could help to identify mobility pathways that can help countries or sectors to meet labour shortages and increase productivity and community resources, as well as helping to define skills that migrants can take back to their communities of origin to support greater resilience.

By integrating human mobility in adaptation planning and actions, national stakeholders could develop rights-based solutions to support people to move or to stay, and for people on the move; in order to avoid harmful displacement and risks, human mobility could contribute to climate change adaptation and ensure that vulnerable population groups are better protected from climate risks, including by considering the diversity of mobile populations (as outlined in 2.1), as well as their internal differences. Special consideration could be given to ensure that programming is gender-responsive and childsensitive and responds to the rights of specific groups, such as Indigenous Peoples (see box 2.2).

The 2022 contribution of Working Group II to the AR6 acknowledges these interlinkages between human mobility and adaptation and identifies climate-resilient development pathways as concrete development trajectories for action that integrate adaptation measures and their respective enabling conditions with mitigation practices. These development pathways are envisaged to incorporate the co-dependence of people and ecosystems at the local level, while simultaneously advancing ecosystem functions on a global scale. The IPCC stresses the importance of including equity and emphasizes the need for various system transitions in land, ocean, ecosystems, urban areas and infrastructure, energy, industry and society (Schipper et al., 2022). Chapter 18 of the contribution of Working Group II to the AR6 on climate-resilient development pathways explicitly addresses various dimensions of human mobility in the context of climate change, including displacement, pastoralism, labour migration and planned relocation.

#### **BOX 2.2: INDIGENOUS PEOPLES, ADAPTATION, AND HUMAN MOBILITY**

Although they are among the least responsible for the impacts of climate change, Indigenous Peoples are among the most vulnerable to its impacts. There is also a significant risk that some measures undertaken to address climate change disproportionately disadvantage Indigenous Peoples, creating risk of their displacement, and often exacerbating existing inequalities.

However, Indigenous Peoples already play a key role in adaptation, using traditional knowledge and occupations to identify and take action against climate change impacts, protecting stores of irrecoverable carbon and biodiversity, and transmitting knowledge to future generations.

Finally, consulting with Indigenous populations in climate change planning efforts ensures the development of inclusive interventions that contribute to their empowerment and the sustainability of climate action.

It is therefore critical that any planning process on adaptive human mobility, at any level, ensures the rights to consultation and participation for Indigenous Peoples, including Indigenous women. Such processes should draw upon international labour standards, including the ILO Indigenous and Tribal Peoples Convention, 1989 (No. 169), and the ILO guidelines for a just transition towards environmentally sustainable economies and societies for all. In particular, to strengthen mitigation and adaptation efforts, measures should be undertaken to accelerate the formal recognition and protection of Indigenous Peoples' rights to land and natural resources and security of tenure, while ensuring equal rights for Indigenous women. Furthermore, support should be provided for strengthening Indigenous Peoples' governance structures and representative institutions, and their insights could be sought for promoting traditional knowledge and occupations, as well as Indigenous-led enterprises, and ensuring that adaptation projects benefit Indigenous women and men.

ILO Convention No. 169 discusses the rights of Indigenous Peoples, and Article 16 notes that Indigenous Peoples "shall not be removed from the lands which they occupy". Relocation of Indigenous Peoples from the lands they occupy in order to engage in climate action projects should not occur. The same Article further notes that "[w]here the relocation of these peoples is considered necessary as an exceptional measure, such relocation shall take place only with their free and informed consent", and "[w]henever possible, these peoples shall have the right to return to their traditional lands, as soon as the grounds for relocation cease to exist". Where a return is not possible, Indigenous Peoples should "be provided in all possible cases with lands of quality and legal status at least equal to that of the lands previously occupied by them, suitable to provide for their present needs and future development. Where the peoples concerned express a preference for compensation in money or in kind, they shall be so compensated under appropriate guarantees". Finally, any resulting loss or injury caused by the relocation shall be fully compensated.

(Sources: ILO, 2022b; ILO, 1989)



3.

## 3.1 What is the NAP process and the NAP, and what does a NAP look like?

The NAP process was established under the 2010 CAF with a view to enabling Parties to identify medium- and long-term adaptation needs and develop and implement strategies, programmes and policies to address those needs. NAPs act as strategic national plans that contain priority adaptation actions for a given time period to inform implementation, monitoring and evaluation. The NAP process is aimed at reducing vulnerability by building adaptative capacity and facilitating the coherent integration of climate change adaptation into national policies, programmes and activities within relevant sectors and at suitable levels, especially within development planning processes and strategies (FCCC/CP/2010/7/ Add.1, Decision 1/CP.16). COP 21 (2015) requested the GCF to expedite support for the formulation of NAPs, and the subsequent implementation of policies, projects and programmes identified in them through the GCF (Decision 1/CP.21, paragraph 46, FCCC/ CP/2015/10/Add.1).

Led by national Governments, the NAP process is not prescriptive; it is aimed at enhancing coherence of adaptation planning within countries and facilitates country-driven action. The NAP process allows for the identification and prioritization of capacity and adaptation gaps and enables countries to monitor and review progress and results. NAPs can be updated in an iterative manner. Between 2010, when the process to formulate and implement NAPs was established, and 31 May 2024, only 56 of the 154 developing country Parties had submitted a NAP to the UNFCCC. The NAP-related decision from COP 27 in Sharm el-Sheikh expresses "concern at the large number of countries that have not been able to submit their first national adaptation plan and in this respect notes the challenges, complexities and delays experienced by developing country

Parties in accessing funding" (FCCC/CP/2022/10/ Add.1, Decision 9/CP.27). The Sharm el-Sheikh Implementation Plan "urges developed country Parties to urgently and significantly scale up their provision of climate finance, technology transfer and capacity-building for adaptation so as to respond to the needs of developing country Parties as part of a global effort, including for the formulation and implementation of national adaptation plans and adaptation communications" (FCCC/CP/2022/10/ Add.1: Decision 1/CP.27, para. 22)

#### Structure of the NAP and the NAP process

The NAP and its process are structured to guide countries in planning and implementing climate change adaptation measures. According to the **NAP** technical guidelines, the NAP typically includes:

- Situation analysis: Assessment of climate risks, often in key sectors, and outlining of strategies for adaptation;
- Objectives and actions: Outline of the general and specific objectives and detailed information on the actions for achieving these objectives, including capacity-building, awareness-raising and budgeting;
- Impact of programme implementation: An overview of the expected outcomes and benefits of NAP implementation;
- Cost estimates, which provide financial projections or budgets required for implementing the plan;
- Risks of programme implementation, analysing potential risks, barriers or challenges in implementing the NAP;
- Responsible authorities/institutions: A list of the entities responsible for implementing various aspects of the NAP.

The **NAP process**, by comparison, is a systematic approach to preparing, drafting, implementing, monitoring and revising the NAP. The NAP process, as outlined in the NAP technical guidelines, encompasses **four main elements**:

- Element A lays the groundwork by initiating the NAP process, assessing available information, and addressing capacity gaps.
  For example, this might involve identifying existing climate data and recognizing areas where further expertise is needed;
- Element B involves **preparatory steps** like analysing climate scenarios, assessing

vulnerabilities (e.g. by evaluating the impact of projected climate changes on agriculture) and appraising adaptation options;

- Element C focuses on implementation strategies, including prioritizing adaptation in national and sectoral planning, capacitybuilding and the development of long-term strategies, like integrating climate resilience in infrastructure projects;
- Lastly, Element D covers reporting, monitoring and reviewing the NAP process, ensuring iterative updates and communication of progress, akin to regularly assessing the effectiveness of implemented adaptation measures.

## 3.2 Human mobility and NAPs in the UNFCCC processes

The CAF included the first agreed-upon text on migration, displacement and planned relocation in the UNFCCC climate negotiations process (Warner, 2012). Decision 1/CP.16, paragraph 14(f), invites all Parties to enhance action on adaptation by undertaking, inter alia, "[m]easures to enhance understanding, coordination and cooperation with regard to climate change induced displacement, migration and planned relocation, where appropriate, at the national, regional and international levels" (FCCC/CP/2010/7/Add.1, Decision 1/CP.16).

The TFD of the WIM Executive Committee was established to develop recommendations on integrated approaches to avert, minimize and address displacement related to the adverse impacts of climate change. The mandate of the TFD was later extended to focus more broadly on strategic workstream (d) of the five-year rolling workplan of the WIM Executive Committee, which is aimed at enhancing cooperation and facilitation in relation to human mobility, including migration, displacement and planned relocation. The work of the TFD is leading to enhanced sharing of evidence and knowledge, identification of good

practices and policies, and provision of opportunities for States to articulate their needs. Decision 10/CP.24, paragraph 3, invites Parties and other stakeholders to consider the recommendations on integrated approaches to averting, minimizing and addressing displacement related to the adverse impacts of climate change when undertaking relevant work, which include a recommendation to "integrate climate change related human mobility challenges and opportunities into national planning processes ... and consider communicating these efforts undertaken" (FCCC/CP/2018/10/Add.1, Part II, Decision 10/CP.24, annex, para. 1(g)(iv)). The five-year rolling workplan of the WIM Executive Committee is an indication of the fact that enhancing cooperation and facilitation of efforts in relation to human mobility in the context of averting, minimizing and addressing loss and damage associated with climate change impacts is now firmly anchored in the UNFCCC process. This Technical Guide is also designed to inform discussions of the members of the AC and the WIM Executive Committee on these synergies within the UNFCCC process.

## **3.3 Adaptation Communications (adcoms)**

Article 7, paragraphs 10–12, of the Paris Agreement outlines the establishment of adcoms. Decision 9/ CMA.1, paragraph 1, reports that the purpose of the adcom is, inter alia, to increase the visibility and profile of adaptation, strengthen adaptation action, provide input to the global stocktake and enhance learning on adaptation needs and actions. According to Article 7, paragraph 11, of the Paris Agreement and decision 9/CMA.1, paragraph 3, the adcom "shall be, as appropriate, submitted and updated periodically, as a component of or in conjunction with other communications or documents, including a national adaptation plan, a nationally determined contribution ... and/or a national communication."

#### TABLE 3.1: OVERVIEW OF THE KEY VEHICLE DOCUMENTS FOR THE ADCOM

DOCUMENT	GUIDELINES	SUBMISSION TIMELINE
NAP	Decision 5/CP.17 LEG NAP technical guidelines	Not fixed
NDC	Decision 4/CMA.1, paragraphs 8, 9, 10 and 16, and annex 1, paragraphs 3(d) and 4(d)	Every five years
National communication	Decision 6/CP.25, annex, paragraphs 46–47 (for developed country Parties) Decision 17/CP.8, annex, paragraphs 3–4, 26 and 28–36 (for developing country Parties)	Every four years
Biennial transparency report	Decision 18/CMA.1, annex, paragraphs 10(c), 13–16, 61, 70, 86–87, and 104–117	Every two years

Source: Modified from the draft supplementary guidance for voluntary use by Parties in communicating information in accordance with the possible elements of an adcom (AC document AC22/GUID/6B)

## 3.4 How to mainstream human mobility into NAPs?

Mainstreaming human mobility into NAPs involves a **strategic approach centred on four key principles**:

- Inclusion of relevant dimensions of human mobility: This principle advocates for considering the perspectives of relevant dimensions of human mobility in the context of climate change adaptation to support integrated approaches to avert, minimize and address displacement and enable the potential contribution of human mobility to adaptation outcomes.
- 2. Integration throughout the NAP formulation process: Mainstreaming human mobility could occur at all stages of the NAP formulation process, including readiness proposals. Ideally, this integration begins at the earliest phase to ensure comprehensive planning.
- 3. Meaningful participation of migrants, internally displaced persons, refugees and other relevant stakeholders: Involving a wide range of stakeholders is crucial for formulating a NAP, such as government entities, academia, think tanks, CSOs, employers' and workers' organizations, community leaders, affected populations, including those who stay, migrants, internally displaced persons, refugees, and representatives of host and origin communities. This collaborative approach ensures that **diverse perspectives and needs related to human mobility are considered**.
- 4. Focus on social equity, justice and human rights: Special consideration could be given to social equity, justice and respect for human rights, with a specific focus on intersectional differentiation, including aspects related to age, gender, disability, ethnicity, migration or refugee status, and Indigenous populations. This is vital as marginalized or economically weaker sections of

society often disproportionately bear the brunt of climate change, including through displacement, immobility or negative outcomes of human mobility.

#### Implementation activities

The activities for implementing this strategy include:

- Activities for stakeholder engagement;
- Information collection activities (on stakeholders, human mobility, climate change knowledge, etc.);
- Capacity-building and awareness-raising activities;
- Activities for **generating evidence**, such as policy mapping, literature reviews and case studies;
- Activities for planning, reviewing and revising documents, including sectoral plans and the final NAP.

Section 4 contains supporting materials (including step-by-step descriptions, examples and templates) and suggestions for conducting these activities with a focus on human mobility.

#### Optimizing resources and late-stage integration

If resources are constrained or integration occurs late in the NAP process, prioritize:

- Continuous stakeholder engagement and bilateral talks to raise awareness and acknowledgement of the importance of the issue;
- Compilation of the NAP, ensuring the inclusion of expert knowledge and stakeholder perspectives even if human mobility was not adequately considered in earlier stages.

#### FIGURE 3.1: STRUCTURE AND TYPES OF ACTION OF THIS TECHNICAL GUIDE

		ELEMENT A Laying groundwork and addressing gaps	ELEMENT B Preparatory elements	ELEMENT C Implementation strategies	ELEMENT D Reporting, monitoring, and review
	lection	4.1.1 Activity 1: List of stakeholders (template)	4.2.4 Activity 1: Synthesizing knowledge on sectoral human mobility challenges (description and templates)	4.3.2 Action point 1: Identify relevant local stakeholders (short description)	
	nation coll	4.1.2 Activity 1: Stocktaking of human mobility and adaptation (template)			
	Infor	4.1.2 Activity 2: Situation analysis of human mobility dimensions (template)			
		4.11 Activity 2: Initial briefings and awareness-raising sessions (short description)	4.2.3 Action point 2: Include human mobility experts in the review of the NAP (short description)	4.3.2 Action point 2: Raise awareness about human mobility among local stakeholders (short description)	4.4.2 Action point 1: Include relevant stakeholders in the development and review of CBT indicators
change		4.1.1 Activity 3: Bilateral briefings for senior officials (short description, example)	4.2.4 Action point 1: Conduct initial briefings for sectoral focal points (short description)	4.3.3 Activity 1: Briefing for regional actors (short description, example)	4.4.3 Action point 1: Include relevant experts for mainstreaming human mobility into the next NAP
climate c	gement		4.2.4 Action point 2: Include relevant stakeholders in sectoral task forces (short description)	4.3.3 Activity 2: Talking points for promoting coordination and synergy (short description, example)	4.4.3 Action point 2: Consider contributions from migrants for the development of the next NAP
ntext of	older enga				4.4.4 Action point 1: Include relevant government entities in the stakeholder outreach strategy
in the co	Stakeh				4.4.4 Action point 2: Familiarize broad range of experts with the NAP during stakeholder outreach strategy
mobility					4.4.4 Action point 3: Engage with relevant experts for the stakeholder outreach strategy
g human					4.4.4 Action point 5: Participate in events at national, regional, and global levels, to share experience
streamin		4.1.2 Activity 3: Policy Mapping and Analysis (short description)	4.2.1 Action point 1: Include human mobility types in climate risk assessments and hazard mapping (template)		
for main	g evidence		4.2.1 Action point 2: Include human mobility types in vulnerability and adaptation assessments (template)		
Actions	Generating		4.2.1 Activity 1: (Case) studies to assess key aspects of the human mobility and adaptation nexus (description with examples)		
			4.2.4 Action point 3: Include human mobility in research of sectoral risks, vulnerabilities, adaptation options (description)		
	city- ling	4.1.3 Activity 1: Training on human mobility in the context of climate change nexus (short description, resources, and links)		4.3.1 Activity I: Training on human mobility in the context of climate change (short description)	4.4.4 Action point 4: Include human mobility in school curricula and awareness-raising on climate change adaptation (short description)
	Capa build			4.3.2 Action point 4: Develop capacities of local stakeholders for addressing human mobility-related challenges and opportunities (short description)	
	ning, I, revising		4.2.2 Activity 1: Identifying the priority issues (planning sheets)	4.3.2 Action point 3: Include human mobility in local adaptation plans (short description)	4.4.1 Activity 1: A Results Framework for Mainstreaming Human Mobility into the NAP (description and template)
	Plani reviewing		4.2.3 Action point I: Include all relevant aspects of human mobility in the drafting of the NAP (description and examples)		4.4.2 Action point 2: Consider voluntary contributions from migrants through awareness raising, financial incentives, technical assistance (short description)

Dark: templates and questionnaires | Medium: step-by-step descriptions and links to resources or extensive examples | Light: short descriptions



Key steps for mainstreaming human mobility into NAPs This section explains the entry points for mainstreaming human mobility into the NAP formulation process. For each of the elements and steps from the NAP technical guidelines, and the corresponding outcomes and sub-outcomes of the NAP Readiness Proposals, actions are suggested.

#### There are **two types** of actions:

- Shorter suggestions for integrating human mobility in the context of climate change into existing activities (called **action points**, **strategies** and **sectoral approaches**);
- More detailed descriptions of tools (called activities), for which templates, moderation plans or brief introductions are given.

Structure of the section: This Technical Guide is targeted at stakeholders involved in, and especially those driving, the NAP process. Human mobility stakeholders represent a major target end user of this Technical Guide. Therefore, it is primarily structured in accordance with the NAP readiness proposals (see GCF, 2023), which has a slightly different nomenclature to, but largely correspond with, the UNFCCC NAP technical guidelines (see table 4.1 below).

Action points, strategies and activities are allocated at the sub-outcome level, thus this section has four subsections (outcomes 1–4 correspond with elements A–D of the NAP technical guidelines), each with 3–5 sub-outcomes (corresponding with steps A1, A2, A3, for example, of the NAP technical guidelines).

**Structure of each sub-section**: Each sub-section starts with an overview table that shows the respective outcomes and sub-outcomes of the NAP Readiness Proposals, as well as the corresponding elements and steps of the NAP technical guidelines. For each sub-outcome (in each sub-section of this chapter), there are three headings:

- Under "Why is human mobility important at this step of the NAP process?", activities are listed that are typically found under this sub-outcome; these were compiled from five NAP proposal documents that were analysed for this document (NAP2 from the Republic of Moldova, NAP1 from Armenia, NAP1 from Kyrgyzstan, NAP1 from Tajikistan and NAP1 from Turkmenistan);
- Under "Relevant for NAP1 or NAP2?", it is explained whether the following activities are relevant for NAP1 or NAP2;
- Under "How are human mobility aspects mainstreamed in this step?", the different action points, strategies and activities are listed.

**Structure of the activities**: For each activity, the following parts are described:

"What does it help to do?" states the aims and key aspects of the activities;

"Who?" lists the key actors implementing the activity, and the participants;

**"Steps"** gives a more detailed explanation of the activity, including checklists, moderation plans and a brief description of materials;

**"Result(s)"** explains the concrete outputs of the activity.

#### Table 4.1 lists:

- a. The outcomes and sub-outcomes of the NAP Readiness Proposals;
- b. The corresponding elements and steps of the NAP technical guidelines.

## **TABLE 4.1:** OVERVIEW OF THE OUTCOMES AND SUB-OUTCOMESOF NAP READINESS PROPOSALS, AND THE CORRESPONDING ELEMENTSAND STEPS OF THE NAP TECHNICAL GUIDELINES

	READINESS PROPOSAL OUTCOMES AND SUB-OUTCOMES		NAP TECHNICAL GUIDELINES ELEMENT AND STEPS		
Outcome 1	National coordination, steering mechanisms and institutional arrangements for adaptation planning are established, clarified and strengthened, and knowledge gaps are identified	Element A	Laying groundwork and addressing gaps		
1.1	Legal and institutional frameworks are defined, and coordination mechanisms and institutions are established and operationalized	A1	Initiating and launching the NAP process		
1.2	Identify and systematize available information on climate change impacts, vulnerability, and adaptation, and assess gaps	A2	Stocktaking: Identifying available information and assessing gaps		
1.3	Assess and address capacity gaps of leading institutions	А3	Addressing capacity gaps and weaknesses		
		A4	Comprehensively and iteratively assessing development needs and climate vulnerabilities		
Outcome 2	Evidence and knowledge base on climate change and adaptation strengthened, NAPs formulated	Element B	Preparatory Elements		
2.1	Evidence base: Data and knowledge on climate change and risks are systematized, gaps are identified, prioritized	B1	Analysing current climate and future climate change scenarios		
2.2	Evidence base: Data and knowledge on sectoral vulnerabilities and adaptation options are systematized, and gaps are identified	В2	Assessing climate vulnerabilities and identifying adaptation options		
2.3	Evidence base: Adaptation options are reviewed, appraised and prioritized	В3	Reviewing and appraising adaptation options		
2.4	The NAP is compiled and communicated	B4	Compiling and communicating NAPs		
2.5	Climate change adaptation is mainstreamed into priority sectors of national planning and on the subnational level	В5	Integrating climate change adaptation into national and subnational development and sectoral planning		

	READINESS PROPOSAL OUTCOMES AND SUB-OUTCOMES		NAP TECHNICAL GUIDELINES ELEMENT AND STEPS		
Outcome 3	NAP implementation strategy developed	Element C	Implementation strategies		
3.1	Prioritizing climate change adaptation in national planning	C1	Prioritizing climate change adaptation in national planning		
3.2	A national adaptation strategy is developed, including adaptation financing and private sector engagement	C2	Developing a (long-term) national adaptation implementation strategy		
3.3	Capacity-building of implementing bodies strengthened	С3	Enhancing capacity for planning and implementation of adaptation		
3.4	Priority sector technical and managerial capacity strengthened	С3	Enhancing capacity for planning and implementation of adaptation		
3.5	Subnational technical and managerial capacity for climate change adaptation tasks enhanced	С3	Enhancing capacity for planning and implementation of adaptation		
3.6	Promoting coordination and synergy at the regional level and with other multilateral environmental agreements	C4	Promoting coordination and synergy at the regional level and with other multilateral environmental agreements		
Outcome 4	Mechanisms for reporting, monitoring and review of NAPs and adaptation progress in place	Element D	Reporting, monitoring and review		
4.1	Climate change indicators and reporting methodology for climate change adaptation planning and implementation are developed	D1	Monitoring the NAP process		
4.2	CBT applied to improve the accuracy of M&E and budget systems	D1	Monitoring the NAP process		
4.3	Monitoring systems are in place and the capacity for monitoring is strengthened	D1	Monitoring the NAP process		
4.4	The NAP process is reviewed to assess progress, effectiveness and gaps	D2	Reviewing the NAP process to assess progress, effectiveness and gaps		
4.5	NAP is iteratively updated	D3	Iteratively updating the NAPs		
4.6	NAP is compiled and communicated	D4	Compiling and communicating NAPs		

## 4.1 National coordination, steering mechanisms and institutional arrangements for adaptation planning are established, clarified and strengthened, and knowledge gaps are identified

#### 4.1.1 Establishing institutions and coordination bodies

	READINESS PROPOSAL OUTCOME		READINESS PROPOSAL SUB-OUTCOME		NAP TECHNICAL GUIDELINES ELEMENT		NAP TECHNICAL GUIDELINES STEP
Outcome 1	National coordination, steering mechanisms and institutional arrangements for adaptation planning are established, clarified and strengthened, and knowledge gaps are identified	1.1	Legal and institutional frameworks are defined, and coordination mechanisms and institutions are established and operationalized	Element A	Laying groundwork and addressing gaps	A1	Initiating and launching the NAP process

## Why is human mobility important at this step of the NAP process?

Under this sub-outcome, key activities often include:

- An analysis or review of the existing institutional frameworks for adaptation;
- Design of steering and coordination mechanisms (i.e. horizontal/sectoral and vertical) for the NAP development process;
- The establishment of a stakeholder participation process;

- The development of key documents (plans, conceptual notes, etc.) for implementing the NAP process;
- **5.** Raising awareness and improving understanding among key stakeholders on a national level.

In each of these activities, it is important to include the human mobility perspective, as effective mainstreaming depends on the **early inclusion** of **stakeholders** and of **the topic** in **national coordination**, **steering mechanisms** and **institutional arrangements**.
#### **Relevant for NAP1 or NAP2?**

- NAP1: Important.
- NAP2: If human mobility was not included in NAP1, it is advised to include it in the first steps of the NAP2 process.

### How are human mobility aspects mainstreamed in this step?

The following **action points** are recommended for mainstreaming human mobility **into existing activities**:

- Action point 1: Review the steering and coordination mechanisms (i.e. horizontal/sectoral and vertical) for the NAP process, where the legal and institutional frameworks are defined for the NAP as a whole, and seek entry points where human mobility aspects could be mainstreamed.
- Action point 2: Include national-level human mobility stakeholders in the coordination mechanism for the NAP process.

The **following activities** are recommended to ensure the inclusion of human mobility in this initial phase of establishing institutions and coordination bodies:

- Activity 1: List of stakeholders ensures that all stakeholders for the issue of human mobility are identified.
- Activity 2: Initial briefings and awarenessraising sessions for stakeholders create the awareness among key stakeholders necessary for including human mobility in the NAP formulation process.
- Activity 3: Bilateral briefings for senior officials (i.e. decision makers) from relevant sectoral ministries and UN agencies are aimed at informing key decision makers and raising their awareness about the issue.

ACTIVITY 1:

## List of stakeholders



# WHAT DOES IT HELP TO DO?

It aims to identify the key stakeholders relevant to addressing human mobility in the context of climate change. It is necessary to **include these stakeholders in stakeholder engagement processes** and to ensure the participation of stakeholders in steering and coordination mechanisms (i.e. horizontal/ sectoral and vertical). This is vital for ensuring that all relevant perspectives are considered and that the NAP is better aligned with the broader goals and objectives of the stakeholders involved. The inclusion of stakeholders also ensures that human mobility is mainstreamed and included in the legal and institutional frameworks of the overall NAP formulation process.

# WHO?

The stakeholder listing would include the sectoral government entities, local government institutions, UN agencies, academic institution, think tanks, CSOs (including those led by migrants, internally displaced persons, and refugees), employers' and workers' organizations, and international organizations that have relevant knowledge, expertise or mandates for addressing human mobility in the context of climate change. Stakeholders at the subnational and local levels should be included, especially if the formulation of a local adaptation plan is envisaged. Special attention could be given to identifying entities that address cross-cutting issues in the context of human mobility, including aspects related to age, gender, ethnicity, Indigenous populations, persons with disabilities and legal status.<sup>2</sup> This could be structured as a short questionnaire to accumulate knowledge from different sources.

# STEPS

The stakeholder listing comprises three steps:

1. Read through the questionnaire below and check which stakeholders are relevant in your country's context.

The questions are organized by stakeholder group and provide a starting point for gathering information on whether the stakeholders are:

- Essential for **gathering relevant knowledge** on human mobility to inform the NAP formulation process (e.g. experts from sectoral government entities, local government institutions, UN agencies, academia, think tanks, CSOs, employers' and workers' organizations, international organizations, etc.);
- Key partners for successfully mainstreaming human mobility into the NAP process and document (e.g. actors who are important in the development and implementation of the NAP, actors who have mandates to address different dimensions of human mobility in the country, actors who address cross-cutting issues in the context of human mobility, etc.).
- 2. List the stakeholders (i.e. institutions/organizations or individuals) in the different groups, sorting them as **knowledge partners** and/or **strategic and implementation partners**.
- **3.** Complete the list by providing contact information.

# RESULT

A list of stakeholders, sorted by categories and importance, and with contact information.

2 Including experts on international refugee and human rights law in the context of climate change impacts and disasters.

#### **TEMPLATE 4.1: SHORT QUESTIONNAIRE/LIST OF KEY STAKEHOLDER TYPES**

	TYPES OF STAKEHOLDER	KNOWLEDGE PARTNERS: Which organizations or individuals have knowledge that is needed or could be included when mainstreaming human mobility into the NAP?	STRATEGIC PARTNERS: Which organizations or individuals could help mainstream human mobility into the NAP?	IMPLEMENTATION PARTNERS: Which organizations or individuals could help mainstream human mobility into the NAP?
	Agriculture, fisheries, forestry			
	Civil protection/DRR			
	Education, vocational training			
	Embassies/high commissions/consulates			
	Environment and environmental standards			
	Finance, economy, remittances			
	Foreign affairs			
Î	Gender			
	Housing			
	Interior/home affairs			
	Labour, employment			
	Migrants, diaspora, internally displaced persons, refugees, pastoralists, and others			
	National planning			
	Rural development			

r	Social services		
ities at sible fo	Statistics		
espons	Urban development		
/ernme evels r	Vocational training		
<ey gov<br="">ferent  </ey>	Youth		
diff	Others		
	Diaspora/migrant associations		
	Organizations led by internally displaced persons		
	Refugee-led organizations		
	Recruitment agencies (public and private)		
suo	Money transfer operators		
stituti	CSOs		
/ant in	Employers		
er relev	Private sector		
Othe	Producers'/farmers' organizations		
	Trade unions		
	Credit associations		
	Youth groups		
	Persons with disability		
	Think tanks and academia		
	Education institutions		

UN partners	Expert agencies with mandated responsibilities on human mobility: ILO, IOM, and UNHCR United Nations Entity for Gender Equality and the Empowerment of Women, UNDP, UNDRR, United Nations Human Settlements Programme, United Nations Industrial Development Organization, UNEP, OHCHR, World Bank, etc. In-country United Nations Country Team, led by the UN Resident Coordinator National/regional UN Network on Migration		
thers	Local communities and Indigenous persons		
đ	PDD		

#### ACTIVITY 2:

## Initial briefings and awareness-raising sessions for stakeholders



### WHAT DOES IT HELP TO DO?

It aims to mobilize stakeholders for mainstreaming human mobility considerations into NAP formulation. Initial briefings will act as a sensitization meeting to engage stakeholders on human mobility in the context of climate change.

# WHO?

Primarily, **technical experts** from relevant sectoral government entities, local government institutions, UN agencies, academia, think tanks, CSOs (including those led by migrants, internally displaced persons, and refugees), employers' and workers' organizations, and international organizations that have relevant knowledge, expertise or mandates for addressing human mobility in the context of climate change impacts in the country. If the formulation of a local adaptation plan is envisaged, also identify stakeholders at the provincial, district and municipal levels. Special attention could be given to educating stakeholders who address cross-cutting issues in the context of human mobility, including aspects related to age, gender, ethnicity, Indigenous populations, persons with disabilities and legal status.

# STEPS

- Develop a briefing presentation highlighting (1) how human mobility and climate change are interlinked, and why that matters for climate change adaptation and climate-resilient development, including evidence from the country or other countries with similar contexts, (2) general information about the formulation of NAPs and adcoms, and (3) key steps for mainstreaming human mobility into NAPs and adcoms.
- 2. Organize a briefing session.
- 3. On the basis of the discussions, update the list of stakeholders.

### RESULTS

Increased understanding among technical experts from relevant entities (e.g. experts in the NAP technical working group in a country) with regard to human mobility in the context of climate change, the NAP formulation process, and the need to mainstream human mobility in the NAP formulation process. Improved synergy and coherence between entities and support for planned adaptation that is inclusive of human mobility dimensions.

#### ACTIVITY 3:

## Bilateral briefings for senior officials from relevant sectoral ministries and UN agencies



### WHAT DOES IT HELP TO DO?

The bilateral briefing is meant to inform senior decision makers from relevant sectoral government entities and UN agencies in a country about topics related to human mobility in the context of climate change.

## WHO?

Senior officials from government entities, including those with mandates on the environment, climate change, civil protection/DRR, water, planning, finance, economy, gender, human mobility (including evacuation, diaspora, displacement management, immigration and border management, labour migration, pastoralism, planned relocation, etc.), agriculture, rural development, urban development, local development, statistics, foreign affairs, labour, social affairs, etc. Senior officials from the subnational and local levels such as governors, chief ministers, mayors, deputy mayors and heads of department in provincial governments and municipalities could also be briefed, as well as senior officials from relevant UN agencies, especially those with mandates relevant to NAP formulation and implementation.

 Activity 1 will yield a list of potential candidates in groups of strategic and implementationrelevant stakeholders.

# STEPS

Here is an example of a briefing note. This is expected to help end users to formulate briefing notes as per their context.

#### **TEMPLATE 4.2: EXAMPLE OF A BRIEFING NOTE**

This is the fifteenth year of the human mobility and climate change nexus being discussed in the context of climate change negotiations under the UNFCCC.

#### Human mobility at COP 27

#### Key COP 27 negotiated decisions on human mobility linked to climate change

- 1. The preamble of the Sharm el-Sheikh Implementation Plan<sup>3</sup> acknowledges that Parties should, when taking action to address climate change, respect, promote and consider their human rights obligations, including the human rights of migrants, the right to a clean, healthy and sustainable environment and the right to health.
- 2. The Sharm el-Sheikh Implementation Plan also noted with grave concern the growing gravity, scope and frequency of loss and damage associated with the adverse effects of climate change, resulting in economic and non-economic losses, including forced displacement and impacts on human mobility.<sup>4</sup>
- **3.** A historic decision was taken to establish new funding arrangements to respond to loss and damage, including a fund.<sup>5</sup> In defining the process for the operationalization of the new funding arrangements and the fund, the relevant decisions established a Transitional Committee that will be informed by, inter alia, the gaps within the current landscape, including for displacement, relocation and migration.<sup>6</sup>
- **4.** A decision put the structure of the Santiago Network in place, which includes an Advisory Board and hosted secretariat, as well as the process for selecting a host.<sup>7</sup> This is a major step forward in the full operationalization of the Santiago Network, and in strengthening solutions for human mobility in the context of climate change.<sup>8</sup>
- **5.** A decision on the report of the Executive Committee of the WIM welcomed the adoption of the second five-year rolling workplan of the Executive Committee, which includes a human mobility workstream, and the adoption of the third plan of action of the TFD and expressed appreciation to organizations and experts for the submission of information relevant to the Santiago Network.<sup>9</sup>

#### Other engagements at COP 27 on human mobility linked to climate change

Human mobility discussions were present outside of the negotiations as well. COP 27 saw an increase in attention dedicated to human mobility in presidential thematic events and other side events.

#### Side events

Most notably, human mobility was discussed during the World Leaders Summit at a COP 27 Presidency high-level round table entitled Climate Change and the Sustainability of Communities in Climate-Vulnerable Situations.

- 3 Decision 1/CP.27.
- 4 Decision 1/CP.27, para. 25.
- 5 Decisions 2/CP.27, paras. 2–3, and 2/CMA.4, paras. 2–3.
- 6 Decisions 2/CP.27, paras. 4 and 6(b), and 2/CMA.4, paras. 4 and 6(b).
- 7 Decision 12/CMA.4, para 3, endorsed by decision 11/CP.27.
- 8 The mandate of the Santiago Network is to catalyse the technical assistance of relevant organizations, bodies, networks and experts for the implementation of relevant approaches for averting, minimizing and addressing loss and damage at the local, national and regional level in developing countries that are particularly vulnerable to the adverse effects of climate change (decision 2/CMA.2, para. 43)
- 9 Decision 13/CMA.4, paras. 1(b) and 2(d), endorsed by decision 12/CP.27.

There were over 60 side events focused on the human mobility–climate change nexus at COP 27. The side events ranged from presidential and ministerial political exchanges to technical and programmatic discussions among representatives of Governments, the UN, civil society, academia, migrants, youth and children. The topics of events spanned the human mobility–climate change nexus, covering issues of early warning, peace and security, durable solutions to displacement, human rights, financing, loss and damage, protection, diasporas and remittances, slow onset events, food security, action and solutions, innovation, youth, cities, health and the voices of migrants.

#### National statements

The national statements of several countries at COP 27 also included human mobility considerations.

While formulating the briefing material, special attention could be given to cross-cutting issues in the context of human mobility, including aspects related to age, gender, ethnicity, indigenous populations, persons with disabilities and legal status.<sup>10</sup>

### RESULTS

Increased understanding among senior officials from relevant entities about human mobility in the context of climate change, and the need to mainstream human mobility in the NAP formulation process. Improved synergy and coherence between entities, and support for planned adaptation that is inclusive of human mobility dimensions.

10 Including experts on international refugee and human rights law in the context of climate change impacts and disasters.

# 4.1.2 Stocktaking: Systematize existing knowledge and identify gaps

	READINESS PROPOSAL OUTCOME		READINESS PROPOSAL SUB-OUTCOME		NAP TECHNICAL GUIDELINES ELEMENT		NAP TECHNICAL GUIDELINES STEP
Outcome 1	National coordination, steering mechanisms and institutional arrangements for adaptation planning are established, clarified and strengthened, and knowledge gaps are identified	1.2	Identify and systematize available information on climate change impacts, vulnerability and adaptation, and assess gaps	Element A	Laying groundwork and addressing gaps	A2	Stocktaking: Identifying available information and assessing gaps

### Why is human mobility important at this step of the NAP process?

Under this sub-outcome, key activities often include:

- Compiling and synthesizing available analyses of current and future climate scenarios in the priority sectors;
- 2. Compiling and synthesizing available socioeconomic information in the priority sectors at the national and subnational levels;
- Compiling and synthesizing the existing vulnerability assessments for priority sectors and key industries and developing a workplan/strategy to address gaps;
- Preparing an inventory of sectoral, territorial and international adaptation projects and of stakeholder-driven adaptation activities to analyse lessons learned;
- Compiling existing sectoral strategies and identifying existing adaptation programmes/ projects to detect synergies;
- 6. Developing a comprehensive knowledge management strategy.

In each of the aforementioned key activities, human mobility considerations could be included, as effective mainstreaming will depend on the compilation and synthesis of available evidence on the issue, the inclusion of human mobility in the inventory of sectoral, territorial and international adaptation projects, the identification of good practices and gaps related to human mobility in the context of climate change in sectoral strategies and adaptation programmes/ projects, and the consideration of human mobility dimensions in the knowledge management strategy.

#### **Relevant for NAP1 or NAP2?**

- NAP1: Important.
- NAP2: Important.

### How are human mobility aspects mainstreamed in this step?

The following action points and activities are recommended for mainstreaming human mobility into existing activities:

• Action point 1: Contact the stakeholders and work towards the inclusion of human mobility dimensions in the compilation and synthesis of the following: available information on climate impacts, future climate scenarios, vulnerability assessments and adaptation inventories. Also include human mobility in the knowledge management strategy for the NAP process.

 Action point 2: Consult relevant sectoral entities to document whether human mobility in the context of climate change has been addressed in existing programming and projects, as well as in planned projects and initiatives, including those under adaptation programmes and projects, noting their relevance to the country and their timelines, and identify focal points.

Furthermore, the following **activities** are important with regard to including human mobility in this phase:

• Activity 1: Stocktaking of human mobility in the context of adaptation, which gives an overview

of the status of NAP formulation and the extent to which human mobility is already mainstreamed in the NAP process.

- Activity 2: Situation analysis of human mobility dimensions in the country context, which helps to systematically gather information to create an overview of the importance of the different dimensions of human mobility in the context of climate change, as well as their characteristics and associated challenges.
- Activity 3: Policy mapping and analysis, which systematizes the current extent of mainstreaming of human mobility in the context of climate change within national policies, legal frameworks and strategies.

ACTIVITY 1:

### Stocktaking of human mobility in the context of adaptation



### WHAT DOES IT HELP TO DO?

It consists of a stocktake of what has been done already and what is being done in the respective country context regarding mainstreaming human mobility into adaptation planning (e.g. NAP formulation). This would help to establish a baseline for the mainstreaming.



This questionnaire could be sent to experts in sectoral government entities, UN agencies, academic institutions, think tanks, CSOs (including those led by migrants, internally displaced persons, and refugees), employers' and workers' organizations, and international organizations (see results of the list of stakeholders from template 4.1).

STEPS

Please answer the following questions regarding the mainstreaming of human mobility into the NAP in your **country's context**.

#### TEMPLATE 4.3: QUESTIONS FOR TAKING STOCK OF HUMAN MOBILITY IN THE CONTEXT OF ADAPTATION

	QUESTION	RESPONSE
1.	Is there a climate change related policy document (e.g. law, regulation, strategy or plan) in your country that mentions human mobility in the context of climate change (e.g. displacement, migration and relocation)? If so, what dimensions (see sub-section 2.1) are mentioned in it?	
2.	2. Is there a human mobility related policy document (e.g. law, regulation, strategy or plan) in your country that mentions human mobility in the context of climate change (e.g. displacement, migration and relocation)? If so, what dimensions (see sub-section 2.1) are mentioned in it?	
3.	Which government entity is the custodian/focal point for NAP formulation?	
4.	Is the country developing its first or second NAP?	
5.	When did the current NAP formulation process begin?	
6.	When will the NAP formulation project end?	
7.	Which UN or non-UN agency is managing the NAP formulation process in this country?	
8.	How many meetings has your institution had either with the NAP coordinator/focal point (generally, a government official) or with her/his team in the last year?	
9.	How many meetings have you had with the project manager from the managing UN or non- UN entity in the last year?	

10.	Has your institution contributed verbal or written inputs to one of the NAP activities (e.g. stakeholder meetings, updating of the national climate change strategy, sectoral strategy, vulnerability assessments, inventory of programmes, projects, information sheet, videos, etc.)? If so, please provide details regarding your input. Did this input refer to human mobility in the context of climate change (e.g. displacement, migration or relocation)? If so, please provide details.	
11.	To what extent has human mobility in the context of climate change already been mainstreamed into the NAP formulation process in your country? What has been done?	
12.	Which entities are involved in mainstreaming human mobility in the NAP formulation process? What are their roles?	
13.	Are there adaptation programmes or projects in your country that already consider human mobility in the context of climate change (e.g. displacement, migration or relocation)? If so, what dimensions (see sub-section 2.1) are mentioned in it?	
14.	Where are further opportunities for mainstreaming human mobility in the NAP formulation process?	
15.	What sort of challenges did you encounter during the mainstreaming of human mobility in the NAP? Are there other challenges that you foresee?	

### RESULTS

A general overview of the status of mainstreaming human mobility in the context of climate change into the NAP formulation process and adaptation programming in a country. This could help to create a baseline for the mainstreaming process. This exercise also creates a baseline for an entity's involvement in the mainstreaming process.

#### ACTIVITY 2:

## Situation analysis of human mobility dimensions in the country context



### WHAT DOES IT HELP TO DO?

It provides an overview of the different dimensions of human mobility in the context of environment and climate change in the respective country context.

# WHO?

This questionnaire could be sent to experts in sectoral government entities, local government institutions, UN agencies, academia, think tanks, CSOs (including those led by migrants, internally displaced persons, and refugees), employers' and workers' organizations, and international organizations (see results of the stakeholder list from template 4.1).

# STEPS

The questionnaire could be sent to relevant experts, or it could be discussed in a workshop with these experts. If it is discussed in a workshop, it is helpful to send the questionnaire to participants in advance, so they can gather relevant information beforehand.

### RESULTS

This would provide a brief but systematic overview of human mobility opportunities and challenges in the context of climate change in a country. It could help the stakeholders to assess the status of knowledge and identify gaps. This could, in turn, guide future initiatives.

#### TEMPLATE 4.4: QUESTIONNAIRE FOR SITUATION ANALYSIS OF HUMAN MOBILITY IN THE CONTEXT OF CLIMATE CHANGE

Please prepare the following overview of relevant human mobility dimensions in the context of environment and climate change in your country:

HUMAN MOBILITY DIMENSIONS	How important is this human mobility dimension in your country?	Could you provide an <b>example</b> ?	How do climate impacts (including floods, droughts, heat stress, etc.) influence this human mobility dimension?	Could you explain the <b>linkages</b> between climate impacts and <b>other</b> <b>drivers of human</b> <b>mobility (e.g.</b> <b>demographic,</b> <b>economic,</b> <b>environmental,</b> <b>social and</b> <b>political) in</b> <b>shaping this</b> <b>human mobility</b> <b>dimension</b> ?	What are the <b>positive</b> <b>consequences</b> <b>of this human</b> <b>mobility</b> <b>dimension</b> in terms of vulnerability of people, sustainable development, political situation, decent work, human rights, etc.?	What are the negative consequences of this human mobility dimension in terms of vulnerability of people, sustainable development, political situation, decent work, human rights, etc.?
Internal displacement (e.g. disaster displacement and planned or spontaneous evacuation)						
Migrants in vulnerable situations (migrants in reception centres, migrants moving through irregular pathways, etc.)						
Cross-border displacement (including refugees, persons who do not meet legal refugee categories but may be in need of international protection, and cross-border evacuations)						

Refugees			
Pastoralism and transhumance			
Labour migration and remittances			
Diaspora			
Planned relocation (permanent)			
Migrants and just transition (e.g. migrant workers in the circular economy, or those in fossil fuel industries not to be left behind)			
Displacement due to climate change mitigation or adaptation measures or projects			
Trapped population			

Source: Modified from Black et al. (2011).

#### ACTIVITY 3:

## Policy mapping and analysis



#### Background

There could be limited information on how and to what extent human mobility in the context of climate change has been mainstreamed into national policies, legal frameworks and strategies. To support Governments, policy mapping and analysis could be conducted with a view to mapping existing laws, strategies and plans. This will review national laws and strategies related to various relevant international policy agendas and commitments. It will allow for the subsequent analysis of the extent to which the country has already internalized the recommendations of the WIM Executive Committee based on the work of the TFD contained in decision 10/CP.24, annex; the Sendai Framework; the Global Compact for Safe, Orderly and Regular Migration; and the Global Compact on Refugees.

### WHAT DOES IT HELP TO DO?

It helps to identify good practices, as well as policy gaps, by analysing the current extent of mainstreaming of human mobility in the context of climate change into national policies, legal frameworks, and strategies. It could help to identify institutional champions. It could also put a spotlight on good practices by stakeholders who may not immediately be considered proximate stakeholders on this issue.

WHO?

This exercise is cross-sectoral. It could consider relevant policies, legal frameworks, and strategies from all relevant sectors. Special attention could be given to reviewing laws, regulations, strategies and plans in the context of cross-cutting issues, including those related to age, gender, ethnicity, Indigenous populations, and persons with disabilities.



In order to conduct policy mapping and analysis:

1. Identify relevant policies, legal frameworks and strategies on, inter alia, environment, climate change, civil protection/DRR, water, planning, finance, economy, gender, human mobility (including evacuation, diaspora, displacement management, immigration and border management, labour migration, pastoralism, planned relocation, etc.), agriculture, rural development, urban development,

local development, statistics, foreign affairs, labour and social affairs. Contact key stakeholders to ensure that there is no duplication of existing mapping exercises. Compile information on major laws, regulations, strategies and plans from different sectors (including the key sectors foreseen for the NAP, see also sub-section 4.2.4).

- 2. Identify whether a document refers to human mobility in the context of climate change. A document is considered to recognize the nexus if the narrative mentions environmental or climate change impacts as a driver of human mobility and/or explores the role of human mobility consequences (such as moving to minimize risk and financial and social remittances) in the context of climate change adaptation. If a document recognizes the nexus, the framing of human mobility or people on the move (e.g. as a victim, as someone with agency or as a security threat) and the context are assessed. The analysis involves identifying the specific human mobility actors who are acknowledged in the document (e.g. migrant workers, families staying behind, diaspora, pastoralists, displaced persons, refugees, relocated persons, sending communities and destination communities). For reviewed documents that do not explicitly mention human mobility in the context of climate change, the following approaches could be adopted. For human mobility related documents, references to environment and climate change could be checked in the narrative. For documents from other sectors, assess whether human mobility dimensions are mentioned in the context of topics that are relevant to climate change adaptation or DRR (e.g. contributions of migrant workers to the economy of destination communities, access to social protection among migrants in vulnerable situations, use of traditional knowledge of pastoralists in planning). The analysis could also involve identifying overlaps or a lack of coherence between certain areas. The analysis could also be in the context of the recommendations of the WIM Executive Committee based on the work of the TFD contained in decision 10/CP.24, annex; the Sendai Framework; the Global Compact for Safe, Orderly and Regular Migration; and the Global Compact on Refugees.
- 3. Develop a draft policy mapping and analysis report.
- 4. Organize a review of the draft policy mapping and analysis report by relevant sectoral experts.
- 5. Finalize the report.

The online <u>CLIMB</u> Database has compiled over 1,578 policy instruments that contain provisions of relevance to human mobility in the context of disasters, climate change and environmental degradation. It consists of 1,348 national policy instruments across 172 countries and 230 bilateral and/or regional policy instruments. The policy instruments listed in this database could be useful reference material for the national stakeholder(s) undertaking policy mapping and analysis of relevant policies, legal frameworks and strategies.

### RESULTS

The result could be a policy mapping document that analyses major policies, legislation and strategies in order to assess the extent of alignment with the recommendations of the WIM Executive Committee based on the work of the TFD contained in decision 10/CP.24, annex; the Sendai Framework; the Global Compact for Safe, Orderly and Regular Migration; and the Global Compact on Refugees. This could assist States in identifying existing good practices, and gaps for developing national laws, regulations and strategies aimed at addressing human mobility in the context of climate change. Importantly, these findings could help facilitate stakeholder consultations during the mainstreaming of human mobility in the context of climate change into the NAP process.

### 4.1.3 Capacity-building of coordinating bodies

	READINESS PROPOSAL OUTCOME		READINESS PROPOSAL SUB-OUTCOME		NAP TECHNICAL GUIDELINES ELEMENT		NAP TECHNICAL GUIDELINES STEP
Outcome 1	National coordination, steering mechanisms and institutional arrangements for adaptation planning are established, clarified and strengthened, and knowledge gaps are identified	1.3	Assess and address capacity gaps of leading institutions	Element A	Laying groundwork and addressing gaps	A3	Addressing capacity gaps and weaknesses

### Why is human mobility important at this step of the NAP process?

Under this sub-outcome, key activities often include:

- 1. Assessing capacity gaps of the coordinating bodies;
- 2. Developing a technical capacity-strengthening strategy and implementing it for key stakeholders;
- **3.** Establishing a help desk and technical outreach programme for the coordinating body.

As the coordinating bodies are driving the NAP formulation process, they must be aware of the importance of this mainstreaming and understand the human mobility related challenges and opportunities in the context of environmental change.

#### **Relevant for NAP1 or NAP2?**

- NAP1: Important.
- NAP2: Important.

### How are human mobility aspects mainstreamed in this step?

The action point and activity facilitate the capacitybuilding of coordinating bodies:

- Action point 1: Consult sectoral entities that address human mobility in the context of climate change in order to assess existing capacities and identify capacity-building needs.
- Activity 1: Capacity-building of relevant experts in the coordinating bodies on human mobility in the context of climate change.

#### ACTIVITY 1:

Capacity-building of relevant experts in the coordinating bodies on human mobility in the context of climate change



### WHAT DOES IT HELP TO DO?

While policymakers, practitioners and researchers are exploring the issue of human mobility in the context of climate change, there is often a need for capacity development. Capacity development on this issue remains largely scattered and is essential in three main areas: (i) building knowledge; (ii) strengthening policy, and institutional, administrative and legal frameworks; and (iii) reinforcing operational and technical capacities. This activity helps to develop the capacities of stakeholders.



Technical experts in sectoral government entities, academia, think tanks, CSOs, employers' and workers' organizations, and international organizations. Special attention could be given to developing capacities of experts from entities that address cross-cutting issues in the context of human mobility, including aspects related to age, gender, ethnicity, Indigenous populations, persons with disabilities and legal status.

#### Resources

Here are a few resources that are available to the users of this Technical Guide.

Words into Action guidelines – Disaster displacement: How to reduce risk, address impacts and strengthen resilience (UNDRR, 2019)

This guide **offers practical guidance** to help government authorities integrate disaster displacement and other related forms of human mobility into regional, national, subnational and local DRR strategies. It provides basic background information and highlights the various roles DRR and DRM could play in reducing, preparing for and responding to disaster displacement.



#### The guide is primarily intended to support the work of:

- Regional, national, subnational and local DRM actors, particularly disaster management agencies, civil protection actors and emergency responders, in addressing disaster displacement risk;
- National and regional governments to ensure that policies to avoid and manage displacement within and across borders are coherent across all relevant sectors;
- National and subnational lawmakers and policymakers, such as parliamentarians, to regulate the inclusion of measures for reducing and managing disaster displacement;
- Local authorities responsible for land-use planning and urban development in reducing vulnerabilities and exposure that may lead to displacement, and in ensuring disaster displacement risk is included in spatial development plans;
- International organizations, civil society actors, community-based organizations, academics and others, who may also find it useful.

**The guide has three parts.** The first discusses the purpose of the project, explains why disaster displacement is a global DRR challenge, and provides an overview of how the Sendai Framework addresses disaster displacement. The second part outlines the guiding principles for framing activities under the Framework's four priorities for action relevant to reducing, preparing for and responding to disaster displacement at all levels. The third part is an annex that provides specific references to human mobility, including disaster displacement, in the Sendai Framework, a list of key resources, a glossary, cross-references to other Words into Action guides, and an overview of how disaster displacement is relevant to various global policies.Link: https://disasterdisplacement.org/resource/wiadd/.

#### Facilitator's Guide: Migration, Environment and Climate Change – Training Manual (IOM, 2017)



In 2016, IOM developed the standardized Migration, Environment and Climate Change: Training Manual (Facilitator's Guide). It is aimed at enhancing knowledge and understanding of the topic as well as addressing the capacity needs of the Parties. The objectives of the training course are to deepen understanding of key concepts and issues; encourage and equip policymakers, practitioners and

researchers to reflect on available policy options and examples of good practice; facilitate policy dialogue across policy sectors; support the development of policy frameworks at the national and regional level; enhance the capacity of policymakers to contribute to key policy processes, in particular, under the UNFCCC, the Sendai Framework and the Global Compact for Safe, Orderly and Regular Migration; and contribute, through sharing this knowledge and through training sessions, to more practical on-the-ground activities addressing the migration, environment and climate change nexus. The training manual contains seven training modules: (i) The migration–environment nexus, (ii) Conceptual framework on environmental migration, (iii) Disasters and mobility, (iv) Environmental change and mobility, (v) Data and methodological issues, (vi) Legal perspectives, (vii) Regional focus and integrating human mobility into national policies. It also has three addenda on emerging topics: (i) Environmental migration and cities, (ii) Environmental migration and gender, and (iii) Environmental migration and global policy frameworks. The training manual is designed for facilitators who could make use of the tool to deliver participatory training workshops, but it could also serve as a self-learning tool for those who have an interest in the issue. Duration: around three days. Link: <a href="https://environmentalmigration.iom.int/resources/migration-environment-and-climate-change-training-manual-facilitators-guide">https://environmentalmigration.iom.int/resources/migration-environment-and-climate-change-training-manual-facilitators-guide.</a>

There are also virtual resources for developing capacities for human mobility in the context of climate change.

#### The Global CCCM Cluster Capacity Development Working Group

The Global CCCM Cluster is an Inter-Agency Standing Committee coordination mechanism that supports internally displaced persons to live in safe, dignified and appropriate settings. The Global CCCM Cluster was established in 2005 and is co-led by UNHCR in conflict situations and by IOM in disaster-related displacement situations.

The objectives of the Capacity Development Working Group are:

- To facilitate an exchange between trainers on learning needs, best approaches, new resources and tested methods, with a focus on strengthening operational capacity, coordination and tools;
- To provide a forum for driving the Global CCCM Cluster to develop new capacity-building initiatives, and exchange information and knowledge.

Webinars and other video resources related to capacity development can be found on the Global <u>CCCM</u> <u>Cluster YouTube</u> page. There are videos on, inter alia, localization, preparedness, anticipatory actions, safe and sustainable settlements, climate risks, and gender impacts on climate change.

Face-to-face training is available for Global CCCM staff and partners. The Global CCCM Cluster has an inter-agency roster of trainers that could be deployed to conduct learning needs assessments and deliver training.

Link to the Global CCCM Cluster Capacity Development Working Group web page: https://www.cccmcluster.org/working-groups/capacity-development-working-group.

#### Learning course on disaster displacement (NRC)

This self-paced e-learning course on disaster displacement is administered by NRC and was developed by NRC, PDD and UNDRR. It is intended for civil protection/DRR practitioners and policymakers. It is also relevant for others working on sustainable development, climate change adaptation and poverty reduction. Duration: four to five hours.

Link to the e-learning course on Disaster Displacement: https://kayaconnect.org/course/info.php?id=3028.

### E-Learning on the labour dimensions of climate change and human mobility: Rights-based responses to climate-induced mobility (International Training Centre of ILO)

This e-learning course, organized by the ILO International Training Centre, explores the complex intersection of climate change and human mobility, specifically the impacts on labour mobility, decent work and employment, labour markets, and just transitions towards environmentally sustainable economies. It will explore the potential of safe and regulated labour mobility as an adaptive strategy in response to climate change, and consider concrete strategies for effective labour-market integration of people displaced due to disasters, environmental degradation and climate change.

Link to the e-learning course: <u>https://www.itcilo.org/courses/e-learning-labour-dimensions-climate-</u> change-and-human-mobility

### RESULTS

Increased capacities of experts in sectoral entities who are part of the coordinating bodies on human mobility in the context of climate change.

## **4.2 Evidence and knowledge base on climate change and adaptation strengthened, and NAPs formulated**

### 4.2.1 Evidence base: Systematize data on climate risks and impacts, climate vulnerabilities and adaptation options, identify gaps

	READINESS PROPOSAL OUTCOME		READINESS PROPOSAL SUB-OUTCOME		NAP TECHNICAL GUIDELINES ELEMENT		NAP TECHNICAL GUIDELINES STEP
Outcome 2	Evidence and knowledge base on climate change and adaptation strengthened, and NAPs formulated	2.1	Evidence base: Data and knowledge on climate change and risks are systematized, gaps are identified and prioritized	Element B	Preparatory elements	B1	Analysing current climate and future climate change scenarios
Outcome 2	Evidence and knowledge base on climate change and adaptation strengthened, and NAPs formulated	2.2	Evidence base: Data and knowledge on sectoral vulnerabilities and adaptation options are systematized, and gaps are identified	Element B	Preparatory elements	B2	Assessing climate vulnerabilities and identifying adaptation options

### Why is human mobility important at this step of the NAP process?

Under this sub-outcome, key activities often include:

- Conducting multi-sectoral climate risk assessments, and updating/developing hazard and risk maps;
- Conducting a gender-disaggregated, multisectoral analysis of the impact of climate change on vulnerable groups, with a focus on vulnerability and adaptation options;
- **3.** Improving communication processes between climate data providers and end users.

To avert, minimize and address displacement, reduce the risks that migrants, internally displaced persons, and refugees face owing to climate hazards, and enable human mobility to contribute to adaptation and resilient development, actions and interventions must be context specific and evidence based. As there is often little knowledge on the locally specific interactions between the different human mobility dimensions and the impacts of climate change, establishing a sound evidence base on the patterns and trends, as well as on the drivers and outcomes of different human mobility dimensions, is indispensable. Evidence is necessary to improve the understanding of stakeholders. It could also inform policy development, practice, capacity development and advocacy. Diagnostic and analytical activities are important for mainstreaming human mobility into adaptation planning.

#### **Relevant for NAP1 or NAP2?**

- NAP1: Important.
- NAP2: Important.
- Both, especially NAP1 for creating a sound evidence base.

### How are human mobility aspects mainstreamed in this step?

The key action points and activities are:

- Action point 1: Include human mobility dimensions in climate risk assessments and hazard mapping, which helps to consider human mobility in the *climate risk* assessments and hazard mapping activities that are part of the general NAP process.
- Action point 2: Include human mobility dimensions in vulnerability and adaptation assessments, which helps to consider human mobility in the vulnerability and adaptation assessments that are part of the general NAP process. While climate risk assessments and hazard mapping often focus more on the 'external' and physical side of risks, namely the geospatial distribution of hazards and the exposure of places, people and infrastructure, vulnerability and adaptation assessments focus on the 'internal' side of risks, vulnerabilities and adaptation by uncovering the nuanced economic, social and cultural factors that shape the susceptibility of societies and social groups to harm, and their ability to cope and adapt (IPCC, 2022b).
- Activity 1: (Case) studies to assess key aspects of the human mobility and adaptation nexus, which provide guidelines and examples of the in-depth study of the linkages between human mobility and climate change adaptation.

#### ACTION POINT 1

## Include human mobility dimensions (see sub-section 2.1) in climate risk assessments and hazard mapping



Start with identifying stakeholders involved in the climate risk assessment and hazard mapping. In the planning phase for risk assessment and hazard mapping, the importance of human mobility could be discussed with those stakeholders. The following template could give an initial indication of key themes to include.

### **TEMPLATE 4.5:** CHECKLIST FOR INCLUDING HUMAN MOBILITY DIMENSIONS IN CLIMATE RISK ASSESSMENTS AND HAZARD MAPPING

RELEVANT HUMAN MOBILITY DIMENSIONS	KEY ASPECTS TO INCLUDE IN CLIMATE RISK ASSESSMENTS AND HAZARD MAPPING
Internal displacement (e.g. disaster displacement and planned or spontaneous evacuation)	Population exposed to extreme events and climatic hazards; people living in areas with past instances of population displacement. Locations and population profile of people at risk of displacement due to disasters. Current displaced populations, including disaster- and conflict-related internally displaced persons in situations of protracted displacement, with high climate hazard exposure. Areas with an especially significant need to develop specific evacuation plans, develop or strengthen shelters, train personnel and pre-position relief material.
Migrants in vulnerable situations (e.g. migrants in reception centres, migrants moving through irregular pathways)	Locations of informal settlements and migrant reception centres in potentially hazardous locations.

RELEVANT HUMAN MOBILITY DIMENSIONS	KEY ASPECTS TO INCLUDE IN CLIMATE RISK ASSESSMENTS AND HAZARD MAPPING
Cross-border displacement (including refugees, persons who do not meet legal refugee categories but may be in need of international protection, and cross-border evacuations)	Locations and population profiles of cross-border displacement areas, focusing on vulnerable groups with international protection needs owing to climate change impacts. Areas where climate change might lead to or exacerbate conflicts require preventive measures and conflict-sensitive approaches to prevent displacement.
Refugees	Location and population profile of refugee camps in settlements and host communities in hazardous locations. Including refugees in multi- hazard early warning systems and population change projections.
Pastoralism and transhumance	Assess the exposure of pastoralist routes to extreme events and climate hazards. Availability and quality of pasture and water.
Labour migration and remittances	Assess the exposure of the residences and workplaces of migrant workers to extreme events and climate hazards in destination communities. Exposure of migrants to extreme events and climate hazards during transit.
Diaspora	Raise awareness among diaspora members about the exposure of relevant communities and population groups in heritage countries to extreme events and climate hazards. Assess the exposure of diaspora- supported sustainable development interventions, including climate action, to extreme events and climate hazards.
Planned relocation (permanent)	Identify areas/zones with potential need for relocation. Assess the exposure of destination communities to extreme events and climate hazards.
Migrants and just transition (e.g. migrant workers in the circular economy, or those in fossil fuel industries not to be left behind)	Assess the exposure of migrants – who are in green jobs – to extreme events and climate hazards.
Displacement due to climate change mitigation or adaptation measures or projects	Assess the exposure of persons who are displaced due to climate change mitigation or adaptation measures, including those in protracted displacement situations, to extreme events and climate hazards.
Trapped population	Identify areas with vulnerable and immobile populations that are also subject to extreme events and climatic hazards.

#### ACTION POINT 2

## Include human mobility dimensions (see subsection 2.1) in vulnerability and adaptation assessments



Start by identifying stakeholders involved in vulnerability and adaptation assessments. In the planning phase of the assessments, the importance of human mobility could be discussed with those stakeholders. The following template could serve as a starting point for mainstreaming human mobility in vulnerability and adaptation assessments.

### TEMPLATE 4.6: CHECKLIST FOR INCLUDING HUMAN MOBILITY DIMENSIONS IN VULNERABILITY AND ADAPTATION ASSESSMENTS

RELEVANT HUMAN	KEY ASPECTS TO INCLUDE IN CLIMATE RISK ASSESSMENTS
MOBILITY DIMENSIONS	AND HAZARD MAPPING
Internal displacement (e.g. disaster displacement and planned or spontaneous evacuation)	Who is at risk of being displaced by disasters? Are vulnerable population groups, including women, youth, the elderly, people with disabilities, socially marginalized people, and Indigenous persons, at higher risk of being displaced? Are early warning systems in place and functioning? Have evacuation routes been identified and are locals well informed of these evacuation routes? Are temporary shelters available and accessible? Are shelters and emergency facilities close to the places where people live? Are they designed to be accessible to all vulnerable groups (e.g. women, people with disabilities, children, the elderly)? Are basic services (e.g. water sanitation, health care and education) available and accessible? Do vulnerable population groups, including women, youth, the elderly, people with disabilities, socially marginalized people, and Indigenous persons, have access to evacuation information materials and training? Do migrants, internally displaced persons, and refugees have access to evacuation information materials and training including in their own languages? Are people's livelihoods considered that are left behind? Is there support for people after return? Are there plans to maintain and quickly rebuild infrastructure? Is there support through social protection systems? Are social protection benefits portable? Are transitional shelter needs and longer-term solutions considered in case of prolonged displacement, especially where the return is not safe or feasible?

RELEVANT HUMAN MOBILITY DIMENSIONS	KEY ASPECTS TO INCLUDE IN CLIMATE RISK ASSESSMENTS AND HAZARD MAPPING
Migrants in vulnerable situations (e.g. migrants in reception centres, migrants moving through irregular pathways)	Were vulnerability to climate change and environmental risks considered when designing camps and facilities for migrants in reception centres? Have migrants in reception centres and migrants moving through irregular pathways been included in early warning communications (e.g. language, communication channel)? Were migrants in reception centres and migrants moving through irregular pathways considered while designing planned adaptation measures? Are there specific measures for people with disabilities, the elderly, children or other people at risk? Do migration pathways provide alternatives to return for migrants with irregular status? Are migration pathways responsive to the factors that drive mobility, including the impacts of environmental degradation and climate change?
Cross-border displacement (including refugees, persons who do not meet legal refugee categories but may be in need of international protection, and cross-border evacuations)	Who has international protection needs? Who has (or lacks) documentation? Are people identified/included in DRR and other strategies? Are temporary shelters available and accessible? Are basic services (e.g. water sanitation, health care and education) available and accessible? Are the livelihoods of people that are left behind considered? Is there support for people after return? Are there plans to maintain and quickly rebuild infrastructure? Is there support through social protection systems? Are people informed of their rights and evacuation/DRR processes and strategies? Are there specific measures for people with disabilities, the elderly, children or other people at risk? Are transitional shelter needs and longer-term solutions considered in case of prolonged displacement, especially where return is not safe or feasible? Are steps taken to engage host communities?
Refugees	Were vulnerability to climate and environmental risks considered when designing camps and facilities for refugees? Have refugees been included in early warning communications (e.g. language, communication channel)? Were refugees considered or consulted while designing planned adaptation measures? Are basic services (e.g. water sanitation, health care and education) available and accessible? Are people informed of their rights and evacuation/ DRR processes and strategies? Are there specific measures for people with disabilities, the elderly, children or other people at risk?
Pastoralism and transhumance	How vulnerable are pastoralists to losing access to vital resources? How could their livelihoods be supported, e.g. by assisting in strategic places and at strategic times (e.g. drought months or seasons)? How could risks be addressed (e.g. through too-large herds as a social and economic safeguard, leading to overgrazing and water shortages)? How vulnerable are pastoralists to resource conflicts? How can traditional knowledge from pastoralists contribute to planned adaptation?
Labour migration and remittances	Do migrant workers have adequate accommodation? Do they have decent jobs? Are they protected against climate hazards at the workplace, such as heat stress? Were they recruited through fair recruitment processes? What possibilities are there to support adaptive actions by migrants, and through remittances? Are there rights-based safe and legal migration pathways? Are they included in social protection systems? Are social protection benefits portable? Are enabling conditions (e.g. financial incentives, legislation, financial instruments, technical backstopping, information) considered to leverage the use of financial and social remittances in climate change adaptation?

RELEVANT HUMAN MOBILITY DIMENSIONS	KEY ASPECTS TO INCLUDE IN CLIMATE RISK ASSESSMENTS AND HAZARD MAPPING
Diaspora	How could networks of diaspora groups be mobilized to support adaptation activities? What climate action relevant skills or knowledge do diaspora members have? Are enabling conditions (e.g. financial incentives, legislation, financial instruments, technical backstopping, information) considered to leverage financial support and knowledge of diaspora to enhance climate change adaptation in the country of origin or the country of destination?
Planned relocation (permanent)	How could voluntary relocation processes be ensured? Are basic services (e.g. water sanitation, health care and education) available and accessible? Are livelihoods (re)created at the new locations, or is the continuation of existing livelihoods ensured? What support and training in new activities (e.g. new agricultural practices, access to land, water, seeds, tools, resources, markets, employment) do the relocated groups need? Are support and training measures designed to be accessible to all vulnerable groups (e.g. women, people with disabilities, children, the elderly)? How could decent work be assured in the new location? Do people have access to social protection in the new location? Are early warning systems in place and functioning? Are shelters and emergency facilities close to the places where people live?
Migrants and just transition (e.g. migrant workers in the circular economy, or those in fossil fuel industries not to be left behind)	Who is especially vulnerable to job losses due to transitioning to the green economy, and how could this be addressed? How could sectoral changes in migration destinations and labour markets be considered (e.g. strategic planning for skills development for green jobs, in countries of origin as well as during migration in countries of destination)? How could decent green jobs be created? How could employers and workers be engaged in social dialogue in this process? What social protection measures could support just transitions? How could international cooperation be tapped for this? Do migrant workers benefit from skills development and portable social security benefits?
Displacement due to climate change mitigation or adaptation measures or projects (e.g. clean energy infrastructure on the lands of Indigenous Peoples)	Who is affected by displacement due to climate change mitigation and/or adaptation measures or projects? Are community members, including women, youth, the elderly, marginalized social groups, and Indigenous Peoples, involved in consultations during design, implementation and monitoring? How have these groups been consulted? How can they benefit from these processes? How can this be avoided, and how can affected groups be compensated? What social protection measures and grievance redressal mechanisms are in place that affected persons could access?
Trapped population	In regions with severe climate change impacts and high concentrations of vulnerable groups that are unable to move, for whom would human mobility be important, and how could they be supported?

#### ACTIVITY 1:

(Case) studies to assess key aspects of the human mobility and adaptation nexus



#### Background

In most national contexts, there is insufficient knowledge about the relevant dimensions of human mobility in the context of climate change. This applies especially to the **relationships** between human **mobility**, **vulnerability**, climate change **adaptation** and climate-resilient development. As these relationships are highly context specific, the **applicability of generalized insights** or the **transferability** of knowledge from other contexts is usually **limited**.

### WHAT DOES IT HELP TO DO?

Detailed case studies can help yield key **knowledge and evidence** that is **necessary for designing** interventions that (i) avert, minimize and address climate-induced displacement; (ii) increase the positive contributions of human mobility to adaptation, and manage the negative outcomes of human mobility; and (iii) reduce the vulnerability of migrants, internally displaced persons, refugees and other people in need of protection against climate risks, and strengthen their adaptive capacity.

The 'hard evidence' that case studies provide add legitimacy and credibility to the mainstreaming of human mobility in adaptation planning. It helps to include the perspectives of local stakeholders, including vulnerable groups, which is vital. It helps to facilitate interdisciplinary collaboration as it is key to include social scientists, such as human mobility scholars. If done well, it gives a voice to and empowers vulnerable and marginalized groups.

## WHO?

Collaboration between **researchers and NAP stakeholders** (e.g. sectoral government entities, local government institutions, UN agencies, academia, think tanks, CSOs, employers' and workers' organizations, and international organizations) is **indispensable**. Collaborating with and involving **international researchers could be helpful**, as expertise on human mobility in the context of climate change is likely to be unevenly distributed between disciplines and countries.

#### To determine the knowledge needs, scope and goals of a study:

- **Build on the results** of sub-section 4.1.2 activities 1 (stocktaking), 2 (situation analysis) and 3 (policy mapping), as well as on the results of sub-section 4.1.1 activity 1 (list of stakeholders);
- **Review existing literature**, including the results of sub-section 4.2.1 action points 1 (climate risk assessments and hazard mapping) and 2 (vulnerability and adaptation assessments);
- **Consult stakeholders** about key knowledge needs regarding human mobility related challenges and opportunities in the context of climate change.

The **results of stocktaking** (sub-section 4.1.2 activity 1) and **situational analysis** (sub-section 4.1.2 activity 2) can help to identify **key knowledge gaps** (by providing insights, e.g. that there is a considerable number of pastoralists in the national context, and they suffer from climate change impacts, but there is little knowledge about the spatial and social distribution of their vulnerability to climate change, or about adaptation strategies derived from traditional knowledge by pastoralists), and to **prioritize knowledge needs**.

Once knowledge needs have been identified and prioritized, the **type of study** can be more easily determined. These could range from **more general overview** studies – for example, assessing all relevant human mobility dimensions in a given country context – to **more specific studies** (see also boxes 4.1, 4.2, 4.3, 4.4, and 4.5).

Box 4.1 provides a brief overview of different types of case studies that could be relevant in assessing key aspects of the human mobility and adaptation nexus. Boxes 4.2–4.5 provide examples of case studies from different country contexts.

#### BOX 4.1: TYPES OF (CASE) STUDIES ON HUMAN MOBILITY IN THE CONTEXT OF CLIMATE CHANGE

**Broader overview/comprehensive studies** assessing all relevant human mobility dimensions in a given country context in terms of extent, dynamics, drivers and policy challenges.

**In-depth studies** focusing on a **few human mobility dimensions or one specific one** (e.g. the vulnerability of internally displaced persons to climate risks; the impacts of climate change on pastoralist livelihoods, the impact of social remittances on climate change adaptation).

#### STUDIES COULD:

- Be **empirical (field) studies**, collecting 'fresh data', with either quantitative, qualitative or mixed methods research (MMR) approaches;
- Be desk studies focusing on existing data and information, complemented by expert interviews;
- Be **cross-sectional** (e.g. comparing different types of sub-population), but also **longitudinal** (i.e. with data that cover several steps over time);
- Involve remote sensing as part of hazard mapping, and vulnerability and adaptation assessments. This
  enables analysis of how the risks of climatic and environmental hazards shape human mobility, but also
  assessing the risks and impacts of such hazards for migrants, internally displaced persons, refugees and
  other people with protection needs;

• Involve **action research** as an important avenue, given that a key area of interest is the study of adaptation options, where **interventions** (e.g. training of migrants, including female migrants, and women staying behind, among others) are conducted and their **effects studied**.

#### BOX 4.2: AN ASSESSMENT OF CLIMATE RISKS TO UNDERSTAND OPTIONS FOR DURABLE SOLUTIONS FOR DISPLACED PERSONS

#### **PROJECT OVERVIEW**

The study aims to examine how climate impacts will affect areas where investment could be made to support the return, integration or relocation of displaced persons. Climate impacts are felt, and increasingly will be felt, in areas from which people have been displaced, in the areas where they have settled, and in some areas where the national Government is considering planned relocation. Investing in adaptation will be key to reducing local climate risk and creating safer conditions to minimize the possibility of impacts on their lives and well-being, including secondary displacement.

#### **METHODOLOGY**

The study will perform a probabilistic disaster risk assessment, integrating climate scenarios in the areas that are being considered for recovery and durable solutions, as well as an analysis of climate impacts on key sectors on which displaced persons will depend for their livelihoods and access to basic services. It will also build on movement intention surveys to understand the needs, challenges and preferences of displaced persons needing solutions.

#### **PLANNED ACTIVITIES**

- Generating evidence on climate impacts in areas that are being considered for investment in durable solutions by local authorities.
- Generating evidence on the climate impacts that displaced persons have been suffering in their places of initial residence and displacement, on their movement intentions, and on the assets/resources they have available for income generation and access to services.
- Identifying key adaptation options that need to be implemented to make return, integration or relocation safer in the face of climate impacts.

#### **EXPECTED OUTCOMES**

This study is expected to provide key information regarding the investments needed to reduce climate risks in areas where displaced persons could return, integrate or relocate. Work implemented on the basis of the evidence produced through this study could help to resolve displacement situations in a sustainable manner. These insights will help countries to achieve objectives under the UNFCCC and the Sendai Framework, and implement the recommendations included in the *Guiding Principles on Internal Displacement* (UNCHR, 1998), and the Inter-Agency Standing Committee *Framework on Durable Solutions for Internally Displaced Persons* (The Brookings Institution and University of Bern, 2010).

## BOX 4.3: A CASE STUDY ON THE IMPACT OF LABOUR MIGRATION ON ADAPTATION OF RURAL HOUSEHOLDS AND COMMUNITIES

#### **PROJECT OVERVIEW**

The study aims to improve understanding of the extent to which labour migration can and does contribute to adaptation, the conditions under which this happens, and for whom this is the case. The study explores the outcomes of labour migration at the individual, household and community level, and the role of labour migration as both an adaptive response to climate risks and other livelihood risks and a factor influencing rural communities' vulnerability and resilience.

#### METHODOLOGY

The study adopts an MMR approach, integrating quantitative and qualitative methods to provide a comprehensive understanding of the migration–adaptation nexus. Key methods include:

- A systematic review of existing data, literature and expert insights to frame the research scope and select study sites;
- A representative household survey across chosen regions to study the adaptation benefits and vulnerabilities associated with labour migration, and capture intersectional disparities;
- In-depth qualitative research, including focus group discussions, expert interviews, and livelihood history interviews, uncovering the causal connections between migration, adaptation and vulnerability on a household and community level.

#### **ACTIVITIES**

- Understanding the national and international legal frameworks governing labour migration, and how they are applied.
- Conducting stakeholder consultations to formulate goals, approaches and research questions for the study design.
- Fine-tuning the instruments, testing the methods and carrying out data collection and analysis.
- Organising feedback workshops with policy stakeholders and experts to validate research findings, discuss future challenges and opportunities and disseminate study results for broader impact.
- Deriving policy recommendations, targeting specific stakeholder groups and featuring concrete action points, from interactions with stakeholders.

#### **EXPECTED OUTCOMES**

The study is expected to generate nuanced insights into and lead to a better understanding of how labour migration can and does contribute to adaptation, including to what extent and the mechanisms involved, as well as how the rights of migrant workers and those in communities of origin and destination can be protected. It seeks to:

- Provide evidence-based and actionable recommendations for specific policy sectors on enhancing climate change adaptation, including rights protection, in rural households and communities;
- Offer strategic entry points for integrating human mobility into climate change adaptation policies at the national level;
- Generate knowledge on how to systematically strengthen the mainstreaming of human mobility into climate change adaptation planning on a more general level.

#### BOX 4.4: A LONGITUDINAL SURVEY STUDY ON THE INTERLINKAGES BETWEEN HUMAN MOBILITY AND CLIMATE CHANGE IN A MULTI-COUNTRY CONTEXT

#### **PROJECT OVERVIEW**

The study aims to examine how climate change impacts shape human mobility and how the consequences of human mobility contribute to climate change adaptation. The focus is on various human mobility types, including pastoralism, labour migration, disaster displacement and planned relocation. The project will generate both nationally specific and comparative evidence on human mobility in the context of climate change.

#### METHODOLOGY

The project involves several waves of quantitative data collection, occurring every 10 months. The longitudinal approach allows for tracking of changes and trends over time in selected areas.

#### **PLANNED ACTIVITIES**

- Developing research methodology and research tools.
- Undertaking capacity development to support the longitudinal study on human mobility due to climate change. Organizing workshops to develop capacities for national stakeholders.
- Organizing data collection in research sites in the project countries.
- Analysing the data.
- Developing a reporting template and drafting the report on human mobility in the context of climate change.

#### **EXPECTED OUTCOMES**

This study is expected to provide vital insights that will inform the reporting of government focal points to international frameworks like the UNFCCC, the Sendai Framework and the Global Compact for Safe, Orderly and Regular Migration. The research will also contribute to global policy development by providing evidence, often overlooked in global climate change discourse.

#### BOX 4.5: ENHANCEMENT OF WOMEN'S ADAPTIVE CAPACITY THROUGH GENDER-SENSITIVE ACTION RESEARCH

#### **PROJECT OVERVIEW**

This study focuses on understanding and responding to the interconnections between migration, gender roles, climate change impacts and agricultural practices. It highlights the critical role of women in rural areas, particularly the family members of migrant workers, in addressing their household's adaptation needs in the context of male outmigration.

#### METHODOLOGY

Employing action research, the study will gather evidence on how capacity-building efforts for women could improve climate change adaptation within households where women have taken up responsibilities that used to be borne by male family members. It involves baseline and endline surveys, qualitative analyses and the development of a set of interventions focusing on climate change adaptation strategies at the household level.

#### **PLANNED ACTIVITIES**

- Baseline survey and qualitative studies on migration, adaptive capacity and actions, gender roles, and remittance usage.
- Implementation of village-level training (e.g. on financial literacy, drought preparedness) for women staying behind.
- Provision of advisory services through in-person sessions and digital messaging among women to support the application of learned skills.
- Endline survey to assess the impacts of training and advisory services in intervention and control groups.
- Engagement with Government and other stakeholders to raise awareness of the role of women staying behind in climate change adaptation.

#### **EXPECTED OUTCOMES**

Anticipated results include improved knowledge and capacities with regard to the nexus of migration, gender, climate change impacts and agriculture. The study aims to guide gender-responsive policy development, enhance stakeholder understanding of human mobility in the context of climate change with a gender perspective, and foster sustainable practices that support both local and national adaptation strategies.



This activity helps to generate evidence on various topics related to human mobility in the context of climate change in a country.
# 4.2.2 Evidence base: Review, appraise and prioritize adaptation options

	READINESS PROPOSAL OUTCOME		READINESS PROPOSAL SUB-OUTCOME		NAP TECHNICAL GUIDELINES ELEMENT		NAP TECHNICAL GUIDELINES STEP
Outcome 2	Evidence and knowledge base on climate change and adaptation strengthened, and NAPs formulated	2.3	Evidence base: Adaptation options are reviewed, appraised, and prioritized	Element B	Preparatory elements	В3	Reviewing and appraising adaptation options

### Why is human mobility important at this step of the NAP process?

Under this sub-outcome, key activities often include:

- Surveying existing (Indigenous) adaptation practices;
- 2. Developing and prioritizing adaptation fields and actions that are informed by stakeholder consultations;
- Developing concept notes that address the top-priority adaptation options;
- 4. Conducting baseline analysis in priority sectors;
- 5. Assessing vulnerabilities in priority sectors;
- Developing and prioritizing future scenarios and sectoral adaptation options;
- **7.** Compiling and publishing sectoral adaptation plans.

Considering human mobility during the review, appraisal and prioritization of adaptation options is crucial because it ensures that adaptation strategies address different human mobility dimensions. This includes, for example, the needs of populations vulnerable to displacement, as well as the potential of human mobility in terms of adaptation and climate-resilient development, especially for households.

#### Relevant for NAP1 or NAP2?

• Both, but especially for NAP2.

### How are human mobility aspects mainstreamed in this step?

The **following activity** is important in terms of mainstreaming human mobility into the NAP:

• Activity 1: Identifying the priority issues related to mainstreaming human mobility in the context of climate change within the NAP.

#### ACTIVITY 1:

## Identifying the priority issues related to mainstreaming human mobility in the context of climate change within the NAP

### WHAT DOES IT HELP TO DO?

It helps to identify the priority issues related to mainstreaming human mobility in the context of climate change within the NAP. This, in turn, will help to plan engagements, advocacy, briefings, consultations, research, operational activities, etc.

# WHO?

Priority issues could be identified together with the representatives of the stakeholders identified from template 4.1.

# STEPS

**Planning** for what needs to be done in the next five years regarding mainstreaming human mobility in adaptation planning and communication **in your country's context**:

- Plan and conduct a stakeholder engagement process; this can be workshops, meetings, interactions held as a stand-alone activity or a series aimed at bringing together perspectives on priorities for action. This could include briefings on (the existing and newly generated) evidence about human mobility in the context of climate change.
- 2. Compile action issues and options for engagement through an open process and discussion, including stakeholders, and build on the outcomes of the activities under sub-sections 4.1.1 and 4.1.2, as well as on the evidence base from activities under sub-section 4.2.1. Identify which action points could best be dealt with by the stakeholders involved (and which ones might best be delegated to other processes).
- **3.** Identify up to three priority issues (based on criteria such as urgency, feasibility and impact) for the next 60 months.
- **4.** Ensure these priority issues are aligned with priority sectors and sectoral adaptation actions identified by the country.
- **5.** For each priority issue, list the objectives, tasks, timeline, resource requirements and a focal point/ nodal agency/responsible agency.

#### **TEMPLATE 4.7: FORMULATION AND OPERATIONALIZATION OF PRIORITY ISSUES**

	PRIORITY ISSUE 1:			
	OBJECTIVE:			
·	Task 1:			
		Next 6 months:		
	Timeline	Next1year:		
		Next 5 years:		
, ,	Resources needed:			
·	Focal point/nodal agenc	y/responsible agency:		
ources	Task 2:			
ndreso	Timeline	Next 6 months:		
asks ai		Next1year:		
rtant t		Next 5 years:		
odml	Resources needed:			
	Focal point/nodal agenc	y/responsible agency:		
	Task 3:			
		Next 6 months:		
	Timeline	Next1year:		
		Next 5 years:		
	Resources needed:			
	Focal point/nodal agenc	y/responsible agency:		

	PRIORITY ISSUE 2:			
	OBJECTIVE:			
	Task 1:			
		Next 6 months:		
	Timeline	Next1year:		
		Next 5 years:		
	Resources needed:			
	Focal point/nodal agenc	y/responsible agency:		
ources	Task 2:			
ndres	Timeline	Next 6 months:		
asks a		Next1year:		
rtant t		Next 5 years:		
Impo	Resources needed:			
	Focal point/nodal agenc	y/responsible agency:		
	Task 3:			
		Next 6 months:		
	Timeline	Next1year:		
		Next 5 years:		
	Resources needed:			
	Focal point/nodal agenc	y/responsible agency:		

	PRIORITY ISSUE 3:					
	OBJECTIVE:	OBJECTIVE:				
	Task 1:					
		Next 6 months:				
	Timeline	Next1year:				
		Next 5 years:				
	Resources needed:					
	Focal point/nodal agenc	y/responsible agency:				
ources	Task 2:					
nd res	Timeline	Next 6 months:				
asks aı		Next1year:				
rtant t		Next 5 years:				
lmpo	Resources needed:					
	Focal point/nodal agenc	y/responsible agency:				
	Task 3:					
		Next 6 months:				
	Timeline	Next1year:				
		Next 5 years:				
	Resources needed:					
	Focal point/nodal agenc	y/responsible agency:				

### RESULTS

The stakeholders will have an overview of the priority issues associated with mainstreaming human mobility related opportunities and challenges in the context of climate change within the NAP. The priorities are categorized by timeline (six months, one year and five years) following the planning exercise.

### 4.2.3 Compile and communicate the National Adaptation Plan

	READINESS PROPOSAL OUTCOME		READINESS PROPOSAL SUB-OUTCOME		NAP TECHNICAL GUIDELINES ELEMENT		NAP TECHNICAL GUIDELINES STEP
Outcome 2	Evidence and knowledge base on climate change and adaptation strengthened, and NAPs formulated	2.4	The NAP is compiled and communicated	Element B	Preparatory elements	В4	Compiling and communicating NAPs

### Why is human mobility important at this step of the NAP process?

Under this sub-outcome, key activities often include:

- 1. Compiling the draft NAPs;
- **2.** Incorporating inputs of all relevant stakeholders into the NAP;
- **3.** Communicating and disseminating the NAP at the national level.

It is vital that human mobility in the context of climate change is **included in the NAP**, as **this is a cornerstone of mainstreaming** it into the relevant national and sectoral adaptation actions: *What is not included in the NAP will likely not be implemented.* 

#### **Relevant for NAP1 or NAP2?**

• Relevant for NAP1 and NAP2.

### How are human mobility aspects mainstreamed in this step?

The **following action points** are recommended for mainstreaming human mobility in the NAP:

- Action point 1: Include all relevant aspects of human mobility in the drafting of the NAP.
- Action point 2: Include human mobility experts in the review process for the NAP.

#### ACTION POINT 1:

## Include all relevant aspects of human mobility in the drafting of the NAP



### WHAT DOES IT HELP TO DO?

To ensure that **relevant knowledge of human mobility**, gathered from the evidence base, policy analyses and adaptation options and priorities, is **included** in the process of compiling and drafting the NAP. It is the basis for the consideration of human mobility in **budgeting**, **programmes**, **and projects for adaptation**.

WHO?

The key stakeholders and thematic experts involved in the drafting of the NAP.

## STEPS AND APPROACHES

- Evidence base: Include the evidence base on the relevant human mobility dimensions in the country context, including the information on climate change impacts on human mobility and the impacts of human mobility on climate change adaptation, the human mobility information from vulnerability and adaptation assessments, and the policy mapping and analysis (see sub-sections 4.1.2 and 4.2.1).
- **Prioritized adaptation options and strategies:** Include the human mobility aspects identified in the **adaptation mapping** and prioritization (see sub-section 4.2.2).
- **Dissemination and capacity-building:** Include human mobility aspects in the **dissemination and capacity-building component** of the NAP.
- **M&E framework:** Include human mobility related challenges and opportunities in the framework for monitoring and evaluating the effectiveness of adaptation actions.
- **Resource allocation and funding:** Ensure adequate **resources and funding** are allocated for the implementation of human mobility related adaptation actions. This could involve seeking financial support from international climate funds and other sources.
- **Updating and revision:** The NAP is meant to be regularly or periodically updated, including the human mobility aspects, and especially with regard to the evolving nature of human mobility patterns.

#### What is important here?

- Acknowledging relevant dimensions of human mobility in the context of climate change, especially:
  - That voluntary in situ adaptation is preferable in order to avert, minimize and address disaster displacement, address potential human rights violations of migrants, internally

displaced persons and refugees, and address human mobility that erodes adaptive capacity and increases vulnerability;

- That other types of human mobility (e.g. planned evacuation, labour migration, planned relocation) could be part of solutions and contribute to adaptation when certain conditions are met
   (e.g. safe and regular migration pathways, rights protection of migrants in destinations, and fair recruitment and decent work for migrant workers);
- That refugees, internally displaced persons, migrants in transit centres, and migrants moving through irregular pathways are often among the most vulnerable to climate risks and need special attention and thus need to be considered in adaptation.
- Paying **special attention** to the **needs of vulnerable groups** and the factors that contribute to marginalization and vulnerability in the nexus of human mobility and climate change, which include **gender**, **age**, **disability** and other dimensions of inequality, as well as the special situation of **Indigenous groups** and **socially marginalized groups**.

#### **BOX 4.6: OPTIONS FOR MAINSTREAMING HUMAN MOBILITY IN THE NAP**

It must be noted that **the pen holders for the NAP** are, in most cases, climate change experts. This implies that, usually, much of the narrative is framed from the perspective of climatic factors, ecosystem services and natural resources. This **often leaves limited scope** to articulate human mobility related challenges and opportunities in the context of climate change in a nuanced manner. **Therefore**, a **focus on communities, people, well-being, livelihoods and the protection of human rights** in the draft NAP provides an **opportunity for mainstreaming human mobility**, in addition to focusing on climatic and environmental factors.

Implementing the activities in this Technical Guide enables key aspects of human mobility to be included early on in the knowledge basis for drafting the NAP, and the sectoral and local adaptation plans.

There is no "one-size-fits-all' approach to including human mobility in a NAP. The following are some of the options for firmly anchoring human mobility in adaptation planning:

- It could be **fully integrated into all parts of the NAP**, including background information, situational analysis, adaptation priorities, sectoral plans, action plans, M&E, and budgeting;
- It could be placed in a stand-alone **chapter or section** of the NAP;
- It could be a **stand-alone document** that complements the NAP.

All options have their advantages and disadvantages. **Full integration** has the advantage that human mobility aspects are not likely to be 'left out' when implementing the adaptation plan. It makes the document more nuanced and complex. A **separate chapter** has the advantage of still being part of the main NAP, and thus integral to NAP implementation. However, it is less thoroughly integrated, and certain stakeholders might overlook aspects of it. A **stand-alone document** has the advantage of allowing address human mobility issues to be addressed in a more comprehensive and detailed manner. However, there is the risk that it may be overlooked when the NAP is implemented.

See below Action Point 2 for examples from different country context for these three options.

## Include human mobility experts in the review of the NAP



### WHAT DOES IT HELP TO DO?

In the review of the NAP, **human mobility experts and stakeholders need to be involved**. This will ensure that the different aspects of human mobility are **considered** in all relevant parts of the final NAP, or that there are **references** to a separate chapter or external document on human mobility.

# WHO?

The inclusion of **human mobility experts and relevant stakeholders** in the review of the draft NAP is essential.

# STEPS

The draft **NAP could be shared with human mobility experts** for feedback and to gather suggestions on human mobility aspects.

#### BOX 4.7: EXAMPLE 1: NCCAP 2030 OF THE REPUBLIC OF MOLDOVA – HUMAN MOBILITY IS FULLY INTEGRATED INTO ALL PARTS OF THE NAP

In the NCCAP 2030 of the Republic of Moldova ('the second NAP'), human mobility in the context of climate change **was mainstreamed and integrated into relevant parts of the NAP**.

The Republic of Moldova is among the **most climate-vulnerable** countries in Europe and is also characterized by a **high outmigration rate** and inflow of **remittances**. In terms of **human mobility related topics**, the focus of the NCCAP lies in the vulnerability and climate risk exposure of refugees; people displaced by extreme weather events; the potential of labour migration and remittances to contribute to adaptation and sustainable development; and the situation of family members who stay behind in places of origin.

In the following, **some examples** will be given of **texts on human mobility** from different chapters of the NCCAP document (*italic* font denotes text taken from the NCCAP document, NCCAP 2030).

#### **BACKGROUND AND INFORMATION**

According to the introductory part, the **NCCAP is anchored in major policy** documents that are relevant to climate change policy. For example, the "NCCAP 2030 will contribute to the implementation of Moldova's international commitments undertaken not only through the signing of the Paris Agreement but also with the adoption of the 2030 Global Agenda and its SDGs, as well as the **Sendai Framework for Disaster Risk Reduction 2015-2030** and the **Global Compact for Safe, Orderly and Regular Migration**, in particular, its climate goals." (p.4, emphasis added)

#### SITUATIONAL ANALYSIS

The NCCAP provides a **register of climate change impacts, vulnerabilities** and **adaptation options** in the key sectors covered (i.e. agriculture, energy, forestry, health, transport and water). The impacts of climate change on **labour migration** out of the agriculture sector, as well as the potential role of remittances for agricultural adaptation, are acknowledged:

#### Agriculture sector

"39. Moreover, population migration has created a real shortage of labor force in villages, and the agricultural sector registers the lowest average monthly income compared to other economy sectors. **Climate and non-climate risks have led to labor migration to other sectors, resulting in labor shortages in rural areas.**" (NCCAP 2030, p.11, emphasis added)

"Consider the impact of (out)migration on human capital in rural areas, as well as migration's potential (e.g., skills, knowledge, remittances) to contribute to agricultural adaptation." (p.17, emphasis added)

#### **Health sector**

"Thus, the effects of climate change will increase health disparities between populations in different countries as well as within countries, leading to an unequal distribution and additional burden for low-income groups and some vulnerable groups, such as children, people working outdoors, elderly, pregnant women, and people with chronic diseases. **Persons in temporary shelters (e.g., migrants, refugees or persons displaced due to extreme weather events) are also particularly vulnerable to climate risks during transit or at the place of destination.**" (p.41, emphasis added)

#### Institutional and governance context

"189. The NCCC [National Climate Change Commission] is the basic pillar of the Climate Change Coordination Mechanism, which must ensure cross-sectoral coordination of all climate-related issues, including adaptation and mitigation. The purpose of the mechanism is to foster dialogue, coordination, collaboration and coherence across sectors and to oversee reporting on planning and implementation of climate change adaptation actions by all stakeholders. **As migration is a cross-cutting issue, it is necessary to ensure that government institutions with a mandate to address planned migration, displacement and resettlement (as referred to in the Paris Agreement) are included in the NCCC, with a view to ensuring their participation in coordinating the process of adaptation to climate change.**" (p.67, emphasis added)

"As migration has a major impact on most households in the country, institutions with responsibilities in the field of migration will be included in the capacity gap assessment. **Government institutions addressing** different forms of migration, in particular displacement, migration and planned resettlement, will be included in stakeholders' processes and activities." (pp.69–70, emphasis added)

#### **GENERAL OBJECTIVES, SPECIFIC OBJECTIVES AND ACTIONS**

Different aspects of human mobility are integrated into most of the specific objectives of the adaptation plan:

### Specific objective 1: Development of climate change adaptation capacities and cross-sectoral cooperation

"244. It will ensure the strengthening of cross-cutting coordination, increasing the efficiency of cooperation as well as the operationalization of the National Climate Change Commission, which is conceived as an interinstitutional body for coordinating activities in the field of climate change. Improving the functioning of the National Climate Change Commission (NCCC) is a priority during the current iteration of the NAP. **This will allow the inclusion of representatives of all relevant institutions from priority adaptation sectors (including institutions responsible for addressing horizontal issues such as displacement, migration and planned resettlement) in the composition of the NCCC.**" (p.81, emphasis added)

"At the same time, by developing and implementing continuous training programmes for the staff of entities with responsibilities related to adaptation to climate change, capacities to use data, information and analysis reports on climate change in planning activities of priority sectors, **integrating gender and migration aspects will be strengthened.**" (p.81, emphasis added)

### Specific objective 2: Raising awareness on climate change adaptation and disaster risk reduction through reliable and accessible information

*"For all sectors, the need to collect and disseminate data on cross-cutting issues* (*vulnerabilities, gender, migration-environment connection*) *will also be taken into account."* (p.81, emphasis added)

"246. As regards disaster risk reduction and adaptation to climate change, integrated information systems on CCA and disaster risk reduction (DRR) will be established. It will also improve research, data collection, risk analysis and information sharing to **better map, understand and manage human mobility related to the adverse impacts of climate change.**" (p.82, emphasis added)

### Specific objective 4: Mainstreaming of CCA and disaster risk reduction into sectoral strategic planning and investment planning at national and local level

"This will also be promoted through the development of the early warning system, which is a basic tool for DRM, and needs to be explored and exploited at the maximum extent. **At the same time, the general capacities of the Government to address the relationship between environment, migration and gender will be strengthened.**" (p.83, emphasis added)

#### Specific objective 5: Increasing the resilience of priority sectors by financing activities in the field of climate change adaptation and reducing risks and adverse impacts of climate hazards "Finally, the implementation of insurance programmes against climate risks will be ensured, as well as subsidizing agricultural producers based on climate-resilient development programmes, as well as stimulating the investment of migrants' remittances in the adaptation of the agricultural sector to climate change." (p.83, emphasis added)

"The third category of actions will focus on raising awareness and promoting energy efficient products, encouraging household consumers to reduce energy consumption and use energy-efficient equipment, as well as implementing energy efficiency projects in public buildings. **It will also consider how to improve the** 

### *local institutional context and incentives that could motivate migrants and their families left behind in the country to invest in energy efficiency and renewable energy solutions.*" (p.83, emphasis added)

#### ACTION PLAN for the implementation of the National Climate Change Adaptation Programme until 2030 (NCCAP 2030 Action Plan)

Aspects of human mobility are also a key part of the Action Plan; human mobility is addressed in **26 of the 95 activities**. In the following table, some examples are given from the Action Plan.

#### SPECIFIC OBJECTIVE 1: DEVELOPMENT OF CLIMATE CHANGE ADAPTATION CAPACITIES AND CROSS-SECTORAL COOPERATION

PRIORITY ACTIONS	ACTIONS	DEAD- LINE	RESPONSIBLE INSTITUTION(S)	MONITORING INDICATOR (S)	SOURCE OF FUNDING
	1.3.1. Deliver capacity building trainings related to CC for key staff from sectoral ministries and agencies, including specific sessions on gender and climate change, <b>including</b> <b>the nexus of</b> <b>migration and</b> <b>environment and</b> <b>climate change</b>	IV Quarter 2024	National Commission on Climate Change, Ministry of Environment, State Chancellery, Public Administration Institute of Moldova State University	Training programs for key staff (including Climate Change contact points) developed	Budget of the involved authorities / institutions and external Assistance (NAP-2)
Priority action 1.3. Ensure continuous targeted capacity building trainings for CCA policy implementation	1.3.3. Organizing trainings for civil servants and Local Public Administration, including women and men, on risks and climate vulnerabilities from a gender and migration perspective, and integrating CCA aspects into strategic planning and sectoral and local budgeting (with the Institute of Public Administration, Regional Development Agencies and/or other designated sectoral training institutions)	IV Quarter 2025	Ministry of Environment, State Chancellery, Moldova State University	10 thematic training sessions held over 2 years: targeting the priority sectors' civil service and the local governments at the level of development region (including male and female staff); Number of civil servants from ministries and other administrative authorities with responsibilities in the field of CC trained annually – women and men.	Budget of the involved authorities / institutions and external assistance (NAP-3)

#### SPECIFIC OBJECTIVE 2: RAISING AWARENESS ON CLIMATE CHANGE ADAPTATION AND DISASTER RISK REDUCTION THROUGH RELIABLE AND ACCESSIBLE INFORMATION

#### **SPECIFIC OBJECTIVE 4:** INTEGRATE CSA AND DRR INTO SECTORAL STRATEGIC PLANNING AND INVESTMENT PLANNING AT NATIONAL AND LOCAL LEVELS

PRIORITY	ACTIONS	DEAD-	RESPONSIBLE	MONITORING	SOURCE
ACTIONS		LINE	INSTITUTION(S)	INDICATOR (S)	OF FUNDING
Priority action 4.2. Incorporate climate DRR into development planning and increase DRM preparedness	4.2.2. Develop, test and improve early warning systems and mechanisms for disaster risks communication (including migrants, women staying behind, refugees and IDPs), including cell broadcasting (SMS, voice message).	IV Quarter 2026	Ministry of Internal Affairs, General Inspectorate for Emergency Situations (IGSU)	Simple early warning facilities, equipment, and systems with broad dissemination capacity for early warning of people, including women and men, with diverse backgrounds (including migrants, women staying behind, refugees and IDPs) are established and used	Budget of the involved authorities / institutions and external assistance (UNDP-ADA)

#### SPECIFIC OBJECTIVE 5: INCREASING THE RESILIENCE OF PRIORITY SECTORS BY FINANCING ACTIVITIES IN THE FIELD OF CLIMATE CHANGE ADAPTATION AND REDUCING RISKS AND ADVERSE IMPACTS OF CLIMATE HAZARDS

PRIORITY	ACTIONS	DEAD-	RESPONSIBLE	MONITORING	SOURCE
ACTIONS		LINE	INSTITUTION(S)	INDICATOR (S)	OF FUNDING
Priority action 5.2. Increase energy efficiency and resilience of the ENERGY sector infrastructure through adjustment to the future hydro- meteorological parameters	5.2.4. Promote efficient energy use and high energy efficient products, including incentivizing the migrants and families staying behind to invest in clean energy	IV Quarter 2030	Energy Efficiency Agency	One national event per year until 2030. 5 sectorial events per year until 2030	Budget of authorities/ Institutions involved

#### BOX 4.8: EXAMPLE 2: SECTORAL ADAPTATION PLAN FOR WATER MANAGEMENT OF THE REPUBLIC OF UZBEKISTAN – HUMAN MOBILITY IS FULLY INTEGRATED INTO THE SECTORAL NAP

#### BACKGROUND

Uzbekistan is highly vulnerable to climate change impacts. The country is experiencing **rising temperatures**, changes in **precipitation patterns**, severe **droughts**, **flooding**, **heat waves** and **dust storms**. These changes are detrimental to ecosystem services and are amplifying existing environmental degradation, such as the **drying of the Aral Sea**. This, in turn, has adverse impacts on the lives and livelihoods of people. Uzbekistan is formulating **four sectoral NAPs** on agriculture, water, health and building with a view to proposing actions and guidelines for managing the impacts of climate change on priority sectors.

Here are some examples of new or changed text for the updated National Adaptation Plan for Water Management of Uzbekistan, which is currently being drafted.

#### **EXPECTED RESULTS**

*"Improved disaster risk management to avert, minimize and address loss and damage, including disaster displacement."* (Sectoral Adaptation Plan for Water Management Sector, in preparation, p.14)

#### METHODOLOGY

#### Approach

"It is well understood that in order to achieve the fulfillment of the NAP objectives and its goals, it is expected that an effective adaptation strategy must involve both structural and non-structural adaptation measures. Structural measures could include measures like introducing or expanding irrigation schemes; improving infrastructure (e.g., storage facilities); **developing early warning systems**; providing technical assistance with regard to weather forecasting and risk management strategies, etc.

Non-structural measures may focus on policy reforms – including changing production subsidies/incentives or introducing new financial instruments – as well as raising awareness among farmers and other water users about how best they can adapt their activities given changes in environmental conditions and improving water monitoring and **hazard warning systems**." (p.14, emphasis added).

#### NATIONAL SOCIOECONOMIC CONDITIONS

This section of the draft National Adaptation Plan for Water Management already refers to human mobility. The following updated text has been suggested:

"There are types of migration in Uzbekistan. Uzbekistan has a significant net emigration ranging from 16 to 71 thousand people over the last 20 years leaving the country. Besides that, approximately 1.7 million people travel abroad each year for jobs (2022), three-quarters of which travel to Russia. In 2022, the number of registered internal migrants within Uzbekistan was 214,821, of which 60% was women (UzStat 2023). According to the Central Bank of Uzbekistan (2023), in 2022, the remittance inflow to Uzbekistan was around 16.9 billion USD. While remittances could be useful to procure basic needs in the aftermath of a disaster or during the lean season, there is limited knowledge on whether and how remittances shape adaptive capacity and the participation of migrants in adaptation planning and implementation in Uzbekistan. In 2020, there were 70,000 internal displacements due to disasters in Uzbekistan (IDMC 2021). Pastoralists in the Karakalpakstan region are facing water insecurity due to desertification (UNDP, 2015). The Groundswell Report II identified pockets surrounding the Ferghana Valley and southern Uzbekistan, along the Amu Darya River in Uzbekistan, as hotspots for internal climate out-migration by 2050 due to projected decreases in water availability and crop productivity (World Bank 2021). The same report also suggested that the Ferghana Valley and the area around Tashkent will be hotspots for internal climate in-migration by 2050 (World Bank 2022)." (p.23)

#### Trends in and forecasts of water use

Effect of future climate change on water management sectors (the text in bold font has been suggested as addition):

"Climate change is further increasing flood risks through a combination of more extreme precipitation events, glacier melt and slope destabilization through permafrost melt while the arid climate and regular high temperatures make drought also an increasingly regular occurrence in Uzbekistan. Thus, for instance, peak river flows due to snowmelt are expected to shift up to one month earlier in the year, which could increase the likelihood of increased occurrence of flood, mudflow, and landslide risks. **This also increases the risk of disaster displacement ...**." (p.29, emphasis added)

#### **VULNERABILITIES IN THE WATER MANAGEMENT SECTOR**

**Floods, flash floods and other water-related hazards** (the text in bold font has been suggested as addition):

"Some parts of Uzbekistan are at high risk of both river flooding and flash flooding. The most severe recent flood in terms of loss of life occurred in 1998 on the Aksu and Shahimardan rivers, killing 109 people. The triggering mechanism of this flood event was an outbursting of a glacier lake... As of 2010, assuming protection for up to a 1 in 25-year event, the population annually affected by flooding in Uzbekistan is estimated at 61,000 people and the expected annual impact on [gross domestic product] is estimated at \$181 million. Development and climate change are both likely to increase these figures. **The vulnerability of children, the elderly, women, marginalized population groups, and persons with disabilities to flooding will also differ. The flooding also increases the risk of displacement.**" (p.44, emphasis added)

#### Adapting the water sector to climate change

The following text has been suggested to be added:

"The improvements in structural adaptation measures (e.g., early warning systems, evacuation centres) could reduce the risk posed by disaster displacement. At the same time, temporary labour migration – internal or international – is an autonomous adaptation strategy to seasonal water stress. However, those exposed to prolonged water insecurity could migrate permanently, likely to urban areas. Climate change impacts are increasingly amplifying the non-climate risks to which pastoralists are exposed. Therefore, include migration experts in the consultative processes related to water; explore migration outcomes in the context of climate change impacts on extreme weather events as well as access to water for drinking, irrigation, and hygiene; consider the positive impacts of migration on water security in the planning and implementation processes, such as leveraging remittances to finance irrigation technologies, or the flow of knowledge and skills; consider the water availability and safety in areas where migrants are in vulnerable situations, e.g., migrants in informal settlements in urban areas, internally displaced persons and refugees;

consider different needs of migrants, internally displaced persons and refugees in the communication of water-related adaptation; include migrants, internally displaced persons and refugees in monitoring of water-related adaptation." (p.46)

#### BOX 4.9: EXAMPLE 3: NATIONAL ADAPTATION PLAN OF THE REPUBLIC OF ECUADOR -HUMAN MOBILITY IS COVERED IN A DEDICATED CHAPTER OF THE NAP

#### BACKGROUND

Ecuador faces numerous **climate change risks**, primarily due to its varied climate zones, which range from high-altitude glaciers to tropical rainforests and dry tropical forests. The diverse ecosystems are highly sensitive to climate change, and their degradation impacts the quality of environmental services, crucial for both rural livelihoods and urban welfare. The **country's vulnerability is amplified** by its exposure to extreme weather events, such as the catastrophic El Niño events of the past. Key economic sectors like agriculture, health, energy and tourism are particularly susceptible to climate impacts. The **NAP of Ecuador** focuses on reducing vulnerability and climate risks across six prioritized sectors: (i) natural heritage; (ii) water; (iii) health; (iv) human settlements; (v) productive and strategic sectors and (vi) food sovereignty, agriculture, livestock, aquaculture and fisheries. These sectors are crucial for the country's socioeconomic stability and directly influence the livelihoods of its inhabitants (MAATE, 2023).

#### **INTRODUCTION**

In the **introduction**, the chapter on human mobility is anchored in global policy frameworks (SDGs; the Global Compact for Safe, Orderly and Regular Migration) and national policy frameworks (national development plan entitled Creating Opportunities 2021–2025; the National Agenda for Equality in Human Mobility 2017–2021; NDCs).

#### DIAGNOSIS OF MIGRATION AND CLIMATE CHANGE

In the diagnosis section, the human mobility chapter assesses key challenges related to human mobility and climate change, namely **displacement** due to climate hazards (floods, landslides, storms, droughts), **planned relocation**, and the potential of **labour migration and remittances**. The assessment is based on data from historical events and a registry of loss and damage and impacts from hazards.

#### **PRIORITIES AND LINES OF ACTION**

On the basis of the challenges identified, the chapter proposes **three priorities** for action: information and evidence, capacities, and financing. Within each of these, **key lines of action** are proposed.

#### Information and evidence

As there is **limited information** on human mobility related to climate change, the first priority is aimed at knowledge generation, with two recommended lines of action:

- "Generate information on migration and displacement due to climate change that includes: identification and location of the population under these conditions, climate hazards and relocated communities, with emphasis on border areas and destination zones, itineraries of mobilities associated with climate change, considering the differentiated situation of women, men and gender diversity.
- **Promote research and innovation** related to the social, economic, and productive challenges of climate-related migration and displacement, together with higher education institutions." (MAATE and IOM, 2023, p.5, emphasis added)

#### Capacities

To address capacity gaps, the second priority proposes capacity development in the four phases of the adaptation cycle:

- "Assess impacts, vulnerability, and risks: This phase of the cycle prioritizes the development of two capacities: participation and understanding of risks. The first requires the participation of society in climate change adaptation, specifically in the assessment of climate change impacts. The second implies understanding climate risks in all their dimensions of vulnerability, degree of exposure of people and goods, characteristics, and environment; especially the vulnerability of children, adolescents, and migrant women. ...
- Generate local adaptation plans: This phase prioritizes the management of two capacities: formulation of planning for sustainable development and information sharing and use of local knowledge. The first involves institutionalizing climate action as a development component, promoting knowledge of the regulatory framework and multi-sector and multi-level intersectoral articulation ... The second capacity complements the first through the exchange of knowledge and the use of local knowledge, which allows the generation of adaptation plans based on particular information and realities.
- Implement adaptation measures: This phase involves the management of programs and projects with a gender focus that allows the implementation of concrete mechanisms for daptation to climate change."
- Monitor and evaluate adaptation: This phase prioritizes the financial and technological capacity to monitor and evaluate the population's adaptation to climate change." (MAATE and IOM, 2023, pp.5–6, emphasis added)

#### Financing

The chapter on human mobility states that there is **limited funding for adaptation** (compared with mitigation), especially for migrant populations. As the **cost–benefit ratio** of adaptation for migrants is better than that of recovery, increasing financial support for local governments and individuals, with the aim of developing habitats, food sovereignty, capacities and decent work **for migrant and climate-displaced populations**, is recommended.

 "Promote public and private financial services to implement adaptation mechanisms, with priority in the food, housing, and livelihood sectors, for vulnerable populations." (MAATE and IOM, 2023, p.6, emphasis added)

#### **PROPOSAL OF PROGRAMMES AND PROJECTS**

Based on the lines of action above, the following interventions for the management of migration and displacement are suggested:

- "Database on climate-related migration and displacement in Ecuador that presents information on identification, location, and characterization of the population under these conditions, climate hazards and relocated communities with emphasis on border areas and destination areas, itineraries of mobilities associated with climate variability, considering the differentiated situation of women, men, and diverse genders.
- **Strengthening of community capacities** in the face of climate hazards, including the identification and understanding of climate hazards, as well as the knowledge and use of **early warning systems**.
- Climate change detection and attribution studies to identify the **impact of climate change on the** climatic factors that trigger migration, and to identify the degree of **impact of climate change on** the socioeconomic conditions that trigger migration." (MAATE and IOM, 2023, p.7, emphasis added)

#### MONITORING

**Two indicators** are identified for the monitoring of measures implemented for human mobility and climate change:

- "Percentage of climate-related migrant population (national and international) affected by hydrometeorological events recorded in Ecuador, disaggregated by gender, age, and canton/province of residence.
- **Percentage of population** exposed to climate hazards **trained**." (MAATE and IOM, 2023, p.7, emphasis added)

#### BOX 4.10: EXAMPLE 4: NATIONAL ADAPTATION PLAN OF THE REPUBLIC OF MARSHALL ISLANDS - HUMAN MOBILITY IS MAINSTREAMED IN THE NAP

#### BACKGROUND

The Marshall Islands, a **low-lying atoll nation** in the Pacific, is confronted with considerable climate change challenges. The country is comprised of more than 1,000 individual islands and islets and faces a unique set of vulnerabilities, primarily due to its geographical location and physical characteristics. **Sea level rise**, one of the most direct consequences of climate change, poses an **existential threat**, leading to the **loss of land**, contamination of **freshwater** resources, and impacts on **marine ecosystems**. The islands' dependence on marine resources for food, livelihoods and culture amplifies their susceptibility to changing ocean temperatures and acidification, which affect coral reefs and fish populations. The Marshall Islands' **vulnerability** is further exacerbated by extreme weather events, including storms and droughts, which could have devastating effects on infrastructure, health and food security.

Through the NAP, the Marshall Islands aims to implement adaptation measures that **address both immediate and long-term climate change impacts**, ensuring the sustainability of its **environment**, the health and safety of its **population**, and the preservation of its cultural **heritage**. The NAP of the Marshall Islands prioritizes **sectors** such as (i) coastal zones; (ii) education; (iii) fisheries; (iv) food security; (v) health; (vi) infrastructure; (vii) migration; and (viii) water. The plan underscores the importance of community-based approaches, integrating traditional knowledge with scientific research to foster a resilient society capable of withstanding the challenges posed by climate change.

#### INTRODUCTION

The introduction sets out the principles and key approaches of the NAP process in the Marshall Islands, based on self-determination and community-based action.

#### **COUNTRY CONTEXT**

In the country context section, the NAP refers to a range of human mobility dimensions; it mentions the role of migration to the United States of America and **remittances** as a source of income, the country's displacement history in the context of nuclear testing, the impacts of **displacement**, the need to include **planned relocation** in infrastructure planning, and the availability of migration **data**.

#### CLIMATE IMPACTS, RISKS AND VULNERABILITIES

In this diagnostic section, the NAP refers to migrants, displaced persons, migration, relocation and displacement in different and complex contexts of climate and environmental change:

"Those consulted included vulnerable populations and underrepresented groups (persons with disabilities, women, youth, **migrants**, **deportees**, private sector, etc.)." (Republic of the Marshall Islands, 2023, p.95, emphasis added)

"In addition, the **level of investment** varies locally **to protect against extreme events** and provide for economic development opportunities. It is lower in the more rural atolls, **leading to internal migration** to the urban or intermediate centres." (p.102, emphasis added)

"Climate-induced migration also disrupts established healthcare dynamics." (p.118, emphasis added)

"Recovery [of persons with disabilities] post-disasters is often slower, with **some facing displacement** or inadequate housing." (p.128, emphasis added)

#### NATIONAL ADAPTATION PATHWAY FOR SURVIVAL

In the adaptation section, the NAP combines technical and nature-based solutions with a strong focus on **planned relocation** and **migration** as alternatives to **in situ adaptation**. The strategies follow adaptation pathways that are phased over time and spatially differentiated according to urban, semiurban and rural atolls.

"Phase D2 (2040 – 2050) In this phase, key decisions on protection measures for the 20" (0.5m) SLR decision point would be made. There would be **consideration of the consolidation of services and planned relocations from unprotected atolls as necessary** and consideration of the practicability of measures to achieve protection to 6.5ft SLR for 2150 and beyond.

Phase D3 (2050 – 2070) This phase includes the **implementation of identified measures for protection and planned relocation** and review of the Pathway beyond D3.

Phase D4 (2070/2090 – 2150) This phase provides for validation and implementation of 6.5ft (2m) SLR protection measures **or alternative pathways of migration or identification of alternative land**". (p.139, emphasis added) "Four main Decision Points (D, D2, D3, D4) are identified along the Pathway. Each of these decision points represents the relative point in time by which critical national decisions must be made. At these points, the decisions will affect subsequent decisions along the pathway; they are path-dependent decision points. The first two decision points prioritize national decisions about Protection as a main adaptation strategy, while **the next two decision points further along the timeline focus on national decisions about Planned Relocation and Migration as adaptation strategies.**" (p.142, emphasis added)

#### NAP IMPLEMENTATION I, II AND III

In these sections, the NAP implementation strategy is laid out, the necessary institutional, financial and capacity-related **conditions** are defined, and the **M&E** framework is elaborated. Human mobility is considered in the form of rural-to-urban and internal movements and international (labour) migration, planned relocation, and displacement, and its role in adaptation measures is considered.

#### "Specific Barriers to adaptation in the Health Sector

10. Increasing migration and an urbanizing population will have less access to natural resources, traditional practices, and cultural networks that were used to adapt to weather events in the past." (p.161, emphasis added)

#### "7.1.1.2 Sea-Level Rise Policy:

...

For up to \$2 billion up to four atoll islands could be protected to provide for population migration from the remaining 20 unprotected atolls." (p.178, emphasis added)

#### BOX 4.11: EXAMPLE 5: NATIONAL ADAPTATION PLAN OF THE REPUBLIC OF PAKISTAN - HUMAN MOBILITY IS MAINSTREAMED INTO THE NAP

#### BACKGROUND

Pakistan is increasingly facing **severe climate change threats** that amplify challenges across its diverse climatic regions, ranging from the **glaciated peaks** of the Himalayas to **arid deserts and fertile plains**. This geographical and ecological diversity makes Pakistan particularly vulnerable to a range of climate change impacts. The country experiences frequent **disasters** induced by natural hazards, including floods, droughts and glacial lake outburst floods, which pose significant threats to life, livelihoods and infrastructure. Additionally, the **agricultural sector**, which forms the backbone of Pakistan's economy and employs a large portion of the population, is highly sensitive to climate variability. **Water scarcity**, exacerbated by changing rainfall patterns and melting glaciers, further compounds the nation's vulnerability, affecting not only agriculture but also human health and urban water supplies.

The NAP of Pakistan aims to enhance resilience and reduce the climate change vulnerabilities of **critical sectors**. The NAP prioritizes actions across several key areas: (i) the agriculture–water nexus, (ii) natural capital (land, water and air), (iii) urban resilience, (iv) human capital, (v) DRM, and (vi) gender, youth and social inclusion.

By focusing on these sectors, Pakistan seeks to **safeguard its developmental gains**, protect the livelihoods of its citizens, and ensure environmental sustainability in the face of escalating climate risks.

#### INTRODUCTION

In the introduction, the NAP highlights the risk of current levels of and increased future displacement under worsening climatic conditions:

"It is clear from current data and future projections that climate change poses fundamental risks for Pakistan: if current trends persist, more and more of the country will be rendered uninhabitable. **This would lead to mass population displacement**, increased competition for depleting resources, and the very real prospect of conflict. All this means that combating climate change in Pakistan is imperative." (Ministry of Climate Change and Environmental Coordination, 2023, p.12, emphasis added)

#### **CLIMATE RISKS AND VULNERABILITIES**

In the diagnostics section, the NAP explores the complex relationships between climate risks, different forms of human mobility (e.g. internally displaced persons, pastoralists and migrant workers), and **conflict**.

"As noted, climate change is leading to the loss of agricultural and grazing land, increased water scarcity, and the loss of livelihoods. This creates greater pressure and competition for the remaining scarce resources, for example, between pastoralists and livestock farmers for land as Pakistan's vegetation cover and pastures shrink. Where the effects of climate change are chronically severe, this leads to forced population displacement and thereby increased strain on resources and services. This in turn often sparks tensions even conflict—between host and internally displaced person ... communities." (pp.18–19, emphasis added)

A particular focus lies on the increasing movement of displaced populations to the already resourcestrained **urban areas** of the country:

"Weak growth will increase the risk of extreme poverty, food insecurity, and malnutrition. This will make sustained progress in poverty reduction and human development far more challenging than it is today. **These interrelated risks could also set the stage for major societal disruptions, including the displacement of people and greater pressure on cities unprepared for the influx of displaced migrants, on top of those they currently host.** These projections highlight the urgency and importance of devising comprehensive adaptation strategies to reduce the impact of climate change on various sectors of Pakistan's economy and society." (p.23, emphasis added)

#### **ADAPTATION PRIORITIES**

In the section setting out adaptation priorities, human mobility in the context of climate change is included as a factor to be considered in the adaptation of the educational and health sectors:

"Sectoral climate vulnerability assessments should be regularly updated to inform these policy and planning processes. Particularly relevant vulnerability and resilience indicators are the mapping of schools, clinics, and other buildings in areas prone to floods, heatwaves, droughts, landslides, and air pollution. Following extreme weather events, tracking data on education-day losses, student absenteeism, and other impacts is essential.

Corresponding health indicators, such as the prevalence and spread of diseases due to climate extremes, also need to be identified and monitored. Additionally, it is crucial to analyse climate-induced migration patterns and their potential influence on education and health outcomes." (p.65, emphasis added)

#### BOX 4.12: EXAMPLE 6: NATIONAL ADAPTATION PLAN OF THE REPUBLIC OF ETHIOPIA - HUMAN MOBILITY IS MAINSTREAMED INTO THE NAP

#### BACKGROUND

Ethiopia is increasingly confronted with severe climate change threats that magnify challenges across its **varied climatic zones**, ranging from the highlands, with their cool, temperate climate, to lowland deserts that are hot and arid. This geographical and ecological diversity renders Ethiopia especially susceptible to a variety of climate change impacts. The country faces recurring **disasters**, including droughts, floods and occasional locust infestations, which pose significant risks to human life, livelihoods and infrastructure. The **agricultural sector**, which is the cornerstone of Ethiopia's economy and employs most of the population, is very vulnerable to climate variability. **Water scarcity**, aggravated by shifting rainfall patterns and the reliance on rain-fed agriculture, further increases the country's vulnerability.

**The NAP** of Ethiopia aims to boost resilience and reduce the climate change vulnerabilities of crucial sectors. The NAP identifies **priority actions** across several key areas: (i) agriculture, (ii) forestry, (iii) health, (iv) transport, (v) power, (vi) industry, (vii) water, and (viii) urban. The plan underscores the importance of integrated water resource management, sustainable land management practices, conservation of biodiversity and enhanced DRM strategies.

#### PREPARATORY PHASE, DIAGNOSTIC ANALYSIS AND RESULTS

In the overview of climate risks and impacts on priority sectors, the NAP lists risks for livestock and **pastoralists** in the agricultural sector, **displacement** through increased flood incidence as an impact in the health sector, and an increase of **rural-to-urban migration** through more frequent droughts and floods as an impact in the urban sector. Migration for seasonal labour is mentioned as a short-term **coping strategy** of communities in response to climate hazards.

#### NAP OF ETHIOPIA

The plan refers to the NDC, which states the need to include **pastoralists** in adaptation solutions, and to address the well-being of, among others, '**environmental refugees**':

"Because climate change will affect all geographic areas of the country, its solution **requires the participation of the entire population, especially farmers and pastoralists**. Parallel to this, Ethiopia's response to climate change aims to integrate actions that improve the status of women and the welfare of children. Furthermore, measures to address climate change will be planned and implemented in a manner that **addresses the wellbeing of the elderly, persons with disabilities, and environmental refugees**." (Federal Democratic Republic of Ethiopia, p.23, emphasis added) The NAP lists **18 major adaptation options**, and option 8 includes voluntary planned relocation and migration as an option to build social protection and contribute to livelihood options:

"8. Building social protection and livelihood options of vulnerable people. This adaptation option will give special emphasis to women, children, and impoverished communities by putting in place safety net schemes, supporting asset creation, improving access to credit, **promoting livelihood diversification**, **and arranging voluntary resettlement/migration**." (p.27, emphasis added)

Annex 1: Risks and vulnerable sectors within each region with their existing coping mechanism Annex 1 compiles climate risks, impacts and coping strategies, broken down by vulnerable sectors and regions.

Migration is listed once as a **risk factor**:

*"Flood, Drought, Human and animal diseases, wildfire, Crop pest, Migration and conflict"* (p.53, risks/hazards for Benishangul-Gumuz Region, emphasis added).

Involuntary migration and outmigration are mentioned three times as a **result of climate impacts**, or as **aggravating factors**, for example:

"Death, Loss of livestock production and productivity, price shock, loss of pasture and water which results in migration, loss of income" (p.55, impact on livestock sector, Somali Region, emphasis added)

Labour migration, partly seasonal, is mentioned nine times as a coping strategy, for example:

*"Migration of household heads with their livestock*; resource sharing; food borrowing; eating wild fruits; selling more livestock; etc" (p.53, coping strategies for Afar Region, emphasis added)

"Sell more livestock than usual; consumption of crops rather than sell; seek alternative jobs; wild food eating; reduce expenditure on non-essential items; **seasonal labour migration**; etc." (p.53, coping strategies for Amhara Region, emphasis added)

"*Migration of household heads with their livestock*; elders conflict resolution mechanisms; resource sharing; food borrowing; eating wild fruits; selling more livestock; etc." (p.55, Coping strategies for Somali Region, emphasis added)

#### BOX 4.13: EXAMPLE 7: NATIONAL ADAPTATION PLAN OF THE REPUBLIC OF THE PHILIPPINES - HUMAN MOBILITY IS MAINSTREAMED INTO THE NAP

The Philippines is highly vulnerable to climate change impacts, being exposed to a variety of climatic risks. **Extreme events** cause considerable **human losses** and **economic damage**, and disaster responses and infrastructure repairs put a heavy toll on the national economy, with projections indicating a potential loss of up to 13.6 per cent of its gross domestic product by 2040 due to climate change. Climate change affects especially vulnerable groups, who face **livelihood losses**, increasing **health risks**, and often disaster **displacement**. Being a critical **hotspot for biodiversity**, the natural resources of the country are also under threat, especially forests, mangroves and coral reefs. These ecosystems, which provide vital services locally and globally, face destruction and degradation, further endangering the country's natural heritage and economic stability.

The NAP (2023–2050) is aimed at reducing the country's vulnerability and increasing its resilience to climate change through integrating adaptation into relevant policies and programmes, incorporating sectoral and national development priorities, providing guidance for effective public spending, and attracting private capital for adaptation. It identifies eight key sectors: (i) agriculture, fisheries and food security, (ii) water resources, (iii) health, (iv) ecosystems and biodiversity, (v) cultural heritage, population displacement and migration, (vi) land use and human settlements, (vii) livelihoods and industries, and (viii) energy, transport and communications. Human mobility is mainstreamed throughout the whole NAP in various dimensions, with one of the eight key sectors dedicated to displacement, migration and heritage.

#### INTRODUCTION

This NAP mentions **displacement**, **climate-induced migration** and **mobility**, and **relocation** as key aspects to be considered in adaptation. It outlines the relevance of human mobility in **key sector (v)** (cultural heritage, population displacement and migration). It identifies "safeguarding communities and culture: durable solutions for climate-induced mobility" as an **adaptation theme** for the sector, with three key outcomes of (i) support for populations **displaced** by **sudden onset events**, (ii) preparatory and reintegration support for populations **impacted by slow onset events**, and (iii) the protection of cultural heritage.

#### MULTIDECADAL NAP STRATEGY FRAMEWORK

This section, which outlines the purpose, vision and objectives of the NAP, mentions the interlinkages of *"the land use and human settlements sector, concentrating on mobility and displacement, with their nexus to conflict and DRRM* [Disaster risk reduction and management]" (Climate Change Commission (CCC) and the Department of Environment and Natural Resources (DENR), 2023, p.50).

#### NATIONAL CIRCUMSTANCES

This section provides the necessary geographical, economic, social and governance **background** for the NAP. It emphasizes that "**no national data** is available regarding population displacement from extreme weather events" (p.57, emphasis added), and that "[p]opulation growth and **migration trends** need careful examination, especially in the context of movements **towards high-risk and disaster-prone areas.**" (p.57, emphasis added)

#### **CLIMATE CHANGE IN THE PHILIPPINES**

In this section, data on historical and possible future climate trends are summarized, and the development implications for the country are outlined.

The implications of sea level rise, especially of extreme sea levels and tropical storms, are emphasized here: "Sea level rise may permanently **displace** 150,000 and 420,000 Filipinos in 2030 and 2050, respectively." (p.92, emphasis added) "Overall, floods from extreme sea levels would result in the **displacement** and disruption of up to two million individuals by 2030 and 2050 (SSP [Shared Socio-Economic Pathway] 5-8.5)." (p.110, emphasis added) **Extreme rainfall** with resulting flooding and landslides is projected to affect between 2.6 million and 5.7 million people annually in the coming decades (p. 124-125). **Typhoons and super typhoons** are projected to have a major impact, with up to 5.3 million and up to 6 million people affected annually in the 2030s and 2050s respectively, leading to disaster displacement.

#### **ADAPTATION PRIORITIES**

In the outline of key priority sector (v) on cultural heritage, population displacement and migration, **Indigenous People** are highlighted to be especially **vulnerable to displacement and migration** caused by sudden and slow onset climate risks (p.150).

The report includes **cost estimates** for climate impacts and inaction across the sectors; for sector (v) on cultural heritage, displacement and migration, it is estimated that costs of 9 billion Philippine pesos will arise from **relocation of communities** displaced by climate events (p.32, p.154).

The NAP also addresses **interdependencies between sectors**; for example, the influences of sectors (vi) land use and human settlements and (vii) livelihoods and industries on the **capabilities and necessities for mobility** (p.152). This is further explored in the analyses of the sectors; for example, in the health sector, "[r]ising sea levels lead to coastal erosion and the submergence of low-lying areas, resulting in immediate loss of shelter and livelihoods and potential **displacement** of communities. This **displacement can cause psychological distress**, trauma, and loss of sense of place and cultural identity." (p.184, emphasis added)

#### "CULTURAL HERITAGE, POPULATION DISPLACEMENT AND MIGRATION" SECTOR

The NAP makes clear that "[t]oday, discussions on climate emergencies in relation to communities focus on recovery from rapid onset events like typhoons, storm surges, and floods. However, **there is a need to consider the whole spectrum of human mobility** considering climate change—migrants, returning migrants, temporary evacuation, permanent evacuation, and voluntary and involuntary mobility." (p.205, emphasis added) The section also mentions **involuntary immobility** as a result of poverty and lack of connections: "Impoverished populations often have **fewer social networks** and connections that can influence their **capability to migrate**. This results in either **involuntary immobility**, where populations may then continue to be exposed to harmful hazards, or forced mobility, where reintegration efforts may be constrained by their limited financial resources." (p.209, emphasis added)

The **linkages between displacement and loss of heritage**, as well as the importance of heritage and traditional knowledge for livelihoods and well-being, is emphasized: "*Displaced* populations, including those who have migrated due to slow onset environmental pressures, face the dual challenge of finding new settlements, while contending with unfamiliar surroundings and limited resources. The disruption caused by climate change **exacerbates the vulnerability** of these populations, compounding their struggle for

adequate **housing, livelihoods, security**, and access to essential **services**." (CCC and DENR, 2023, p.206, emphasis added)

The section lists a **range of issues** related to displacement that need attention:

#### "Expected increase of climate refugees

Slow-onset climate events (e.g., rising sea levels) will persistently drive populations away from their settlements, amplifying the need for managed retreat and mobility as an adaptation strategy.

#### Increased mobility due to extreme heat

Increased temperature can affect the productivity of agricultural land. These circumstances may result in farmers seeking other sources of livelihood in other areas.

#### Disruption of livelihoods

Loss of livelihoods, overcrowded settlements with limited infrastructure and resources can trap displaced populations in a cycle of vulnerability.

#### Disruption of learning continuity for children

Children who are displaced due to climate change may end up in areas with limited access to quality education facilities and resources, which may affect early learning.

#### Loss of access to services

Displaced populations often have difficulty accessing necessities, such as shelter, infrastructure, and social services, exacerbating their vulnerabilities and hindering recovery and resettlement efforts.

#### Potential loss of culture and traditions

Climate-induced displacement can sever ties between populations and their cultural heritage rooted in specific geographic locations including traditional practices, language, rituals, and ways of life.

#### Increased conflict and instability

Climate-related impacts can exacerbate existing social and political tensions and contribute to instability in vulnerable regions (e.g. BARMM [Bangsamoro Autonomous Region in Muslim Mindanao]), often through indirect pathways. Populations displaced by a combination of both conflict and the consequences of climate change are extremely unlikely to be able to return home.

#### Links with trafficking in persons and smuggling of migrants

While climate risks do not in themselves cause trafficking in persons and smuggling of migrants, these can create personal, situational, and contextual conditions that affect migrants, especially women." (pp.207–208, emphasis in original)

The section acknowledges the **potential of mobility for adaptation**: "Increasingly, **mobility is seen as an adaptation strategy** to manage the impacts of climate change. From an economic perspective, effective integration of displaced individuals and migrants into the local workforce can lead to improved human capital in relocated areas." (p.205, emphasis added) An emphasis is placed on the **reintegration of displaced and relocated communities**, with the need to address livelihood and employment issues, infrastructure challenges and cultural aspects: *"Individuals lose their livelihoods and income sources when they move, and reintegrating them into the workforce can be challenging, especially if their skills do not match local job market demands. Reintegration efforts may face difficulties in ensuring that populations have access to essential services, especially since overcrowding in host communities can strain existing infrastructure and resources. Lastly, cultural differences and misconceptions often lead to exclusion and marginalization." (pp.205–206, emphasis added)* 

The section then sets out **three priority outcomes** for the sector: 1. Provision of adaptive physical, social, economic and gender-responsive **support to populations displaced by sudden climate events**; 2. Robust preparatory and reintegration **support for populations impacted by slow onset climate events**; and 3. Preservation, protection and rehabilitation of cultural heritage amid climate risks.

As shown in the tables below, it defines **indicative key strategies**, states **implementation priorities** ranging from immediate (0–3 years) and medium-term (3–6 years) to long-term (6+ years), and gives **rough estimates for costs** (high or medium).

#### **OUTCOME 1:** PROVISION OF ADAPTIVE PHYSICAL, SOCIAL, ECONOMIC AND GENDER-RESPONSIVE SUPPORT TO POPULATIONS DISPLACED BY SUDDEN CLIMATE EVENTS

INDICATIVE KEY STRATEGIES	BRIEF DESCRIPTION	IMPLEMENTATION PRIORITY	CAPITAL- INTENSIVENESS
Provide adequate social facilities and programs in <b>resettlement areas</b>	Organize gender-responsive community events and pro- grams aimed towards <b>inclusion</b> <b>and protection of displaced</b> <b>individuals</b> within their new communities, as well as the <b>creation of social facilities</b> <b>in resettlement</b> areas (e.g., day care centers, recreational spaces, etc.).	Immediate (0–3 years)	High
Strengthen <b>recovery</b> <b>coordination</b> between the public sector, community volunteers, CSOs/NGOs, and the private sector.	Strengthen NDRRMC [National Disaster Risk Reduction Man- agement Council] and other <b>multi-stakeholder task forces</b> that facilitate regular commu- nication, information sharing, and joint planning among the public sector, CSOs/NGOs, and the private sector to identify resource gaps and streamline recovery strategies.	Immediate (0–3 years)	Medium
Develop incentive mechanisms to <b>encourage climate-</b> <b>resilient shelter</b> design and construction.	Upgrade new and available shelters using locally available, sustainable materials and techniques, elevated in flood- prone areas, integrated with renewable energy sources and rainwater harvesting systems.	Immediate (0-3 years)	High

INDICATIVE KEY STRATEGIES	BRIEF DESCRIPTION	IMPLEMENTATION PRIORITY	CAPITAL- INTENSIVENESS
Provide <b>temporary subsidies</b> for necessity support.	Widen distribution and reach of <b>food stamps, rations,</b> <b>emergency food distribution,</b> <b>education, and healthcare</b> <b>subsidies.</b>	Immediate (0–3 years)	High
Capacitate regional offices to roll out <b>Post-Disaster Shelter</b> <b>Recovery Policy</b> Framework to LGUs [Local Government Units].	Implement action plans along dimensions of the policy frame- work, including institutional arrangements, shelter recovery practices, shelter recovery planning, shelter recovery financing, and shelter recovery implementation, with direct focus on the most vulnerable segments- women, elder- ly, youth, and persons with disabilities.	Immediate (0–3 years)	High
Introduce a variety of <b>local</b> sources of livelihood in the locality.	Coordinate with nearby communities to identify open economic <b>opportunities for</b> <b>resettled communities</b> to tap into.	Medium-term (3–6 years)	High
Build <b>resilient social</b> <b>enterprises</b> through public- private partnerships.	Create programs that will en- able displaced communities to set up or contribute <b>social en- terprises</b> (e.g., green solutions/ products) through <b>public-pri-</b> vate partnerships.	Medium-term (3–6 years)	Medium
Broaden <b>access</b> to local <b>financing</b> and lending facilities.	Ensure that displaced commu- nities have <b>access to financing</b> and lending facilities to <b>sup-</b> <b>port their relocation</b> .	Medium-term (3–6 years)	Medium
Scale <b>partnerships with NGOs</b> and train local healthcare providers, licensed social workers, and emergency responders.	Establish <b>joint programs</b> to deliver services and programs to address the psychological and social needs of individuals and communi- ties who have been <b>forcibly</b> <b>displaced or relocated</b> .	Medium-term (3–6 years)	High

(pp.210–212, emphasis added)

#### **OUTCOME 2:** ROBUST PREPARATORY AND REINTEGRATION SUPPORT FOR POPULATIONS IMPACTED BY SLOW ONSET CLIMATE EVENTS

INDICATIVE KEY BRIEF DESCRIPTION STRATEGIES		IMPLEMENTATION PRIORITY	CAPITAL- INTENSIVENESS	
Define <b>national policy</b> <b>framework on climate-</b> <b>induced migration</b> to ensure social protection.	Determine <b>national policy and</b> <b>framework</b> to <b>assess</b> , <b>support</b> , <b>and reintegrate climate</b> <b>refugees and other migrants</b> affected by climate change, with a focus on activating social preparation methods for <b>return</b> <b>or resettlement</b> into new areas.	Immediate (0–3 years)	High	
Scale targeted community education programs to increase <b>awareness on climate risks</b> .	Establish comprehensive early warning systems to monitor and predict slow onset climate events and combine with targeted community ed- ucation programs to <b>increase</b> <b>awareness</b> about the potential impacts.	Immediate (0–3 years)	Medium	
Strengthen capacities on <b>safe</b> evacuation and disaster response	Enhance skills and readiness of individuals and commu- nities to effectively carry out safe evacuation procedures and respond to disasters.	Immediate (0-3 years)	Medium	
Facilitate mechanisms for <b>community-based</b> adaptation planning	Facilitate <b>participatory adap-</b> <b>tation planning</b> at the com- munity level by collaborating with locals to identify specific vulnerabilities and design con- text-specific strategies.	Medium-term (3–6 years)	Medium	

(pp.210-212, emphasis added)

#### NAP IMPLEMENTATION

In the section on implementation, the NAP includes funding for relocation under the set of action plans for mobilizing domestic public funds: *"Prioritize funding for social welfare and community adaptation: To channel significant domestic public funding to social resilience of communities, ensure equitable resilience-building and prevent exacerbation of existing inequalities. (e.g., provide cash transfers, relocate vulnerable communities, integrate the Philippines' Population, Health, and Environment Approach)" (p.261, emphasis added).* 



Various dimensions of human mobility will be mainstreamed into the NAP.

#### 4.2.4 Sectoral mainstreaming of adaptation

	READINESS PROPOSAL OUTCOME		READINESS PROPOSAL SUB-OUTCOME		NAP TECHNICAL GUIDELINES ELEMENT		NAP TECHNICAL GUIDELINES STEP
Outcome 2	Evidence and knowledge base on climate change and adaptation strengthened, NAPs formulated	2.5	Climate change adaptation is mainstreamed into priority sectors of national planning and on the subnational level	Element B	Preparatory elements	В5	Integrating climate change adaptation into national and subnational development and sectoral planning

### Why is human mobility important at this step of the NAP process?

Under this sub-outcome, key activities often include:

- 1. Appointing sector focal points and task forces;
- **2.** Conducting policy, institutional and budgetary reviews for the respective priority sectors;
- Sectoral adaptation programming: Updating legislation, strategic planning and action plans for the respective sectors to include climate change adaptation;
- **4.** Skill and capacity mapping and developing skill development and recognition programmes;
- Gender gap analysis of sectoral policies and adaptation plans for the respective priority sectors to identify climate vulnerability related gender gaps;
- 6. Designing and implementing sectoral outreach strategies (e.g. organizing regular (annual) awareness sessions for media and journalists on key aspects of climate change vulnerability and adaptation opportunities);
- **7.** Engaging in social dialogue with employers' and workers' organizations in the priority sector.

Incorporating human mobility in sectoral adaptation plans is important for the following reasons: Firstly, sectoral adaptation plans are **important 'hinges' between** adaptation **planning and implementation**, and their increased level of detail

at the sectoral level, compared with national-level adaptation planning, enables the mainstreaming of human mobility within concrete adaptation actions. Secondly, sectoral adaptation planning includes a wider range of important stakeholders that are necessary for mainstreaming human mobility in adaptation planning. Thirdly, by considering human mobility dimensions and changes thereto, the **effectiveness and long-term** sustainability of sectoral adaptation actions are increased, as they better reflect dynamic real-world conditions regarding, for example, food systems, labour markets or housing needs. Fourthly, including human mobility aspects in the different sectors fosters policy coherence by prompting exchange and uncovering linkages between sectors.

Based on a mapping of the priority areas identified in the NAPs of a selected group of states (see Table 4.2), this Technical Guide provide guidance for mainstreaming human mobility in the context of climate change for the following **priority sectors**:

- Agriculture and food systems;
- Water;
- Biodiversity, ecosystems and forestry;
- Urban settlements;
- Energy;
- DRR.

#### TABLE 4.2: PRIORITY SECTORS COVERED IN THE NAPS OF DIFFERENT COUNTRIES

COUNTRY	PRIORITY SECTORS									
	WATER	AGRICULTURE AND FOOD SECURITY	BIODIVERSITY, ECOSYSTEMS AND FORESTRY	HEALTH	ENERGY	TRANSPOR- TATION	URBAN SETTLEMENTS	DRR	MARINE RESOURCES	OTHER
Brazil	V	V	V	V					V	Vulnerable population
Ethiopia	V	v	v	V	V	V	v			Industry
Ghana		V	V		V	V	v			Equitable social development, land use, infrastructure
Guatemala	V	v	v	V					V	Infrastructure
Kenya	V	V	V		v					Livelihoods, livestock, infrastructure, tourism
Marshall Islands				V	V	V			V	Education skills, and training; cultural and internal affairs
Pakistan	V	V		V			V	V		Human capital; gender, youth and social inclusion
Peru	V		V	V		V			V	Tourism

COUNTRY	PRIORITY SECTORS									
	WATER	AGRICULTURE AND FOOD SECURITY	BIODIVERSITY, ECOSYSTEMS AND FORESTRY	HEALTH	ENERGY	TRANSPOR- TATION	URBAN SETTLEMENTS	DRR	MARINE RESOURCES	OTHER
Philippines	V		V	V	V	V	V			Cultural heritage, population displacement, and migration; livelihoods and industries
Republic of Moldova	V	V	V	V	V	V				
Somalia	V	V	V	V				V	V	Pastoralism
Uzbekistan	V	V		V			V	V		

#### **Relevant for NAP1 or NAP2?**

• Both, especially for NAP2, which often has a stronger focus on sectoral mainstreaming.

### How are human mobility aspects mainstreamed in this step?

For mainstreaming human mobility into sectoral adaptation planning, the following steps could be taken:

- Raise awareness among sectoral focal points about the importance of mainstreaming, with initial briefings (action point 1);
- Include relevant stakeholders in sectoral task forces (action point 2);
- Include human mobility in the context of climate change in additional research and mapping

**of sectoral** risks, vulnerabilities and adaptation options (action point 3);

 Identify key challenges and opportunities of human mobility in the context of climate change by sector, and ways to address them and related needs (activity 1).

It is important to consider internal displacement, including disaster displacement and planned evacuation, migrants in vulnerable situations, crossborder displacement, refugees, pastoralism and transhumance, labour migration and remittances, diaspora, planned relocation, migrants and just transition, displacement due to climate change mitigation and adaptation measures, and trapped population, in the communication and dissemination of information on the different sectors.

## Conduct initial briefings for sectoral focal points

# WHAT DOES IT HELP TO DO?

 Short thematic, bilateral briefings with sectoral focal points will raise awareness of the topic among sectoral focal points and help to get their support for mainstreaming human mobility in the context of climate change in their respective sectors.

### WHO?

- The **sectoral focal points** for the respective sectors could be identified and contacted through the national focal points and the ministries involved.
- **Thematic experts** on human mobility from relevant government entities, UN agencies, academia, think tanks, CSOs (including those led by migrants, internally displaced persons, and refugees), employers' and workers' organizations, and international organizations (which would have already been identified in sub-section 4.1.1 activity 1).
- Special attention could be given to **briefing experts from entities** that address cross-cutting issues in the context of human mobility, including aspects related to age, gender, ethnicity, Indigenous populations, persons with disabilities and legal status.

# STEPS

- Bilateral meetings could be arranged with the sectoral focal points.
- The **briefing material** from sub-section 4.1.1 activity 2 could be used here.
- A specific emphasis on topics and themes relevant to the sectors could be added; templates 4.8–
   4.13 provide a basis for this by giving helpful examples of how human mobility in the context of climate change interacts with the different sectors, and could be adjusted according to the local context.

#### ACTION POINT 2:

## Include human mobility relevant stakeholders in sectoral task forces



### WHAT DOES IT HELP TO DO?

 Identifying and including human mobility relevant stakeholders and their perspectives in the sectoral task forces ensures that needs related to relevant dimensions of human mobility are addressed and the potential of such dimensions to contribute to adaptation can be fully realized.

# WHO?

- The **key stakeholders on human mobility** (who would have already been identified in sub-section 4.1.1 activity 1).
- In addition to human mobility experts, it is also highly recommended to directly **include representatives** of relevant groups, including migrants and their family members staying behind, diaspora members, internally displaced persons, pastoralists and refugees.
- Be sure to also include experts from entities that address cross-cutting issues in the context of human mobility, including aspects related to age, gender, ethnicity, Indigenous populations, persons with disabilities and legal status.<sup>11</sup>

# STEPS

- **Contact** some of the key stakeholders identified in **sub-section 4.1.1 activity 1** and include them or facilitate their inclusion in the activities of the sectoral task force.
- If there is a lack of sectoral expertise or too few stakeholders, **additional sectoral experts** could be identified using the stakeholder list from sub-section 4.1.1 activity 1.

11 Including experts on international refugee and human rights law in the context of climate change impacts and disasters.

#### ACTION POINT 3:

## in the context of climate change in additional research and mapping of sectoral risks, vulnerabilities and adaptation options

### WHAT DOES IT HELP TO DO?

**Include human mobility** 

Ensuring that the different dimensions of human mobility in the context of climate change are included in **additional research and mapping** of **sectoral** risks, vulnerabilities and adaptation options ensures that if **additional sector-specific** research and mapping is undertaken in this area, aspects of **human mobility are not left out**.

# WHO?

- The **key stakeholders on human mobility** (who would already have been identified in sub-section 4.1.1 activity 1).
- **Thematic experts** from relevant government entities, UN agencies, academia, think tanks, CSOs, employers' and workers' organizations, and international organizations.
- Be sure to also include **experts** from entities that address **cross-cutting issues** in the context of human mobility, including aspects related to age, gender, ethnicity, Indigenous populations, persons with disabilities and legal status.<sup>12</sup>
- In addition to sectoral experts and human mobility experts, it is also highly recommended to directly
  include representatives of relevant groups, including migrants and their family members staying
  behind, diaspora members, internally displaced persons, pastoralists, refugees, and employers' and
  workers' organizations.
- Focal points who are tasked with compiling the relevant information for sectoral planning.



- Draw on existing evidence and knowledge on the relationship between human mobility and key sectors (see activity 1 below).
- Identify possible additional priority fields using the sectoral checklists from activity 1 below.

12 Including experts on international refugee and human rights law in the context of climate change impacts and disasters.
#### ACTIVITY 1:



# Synthesizing knowledge on sectoral human mobility challenges and policy entry points

The rest of this sub-section is structured according to the six sectors listed in the introduction to this subsection. For each human mobility dimension, a non-exhaustive checklist is given, as well as examples of entry points for including human mobility in sectoral adaptation planning.

## WHAT DOES IT HELP TO DO?

Bring together knowledge on relevant dimensions of human mobility for each key sector, including
its challenges and potential for adaptation, and policy gaps and entry points. This activity creates the
basis for prioritizing and planning appropriate sectoral adaptation actions. It could also help to avoid
duplications within additional research, and to better inform such research.

WHO?

- Sectoral experts and human mobility experts from relevant government entities, UN agencies, academia, think tanks, CSOs (including those led by migrants, internally displaced persons, and refugees), employers' and workers' organizations, and international organizations.
- Special attention could be given to briefing **experts from entities** that address cross-cutting issues in the context of human mobility, including aspects related to age, gender, ethnicity, Indigenous populations, persons with disabilities and legal status.<sup>13</sup>
- Focal points who are tasked with compiling relevant information for sectoral planning.

# STEPS

- Get all relevant documents on the evidence base and on policy mapping this could include the results of sub-section 4.1.2 activities 2 and 3, and sub-section 4.2.1 action points 1 and 2 and activity 1 and review and synthesize existing knowledge on the impacts of relevant dimensions of human mobility on key sectors.
- Identify both challenges and potential opportunities related to human mobility for adaptation in the sectors; use templates 4.8–4.13 below. These templates could also be sent as questionnaires to stakeholders to elicit additional knowledge.

13 Including experts on international refugee and human rights law in the context of climate change impacts and disasters.

(ask stakeholders to use the examples, but to add columns or replace the content with countryand sector-specific information).

- Also identify entry points for adaptation action and policy for addressing these challenges and opportunities; use sectoral templates 4.8–4.13 below.
- Compile long sector-specific lists of relevant human mobility dimensions, their adaptation challenges and opportunities, and policy entry points.

### Agriculture and food systems

Agriculture is one of the key sectors addressed in NAPs because it is **strongly impacted** by climate change and is essential for maintaining **food** security for populations. In many parts of the world, especially in the most vulnerable countries and areas, agriculture is also a key sector for livelihoods, employment and the economy (World Bank, 2019). Climate impacts on agriculture translate into a range of social and economic impacts, including increasing food insecurity, loss of rural income, and increases in poverty, land abandonment and conflict over scarce resources, in addition to relocation of food production chains (IPCC, 2022b). Migrant workers in the agricultural and food processing sectors are often key contributors to these sectors, but work and live under precarious conditions (Martin, 2016). They are more likely to be vulnerable to impacts of climate change; for example, in terms of heat stress in the workplace.

Pastoralists are particularly vulnerable to climate change impacts, often living in remote, marginal areas with limited access to resources and support networks. However, pastoralists' traditional knowledge is integral to their adaptation. Their reliance on natural resources means that they are well positioned to promote conservation and sustainable land management (IPCC, 2022b; Reid et al., 2014). Supporting pastoralists and their traditional ways of life could inform impactful adaptation to climate change and preserve valuable knowledge and practices.

### Specific challenges and opportunities, as well as entry points, for mainstreaming human mobility into adaptation in the agriculture and food security sector

- Minimize the adverse effects of the various human mobility dimensions on agriculture and food systems by providing adequate (temporary or permanent) support, increasing preparedness and managing other negative outcomes;
- Maximize the potential contributions of migrant workers, diaspora members, returning migrants, internally displaced persons, refugees and others to adaptation in agriculture and leverage their skills, knowledge or resources, including in relation to their expertise in farming and other agricultural activities, their networks and connections, and their innovation and creativity;
- Protect migrant workers in this sector, where they are often subject to poor working conditions and exposed to direct impacts of climatic hazards in the workplace (e.g. heat waves, flooding, mudflow).

## **TEMPLATE 4.8:** AGRICULTURE AND FOOD SYSTEMS – CHALLENGES AND OPPORTUNITIES, AND ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Internal displacement (e.g. disaster displacement and planned or spontaneous evacuation)	<ul> <li>Displacement due to climatic hazards and (temporary) abandonment of agriculture could have negative impacts on food security.</li> <li>Disaster displacement could disrupt work opportunities for migrant farm workers and migrant workers in the food processing sector.</li> <li>Disaster-displaced persons, including children, women and the elderly, might have limited access to nutritious food.</li> <li>Disaster displacement might lead to loss of agricultural assets, especially among women, and/ or produce; this could lead to migration that erodes adaptive capacity or to resistance towards planned evacuation.</li> </ul>	<ul> <li>Ensure functioning agricultural production systems (both localized, as well as regional/national/international) and access to land and resources, as these enable people to return after temporary disaster displacement, and to build back livelihoods.</li> <li>Ensure disaster-displaced persons have access to nutritious food.</li> <li>Protect land rights and ensure that access to resources, especially among women and Indigenous Peoples, is not disrupted due to displacement.</li> <li>Provide compensation and support for agricultural livelihood activities.</li> <li>Include displaced persons in adaptation planning on agriculture and food systems.</li> <li>Be aware of and mediate in potential resource-use conflicts.</li> </ul>
Migrants in vulnerable situations	<ul> <li>Migrants in reception centres and migrants moving through irregular pathways might have <b>limited</b> access to nutritious food.</li> <li>Migrants in reception centres and migrants moving through irregular pathways could lead to increased local demand for agricultural products and food.</li> <li>Informal land use and agriculture by migrants in reception centres could contribute to environmental degradation and a rise in tensions with host communities.</li> </ul>	<ul> <li>Ensure that migrants in reception centres and migrants moving through irregular pathways have access to nutritious food.</li> <li>Facilitate and support sustainable land use for migrants in reception centres.</li> <li>Support the engagement of migrants in reception centres and migrants moving through irregular pathways in local agricultural value chains with decent work.</li> <li>Include migrants in vulnerable situations in adaptation planning on agriculture and food systems, and build on their knowledge.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Cross-border displacement (including refugees, persons who do not meet legal refugee categories but may be in need of international protection, and cross-border evacuations)	<ul> <li>People displaced across borders might have limited access to nutritious food.</li> <li>Cross-border displacement can lead to increased demand for food and agricultural products in hosting areas, potentially straining local resources and infrastructure.</li> <li>Informal land use and agriculture by displaced persons could contribute to environmental degradation and a rise in tensions with host communities.</li> <li>Displaced populations might bring new agricultural knowledge and practices, presenting opportunities for innovation in local farming.</li> </ul>	<ul> <li>Ensure people displaced across borders have access to nutritious food.</li> <li>Support the engagement of people displaced across borders, especially women and Indigenous Peoples, in local agricultural activities by providing access to land, resources and training.</li> <li>Encourage and facilitate the use of sustainable and climate-resilient farming techniques among people displaced across borders to minimize environmental impact and improve food security.</li> <li>Consider cross-border displacement in adaptation planning for agriculture and food systems.</li> <li>Be aware of and mediate in potential resource-use conflicts.</li> </ul>
Refugees	<ul> <li>Refugees might have limited access to nutritious food.</li> <li>The presence of refugees could lead to increased local demand for agricultural products and food.</li> <li>Informal land use and agriculture by refugees around camps could contribute to environmental degradation and a rise in tensions with host communities.</li> <li>Refugees might bring new agricultural knowledge and practices, presenting opportunities for innovation in local farming.</li> </ul>	<ul> <li>Ensure refugees have access to nutritious food.</li> <li>Facilitate and support sustainable land use for refugees.</li> <li>Encourage and facilitate the use of sustainable and climate-resilient farming techniques among refugees to minimize environmental impact and improve food security.</li> <li>Include refugees in adaptation planning on agriculture and food systems and build on their knowledge.</li> <li>Be aware of and mediate in potential resource-use conflicts.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Pastoralism and transhumance	<ul> <li>Reduced output of pastoralist systems due to climate impacts on ecosystem services, including water, land, soil, etc.</li> <li>Possible resource conflicts due to changed mobility, lack of resources or expansion of farming.</li> </ul>	<ul> <li>Include pastoralists in adaptation planning and build on their traditional knowledge of environmental variability.</li> <li>Support pastoralists in periods of livelihood stress.</li> <li>Be aware of and mediate in potential resource-use conflicts.</li> <li>Invest in developing new breeds and genetic types of livestock.</li> </ul>
Labour migration and remittances	<ul> <li>Migrant workers in the farm and food processing sectors often face decent work deficits, exposure to unsafe workplaces, and inadequate living conditions.</li> <li>Remittance investments in farming, livestock rearing and food processing could contribute to adaptation.</li> <li>Lack of labour due to increased outmigration could hamper in situ adaptation.</li> <li>International migrant workers could find it difficult to access food in the aftermath of disasters in countries that are heavily reliant on food imports.</li> </ul>	<ul> <li>Ensure decent work for migrant farm workers and migrant workers in the food processing sector, including through freedom of association and collective bargaining.</li> <li>Assess skills needs and gaps related to the adaptation of agriculture and food systems in destination communities, and offer skill development programmes among migrants.</li> <li>Promote workplace adaptation measures in the agricultural sector through social dialogue.</li> <li>Support migrant households with technical and financial incentives for investing remittance in farming, livestock rearing and food processing.</li> <li>Support farmers in conditions of labour scarcity, including by introducing new technology.</li> <li>Conduct targeted information and awareness campaigns for migrant workers and their family members. Consider language and cultural issues in developing information and awareness campaigns.</li> <li>Include migrant workers in adaptation planning for agriculture and food systems and build on their knowledge.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Diaspora	<ul> <li>Organized diaspora groups have the potential to contribute to agricultural and food systems innovation and change, including by pooling remittances, and through knowledge or technology transfer.</li> </ul>	<ul> <li>Support diaspora members with technical and financial incentives to leverage financial support and knowledge for adaptation related to farming, livestock rearing and food processing.</li> <li>Include diaspora members in adaptation planning on agriculture and food systems and build on their knowledge.</li> </ul>
Planned relocation (permanent)	<ul> <li>Relocated persons, especially children, women and the elderly, might have limited access to nutritious food.</li> <li>Planned relocations can lead to increased demand for food and agricultural products in hosting areas, potentially straining local resources and infrastructure.</li> <li>In many cases, the skills, capacities and experience of relocated people may not be suitable for the livelihoods available in the destination, leading to an inability to find decent work.</li> <li>Relocated communities' use of agricultural resources might lead to conflict with host communities.</li> </ul>	<ul> <li>Ensure relocated persons have access to nutritious food.</li> <li>Ensure continuity of livelihoods and support relocated persons in adapting to new livelihoods and ensure decent work.</li> <li>Support the engagement of relocated persons, especially women and Indigenous Peoples, in local agricultural activities by providing access to land, resources and training.</li> <li>Encourage and facilitate the use of sustainable and climate-resilient farming techniques among relocated persons to minimize environmental impact and improve food security.</li> <li>Provide skill development opportunities and social protection.</li> <li>Be aware of and mediate in potential conflict, including through local (formal and informal) mediation systems.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Migrants and just transition	<ul> <li>Migrants and return migrants have the potential to contribute to climate-resilient agriculture (e.g. introducing organic agriculture or new irrigation systems).</li> <li>New skills might be needed for migrants who choose to engage in climate-resilient agricultural value chains.</li> </ul>	<ul> <li>Support migrants and return migrants with technical and financial incentives to engage in farming, livestock rearing and food processing.</li> <li>Assess skills needs and gaps related to agriculture and food systems in destination communities and offer skill development programmes among migrants.</li> <li>Address decent work deficits in the agriculture sector to make it a viable choice for returning migrants.</li> <li>Include diaspora members in adaptation planning on agriculture and food systems and build on their knowledge.</li> </ul>
Displacement due to climate change mitigation or adaptation measures or projects	<ul> <li>People could be forced to move due to measures related to climate change mitigation or adaptation and might lose their livelihoods.</li> <li>Displaced communities' use of resources might lead to conflict with host communities.</li> </ul>	<ul> <li>Ensure displaced persons have access to nutritious food.</li> <li>Ensure continuity of livelihoods and support in adapting to new livelihoods.</li> <li>Be aware of and mediate in potential conflict, including through local (formal and informal) mediation systems.</li> <li>Compensation could be sought through international climate funds.</li> <li>Provide skill development opportunities and social protection.</li> </ul>
Trapped population	<ul> <li>Agricultural decline and disruption of food systems might decrease individuals' ability to migrate and contribute to immobility.</li> <li>Immobility could further expose vulnerable groups, especially women and Indigenous People, to climate risks and food insecurity.</li> <li>Immobility could also be a result of obligations related to agriculture.</li> </ul>	<ul> <li>Support local adaptation and food security for the most vulnerable groups.</li> <li>Create inclusive, rights-based pathways for safe, orderly and regular migration for people with specific vulnerabilities.</li> <li>Consider the trapped population in adaptation planning on agriculture and food systems.</li> </ul>

### Water

Climate change is increasing the frequency and severity of sudden onset hazards such as floods, cyclones and hurricanes, and leading to increased heatwaves, protracted drought, and glacial melt. According to the AR6, approximately half of the world's population currently experiences severe water scarcity for at least part of the year owing to climatic and non-climatic drivers (IPCC, 2022c). Between 2001 and 2018, 74 per cent of all disasters were water related (UNESCO World Water Assessment Programme, 2020). Of the 26.4 million **internally displaced** owing to disasters in 2023, 9.8 million were displaced owing to floods, 9.5 million owing to storms, and 491,000 were displaced in the context of droughts (IDMC, 2024). Drought is impacting lives and livelihoods by causing land degradation and food insecurity, and reducing agricultural production (McAuliffe and Triandafyllidou, 2021). Pre-existing inequalities and vulnerabilities are further amplified by water-related hazards, especially for those living in hazard-prone areas and relying on primary sector livelihoods. While temporary labour migration could be an autonomous adaptation strategy for seasonal water stress, those exposed to prolonged water insecurity could migrate permanently, likely to urban areas. However, prolonged or repeated drought might also deplete the resources necessary to migrate (Choquette-Levy et al., 2021).

The **impacts of migration on water sources** are largely discussed in negative terms, mainly focusing on the increased demand for water in areas of destination. The **positive impacts of migration**  **on water** security, such as access to finance for adopting irrigation technologies (Sakdapolrak et al., 2016) are rarely considered. Well-governed labour migration could also enhance climate change adaptation by providing an opportunity for livelihood diversification with decent work, channelling investment into resilient infrastructure, and leading to the adoption of climate-smart practices and technologies.

Enhancing knowledge and policy coherence on human mobility, water and climate action will increase benefits for migrants and their families and reduce pressure on climate-vulnerable destinations and sending communities.

### Specific challenges and opportunities, as well as entry points, for mainstreaming human mobility into water sector adaptation

- Increase the potential of migration to contribute to water security, including through access to finance for adopting irrigation technologies or drought-resistant farming practices, or the flow of knowledge and skills (e.g. for water-saving and climate-smart agricultural practices and technologies);
- Ensure water availability and safety in areas with a concentration of **migrants**, internally displaced persons, and refugees;
- Consider the rights of Indigenous groups, pastoralists, and others who are highly dependent on natural resources, including water resources, and their special needs, as well as their traditional knowledge of sustainable water use.

# **TEMPLATE 4.9: WATER – CHALLENGES AND OPPORTUNITIES, AND ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY**

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Internal displacement (e.g. disaster displacement and planned or spontaneous evacuation)	<ul> <li>Flood (and drought) as drivers of displacement.</li> <li>Limited access to safe water in situations of displacement and planned evacuation. Contaminated water could spread diseases.</li> <li>Water-related hazards necessitate evacuation.</li> <li>Shelters are vulnerable to water- related hazards.</li> <li>Limited access to safe sanitation among displaced persons and in evacuation shelters. Contaminated water could spread diseases.</li> </ul>	<ul> <li>Consider vulnerability assessments for water-related displacement and planned evacuation.</li> <li>Improve access to multi-hazard early warning systems, especially among vulnerable population groups, with due consideration for language and cultural issues in early warning communication.</li> <li>Improve preparedness for safe water supply to displaced populations. Ensure safe water provision in evacuation shelters.</li> <li>Plan and build shelters so that they are resilient to water-related hazards.</li> <li>Ensure safe sanitation in evacuation shelters.</li> <li>Include displaced persons in adaptation planning on water and build on their knowledge.</li> <li>Establish monitoring systems to assess the impacts of displacement on water resources.</li> </ul>
Migrants in vulnerable situations (Continues on the next page)	<ul> <li>Exposure of migrants in reception centres and migrants moving through irregular pathways to water-related hazards (e.g. floods, drought).</li> <li>Limited access to safe water among migrants in reception centres and migrants moving through irregular pathways.</li> </ul>	<ul> <li>Vulnerability assessments of migrants in reception centres and migrants moving through irregular pathways could consider water- related hazards.</li> <li>Plan and build migration reception centres so that they are resilient to water-related hazards.</li> <li>Improve safe water supply for migrants in reception centres and migrants moving through irregular pathways.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Migrants in vulnerable situations	• Limited access to <b>safe sanitation</b> among migrants in reception centres and migrants moving through irregular pathways. It can also contribute to the pollution of underground water. <b>Contaminated</b> <b>water</b> could spread diseases.	<ul> <li>Improve safe sanitation among migrants in reception centres and migrants moving through irregular pathways.</li> <li>Consider migrants in reception centres and migrants moving through irregular pathways in adaptation planning on water and build on their knowledge.</li> <li>Establish monitoring systems to assess the impacts on water resources.</li> </ul>
Cross-border displacement (including refugees, persons who do not meet legal refugee categories but may be in need of international protection, and cross-border evacuations)	<ul> <li>Flood (and drought) as drivers of cross-border displacement.</li> <li>Limited access to safe water in situations of displacement and planned evacuation. Contaminated water could spread diseases.</li> <li>Water-related hazards necessitate evacuation.</li> <li>Shelters are vulnerable to water- related hazards.</li> <li>Limited access to safe sanitation among displaced persons and in evacuation shelters. Contaminated water could spread diseases.</li> </ul>	<ul> <li>Consider vulnerability assessments for water-related displacement and planned evacuation.</li> <li>Improve access to multi-hazard early warning systems, especially among vulnerable population groups, with due consideration for language and cultural issues in early warning communication.</li> <li>Improve preparedness for safe water supply to people displaced across borders. Ensure safe water provision in evacuation shelters.</li> <li>Plan and build shelters so that they are resilient to water-related hazards.</li> <li>Ensure safe sanitation in evacuation shelters.</li> <li>Organize cross-border evacuation shelters.</li> <li>Consider people displaced across borders in adaptation planning on water, and build on their knowledge.</li> <li>Establish monitoring systems to assess the impacts of persons displaced across borders on water resources.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Refugees	<ul> <li>Exposure of refugees to water-related hazards (e.g. floods, drought).</li> <li>Limited access to safe water among refugees. Contaminated water could spread diseases.</li> <li>Increased demand for water in areas with refugees can strain local water resources.</li> <li>Refugee camps are vulnerable to water-related hazards.</li> <li>Refugees can introduce new water management practices and technologies, potentially enriching local adaptation strategies.</li> </ul>	<ul> <li>Vulnerability assessment of refugees could consider water-related hazards.</li> <li>Develop and implement policies that strengthen water resource management in areas receiving refugees to ensure sustainable use of and access to water.</li> <li>Invest in improving water infrastructure to accommodate increased demand, and ensure it is resilient to the impacts of climate change.</li> <li>Improve safe water supply for refugee camps.</li> <li>Include refugees in adaptation planning on water, and build on their knowledge.</li> <li>Support the engagement of refugees in local water management.</li> <li>Establish monitoring systems to assess the impacts of refugees on water resources.</li> <li>Be aware of and mediate in potential resource-use conflicts.</li> </ul>
<b>Pastoralism and transhumance</b> (Continues on the next page)	<ul> <li>Climate change could alter water availability, impacting traditional routes and practices of pastoralists and transhumant communities.</li> <li>Competition for diminishing water resources could lead to conflicts between pastoralists and host communities.</li> </ul>	<ul> <li>Vulnerability assessment of pastoralists to water-related hazards.</li> <li>Plan/manage changes in pastoralist routes.</li> <li>Invest in anticipatory actions, including multi-hazard early warning for pastoralists and host communities.</li> <li>Invest in improving water infrastructure to accommodate increased demand, and ensure it is resilient to the impacts of climate change.</li> <li>Invest in developing new breeds and genetic types of livestock.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Pastoralism and transhumance		<ul> <li>Establish monitoring systems to assess the impacts of pastoralists on water resources.</li> <li>Be aware of and mediate in potential resource-use conflicts.</li> <li>Include pastoralists in adaptation planning on water and build on their knowledge.</li> </ul>
Labour migration and remittances (Continues on the next page)	<ul> <li>Decreasing availability and quality of water could affect lives and livelihoods, which, in turn, could lead to people migrating for work.</li> <li>Migrants may not have access to safe water or may live in settlements vulnerable to water hazards in destinations.</li> <li>Remittances could help to improve water supply (e.g. well drilling, piped water).</li> </ul>	<ul> <li>Vulnerability assessment of migrant workers to consider water-related hazards.</li> <li>Improve access to multi-hazard early warning systems, especially among vulnerable population groups, with due consideration for language and cultural issues in early warning communication, in destination communities.</li> <li>Create inclusive, rights-based pathways for safe, orderly and regular migration.</li> <li>Assess skills needs and gaps related to adaptation in the water sector in destination communities and offer skill development programmes among migrants.</li> <li>Include migrants in DRR planning, and ensure adequate protection of migrants and supply of water in destination communities.</li> <li>Leverage remittances for water- related technologies and practices through technical and financial incentives.</li> <li>Enable migrants to use their knowledge, skills and networks to improve access to water.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Labour migration and remittances		<ul> <li>Conduct targeted information and awareness campaigns for migrant workers and their family members. Consider language and cultural issues in developing information and awareness campaigns.</li> <li>Include migrant workers in adaptation planning and build on their knowledge.</li> </ul>
Diaspora	<ul> <li>Diaspora communities could be a source of <b>private investment</b> in water infrastructure in their heritage countries.</li> <li>Leveraging the <b>knowledge and</b> <b>skills</b> of the diaspora for water- related adaptation in host and heritage countries.</li> </ul>	<ul> <li>Leverage financial support of diaspora groups to support water- related adaptation in heritage countries.</li> <li>Raise awareness in diaspora groups.</li> <li>Include diaspora members in adaptation planning in host and heritage countries and build on their knowledge.</li> </ul>
Planned relocation (permanent)	<ul> <li>Water-related hazards are reasons for the relocation of people.</li> <li>Access to water for drinking, household use, sanitation and livelihoods could be limited in new locations.</li> <li>Limited access to safe sanitation among relocated persons.</li> <li>Contaminated water could spread diseases.</li> <li>Relocated communities' use of water might lead to conflict with host communities.</li> </ul>	<ul> <li>Ensure access to safe water for drinking, household use, sanitation, and livelihood activities.</li> <li>Ensure that water use and management practices in new locations are culturally appropriate and sustainable.</li> <li>Improve safe sanitation in relocated communities.</li> <li>Be aware of and mediate in potential conflict, including through local (formal and informal) mediation systems.</li> <li>Establish monitoring systems to assess the impacts of planned relocation on water resources.</li> <li>Invest in anticipatory actions, including multi-hazard early warning systems that consider the needs of vulnerable population groups like women, children, the elderly, and people with disabilities.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Migrants and just transition	<ul> <li>Migrants have the potential to contribute to more sustainable water use, in both origin and destination communities.</li> <li>The existing skills of migrants might become obsolete when demands in destination communities change.</li> </ul>	<ul> <li>Ensure that migrants have decent work opportunities in emerging green sectors, including those related to water (e.g. sustainable water management, irrigation technologies and practices), through rights-based bilateral labour agreements.</li> <li>Assess skills needs and gaps related to water in destination communities, and offer skill development programmes among migrants.</li> <li>Support migrants and return migrants with technical and financial incentives to engage in water- related adaptation.</li> </ul>
Displacement due to climate change mitigation or adaptation measures or projects	<ul> <li>Indigenous and local communities might lose access to traditional water sources owing to large-scale projects like dams or renewable energy installations.</li> <li>Owing to displacement, people might lack access to safe water for drinking, household use, sanitation and livelihoods.</li> </ul>	<ul> <li>Ensure that climate change mitigation and adaptation projects do not disproportionately affect vulnerable populations during planning, construction and operation.</li> <li>Seek compensation for displaced persons through international climate funds.</li> <li>Support local adaptation and ensure water provision for the most vulnerable groups.</li> </ul>
Trapped population	<ul> <li>Water-related hazards lead to people becoming immobile by depleting resources necessary for migration or damaging infrastructure.</li> <li>Populations that are unable to move, especially women and Indigenous Peoples, may face worsening water quality and water scarcity.</li> </ul>	<ul> <li>Create inclusive, rights-based pathways for safe, orderly and regular migration for people with specific vulnerabilities.</li> <li>Support local adaptation and ensure water provision for the most vulnerable groups.</li> </ul>

# Biodiversity, ecosystems and forestry

Human mobility is linked to forests, land cover and biodiversity in a number of ways. Human mobility could **directly impact biodiversity** by driving changes in land use and habitat loss. Migration can lead to land clearing and increased agricultural or urban development, often at the loss of forests, habitats and overall biodiversity. This could then lead to the loss of valuable ecosystem services provided by forests and other ecosystems (Hermans et al., 2023; Kong et al., 2019). Migration to urban areas or international migration and changes in lifestyle also indirectly result in the intensification of agriculture, often with negative effects on biodiversity and ecosystem integrity (Rude et al., 2021). A high concentration of internally displaced persons and refugees in small areas could also lead to overuse of resources (e.g. forest, water) and biodiversity loss (Hasan et al., 2023). Educational migration could create additional financial burdens for those staying behind, which could also lead to increased land-use intensity and deforestation (Juniwaty et al., 2019).

Migration could also lead to **reduced pressure on forests and ecosystems**; for example, when the population density in origin areas is reduced owing to outmigration, or the receipt of remittances **decreases the need for local resources** (Oldekop et al., 2018). Human mobility could also play a role in conservation efforts. As people move into new areas, they bring with them new ideas and perspectives on the environment, which could help to **increase awareness of** and **support for conservation** efforts (Sen and Nagendra, 2020). Pastoralists' livelihoods are adapted to changing and often adverse environmental conditions and variable availability of natural resources, and mobility is their key strategy for dealing with that. Changing economic, social, political and climatic conditions, however, create a need for adaptation of their practices as well.

Overall, human mobility is a complex phenomenon that could both **positively and negatively impact biodiversity, ecosystems and forestry**, and hence support or undermine adaptation efforts. It is important to carefully consider the potential impacts of these processes on the environment and to take steps to minimize negative impacts and promote positive impacts on adaptation.

### Specific challenges and opportunities, as well as entry points, for mainstreaming human mobility into water sector adaptation

- Consider the relationship between different human mobility dimensions and forest and biodiversity in the country context, including:
  - The positive or negative impacts (potential and actual) of each human mobility dimension on biodiversity, ecosystem and forest;
  - The positive or negative impact of loss of forests, grasslands, wetlands, mangroves, or coral reefs on human mobility dimensions.

### **TEMPLATE 4.10:** BIODIVERSITY, ECOSYSTEMS AND FORESTRY – CHALLENGES AND OPPORTUNITIES, AND ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Internal displacement (e.g. disaster displacement and planned or spontaneous evacuation) (Continues on the next page)	<ul> <li>Forest fires could displace people directly by risking their lives and damaging their property, and through loss of livelihood.</li> <li>Deforestation contributes to an increased risk of landslides and floods, which, in turn, increases displacement risk.</li> <li>Increased pressure on ecosystem services in host communities, including through deforestation and increase in solid waste, due to the inflow of people displaced as a result of disasters.</li> <li>Temporary evacuations could lead to the abandonment of conservation practices.</li> <li>Limited availability of natural resources for meeting energy needs and building temporary shelters for displaced persons can contribute to tensions with host communities.</li> </ul>	<ul> <li>Ecosystem-based adaptation         <ul> <li>(e.g. conservation, sustainable management, and restoration of forests, grasslands, wetlands, mangroves or coral reefs) could contribute to reducing the risk of natural hazards, thereby minimizing disaster displacement risk.</li> <li>Ecosystem-based adaptation could contribute to reducing the pressure on ecosystem services due to the inflow of people caused by disasters.</li> <li>Include local stakeholders, especially Indigenous Peoples, and traditional knowledge in sustainable forest management.</li> <li>Ensure the availability of alternative energy sources (e.g. LPG, solar, etc.) for disaster-displaced persons and host communities.</li> <li>Integrate ecosystem-based adaptation planning, and vice versa. For example, identify evacuation routes and temporary shelter areas that minimize impacts on critical habitats and wildlife corridors.</li> <li>Involve evacuees in ecosystem-based adaptation activities, both in their temporary locations and upon their return.</li> <li>Ensure adverse effects on biodiversity, ecosystems and forestry in host communities are minimized.</li> </ul> </li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Internal displacement (e.g. disaster displacement and planned or spontaneous evacuation)		<ul> <li>Implement education programmes for displaced populations about local environmental challenges and sustainable practices.</li> <li>Establish monitoring systems to assess the impacts of displacement on biodiversity, ecosystems and forestry.</li> <li>Be aware of and mediate in potential conflict, including through local (formal and informal) mediation systems.</li> </ul>
Migrants in vulnerable situations (Continues on the next page)	<ul> <li>The spatial concentration of migrants in reception centres and migrants moving through irregular channels could put pressure on ecosystem services and land use.</li> <li>Migrants in reception centres and migrants moving through irregular channels could have limited access to biodiversity, ecosystems and forests.</li> <li>Migrants in reception centres and migrants moving through irregular channels could previously have been dependent on forest-based livelihoods (e.g., timber and non- timber forest products).</li> </ul>	<ul> <li>Be aware of and mediate in potential conflict, including through local (formal and informal) mediation systems.</li> <li>Include the needs of migrants in reception centres and migrants moving through irregular channels in ecosystem-based adaptation initiatives.</li> <li>Ensure the availability of alternative energy sources (e.g. LPG, solar, etc.) for migrants in reception centres and migrants moving through irregular channels.</li> <li>Promote diversification of livelihoods to reduce pressure on existing natural resources.</li> <li>Plan and build migration reception centres in such a way that they do not put pressure on forest resources (e.g. plan and build migration reception centres that are not located in areas with fragile biodiversity).</li> <li>Implement education programmes for migrants in reception centres and migrants moving through irregular channels about local environmental challenges and sustainable practices.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Migrants in vulnerable situations		<ul> <li>Ensure adverse effects on biodiversity, ecosystems and forestry in host communities are minimized.</li> <li>Establish <b>monitoring systems</b> to assess the impacts of migrants in vulnerable situations on biodiversity, ecosystems and forestry.</li> </ul>
Cross-border displacement (including refugees, persons who do not meet legal refugee categories but may be in need of international protection, and cross-border evacuations) (Continues on the next page)	<ul> <li>Increased pressure on ecosystem services in host communities due to the inflow of people displaced by disasters.</li> <li>Cross-border displaced populations could be protected from being exploited by environmentally destructive economic activities.</li> <li>Limited availability of natural resources for meeting energy needs and building temporary shelters for persons displaced across borders can contribute to tensions with host communities.</li> </ul>	<ul> <li>Ecosystem-based adaptation (e.g. conservation, sustainable management, and restoration of forests, grasslands, wetlands, mangroves or coral reefs) could contribute to reducing the risk of natural hazards, thereby minimizing disaster displacement risk.</li> <li>Ecosystem-based adaptation could contribute to reducing the pressure on ecosystem services due to the inflow of people from disasters.</li> <li>Ensure the availability of alternative energy sources (e.g. LPG, solar, etc.) for people displaced across borders and host communities.</li> <li>Develop initiatives that integrate people displaced across borders into existing ecosystem-based adaptation efforts, such as reforestation projects or wildlife protection initiatives.</li> <li>Plan and build shelters in such a way that they do not put pressure on ecosystem services.</li> <li>Ensure adverse effects on biodiversity, ecosystems and forestry in host communities are minimized.</li> <li>Implement education programmes for people displaced across borders about local environmental challenges and sustainable practices.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Cross-border displacement (including refugees, persons who do not meet legal refugee categories but may be in need of international protection, and cross-border evacuations)		<ul> <li>Establish monitoring systems to assess the impacts of displacement on biodiversity, ecosystems and forestry.</li> <li>Be aware of and mediate in potential conflict, including through local (formal and informal) mediation systems.</li> </ul>
Refugees	<ul> <li>The spatial concentration of refugees could put pressure on forest resources and land use.</li> <li>Limited availability of natural resources for meeting energy needs and building temporary shelters for refugees can contribute to tensions with host communities.</li> <li>Refugees could previously have been dependent on forest livelihoods (e.g. timber and non-timber forest products).</li> </ul>	<ul> <li>Ecosystem-based adaptation could contribute to reducing the pressure on ecosystem services due to the inflow of refugees.</li> <li>Mediate in potential conflicts due to land and resource use.</li> <li>Provide alternative livelihoods.</li> <li>Include refugees in ecosystem- based adaptation initiatives.</li> <li>Ensure the availability of alternative energy sources (e.g. LPG, solar, etc.) for refugees and host communities.</li> <li>Plan and build camps in such a way that they do not put pressure on ecosystem services.</li> <li>Ensure adverse effects on biodiversity, ecosystems and forestry in host communities are minimized.</li> <li>Implement education programmes for refugees about local environmental challenges and sustainable practices.</li> <li>Establish monitoring systems to assess the impacts of refugees on biodiversity, ecosystems and forestry.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Pastoralism and transhumance	<ul> <li>Changes in pastoralist routes or timing due to climate change impacts could affect ecosystem services.</li> <li>Traditional knowledge of pastoralists could be used in sustainable ecosystem-based adaptation.</li> <li>Competition for diminishing water and ecological resources could lead to conflict between pastoralists and host communities.</li> </ul>	<ul> <li>Ecosystem-based adaptation could contribute to reducing the impacts of climate change on pastoralism.</li> <li>Integrate traditional knowledge and include pastoralists in ecosystem-based adaptation initiatives.</li> <li>Provide support for pastoralists and people living on agroforestry to avoid forest and biodiversity overuse and degradation.</li> <li>Plan/manage changes in pastoralist routes.</li> <li>Be aware of and mediate in potential resource-use conflicts.</li> </ul>
Labour migration and remittances (Continues on the next page)	<ul> <li>Migrant workers may work in industries that depend on ecosystem services.</li> <li>Labour migration could lead to a decrease in resource pressure on ecosystem services.</li> <li>Social remittances and value change could lead to increased environmental consciousness, and hence to afforestation.</li> <li>Remittance investment could lead to increased intensity in livelihoods and consumption, and hence contribute to the loss of forests, grasslands, wetlands, mangroves or coral reefs.</li> </ul>	<ul> <li>Vulnerability assessment of migrant workers to consider their linkages with biodiversity, ecosystems and forestry.</li> <li>Create inclusive, rights-based pathways for safe, orderly and regular migration.</li> <li>Assess skills needs and gaps related to adaptation with regard to biodiversity, ecosystems and forests in destination communities, and offer skill development programmes among migrants.</li> <li>Leverage remittance and use migrants' knowledge to support ecosystem-based adaptation through technical and financial incentives.</li> <li>Support alternative local livelihoods through decent green jobs and social dialogue.</li> <li>Raise awareness about sustainable livelihoods and consumption.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Labour migration and remittances		<ul> <li>Conduct targeted information and awareness campaigns for migrant workers and their family members. Consider language and cultural issues in developing information and awareness campaigns.</li> <li>Include migrant workers in conservation efforts.</li> </ul>
Diaspora	<ul> <li>Lack of awareness of diaspora members might lead to activities that contribute to the loss of forests, grasslands, wetlands, mangroves or coral reefs.</li> <li>The potential of diaspora to positively contribute to biodiversity conservation and forest protection.</li> </ul>	<ul> <li>Raise awareness among diaspora groups about the importance of ecosystem-based adaptation in host and heritage countries.</li> <li>Support diaspora engagement, investments and knowledge transfer to support ecosystem-based adaptation in host and heritage countries.</li> </ul>
Planned relocation (permanent)	<ul> <li>Planned relocation could lead to deforestation and biodiversity loss in new settlement areas.</li> <li>Limited availability of natural resources for meeting energy needs and building shelters for relocated persons can contribute to tensions with host communities.</li> <li>Relocated communities (especially Indigenous groups) could lose access to important biodiversity, ecosystems and forests related to cultural practices and livelihoods.</li> </ul>	<ul> <li>Integrate ecosystem-based adaptation into relocation planning, creating green settlements.</li> <li>Ensure the availability of alternative energy sources (e.g. LPG, solar, etc.) for the relocated population and host communities.</li> <li>Consult with the host community, including Indigenous Peoples, and ensure access to resources in new settlements. Be aware of and mediate in potential conflict, including through local (formal and informal) mediation systems.</li> <li>Involve relocated persons in ecosystem-based adaptation in destination communities.</li> <li>Ensure adverse effects on biodiversity, ecosystems and forestry in host communities are minimized.</li> <li>Establish monitoring systems to assess the impacts of relocation on biodiversity, ecosystems and forestry.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Migrants and just transition	<ul> <li>Migrants working in industries to be phased out (e.g. certain types of agriculture or logging) will lose jobs and livelihoods, and therefore require retraining and social protection.</li> <li>Migrants may contribute skills and resources relevant to sustainable practices related to biodiversity, ecosystems and forestry.</li> </ul>	<ul> <li>Assess skills needs and gaps related to ecosystem-based adaptation in destination communities and offer skill development programmes among migrants.</li> <li>Support migrants and return migrants with technical and financial incentives to engage in adaptation related to biodiversity, ecosystems and forestry.</li> </ul>
Displacement due to climate change mitigation or adaptation measures or projects	<ul> <li>Dam construction, renewable energy installations (e.g. wind farms, solar energy farms) or large- scale reforestation could result in the <b>displacement of communities</b> that rely on forestry and/or biodiversity for cultural practices and livelihoods.</li> <li>Displacement, especially of Indigenous communities, can lead to a <b>loss of cultural identity</b> and traditional knowledge, which is crucial for sustainable forest and biodiversity management.</li> </ul>	<ul> <li>Involving local communities and leveraging traditional knowledge in the planning of climate change mitigation or adaptation projects can lead to more sustainable and less disruptive outcomes.</li> <li>Comprehensive compensation that goes beyond financial aspects, and includes land rights, livelihood support and cultural preservation can help manage the impacts of displacement.</li> <li>Initiatives like carbon offsetting through reforestation need to consider the land rights and livelihoods of the local communities to avoid displacement or loss of access to forest resources.</li> </ul>
Trapped population	<ul> <li>Trapped populations often live in areas that are increasingly vulnerable to environmental degradation, such as the loss of forests, grasslands, wetlands, mangroves or coral reefs, which could worsen their living conditions and limit their ability to use natural resources sustainably.</li> <li>Immobile groups may lack the resources to adapt to changing environmental conditions, such as shifts in forest ecosystems or the loss of biodiversity.</li> </ul>	<ul> <li>Create inclusive, rights-based pathways for safe, orderly and regular migration for people with specific vulnerabilities.</li> <li>Support local adaptation of immobile groups through capacity-building, education and diversification of livelihoods.</li> </ul>

## **Urban settlements**

Migration to urban areas - whether mega-urban conglomerations, peri-urban settlements or smaller rural towns – is partly the result of **collective** strategies, for example, when families diversify resources and income, but could also be the result of displacement and loss of livelihood in rural origin communities. Cities provide economic opportunities and security, as well as access to markets and public services such as health and education. This could help migrants and their families to gain resources to **better** adapt to climate impacts and other environmental challenges (Baillat et al., 2020). However, often, migrants are also exposed to new risks in urban destinations, especially if urbanization is rapid with little management. Many cities face environmental risks such as flooding, water stress, heat waves, air pollution or fires. Migrants tend to settle in poorly serviced, informal urban and peri-urban areas that may lack basic services such as adequate housing and infrastructure, making them **more vulnerable** to natural hazards. The gaps between climate action in urban environments and migration governance are widening. Such gaps affect cities, urban territories, and dwellers. They mark their realities with hardship and exclusion, while decision makers (i.e. city leaders, urban planners and stakeholders) struggle to find proactive legal, financial or policy support to address the challenges and leverage the opportunities (Roderick et al., 2021).

### Specific challenges and opportunities, as well as entry points, for mainstreaming human mobility into water sector adaptation

- To identify specific challenges and opportunities associated with human mobility in the context of climate change;
- It is important to include involuntary and voluntary human mobility into, out of and within urban areas;
- To specifically include migrants, internally displaced persons, and refugees who live in urban areas in risk and hazard mapping and vulnerability analyses;
- To include representatives of the urban communities that are likely to be most affected by climate-related in-migration;
- Improvement of services in urban areas (e.g. settlement, employment, health care, education) is often key to reaching internally displaced persons, migrants and refugees;
- To review urban development plans to prepare for additional internal and international migration towards cities in the context of climate change, including the sustainable provision of services such as adequate housing, energy, water, waste management and education;
- To acknowledge the need for integrated urban planning to accommodate urban growth as a result of migration to ensure risks are understood and minimized;
- To build **partnerships and networks with other cities**, organizations and institutions to share knowledge, experiences and best practices in the areas of human mobility and urban adaptation planning.

### **TEMPLATE 4.11: URBAN SETTLEMENTS – CHALLENGES AND OPPORTUNITIES,** AND ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Internal displacement (e.g. disaster displacement and planned or spontaneous evacuation)	<ul> <li>The arrival of displaced persons might increase the strain on urban infrastructure, especially in informal settlements.</li> <li>People living in marginal urban areas or informal settlements are often at risk of displacement owing to disasters induced by climatic hazards.</li> <li>People living in marginal urban areas or informal settlements often have limited access to public services and amenities, which increases their vulnerability to climatic hazards.</li> </ul>	<ul> <li>Address displacement and consider the needs for services among disaster- displaced persons in urban planning.</li> <li>Improve disaster preparedness in marginal and hazard-prone urban neighbourhoods. For example, improve access to multi-hazard early warning systems, especially among vulnerable population groups, with due consideration for language and cultural issues in early warning communication.</li> <li>Improve access to adequate housing. Include the necessary resources (e.g. space, services) for accommodating temporary evacuees in urban areas.</li> <li>Implement community engagement and awareness programmes to pre- pare residents for evacuation scenarios.</li> <li>Ensure protection of rights (e.g. tenancy, land) to ensure returns.</li> <li>Be aware of and mediate in potential conflict, including through local (formal and informal) mediation systems.</li> </ul>
Migrants in vulnerable situations	<ul> <li>Migrants in reception centres and migrants moving through irregular channels often live in <b>precarious</b> <b>circumstances</b> and lack access to adequate housing, decent jobs and public services.</li> <li>Migration reception centres could be in areas that are at <b>risk of</b> <b>climatic hazards</b>.</li> </ul>	<ul> <li>Risk and vulnerability assessments need to consider migrants in reception centres and migrants moving through irregular channels in urban areas.</li> <li>Improve access to adequate housing, decent employment and public services among migrants in reception centres and migrants moving through irregular channels.</li> <li>Consider migrant reception centres and migrants moving through irregular channels in urban planning, adaptation planning and DRR planning.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Cross-border displacement (including refugees, persons who do not meet legal refugee categories but may be in need of international protection, and cross-border evacuations)	<ul> <li>The arrival of persons displaced across borders might increase the strain on urban infrastructure, especially in informal settlements.</li> <li>People living in marginal urban areas or informal settlements are often at risk of displacement owing to disasters induced by climatic hazards.</li> <li>Language and cultural barriers could be a barrier for persons displaced across borders with regard to understanding housing regulations.</li> </ul>	<ul> <li>Risk and vulnerability assessments need to consider persons displaced across borders who find shelter in urban areas.</li> <li>Improve disaster preparedness (e.g. early warning, adequate housing) in marginal and hazard-prone urban neighbourhoods.</li> <li>Implement community engagement and awareness programmes to prepare residents for the arrival of people displaced by disasters across borders.</li> <li>Ensure protection of rights (e.g. tenancy, land) to ensure return.</li> <li>Consider persons displaced across borders in urban planning, adaptation planning and DRR planning.</li> <li>Engage persons displaced across borders in languages they speak and with consideration for their cultural norms.</li> <li>Be aware of and mediate in potential conflict, including through local (formal and informal) mediation systems.</li> </ul>
<b>Refugees</b> (Continues on the next page)	<ul> <li>Refugees often live in precarious circumstances in urban areas and lack access to adequate housing, decent jobs and public services.</li> <li>Refugees could live in urban areas that are at risk of climatic hazards.</li> <li>Language and cultural barriers could be a barrier for refugees in terms of understanding housing regulations.</li> </ul>	<ul> <li>Risk and vulnerability assessments need to consider refugees who live in urban areas.</li> <li>Improve disaster preparedness (e.g. early warning, adequate housing) in marginal and hazard-prone urban neighbourhoods.</li> <li>Implement community engagement and awareness programmes to prepare residents for the arrival of refugees.</li> <li>Consider refugees in urban planning, adaptation planning and DRR planning.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Refugees		<ul> <li>Communicate with refugees in the languages they speak and with consideration for their cultural norms.</li> <li>Be aware of and mediate in potential conflict, including through local (formal and informal) mediation systems.</li> </ul>
Pastoralism and transhumance	<ul> <li>Climate-induced loss of traditional livelihoods might increase the migration of pastoralists (or their family members) into urban areas.</li> <li>Unplanned expansion of urban areas could lead to the reduction of traditional grazing lands.</li> <li>Urban settings could provide pastoralists with greater access to markets for their products, such as milk, meat and wool.</li> </ul>	<ul> <li>Risk and vulnerability assessments in urban areas need to consider pastoralists (if relevant).</li> <li>Implement land-use policies that accommodate the changing needs of pastoralists, such as designated grazing corridors.</li> <li>Specifically include pastoralists who might not permanently live in urban areas in planning basic public services and support, such as education, health care and social services.</li> <li>Support pastoralists to diversify livelihoods, potentially integrating them into urban economies through decent jobs while preserving their cultural practices.</li> <li>Be aware of and mediate in potential conflict, including using local (formal and informal) mediation systems.</li> </ul>
Labour migration and remittances (Continues on the next page)	<ul> <li>Labour migration contributes to urban growth and could also add strain on urban services. Rural- to-urban migrants often live in informal settlements with limited access to services.</li> <li>Exclusion of migrants from access to services and higher exposure to climate risks lead to inequality.</li> </ul>	<ul> <li>Risk and vulnerability assessments in urban areas need to consider migrant workers.</li> <li>Support migrants in dealing with climate risks and hazards, including planning, providing tailored information on risks and protection, and ensuring equal access to climate-resilient housing, water, cooling spaces, and other essential services.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Labour migration and remittances	<ul> <li>Migrant workers are often the backbone of important urban processes and economic sectors, contributing to climate change adaptation, although they themselves lack decent work.</li> <li>Remittances from urban areas often contribute to adaptation in rural areas of origin.</li> </ul>	<ul> <li>Ensure adequate housing, social protection and decent work, enabling urban migrants to succeed in urban settings and contributing to rural development.</li> <li>Conduct targeted information and awareness campaigns for migrant workers and their family members. Consider language and cultural issues in developing information and awareness campaigns.</li> <li>Include urban migrants in urban governance – urban planning, adaptation planning and DRR planning – unlocking their potential to contribute to urban adaptation.</li> </ul>
Diaspora	<ul> <li>Diaspora communities might be less aware of and connected to urban adaptation issues in heritage countries.</li> <li>Diaspora investments (e.g. in real estate) could sometimes lead to imbalances in urban development in heritage countries, focusing on certain areas or projects at the expense of broader, inclusive urban planning.</li> <li>The engagement of the diaspora has the potential to contribute to adaptation through investments in sustainable urban projects, and with knowledge and skill transfer in host and heritage countries.</li> </ul>	<ul> <li>Raise awareness in diaspora communities.</li> <li>Actively engage diaspora communities in discourses on urban adaptation in heritage countries. Create opportunities for them to contribute to urban governance (i.e. urban planning, adaptation planning and DRR planning).</li> <li>Create incentives, such as tax benefits, recognition programmes or co-investment schemes, for the diaspora to invest in climate-resilient urban projects.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Planned relocation (permanent)	<ul> <li>If relocated to or within urban areas, communities might face challenges in accessing livelihoods and services, as well as integrating socially and culturally and preserving their identity.</li> <li>Relocated communities might be placed in urban areas that are at risk of climate hazards (e.g. flooding, landslides, heat waves).</li> <li>Relocated communities could contribute to sustainable urban development and revitalization through diverse skills and activities.</li> <li>Relocated communities might have conflicts with host communities regarding access to resources and public services.</li> </ul>	<ul> <li>Include cities and consider urban development in planned relocation and managed retreat plans, both as possible destinations for relocation and for intra-urban relocations from risk zones.</li> <li>Ensure that relocated communities have access to essential livelihoods and public services.</li> <li>Implement relocation in a participatory and voluntary way, respecting the rights and dignity of communities and minimizing social disruption and losses.</li> <li>Implement programmes that facilitate the social integration of relocated populations, such as community-building initiatives.</li> <li>Be aware of and mediate in potential conflict, including through local (formal and informal) mediation systems.</li> </ul>
Migrants and just transition	<ul> <li>Migrants in urban areas might face difficulties when their jobs and skills are made redundant during the just transition.</li> <li>Migrants have the potential to contribute to just transition in urban areas.</li> </ul>	<ul> <li>Engage in inclusive social dialogue with employers' and workers' organizations to help manage the transition in a fair and equitable manner.</li> <li>Assess skills needs and gaps related to adaptation in destination communities. Provide training and capacity-building for internal and international migrants in decent green urban jobs, such as green renovation, urban agriculture, sustainable transportation and circular economy.</li> <li>Support migrants to transition to emerging green sectors, including through equal access to training and social protection.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Displacement due to climate change mitigation or adaptation measures or projects	<ul> <li>When displaced to, from or within urban areas, people displaced owing to climate change mitigation and adaptation measures, especially Indigenous persons and socially marginalized groups, may lose access to their livelihoods and cultural practices.</li> <li>The influx of people displaced owing to climate change mitigation or adaptation measures can strain existing urban infrastructure.</li> </ul>	<ul> <li>Ensure that climate change mitigation and adaptation projects do not disproportionately affect vulnerable population groups during planning, implementation and operation in urban areas.</li> <li>Include affected communities in planning for climate change mitigation and adaptation measures and include the needs of displaced communities in urban planning.</li> <li>Seek compensation through international funding facilities for people permanently displaced to, from or within urban areas owing to climate change mitigation and adaptation projects.</li> </ul>
Trapped population	<ul> <li>People living in marginalized urban areas that are exposed to environmental and climate hazards might be 'trapped' in such areas, lacking the capacity to move to other areas.</li> <li>Vital support and services for dealing with environmental hazards are withheld from vulnerable people living and trapped in (urban) areas that are declared informal or non-settlement zones.</li> </ul>	<ul> <li>Improve living conditions and adaptation to climatic and environmental hazards in vulnerable urban communities (e.g. with flood barriers, adequate housing, cooling centres, greening).</li> <li>Address underlying factors contributing to vulnerability such as inequality, discrimination, decent work deficits and lack of social protection to strengthen adaptive capacity.</li> <li>Create inclusive, rights-based pathways for safe, orderly and regular migration for people with specific vulnerabilities.</li> </ul>

## Energy

The energy sector is linked to human mobility in the context of climate change. Firstly, the **impacts** of climate change on the energy sector could affect migrants, internally displaced persons, and refugees. Extreme weather events, which are expected to become more frequent and severe owing to climate change, could displace people and disrupt their access to energy services. Changes in the availability and affordability of energy could affect the livelihoods and economic opportunities of migrants, internally displaced persons, and refugees, potentially leading to increased (energy) poverty and inequality (Global Platform for Action, 2022; Lahn and Grafham, 2015). Secondly, temporary and permanent migration might lead to higher energy demand in places of destination, which needs to be considered in planning, but could also create additional emissions if energy is produced from fossil fuels (Ru et al., 2015; Scott et al., 2018). With increasing migration from rural to urban areas and changing lifestyles and consumption habits, energy needs for growing cities will also likely increase. These energy requirements need to be met through sustainable means. Thirdly, climate change mitigation measures could negatively affect population groups; for example, if Indigenous groups are displaced when their land is converted for green energy production (e.g. through solar or hydropower projects) or migrant workers working in 'brown industries' get laid off as

a result of decarbonization activities and require reskilling (Kennedy et al., 2023; ILO, 2023a). Fourthly, **migration could also contribute to climate change mitigation**; for example, through investment of remittances in small-scale renewable energy production, or by migrant workers transitioning to decent green jobs in the energy sector (Das et al., 2021; ILO, 2023b).

### Specific challenges and opportunities, as well as entry points, for mainstreaming human mobility into water sector adaptation

- Identify specific challenges and opportunities associated with access to energy within the framework of human mobility and climate change;
- Include representatives of migrants, internally displaced persons, and refugees while planning energy generation and use;
- Engage in social dialogue and action on human mobility and changes in energy generation and use with employers' and workers' organizations;
- Improve access to clean energy in urban areas (e.g. informal settlements) and remote areas for internally displaced persons, migrants and refugees;
- Consider the skills development and social protection needs of migrant workers employed in the fossil fuels sector.

### **TEMPLATE 4.12:** ENERGY – CHALLENGES AND OPPORTUNITIES, AND ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Internal displacement (e.g. disaster displacement and planned or spontaneous evacuation)	<ul> <li>Disaster-displaced persons often have limited access to energy, including clean energy, adversely affecting the environment.</li> <li>Disaster displacement might lead to higher energy demand in (temporary) destinations, including shelters. This could lead to an additional strain on local resources or the local electricity grid.</li> <li>Evacuation centres with access to clean and reliable energy can contribute to ensuring continuity of access to basic services and communications in case of a disaster.</li> </ul>	<ul> <li>Develop protocols for energy supply management during disasters, including shelters, water points and community infrastructure. Consider access to energy in emergency preparedness plans, including improving access among vulnerable population groups.</li> <li>Improve climate resilience of energy infrastructure.</li> <li>Strengthen local capacities to manage increased energy demands.</li> <li>Ensure that displaced persons have access to energy solutions and technology that meet their immediate and longer-term needs.</li> <li>Consider sustainable and efficient disposal of waste from energy solutions, including renewable and energy-efficient solutions.</li> <li>Be aware of and mediate in potential energy-use conflicts, including through local (formal and informal) mediation systems.</li> </ul>
Migrants in vulnerable situations	<ul> <li>Access to energy is often limited in migration reception centres and for migrants moving through irregular channels.</li> <li>Migrants in reception centres and migrants moving through irregular channels who live in informal settlements are often excluded from the regular provision of energy.</li> </ul>	<ul> <li>Include the needs of migrants in reception centres and migrants moving through irregular channels when planning changes in energy systems in the context of climate change.</li> <li>Ensure access to energy for migrants in reception centres and migrants moving through irregular channels, especially in remote areas.</li> <li>Consider sustainable and efficient disposal of waste from energy solutions, including renewable and energy-efficient solutions.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Cross-border displacement (including refugees, persons who do not meet legal refugee categories but may be in need of international protection, and cross-border evacuations)	<ul> <li>People displaced across borders might face barriers in accessing reliable and affordable energy, including clean energy, exacerbating their vulnerability.</li> <li>The influx of displaced populations can increase local energy demands, putting pressure on existing infrastructure.</li> <li>People displaced across borders can benefit from and contribute to the implementation of sustainable energy solutions.</li> </ul>	<ul> <li>Include the needs of people displaced across borders in the planning and upgrading of energy systems in the context of climate change.</li> <li>Ensure access to energy for people displaced across borders, especially in remote areas, and to clean energy, including through training and opportunities for decent work in energy generation/installation.</li> <li>Improve climate resilience of energy infrastructure.</li> <li>Strengthen local capacities to manage increased energy demand.</li> <li>Consider sustainable and efficient disposal of waste from energy solutions, including renewable and energy-efficient solutions.</li> <li>Be aware of and mediate in potential energy-use conflicts.</li> </ul>
<b>Refugees</b> (Continues on the next page)	<ul> <li>Access to energy is often limited in refugee camps.</li> <li>Refugees who live in informal settlements are often excluded from the regular provision of energy.</li> <li>The influx of displaced populations can increase local energy demand, putting pressure on existing infrastructure.</li> </ul>	<ul> <li>Include the needs of refugees in planning, upgrading and changing energy systems in the context of climate change.</li> <li>Ensure access to energy for refugees, especially in remote areas, and to clean energy, including through training and opportunities for decent work in energy generation/installation.</li> <li>Improve climate resilience of energy infrastructure.</li> <li>Strengthen local capacities to manage increased energy demand.</li> <li>Consider sustainable and efficient disposal of waste from energy solutions, including renewable and energy-efficient solutions.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Refugees		<ul> <li>Be aware of and mediate in potential energy-use conflicts.</li> </ul>
Pastoralism and transhumance	<ul> <li>Climate change will likely contribute to the changing energy needs of pastoralists. Provision of (sustainable) energy might be difficult for pastoralists in remote areas.</li> <li>Pastoralists produce charcoal as an alternative source of income, with production increasing during slow onset climatic hazards (e.g. drought). This adversely affects the environment.</li> <li>The establishment of new energy infrastructure (e.g. solar arrays, wind energy) might disrupt pastures and/or routes of pastoralists.</li> </ul>	<ul> <li>Develop portable and easy-to- deploy renewable energy sources for pastoralists.</li> <li>Involving pastoral communities in the planning and implementation of energy projects could increase the success of energy supply.</li> <li>Strengthen local capacities to manage increased energy demands.</li> <li>Be aware of and mediate in potential energy-use conflicts.</li> </ul>
Labour migration and remittances (Continues on the next page)	<ul> <li>Migrant workers could live in informal settlements in destinations with limited access to energy, including clean energy.</li> <li>Remittance investment could help to improve the adoption of energy-efficient and renewable energy solutions.</li> <li>Migrant workers are often important for the functioning of the energy sector, including the renewable energy sector, in destination areas. They may already have skills related to establishing and maintaining renewable energy applications.</li> </ul>	<ul> <li>Improve access to energy, including clean energy, in informal settlements in destination communities.</li> <li>Encourage and facilitate investment of remittances in clean energy projects through technical and financial incentives.</li> <li>Develop programmes to use and/ or develop the skills of migrants and returning migrants in the energy sector, especially in relation to clean energy, including through training and opportunities for decent work.</li> <li>Ensure decent work for migrant workers in the energy sector, including through freedom of association and collective bargaining.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Labour migration and remittances	<ul> <li>Economic crisis, fiscal restructuring and reforming of government subsidies (e.g. for fuel) could adversely impact migrant workers, which could have implications for the environment.</li> </ul>	<ul> <li>Create networks for knowledge and technology exchange between migrants and local communities on clean energy.</li> <li>Conduct targeted information and awareness campaigns for migrant workers and their family members. Consider language and cultural issues in developing information and awareness campaigns.</li> <li>Include migrant workers and other stakeholders working in this sector in addressing the impacts of economic crisis, fiscal restructuring, and subsidy reforms with a view to creating possible solutions for social security.</li> <li>Improve climate resilience of energy infrastructure.</li> </ul>
Diaspora	<ul> <li>Despite diaspora communities' engagement in local development in heritage countries, awareness about the need to support clean energy generation might be limited.</li> <li>Diaspora engagement could contribute to local, small-scale energy systems, especially clean energy development projects.</li> <li>Planned diaspora investments could contribute to large-scale energy systems, especially clean energy development projects.</li> </ul>	<ul> <li>Raise awareness among diaspora groups of activities in the clean energy sector and engage them in such activities.</li> <li>Facilitate knowledge and technology transfer through diaspora networks and with their heritage countries.</li> <li>Create incentives for the diaspora to invest in clean energy projects.</li> <li>Include diaspora members in energy planning in host and heritage countries.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Planned relocation (permanent)	<ul> <li>In destination areas of planned relocation, energy needs are likely to increase.</li> <li>Relocating existing energy infrastructure or building new facilities in relocation areas could be logistically complex and resource intensive.</li> <li>Ensuring equitable access to energy for all members of the relocated community, including vulnerable population groups, might be difficult.</li> <li>Relocation can increase local energy demand, putting pressure on existing infrastructure.</li> </ul>	<ul> <li>Involve representatives of the host community and relocated population in the energy planning process to ensure that the solutions are tailored to their needs and preferences.</li> <li>Explore models for local ownership of energy resources, which could empower communities and ensure long-term sustainability.</li> <li>Ensure access to energy, especially to clean energy and in remote areas, for relocated persons, including through training and opportunities for decent work in energy generation/installation.</li> <li>Consider sustainable and efficient disposal of waste from energy solutions, including renewable and energy-efficient solutions.</li> <li>Improve climate resilience of energy infrastructure.</li> </ul>
Migrants and just transition	<ul> <li>Migrants in 'brown' energy sectors (coal, gas, oil, etc.) might lose their jobs during the transition of energy production, and their skills may become redundant.</li> <li>The 'greening' of the energy sector creates new labour needs (e.g. in wind and solar power, intelligent grids, new heating systems).</li> </ul>	<ul> <li>Work with social partners to map the emerging labour dynamics and skills gaps and needs in the energy sector to ensure skills development for workers, including migrant workers.</li> <li>Organize skills development and recognition schemes for migrant workers in the energy sector.</li> <li>Provide portable social protection to migrant workers whose jobs become redundant.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
due to climate change mitigation or adaptation measures or projects	<ul> <li>clean of green energy projects could become the reason for population displacement, often of Indigenous communities, or disrupt Indigenous practices.</li> <li>After displacement, communities might lose access to vital resources and cultural practices.</li> </ul>	<ul> <li>displacement of communities for large-scale clean energy projects.</li> <li>Develop community-led and community-owned small-scale renewable energy projects.</li> <li>Support the participation of communities, including Indigenous People, in the planning, construction and monitoring of clean energy installations and energy waste disposal.</li> <li>Develop mechanisms for fair benefit sharing with affected communities.</li> <li>Seek compensation through international facilities for people displaced because of energy projects.</li> </ul>
Trapped population	<ul> <li>Trapped populations could be especially vulnerable to energy poverty and local energy shortages resulting from climate impacts.</li> <li>Energy insecurity could contribute to more people becoming involuntarily immobile owing to a decline of resources necessary for moving.</li> </ul>	<ul> <li>Create resilient and clean energy solutions for remote and/or marginalized regions and for populations unable to move.</li> <li>Create opportunities for training and decent work in energy generation/installation and energy waste disposal.</li> </ul>
### **Disaster Risk Reduction**

Climate change, environmental degradation and natural disasters are reshaping contemporary human mobility patterns around the world. In the past 10 years, storms, floods, droughts and other weather-related disasters have caused an average of 23.8 million annual displacements worldwide (IDMC, 2024). The impacts of these sudden onset events are felt worldwide but are unevenly distributed. Over 78 per cent of events are recorded in sub-Saharan Africa, South Asia, East Asia and the Pacific (IDMC, 2024). These impacts are expected to increase. Currently, natural disasters do not tend to lead to protracted displacement to the same extent that conflicts do; however, as extreme weather events become more frequent and severe, especially under highemissions scenarios, there is an increased chance of disaster displacements becoming more protracted or leading to repeated displacements over time (Cissé et al., 2022). Evidence shows that climate change could have different implications for particular social groups; women and young people are often particularly exposed (Traore Chazalnoël et al., 2020). Migrants may also be exposed to unfamiliar risks in destination communities.

DRR and in situ adaptation are aimed at promoting climate-resilient development, which could also help to avert, minimize and address loss and damage, including with regard to displacement in the context of climate change. Implementing such solutions requires broad-based partnerships across different thematic areas at local, regional, national and international level.

### Specific challenges and opportunities, as well as entry points, for mainstreaming human mobility into adaptation in the DRR sector

The key ideas here are to:

- Strengthen preparedness to minimize, avert and address displacement related to the adverse impacts of climate change;
- Assist those displaced as a result of the adverse impacts of climate change and strengthen efforts to find durable solutions;
- Recognize migrants, internally displaced persons, and refugees as key stakeholders in DRR at the local level;
- Recognize that migrants, internally displaced persons, and refugees contribute to the resilience of communities, and that their knowledge, skills and capacities could be useful in the design and implementation of DRR actions.

### **TEMPLATE 4.13:** DISASTER RISK REDUCTION – CHALLENGES AND OPPORTUNITIES, AND ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Internal displacement (e.g. disaster displacement and planned or spontaneous evacuation)	<ul> <li>Rapid response capabilities         <ul> <li>and effective management             of resources during sudden             displacement events could be             challenging.</li> </ul> </li> <li>Providing adequate shelter         <ul> <li>and meeting basic needs (e.g.             food, water and health care) for             displaced populations could be             challenging.</li> </ul> </li> <li>Ensuring the safety and         <ul> <li>security of displaced individuals,             especially of women, children, the             elderly and people with disabilities,             could be challenging.</li> </ul></li></ul>	<ul> <li>Invest in anticipatory actions, including multi-hazard early warning and contingency planning, that consider the needs of vulnerable population groups like women, children, the elderly and people with disabilities.</li> <li>Ensure adequate capacities for responding to disaster displacement. Integrate climate risks into humanitarian response plans and programming.</li> <li>Develop comprehensive evacuation plans that consider all demographics, including vulnerable population groups like women, children, the elderly and people with disabilities.</li> <li>Plan for adequate provision of public services for meeting basic needs during displacement situations.</li> <li>Strengthen local capacities for emergency response and evacuation procedures.</li> <li>Involve local communities in evacuation planning to achieve more effective strategies.</li> <li>Effectively communicate evacuation plans in multiple languages, especially to remote or marginalized communities and vulnerable groups like women, children, the elderly and people with disabilities. Ensure the members of those communities are familiar with evacuation routes.</li> <li>Consider language and cultural issues in DRR communication.</li> <li>Consider protection issues while developing plans for evacuation and emergency shelters.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Migrants in vulnerable situations	<ul> <li>Migrants in reception centres and migrants moving through irregular channels might be difficult to reach and access during disasters.</li> <li>Legal and social barriers could prevent migrants in reception centres and migrants moving through irregular channels from being eligible or accepted to participate in DRR initiatives.</li> <li>Language and cultural barriers could prevent migrants in reception centres and migrants moving through irregular channels from participating in DRR initiatives.</li> </ul>	<ul> <li>Vulnerability assessments of migrants in reception centres and migrants moving through irregular channels could consider climate hazards.</li> <li>Establish legal protections and policies that safeguard the rights of migrants in reception centres and migrants moving through irregular channels in DRR initiatives.</li> <li>Conduct targeted information and awareness campaigns for migrants in vulnerable situations, especially including vulnerable population groups like women, children, the elderly and people with disabilities.</li> <li>Develop and implement non-return policies to avoid a return to countries experiencing disasters, and grant entry, expedite entry processes or otherwise ease entry requirements in disaster situations.</li> <li>Provide targeted training and capacity-building for migrants in reception centres and migrants moving through irregular channels to enhance their understanding of local disaster risks and effective response measures.</li> <li>Consider language and cultural issues in DRR communication.</li> <li>Invest in anticipatory actions, including multi-hazard early warning and contingency planning, that consider the needs of migrants in vulnerable situations, and build disaster-resilient migration reception centres.</li> <li>Collaborate with stakeholders and international organizations to provide support to migrants in vulnerable situations.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Cross-border displacement (including refugees, persons who do not meet legal refugee categories but may be in need of international protection, and cross-border evacuations)	<ul> <li>Cross-border displaced populations are rarely included in DRR planning and implementation.</li> <li>When located in hazard-prone areas without robust infrastructure, these populations can be exceptionally vulnerable to further hazards.</li> <li>Despite their vulnerabilities, displaced populations can bring valuable knowledge and skills that could enhance local resilience against disasters, provided they are properly integrated and empowered.</li> <li>Language and cultural barriers could prevent persons displaced across borders from participating in DRR initiatives.</li> </ul>	<ul> <li>Develop DRR policies that explicitly include considerations for cross- border displacement and related protection needs.</li> <li>Invest in anticipatory actions, including multi-hazard early warning and contingency planning, that consider the needs of people displaced across borders, including women, children, the elderly and people with disabilities.</li> <li>Provide targeted training and capacity-building for people displaced across borders to enhance their understanding of local disaster risks and effective response measures.</li> <li>Plan for adequate provision of public services for meeting basic needs during displacement situations.</li> <li>Avoid placing shelters and settlements for people displaced across borders in high-risk areas.</li> <li>Consider language and cultural issues in DRR communication.</li> <li>Establish and enforce non-return policies that prevent the forced return of displaced populations to areas where their safety would be compromised owing to ongoing or imminent disasters.</li> <li>Set up mechanisms for monitoring the long-term impacts of cross- border displacement.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Refugees	<ul> <li>Refugees might face a lack of integration and inclusion in the host community's DRR strategies, plans and programming.</li> <li>Refugees might be excluded from DRR communication owing to technical and language barriers.</li> <li>Refugee camps may be located in hazard-prone areas and may lack disaster preparedness.</li> <li>Language and cultural barriers could prevent refugees from participating in DRR initiatives.</li> </ul>	<ul> <li>Vulnerability assessment of refugees could consider climate hazards.</li> <li>Develop inclusive DRR policies that take into account the needs of refugees and their protection needs. Integrate climate risks into humanitarian response plans and programming.</li> <li>Provide capacity-building and training for refugees and camp coordinators to enhance their understanding of local disaster risks and effective response measures.</li> <li>Conduct targeted information and awareness campaigns for refugees, especially including vulnerable population groups like women, children, the elderly and people with disabilities. Consider language and cultural issues in DRR communication.</li> <li>Avoid placing camps and settlements for refugees in high-risk areas.</li> <li>Invest in anticipatory actions, including multi-hazard early warning systems that consider the needs of refugees, and build disaster-resilient infrastructure.</li> <li>Develop and implement non-return policies to avoid a return to countries experiencing disasters, and adapt entry requirements to grant, expedite or otherwise facilitate entry in disaster situations.</li> <li>Set up mechanisms for monitoring long-term impacts.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Pastoralism and transhumance	<ul> <li>Pastoralists could be difficult to reach and include in conventional DRR strategies, but they are vulnerable to climatic hazards.</li> <li>The traditional knowledge of pastoral communities could be leveraged for DRR strategies tailored to their needs.</li> </ul>	<ul> <li>Assess the needs of pastoralists in the context of disasters, including the types of disaster that disproportionately impact them.</li> <li>Develop inclusive DRR policies that take into account the needs of pastoralists, including their seasonal movement.</li> <li>Provide capacity-building and training for pastoralists to enhance their understanding of local disaster risks and effective response measures.</li> <li>Conduct targeted information and awareness campaigns for pastoralists, especially including vulnerable population groups like women, children, the elderly and people with disabilities. Consider language and cultural issues in DRR communication.</li> <li>Invest in anticipatory actions, including multi-hazard early warning systems that consider the needs of pastoralists.</li> <li>Set up mechanisms for monitoring long-term impacts.</li> </ul>
<b>Planned relocation</b> (permanent) (Continues on the next page)	<ul> <li>People may be relocated to areas at risk of new environmental hazards.</li> <li>Building new communities for relocated persons provides the opportunity to manage disaster risk in an equitable way.</li> </ul>	<ul> <li>Consider DRR requirements in the destination community while developing and implementing planned relocations.</li> <li>Avoid placing new settlements in high-risk areas.</li> <li>Provide capacity-building and training for the relocated population to enhance their understanding of local disaster risks and effective response measures.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)			
Planned relocation (permanent)		<ul> <li>Conduct targeted information and awareness campaigns for relocated populations, especially including vulnerable groups like women, children, the elderly and people with disabilities. Consider language and cultural issues in DRR communication.</li> <li>Invest in anticipatory actions, including multi-hazard early warning and disaster-resilient infrastructure.</li> <li>Set up mechanisms for monitoring the long-term success of planned relocations.</li> </ul>			
Labour migration and remittances	<ul> <li>Outmigration of people could create challenges for DRR owing to skills and labour shortages.</li> <li>Investment of remittances could contribute to local DRR and resilience-building.</li> <li>The skills and experience of returning migrants could be leveraged for local DRR efforts.</li> <li>Migrant workers may find themselves unable to access DRR initiatives owing to unfamiliarity with local systems and risks.</li> <li>Language and cultural barriers could prevent migrants from participating in DRR initiatives.</li> </ul>	<ul> <li>Vulnerability assessments of migrant workers could consider climate hazards.</li> <li>Create policies that facilitate the investment of remittances and leverage the skills and knowledge of migrants in local DRR initiatives.</li> <li>Assess skills needs and gaps related to resilient energy infrastructure in destination communities and offer skills development programmes among migrants.</li> <li>Conduct targeted information and awareness campaigns for migrant workers and their family members. Consider language and cultural issues in DRR communication.</li> <li>Offer capacity-building programmes to enable left-behind family members and returning migrants to engage in local DRR efforts.</li> <li>Engage migrant workers, including international migrant workers, in DRR planning and awareness- raising initiatives.</li> <li>Develop inclusive DRR policies that take into account the needs of migrant workers.</li> </ul>			

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)
Diaspora	<ul> <li>Diaspora communities might be difficult to reach for DRR activities (language barriers, lack of awareness, lack of inclusion, etc.) in host countries.</li> <li>It might be difficult to engage the diaspora in DRR initiatives in heritage countries (lack of awareness, lack of legal and regulatory mechanisms, etc.).</li> <li>The financial and technical resources and global networks of the diaspora could be leveraged for DRR initiatives in host and heritage countries.</li> </ul>	<ul> <li>Develop strategies to effectively engage diaspora communities in DRR initiatives in host countries.</li> <li>Conduct targeted information and awareness campaigns for diaspora members.</li> <li>Provide capacity-building and training for diaspora members to enhance their understanding of disaster risks and effective response measures.</li> <li>Create mechanisms to incentivize diaspora contributions to DRR efforts.</li> <li>Establish platforms for knowledge and technology exchange between the diaspora and heritage countries.</li> </ul>
Migrants and just transition	<ul> <li>Migrants in sectors undergoing transition might face challenges in being included in DRR due to their transient status or lack of representation.</li> <li>Migrants can bring valuable skills and knowledge to DRR, particularly in sectors that are transitioning to more sustainable practices Migrants' contributions to DRR efforts may be undervalued or go unrecognized.</li> <li>The just transition provides an opportunity to create inclusive DRR policies that explicitly recognize and integrate the needs and contributions of migrants</li> </ul>	<ul> <li>Develop policies to support DRR initiatives in communities that are part of a just transition.</li> <li>Engage relevant stakeholders in planning for DRR in communities in the context of just transition, especially employers' and workers' organizations.</li> <li>Conduct targeted information and awareness campaigns for migrants and their family members in communities that are part of a just transition. Consider language and cultural issues in developing information and awareness campaigns.</li> <li>Provide targeted training and capacity-building for migrants and their family members who live in communities that are involved in just transition with a view to enhancing their understanding of local disaster risks and effective response measures.</li> </ul>

RELEVANT HUMAN MOBILITY DIMENSIONS	CHALLENGES AND OPPORTUNITIES (examples of country- and sector-specific information to be added by the user)	ENTRY POINTS AND ACTIONS FOR ADAPTATION POLICY (examples of country- and sector-specific information to be added by the user)				
Displacement due to climate change mitigation or adaptation measures or projects	<ul> <li>Implementation of climate change mitigation and adaptation measures can itself contribute to increased vulnerability and exposure of communities to climate risks.</li> <li>For example, the creation of flood embankments in one area could increase the risk of flooding in another.</li> </ul>	<ul> <li>Avert, minimize and address displacement of people due to climate change mitigation or adaptation measures through inclusive design and planning, including the feedback of Indigenous Peoples and local communities regardless of residence status.</li> <li>Seek compensation through international facilities for people displaced because of climate change mitigation and adaptation projects.</li> </ul>				
Trapped population	<ul> <li>Upgrading infrastructure to withstand disaster risks in communities at high risk could be a challenge.</li> <li>Managing increased health and safety risks could become difficult owing to prolonged exposure to hazardous conditions.</li> </ul>	<ul> <li>Create inclusive, rights-based pathways for safe, orderly and regular migration for people with specific vulnerabilities.</li> <li>Include communities/trapped populations in local adaptation planning and allocate adequate resources.</li> <li>Invest in anticipatory actions, including multi-hazard early warning and contingency planning, that consider the needs of vulnerable population groups like women, children, the elderly and people with disabilities.</li> </ul>				

RESULTS

A synthesis of sectoral human mobility challenges and opportunities, along with information on entry points, is available to stakeholders.

# 4.3 NAP implementation strategy developed

# 4.3.1 Capacity-building of implementing bodies, sectoral entities and subnational actors

	READINESS PROPOSAL OUTCOME		READINESS PROPOSAL SUB-OUTCOME		NAP TECHNICAL GUIDELINES ELEMENT		NAP TECHNICAL GUIDELINES STEP
Outcome 3	NAP implementation strategy developed	3.3	Capacity-building of implementing bodies strengthened	Element C	Implementation strategies	C3	Enhancing capacity for planning and implementation of adaptation
Outcome 3	NAP implementation strategy developed	3.4	Priority sector technical and managerial capacity strengthened	Element C	Implementation strategies	C3	Enhancing capacity for planning and implementation of adaptation
Outcome 3	NAP implementation strategy developed	3.5	Subnational technical and managerial capacity for climate change adaptation tasks enhanced	Element C	Implementation strategies	C3	Enhancing capacity for planning and implementation of adaptation

# Why is human mobility important at this step of the NAP process?

Under these sub-outcomes, key activities of the NAP process often include:

- 1. Assessing capacities and gaps for adaptation planning, implementation, financing, monitoring, and knowledge management;
- **2.** Assessing sectoral capacities and gaps for adaptation;
- 3. Developing and implementing training programmes focused on climate impacts and climate vulnerability assessment methodologies and approaches for technical planners, sectoral and academic researchers, NGOs and other relevant stakeholders;
- Generating gender-responsive standardized guidelines or manuals at the sector and subsector level;
- 5. Establishing training infrastructure;
- **6.** Developing and disseminating sector-specific information and training products.

It is important to include human mobility aspects in the **training and capacity-building of implementing bodies and subnational actors**. The success of mainstreaming human mobility into adaptation planning will **depend on the capacity and willingness** of subnational actors – both governmental and non-governmental – to carry out the necessary activities at the subnational level.

### Relevant for NAP1 or NAP2?

- NAP1: Important.
- NAP2: Important.

# How are human mobility aspects mainstreamed in this step?

Human mobility aspects can be mainstreamed via **training workshops** that increase knowledge-sharing and the capacity of actors to include these aspects in adaptation actions.

### ACTIVITY 1:

# Training on human mobility in the context of climate change



# WHAT DOES IT HELP TO DO?

While there is engagement from planners, practitioners and researchers on the issue of human mobility in the context of climate change, there is also a need for capacity development. There is a need to **build the capacities of front-line actors** such as municipalities, CSOs, employers' and workers' organizations, community-based organizations, and community members. There are limited opportunities for capacity development on this issue at the subnational level.

# WHO?

Technical experts from sectoral government entities, municipalities, UN agencies, academia, CSOs (including those led by migrants, internally displaced persons, and refugees), faith-based organizations, employers' and workers' organizations, community-based organizations and international organizations. Special attention could be given to identifying implementing entities that address cross-cutting issues in the context of human mobility, such as those relating to age, gender, ethnicity, Indigenous populations, persons with disabilities and legal status.<sup>14</sup>

# STEPS

Please refer to sub-section 4.1.3 on capacity-building of coordinating bodies for more information on resources for capacity development in relation to human mobility in the context of climate change.

# RESULTS

Increased capacities of implementing bodies, sectoral entities and subnational actors with regard to human mobility in the context of climate change.

### 4.3.2 Developing local adaptation plans

	READINESS PROPOSAL OUTCOME		READINESS PROPOSAL SUB-OUTCOME		NAP TECHNICAL GUIDELINES ELEMENT		NAP TECHNICAL GUIDELINES STEP
Outcome 2	Evidence and knowledge base on climate change and adaptation strengthened, and NAPs formulated	2.5	Climate change adaptation is mainstreamed into priority sectors of national planning and on the subnational level	Element B	Preparatory elements	B5	Integrating climate change adaptation into national and subnational development and sectoral planning

### Why is human mobility important at this step of the NAP process?

Under this sub-outcome, key activities often include:

- Identifying opportunities and constraints for integrating climate change into planning at the subnational and local level;
- Building and enhancing capacity for integrating climate change into planning at the subnational and local level;
- **3.** Identifying adaptation choices and criteria, selecting the best options for planning, and drafting the local adaptation plan.

It is at the local level, in communities, where vulnerabilities to climate impacts manifest, and where activities are carried out. It is also where adaptation actions are implemented. Without the local perspective and localized voices, adaptation plans cannot adequately take into account the **diversity of local realities**, the diversity of settings for each context, and **different vulnerabilities and capabilities**. This is also true for the challenges and opportunities, and the entry points for adaptation for relevant dimensions of human mobility, which, along with their contexts, often differ from one community to another. Adaptation planning needs to strive for **local-level equity**; communities and their needs for support are different, and this needs to be acknowledged in adaptation planning.

### Relevant for NAP1 or NAP2?

- NAP1: Important.
- NAP2: Important.

## How are human mobility aspects mainstreamed in this step?

The following **action points** are recommended for mainstreaming human mobility into **existing activities**:

- Action point 1: Identify relevant local stakeholders.
- Action point 2: Raise awareness about human mobility in the context of climate change and the relevance for NAPs among local stakeholders.
- Action point 3: Include human mobility in the design (and implementation) of the (sectoral) adaptation plans at the local level.
- Action point 4: Develop capacities of local stakeholders for addressing human mobility related challenges and opportunities, including capacities for accessing necessary funding.

# Identify relevant local stakeholders



# WHAT DOES IT HELP TO DO?

It is important to **identify**, at the local level, **all relevant stakeholders and groups**. On a national level, this has been done in sub-section 4.1.1 (see results of the list of stakeholders from template 4.1). It will help to contextualize the planning at the local level and to ensure that the expertise of local stakeholders (governmental and non-governmental) is included. This increases the success of adaptation actions and helps to reduce possible maladaptive outcomes.

# WHO?

For local adaptation planning, it is necessary to ensure that a diverse range of stakeholders are represented at the local level. Include representatives from local government authorities, UN agencies, academia, CSOs (including those led by migrants, internally displaced persons, and refugees), faith-based organizations, community-based organizations, employers' and workers' organizations, and international organizations during the formulation of local adaptation plans. Include representatives of disaster-displaced persons, migrants in vulnerable situations, refugees, pastoralists, evacuated persons, relocated persons, migrant workers, diaspora members and trapped populations. Special attention could be given to briefing experts from local organizations that address cross-cutting issues in the context of human mobility, including aspects related to age, gender, ethnicity, Indigenous populations, persons with disabilities and legal status.<sup>15</sup>



Please use the template for the list of stakeholders from template 4.1.

### ACTION POINT 2:

Raise awareness about human mobility in the context of climate change and the relevance for NAPs among local stakeholders



### WHAT DOES IT HELP TO DO?

Short thematic (bilateral) briefings or information workshops with representatives identified in action point 1 will help to raise awareness about human mobility in the context of climate change at the local level and inform stakeholders of the relevant national-level NAP priorities.



Representatives identified in action point 1.

# STEPS

The template for bilateral briefings (see template 4.2) could be used. The briefings could be based on synthesized existing knowledge, such as the results of the situation analysis (see activity 2 in sub-section 4.1.2) and case studies (see activity 1 in sub-section 4.2.1).

### ACTION POINT 3:

# Include human mobility in the design (and implementation) of the (sectoral) adaptation plans at the local level



### WHAT DOES IT HELP TO DO?

This action point is about **bringing together information** on challenges and opportunities related to locally relevant dimensions of human mobility, and including entry points for sectoral adaptation **in local adaptation planning**. Only when the challenges and opportunities related to relevant dimensions of human mobility in the context of sectoral adaptation are inscribed in local adaptation planning can specific needs and potential contributions be adequately addressed in the implementation of adaptation plans.

WHO?

Include representatives of stakeholders identified in action point 1.

# STEPS

Build on the evidence base that has been established through vulnerability and adaptation assessments (see sub-sections 4.2.1 and 4.2.2) and sectoral mainstreaming of adaptation (see sub-section 4.2.4). When assessing **vulnerabilities** and the drivers of these vulnerabilities, as well as identifying options for **adaptation** and **sectoral adaptation** for the local context, include **human mobility dimensions relevant to the local context** and consider specific related needs and potential opportunities. It is important to **disaggregate** community assessments of vulnerabilities and adaptation options by groups of **intersecting category** of difference (e.g. by age, gender, ethnicity, Indigenous populations, persons with disabilities and legal status). **Prioritize adaptation options** and integrate them into **community planning. Communicate the adaptation options** identified by and for the community at the regional and national level to raise awareness of the diversity of adaptation approaches required and of potential good practices.

### ACTION POINT 4:



# Develop capacities of local stakeholders for addressing human mobility related challenges and opportunities

### WHAT DOES IT HELP TO DO?

This action point focuses on **providing training and capacity-building** to local stakeholders for addressing human mobility related challenges and opportunities in the context of climate change. In order to successfully implement and facilitate the inclusion of human mobility into local adaptation planning, stakeholders need to be aware of the importance of the topic and have some procedural knowledge. This is also important with regard to the ability of local stakeholders to access sufficient funding from national and other sources to enable NAPs to be translated into local action.



Representatives identified in action point 1.



Please refer to the resources under activity 1 of sub-section 4.1.3, which could be combined with training sessions on NAPs and information on the mechanisms for local adaptive action.

### 4.3.3 Synergy at the regional level



# Why is human mobility important at this step of the NAP process?

Under this sub-outcome, key activities often include:

- Participating in regional or international learning and knowledge-sharing events and other such forums to share experience and disseminate information;
- 2. Developing procedures for international collaboration on climate change adaptation and sharing best practices.

The sharing of knowledge and promotion of good practices on human mobility in the context of climate change in regional or international learning and knowledge-sharing events is essential for raising awareness among a wider group of stakeholders, highlighting the importance of this issue, facilitating peer learning and building a community of practice. This, in turn, will help to enable coordinated responses that transcend national borders, address transboundary challenges and facilitate regional collaboration.

### **Relevant for NAP1 or NAP2?**

- NAP1: Important.
- NAP2: Important.

## How are human mobility aspects mainstreamed in this step?

The key activities that are essential for raising awareness across a wide range of stakeholders are: briefings, presentations, and knowledge-sharing events that advocate the importance of addressing human mobility in the context of climate change in regional or international learning. It is also key to highlight the coherence of the narrative on human mobility in the context of climate change among the UNFCCC, the Sendai Framework, the Global Compact for Safe, Orderly and Regular Migration, and the Global Compact on Refugees.

The following activities are recommended to mainstream human mobility into adaptation on the regional level:

- Activity 1: Conduct a briefing for regional actors on the topic, specifically on the relevance of integrating human mobility in regional frameworks related to climate change.
- Activity 2: Provide talking points to promote coherence and synergy among stakeholders involved in multilateral processes for human mobility and climate change adaptation.

### ACTIVITY 1:

# Briefing for regional actors



# WHAT DOES IT HELP TO DO?

The briefing is meant to educate relevant actors associated with multilateral processes, agreements and events (e.g. the Sendai Framework, the Global Compact on Refugees, the Global Compact for Safe, Orderly and Regular Migration, the New Urban Agenda, the International Labour Conference, the Agenda for the Protection of Cross-Border Displaced Persons in the Context of Disasters and Climate Change) and ensure that regional legal and policy frameworks and related issues are incorporated in international policy frameworks.

# WHO?

Technical experts from multilateral organizations at the regional level. Special attention could be given to briefing technical experts from multilateral organizations that address cross-cutting issues in the context of human mobility, including aspects related to age, gender, ethnicity, Indigenous populations, persons with disabilities and legal status.<sup>16</sup>

# STEPS

Here is an example of a briefing note for engaging actors at the regional level.

### RESULTS

Improvement in coherence in addressing human mobility in the context of climate change within different multilateral processes at the regional level.

### **TEMPLATE 4.14: BRIEFING NOTE FOR ENGAGING ACTORS ON THE REGIONAL LEVEL**

#### Key COP 27 negotiated decisions for human mobility linked to climate change

- 1. This is the fifteenth year of the human mobility and climate change nexus being discussed in the context of climate change negotiations under the UNFCCC, and the fifteenth year that IOM has attended a COP.
- 2. The preamble of the Sharm el-Sheikh Implementation Plan<sup>17</sup> acknowledges that Parties should, when taking action to address climate change, respect, promote and consider their human rights obligations, including the human rights of migrants, the right to a clean, healthy and sustainable environment and the right to health.
- 3. The Sharm el-Sheikh Implementation Plan also noted with grave concern the growing gravity, scope and frequency of loss and damage associated with the adverse effects of climate change, resulting in economic and non-economic losses, including forced displacement and impacts on human mobility.<sup>18</sup>
- **4.** A historic decision was taken to establish new funding arrangements to respond to loss and damage, including a fund.<sup>19</sup> In defining the process for the operationalization of the new funding arrangements and the fund, the relevant decisions established a Transitional Committee tasked with developing recommendations thereon that will be informed by, inter alia, the gaps within the current landscape, including for displacement, relocation and migration.<sup>20</sup>
- **5.** A decision established the structure of the Santiago Network, which includes an Advisory Board and hosted secretariat, as well as the process for selecting a host,<sup>21</sup> representing a step forward in the full operationalization of the Santiago Network, and in strengthening solutions for human mobility in the context of climate change.<sup>22</sup>
- **6.** A decision on the report of the Executive Committee of the WIM welcomed the adoption of the second five-year rolling workplan of the Executive Committee, which includes a human mobility workstream, and the adoption of the third plan of action of the TFD, of which IOM is a member, and expressed appreciation to organizations and experts for the submission of information relevant to the Santiago Network,<sup>23</sup> IOM having made such a submission.

#### Relevance of the abovementioned decisions to other multilateral processes

- 1. At the global level, environmental migration is already anchored within several relevant policy processes.
- 2. The TFD of the WIM Executive Committee noted the relevance of other international processes, instruments and frameworks (e.g. the Sendai Framework, the SDGs under the 2030 Agenda for Sustainable Development, the Global Compact for Safe, Orderly and Regular Migration, the Global Compact on Refugees, and the Agenda for the Protection of Cross-Border Displaced Persons in the Context of Disasters and Climate Change), which should be taken into account, as appropriate, when identifying responses to the challenges related to human mobility in the context of climate change.
- 17 Decision 1/CP.27.
- 18 Decision 1/CP.27, para. 25.
- 19 Decisions 2/CP.27, paras. 2-3, and 2/CMA.4, paras. 2-3.
- 20 Decisions 2/CP.27, paras. 4 and 6(b), and 2/CMA.4, paras. 4 and 6(b).
- 21 Decision 12/CMA.4, para 3, endorsed by decision 11/CP.27.
- 22 The mandate of the Santiago Network is to catalyse the technical assistance of relevant organizations, bodies, networks and experts for the implementation of relevant approaches for averting, minimizing and addressing loss and damage at the local, national and regional level in developing countries that are particularly vulnerable to the adverse effects of climate change (decision 2/CMA.2, para. 43).
- 23 Decision 13/CMA.4, paras. 1(b) and 2(d), endorsed by decision 12/CP.27.

### ACTIVITY 2:

# Talking points for promoting coherence, coordination and synergy



## WHAT DOES IT HELP TO DO?

The talking points are meant to help stakeholders interact with those associated with other multilateral processes (e.g. the Sendai Framework, the Global Compact on Refugees, the Global Compact for Safe, Orderly and Regular Migration, the New Urban Agenda, the Agenda for the Protection of Cross-Border Displaced Persons in the Context of Disasters and Climate Change) with a view to promoting coherence, coordination and synergies.



Technical experts and/or coordinators/focal points in entities for different multilateral processes.

# STEPS

Here are examples of talking points aimed at enabling migrants, internally displaced persons, and refugees to benefit from and contribute to climate change adaptation.

# RESULTS

Improved coherence in addressing human mobility in the context of climate change within different multilateral processes at the regional level.

### **TEMPLATE 4.15:** TALKING POINTS ON ENABLING MIGRANTS, INTERNALLY DISPLACED PEOPLE, AND REFUGEES TO BENEFIT FROM AND CONTRIBUTE TO CLIMATE CHANGE ADAPTATION

#### Objective and key asks

• [INSERT NAME OF THE ACTOR] agrees to enable migrants, internally displaced persons, and refugees to benefit from and contribute to climate change adaptation.

#### Key messages

- *Highlight* that human mobility in the context of climate change is already anchored within several relevant global policy frameworks, such as the UNFCCC, the Sendai Framework, the Global Compact for Safe, Orderly and Regular Migration, and the Global Compact on Refugees.
- *Highlight* that the UNFCCC, the Sendai Framework, the Global Compact for Safe, Orderly and Regular Migration, and the Global Compact on Refugees recognize that voluntary forms of human mobility can be leveraged to enhance climate change adaptation.
- Highlight the need for increased focus on and finance for adaptation that reaches migrants in vulnerable situations, internally displaced persons, and refugees, given the disproportionately low adaptive capacity of significant segments of these populations, especially in fragile and conflictaffected contexts with little access to adaptation efforts.
- *Highlight* measures for the protection and support of durable solutions for displaced persons.
- *Highlight* safe and regular migration pathways, including labour migration and remittances, that could fill gaps as needed for the implementation of adaptation measures.
- *Highlight* the role of migrants, internally displaced persons, and refugees as active participants and local leaders in climate change adaptation.
- *Highlight* safe and regular migration pathways in the context of climate change to address the needs of the vulnerable groups such as gender, youth, Indigenous persons, socially marginalized groups, and persons with disabilities.
- *Highlight* the role of refugee and human rights instruments in providing legal protection to people displaced across borders in need of international protection in the context of climate change impacts as a way of enabling their adaptive capacity.

### Brief overview of background information linked to key messages

- Paragraph 1(g)(vi) of the recommendations of the WIM Executive Committee TFD on integrated approaches to averting, minimizing and addressing displacement related to the adverse impacts of climate change (contained in decision 10/CP.24, annex) invites Parties to facilitate orderly, safe, regular and responsible migration and mobility of people, as appropriate and in accordance with national laws and policies, in the context of climate change, by considering the needs of migrants and displaced persons, communities of origin, transit and destination, and by enhancing opportunities for regular migration pathways, including through labour mobility, consistent with international labour standards, as appropriate.
- Paragraph 36(a)(vi) of the Sendai Framework (UNGA A/RES/69/283) recognizes that migrants contribute to the resilience of communities and societies and acknowledges that the knowledge, skills and capacities of migrants can be useful in the design and implementation of DRR.

- Objective 5 of the Global Compact for Safe, Orderly and Regular Migration (UNGA A/RES/73/195) is to enhance the availability and flexibility of pathways for regular migration, committing countries to, inter alia, developing or building on existing national and regional practices for admission and stay of appropriate duration based on compassionate, humanitarian or other considerations for migrants compelled to leave their countries of origin owing to sudden onset natural hazards and other precarious situations, while adaptation in or return to their country of origin is not possible. The options for doing so include humanitarian visas, private sponsorships, access to education for children and temporary work permits (Global Compact for Safe, Orderly and Regular Migration, para. 21(g)).
- Paragraph 61 of the Global Compact on Refugees (UNGA A/73/12 Part II) highlights the need to enable all those in need of international protection to find and enjoy it through the application of certain international and regional obligations in a way that avoids protection gaps. Paragraph 63 calls for stakeholders to provide guidance and support for measures to address other protection and humanitarian challenges, including measures to assist those forcibly displaced by natural disasters, taking into account national laws and regional instruments as applicable.
- The addendum to the Kampala Ministerial Declaration on Migration, Environment and Climate Change (Member States of the Intergovernmental Authority on Development (IGAD), The East African Community (EAC) and States of the East and Horn of Africa, 2022) underlines the importance of voluntary human mobility as a climate change adaptation strategy and commits to incorporating human mobility considerations into NAPs.
- The core areas for action of the Pacific Regional Framework on Climate Mobility (Pacific Islands Forum, Joint-Working Group on Climate Mobility, & Governments of Fiji and Tuvalu, 2023, para. 31) recognize the role of labour mobility as an adaptation measure for communities experiencing socioeconomic challenges that are exacerbated by climate change related challenges.

# **4.4 Mechanisms for reporting,** monitoring and review of NAPs and adaptation progress in place

# 4.4.1 M&E: Indicators for climate change and impacts, reporting strategies

	READINESS PROPOSAL OUTCOME		READINESS PROPOSAL SUB-OUTCOME		NAP TECHNICAL GUIDELINES ELEMENT		NAP TECHNICAL GUIDELINES STEP
Outcome 4	Mechanisms for reporting, monitoring and review of NAPs and adaptation progress in place	4.1	Climate change indicators and reporting methodology for climate change adaptation planning and implementation are developed	Element D	Reporting, monitoring and review	D1	Monitoring the NAP process

# Why is human mobility important at this step of the NAP process?

Under this sub-outcome, key activities often include:

- 1. Developing indicators, methodology (means), and reporting structures for climate change adaptation;
- Facilitating interministerial coordination for monitoring and reporting;
- **3.** Identifying existing M&E activities and processes within the Government that offer entry points;
- **4.** Initiating the development of a gender-sensitive and transparent monitoring system.

Mainstreaming human mobility in the monitoring of NAPs will help stakeholders to **better assess and understand the extent and success of addressing human mobility aspects during the implementation of NAPs**. It will also help to **assess whether crosscutting issues**, such as gender, youth, Indigenous populations, socially marginalized groups, and persons with disabilities, **have been considered** while addressing human mobility related challenges and opportunities in the context of adaptation.

### **Relevant for NAP1 or NAP2?**

- NAP1: Important.
- NAP2: Important.

### How are human mobility aspects mainstreamed in this step?

The following **action points** and activity are recommended for mainstreaming human mobility into existing activities:

- Action point 1: Include experts from sectoral government entities, UN agencies, academia, think tanks, CSOs (including those led by migrants, internally displaced persons, and refugees), employers' and workers' organizations, and international organizations that work on human mobility while developing indicators and a reporting methodology for the mainstreaming of human mobility into climate change adaptation planning and implementation.
- Action point 2: Include sectoral government entities that work on human mobility in the NAP technical working groups/interministerial coordination groups for monitoring and reporting.
- Activity 1: Develop a results framework for mainstreaming human mobility into the NAP. It could cover improving awareness of national stakeholders; providing tools to and developing capacities of government stakeholders; and generating evidence on human mobility in the context of climate change.

### ACTIVITY 1:

# A results framework for mainstreaming human mobility into the NAP



# WHAT DOES IT HELP TO DO?

The results framework will help to monitor and evaluate the mainstreaming of human mobility into the NAP.

# WHO?

This results framework will be useful for sectoral government entities, UN agencies, academia, think tanks, CSOs (including those led by migrants, internally displaced persons, and refugees), employers' and workers' organizations, and international organizations that work on human mobility and are especially interested in its nexus with climate change. Special attention could be given to consulting experts from entities that address cross-cutting issues in the context of human mobility, including aspects related to age, gender, ethnicity, Indigenous populations, persons with disabilities and legal status.<sup>24</sup>

# STEPS

Here is an example of a results framework with objectives, outcomes, outputs and activities.

# RESULTS

This will ensure that the mainstreaming of human mobility related challenges and opportunities in the context of climate change is monitored and reported on as part of the overall monitoring and reporting of the NAP process.

# TABLE 4.3: AN EXAMPLE OF A HUMAN MOBILITY AND NAP RESULTS FRAMEWORK WITH OBJECTIVES, OUTCOMES, OUTPUTS AND ACTIVITIES

		INDICATOR	DATA SOURCE AND COLLECTION METHOD	BASELINE	TARGET	ASSUMPTIONS
Objective	The project will con- tribute to supporting the Government of [NAME OF THE COUN- TRY]'s strategic vision on climate change adaptation.	The number of NAPs validated by the Government which include considerations for human mobility in the context of climate change.	Final report, Government policy documents, ex-post evaluation report.	0	1	
Outcome 1	Government institutions mainstream migration considerations within the NAP.	Number of draft NAPs that include considerations for human mobility in the context of climate change.	Government policies, reports.	0	1	Government institutions priori- tize human mobility in the con- text of climate change in their national policy agenda. Relevant sectoral government institutions acknowledge the role of migra- tion in supporting climate action.
Output 1.1	National stakeholders in [NAME OF THE COUNTRY] have improved knowledge about human mobility in the context of	Number of senior-level offi- cials briefed on migration, en- vironment and climate change nexus (including the role of migration in climate action) (disaggregated by gender).	Briefing attendance list.	0	25	Relevant sectoral government institutions acknowledge the role of human mobility in supporting climate action.
	climate change.	Number of national experts supported to develop expertise on human mobility in the context of climate change	List of national experts.	0	10 (target: 5 women, 5 men).	

		INDICATOR	DATA SOURCE AND COLLECTION METHOD	BASELINE	TARGET	ASSUMPTIONS
	Activities that lead to Out 1.1.1 Conduct bilateral b (each meeting will I 1.1.2 Support X national to develop expertis a working paper/po	Experts are available to support the bilateral briefings and develop background material.				
Output 1.2	Government stakeholders have tools and capacities for mainstreaming human mobility in the context of climate change into the	Availability of the Technical Guide on Integrating Human Mobility and Climate Change Linkages into Relevant National Climate Change Planning Processes in the local language.	The Technical Guide	No	Yes	
	framework in [NAME OF THE COUNTRY] in a gender-sensitive manner. (Continues on the next page)	Number of reports on mapping and analysis of major legislation, strategies and plans in [NAME OF THE COUNTRY] to assess alignment with the recommendations of the WIM Executive Committee based on the work of the TFD contained in decision 10/ CP.24, annex.	Report on mapping and analysis of legislation, strategies, and plans.	0	1	

		INDICATOR	DATA SOURCE AND COLLECTION METHOD	BASELINE	TARGET	ASSUMPTIONS
	Government stakeholders have tools and capacities for mainstreaming human mobility in the context of climate change into the national adaptation framework in [NAME OF THE COUNTRY] in a gender-sensitive manner.	Number of interministerial meetings to support the mainstreaming of human mobility in the context of climate change into the NAP.	Meeting minutes, meeting attendance sheet.	0	5	
Output 1.2		Number of participants in the interministerial meetings to support mainstreaming of human mobility in the context of climate change into the NAP, disaggregated by gender and institution.	Meeting minutes, meeting attendance sheet.	0	40 (target: 20 women, 20 men)	
		Number of meetings with the UNFCCC focal point/NAP project coordinator of [NAME OF THE COUNTRY].	Meeting minutes.	0	4	
	Activities that lead to Out 1.2.1 Translate the Tech Relevant National ( 1.2.2 Develop a report by COUNTRY 1 to asse	es into ME OF THE ttoo based	Sectoral ministries are interested in guidelines and policy advice. Stakeholders are interested in participating in consultations.			
	on the work of the TFD contained in decision 10/CP.24, annex. 1.2.3 Provide gender-sensitive policy advice and technical guidance to the interministerial team for mainstreaming human mobility in the context of climate change into the NAP.					

		INDICATOR	DATA SOURCE AND COLLECTION METHOD	BASELINE	TARGET	ASSUMPTIONS
ıt1.3	Evidence on human mobility in the context of climate change is available to guide policy development in [NAME OF THE COUNTRY].	Availability of a case study report.	Research report, information sheets.	0	2	
Outp		Number of participants in the learning event to disseminate the findings of the case study, disaggregated by gender	Post-workshop report of the learning event, attendance list.	0	50 (target 25 women, 25 men).	
	Activities that lead to Out					
	1.3.1 Conduct a case stu change adaptation 1.3.2 Disseminate finding					

### 4.4.2 M&E: Climate budget tagging (CBT)

	READINESS PROPOSAL OUTCOME		READINESS PROPOSAL SUB-OUTCOME		NAP TECHNICAL GUIDELINES ELEMENT		NAP TECHNICAL GUIDELINES STEP
Outcome 4	Mechanisms for reporting, monitoring and review of NAPs and adaptation progress in place	4.2	CBT applied to improve the accuracy of M&E and budget systems	Element D	Reporting, monitoring and review	D1	Monitoring the NAP process

### Why is human mobility important at this step of the NAP process?

Under this sub-outcome, key activities often include:

- Training the Ministry of Finance and other key sectoral government entities at the national, sectoral and sub-sectoral level on the implementation of the CBT guidelines developed under NAP1 to ensure their implementation in the national performance-based budget;
- 2. Reviewing the use of the CBT indicators in the budget and evaluating needs and applications for decision-making purposes.

The mainstreaming of an issue in the planning process at different levels is as good as the budget allocated to it. **Mainstreaming human mobility** in the context of climate change **in budget systems** could ensure the sustainability of this issue within NAP implementation.

In some cases, CBT also proved useful in channelling private climate change finance towards identified projects. It could help a country to mobilize domestic and international finance and set incentives for remittance investment for climate change adaptation.

#### **Relevant for NAP1 or NAP2?**

- NAP1: Important.
- NAP2: Important.

### How are human mobility aspects mainstreamed in this step?

The following **action points** are recommended for mainstreaming human mobility in the context of climate change into existing activities:

- Action point 1: Include experts from sectoral government entities, UN agencies, academia, think tanks, CSOs (including those led by migrants, internally displaced persons, and refugees), employers' and workers' organizations, and international organizations that work on human mobility in the development and review of CBT indicators.
- Action point 2: Consider also leveraging voluntary contributions from migrants, their families and the diaspora as part of the mobilization of domestic and international finance through awareness-raising, financial incentives and technical assistance.

### Results

This will ensure that human mobility related initiatives have access to adequate, predictable and debt-free climate finance, remittances are leveraged, and migrant and diaspora investors are able to contribute to climate change adaptation.

### 4.4.3 M&E: NAP is iteratively updated



### Why is human mobility important at this step of the NAP process?

Under this sub-outcome, key activities often include:

- Developing, on the basis of stakeholder consultations and progress under the ongoing NAP, a road map for the next NAP with an accompanying action plan;
- 2. Identifying funding sources for the next NAP.

**Mentioning human mobility** in the context of climate change during the updating of the NAP will help to address this issue in the medium and long term; contribute to synergy, coherence and continuity; and assist with mobilizing resources and developing a community of practice.

#### **Relevant for NAP1 or NAP2?**

- NAP1: Important.
- NAP2: Important.

### How are human mobility aspects mainstreamed in this step?

The following **action points** are recommended for mainstreaming human mobility in the context of climate change into existing activities:

- Action point 1: Include experts from sectoral government entities, UN agencies, academia, think tanks, CSOs (including those led by migrants, internally displaced persons, and refugees), employers' and workers' organizations, and international organizations that work on human mobility in the stakeholder consultations under the ongoing NAP so that human mobility considerations are mainstreamed into the road map for the next NAP. Special attention could be given to including experts from entities that address cross-cutting issues in the context of human mobility, including aspects related to age, gender, ethnicity, Indigenous populations, persons with disabilities and legal status (see results of the list of stakeholders from template 4.1).<sup>25</sup>
- Action point 2: Consider leveraging contributions from migrants and their families, and the diaspora for supporting the implementation of the next NAP through awareness-raising, financial incentives and technical assistance.

### Results

This will help to address this issue in the medium and long term; contribute to synergy, coherence and continuity; and assist with mobilizing resources and developing a community of practice.

### 4.4.4 Publish NAP and outreach



### Why is human mobility important at this step of the NAP process?

Under this sub-outcome, key activities often include:

- Developing and implementing a stakeholder outreach strategy to support medium- and longterm adaptation planning;
- 2. Developing a process to facilitate communication and the integration of adaptation into school curricula and awareness-raising;
- **3.** Participating in regional or international learning and knowledge-sharing events and other such forums to share experience and disseminate information.

Mainstreaming human mobility in the outreach strategy will ensure that relevant stakeholders who work on human mobility are **aware of the scope and content of the NAP**. This, in turn, will contribute to their involvement during NAP implementation.

### **Relevant for NAP1 or NAP2?**

- NAP1: Important.
- NAP2: Important.

## How are human mobility aspects mainstreamed in this step?

The following **action points** are recommended for mainstreaming human mobility in the context of climate change into existing activities:

- Action point 1: Include government entities that address different forms of human mobility in the development and implementation of the stakeholder outreach strategy (refer to activity 1 of sub-section 4.1.1).
- Action point 2: Organize consultations to familiarize experts from sectoral government entities, UN agencies, academia, think tanks, CSOs (including those led by migrants, internally displaced persons, and refugees), employers' and workers' organizations, and international organizations with the NAP during the implementation of the stakeholder outreach strategy (see results of the list of stakeholders from template 4.1). Special attention could be given to including experts from entities that address crosscutting issues in the context of human mobility, including aspects related to age, gender, ethnicity, Indigenous populations, persons with disabilities and legal status.
- Action point 3: Engage with experts from sectoral government entities, UN agencies, academia, think tanks, CSOs (including those led by migrants, internally displaced persons, and refugees), employers' and workers' organizations, and international organizations during the implementation of the stakeholder outreach strategy (see results of the list of stakeholders from template 4.1).

- Action point 4: Ensure the topic of human mobility in the context of climate change is integrated into school and university curricula and awareness-raising materials on climate change adaptation. Special attention could be given to identifying entities that address cross-cutting issues in the context of human mobility, such as aspects related to gender, youth, Indigenous persons and persons with disabilities.
- Action point 5: Participate in meetings, round tables and side events on human mobility in the context of climate change, which are organised at the national, regional and global level, to share experience and disseminate information.

#### Results

Relevant stakeholders are aware of the scope and content of the NAP, including human mobility related activities. This, in turn, will lead to their involvement during NAP implementation.





# Annex: Research gaps on human mobility in the context of climate change

There are some specific areas where only minimal research has been done, and knowledge is especially scarce. The areas where a lack of knowledge became apparent when this Technical Guide was developed are listed below.

**Climate change, health and human mobility:** The interconnections between climate change, human mobility and health are complex, yet this area remains underexplored (IPCC, 2022c; Romanello et al., 2023). This includes the unequal distribution of health impacts across different human mobility dimensions and the related challenges for health care provision. There is little knowledge on the role of climate-related health risks as a factor for the decision to move or stay, and on the consequences of climate-related health risks in terms of limiting the ability of populations to be mobile, and their consequences for trapped populations.

### Challenges for Indigenous groups and cultural heritage related to human mobility in the context of climate change: Especially in the context of

displacement and planned relocation, but also when the mobility of pastoralists changes, the inclusion of Indigenous groups is important for minimizing intangible losses of place, cultural heritage and traditional knowledge. It is crucial to include Indigenous populations in legal and governance frameworks, and to develop compensation and assistance mechanisms for intangible losses and damage related to human mobility. Better and contextualized knowledge is needed with regard to maintaining living heritage values, and ways to better incorporate Indigenous practices and knowledge into policies, ensuring cultural continuity and dignity in adaptation efforts (Simpson et al., 2024).

**Climate mobility, biodiversity and naturebased solutions:** The consequences of different dimensions of human mobility for biodiversity and for ecosystem services are understudied. We need a better understanding of the effects of nature-based adaptation or mitigation projects, such as conservation agriculture, reforestation and the establishment of protected areas, on different dimensions of human mobility, as well as the socioeconomic effects, including livelihood losses and changes in living conditions (Simpson et al., 2024). There is also little knowledge on how to incorporate human mobility into biodiversity management policies. Efforts are needed to develop frameworks that align mobility with conservation and climate adaptation goals; for example, the inclusion of pastoralism and agroforestry as mobility-linked nature-based approaches.

#### Intersectional differences and climate mobility:

There is a need for more detailed research that assesses how climate change impacts intersect with factors such as disability, gender and ethnicity in producing vulnerabilities and affecting adaptive capacities (Ayanlade et al., 2023). There are also substantial gaps in knowledge and implementation frameworks that specifically address the needs of people with disabilities, different genders, and ethnic minorities within the context of human mobility and climate adaptation. This relates to a lack of disaggregated data on the specific needs and challenges faced by, for example, disabled persons, youth or ethnic minorities in the context of climateinduced mobility.

**Climate change and human trafficking:** Although there is a highly pressing need for policy action and research in this field, knowledge remains scarce here. Research is needed to clarify how environmental degradation and socioeconomic factors combine to increase vulnerabilities to human trafficking, including to identify factors that lead individuals to risky paths that may result in exploitative labour conditions. It is also important to identify gaps in social protection programmes during disasters that contribute to higher risks of trafficking in order to strengthen support systems (Coelho, 2016; Bharadwaj et al., 2022).
## Compounding and cascading risks, and human mobility in the context of climate change: There is a

need for more detailed studies on how various drivers (e.g. economic, environmental, demographic, political and historical drivers) of vulnerabilities and adaptive capacity intersect and compound each other, and how these interact with different dimensions of mobility. This includes understanding both the direct impacts (e.g. displacement due to extreme weather events) and indirect impacts (e.g. long-term migration due to deteriorating agricultural conditions, resulting from combined environmental, economic, political and demographic changes). There is also a significant gap in understanding the long-term and transboundary effects of compounding and cascading risks, which can affect mobility dimensions across regions and over decades (Simpson et al., 2024; Anisimov, 2023).

## Climate change, conflict and human mobility:

Human mobility is often the outcome of conflict, but can also contribute to conflict. The mechanisms through which climate change, conflict and different dimensions of human mobility are linked, and the contexts under which these mechanisms come into play, are still not well understood. This includes the roles of resource scarcity, economic distress and environmental degradation, but also of policies and events in catalysing or moderating conflicts. More locally specific, contextualized research is needed on the long-term and potentially non-linear effects of climate change on conflict and mobility, as well as on compounding and cascading risk factors linked to this (Zingg, 2021; Savelli et al., 2023).

Human mobility and climate change in fragile contexts: The relevance of fragile contexts for human mobility in the context of climate change is poorly understood. This is particularly important, as the capacity of states in fragile contexts to respond to the related challenges is often insufficient, with limited resources and governance structures making them unable to protect or support affected populations. Effective policy frameworks that integrate climate change adaptation, displacement management and conflict mitigation are crucial, yet remain underdeveloped. Understanding the interplay between state capacities, climate resilience, mobility, and conflict prevention is essential for creating sustainable solutions for vulnerable populations (UNHCR, 2022).

Adaptation indicators and human mobility in the context of climate change: There is already a notable gap in the development of localized adaptation indicators. This gap reflects the specific vulnerabilities of different communities affected by climate change. In addition, existing adaptation metrics often overlook the different dimensions of human mobility as both outcomes and factors of adaptive capacity. Research could help to better integrate mobility factors into adaptation indicators, especially with regard to the global goal on adaptation.

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