

Integrating
Disaster Risk Reduction and
Climate Change Adaptation in the
UN Sustainable Development
Cooperation Framework

Guidance Note on Using Climate and
Disaster Risk Management to Help Build
Resilient Societies

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The need to develop guidance on integrating climate and disaster risk into the Common Country Analysis and the UN Sustainable Development Cooperation Framework was reemphasized during the 2019 meeting of the UN Senior Leadership Group on Disaster Risk Reduction for Resilience. The development of this Guidance Note was coordinated by the UN Office for Disaster Risk Reduction (UNDRR) and supported by an interagency task team chaired by FAO and UNDP (see full list of member agencies below). Consultations have been undertaken with global, regional and national UN colleagues with expertise in disaster risk reduction and climate change adaptation as well as the process of developing the UN Sustainable Development Cooperation Framework.

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Foreword

Millions of people are falling back into poverty each year due to shocks ranging from both localized severe weather to major disaster events including drought, floods and storms and, as demonstrated by COVID-19, pandemic and epidemic disease.

Environmental changes driven by climate change and unsustainable exploitation of the earth's resources are rendering many people and ecosystems ever more vulnerable thus increasing the scale and frequency of hazards.

Risk-blind investments and development choices weave hazards, exposure and economic, social and environmental vulnerabilities together into an intricate filigree of disaster risk. This has created a systemic pattern of disaster risk which is now eroding development processes across all sectors.

The projected temperature increase of 3.2°C in the global climate is estimated to cause "once-in-one-hundred-year" events to occur every decade and threatens to render existing risk management strategies obsolete.

A World Bank study of 89 countries cited in in the Global Assessment Report for Disaster Risk Reduction 2019, found that if all disasters were to be prevented in one year, the number of people living in extreme poverty – those living on less than \$1.90 a day – would fall by 26 million.

The COVID-19 pandemic which quickly accelerated from a public health emergency to a socio-economic crisis overlapping with other disaster events, is stark evidence of how deeply disaster risk is embedded in our current methods of consumption and production.

As huge sums are being invested in the COVID-19 response and recovery we must ensure that these investments are risk-informed and lead us on a path to a more resilient future. Only good disaster risk governance can turn this crisis into an opportunity to invest in low-carbon technologies and turn away from dependence on fossil fuels.

The COVID-19 recovery must be green and sustainable but we will have to live with the consequences of the record levels of greenhouse gas emissions in the atmosphere for a long time to come. It is important then that we continue to focus on integration and coherence in efforts to reduce disaster risk and adapt to climate change while also paying attention to emergency health management.

This is underlined by the fact that extreme weather events have almost doubled over the last twenty years driving loss of life, poverty and displacement in low and middle-income countries.

To help build resilience to climate and disaster risks, countries must be supported to identify and leverage relevant technical, financial, and organizational capacities in all sectors of society.

I am pleased to share with you this Guidance Note on Integrating Disaster Risk Reduction and Climate Change Adaptation in the UN Sustainable Development Cooperation Framework.

The Guidance Note is intended to help Resident Coordinator Offices and UN Country Teams. It outlines the impacts of climate and disaster risks on progress towards achieving the SDGs and suggests appropriate actions for each phase in the UN Sustainable Development Cooperation Framework lifecycle to make them risk-informed.

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Mami Mizutori

Secretary-General's Special
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Acronyms

CADRI	Capacity for Disaster Reduction Initiative	SOP	Standard Operation Procedure
CEDAW	Committee on the Elimination of Discrimination against Women	UN	United Nations
CSO	Civil Society Organization	UNCT	UN Country Team
DRM	Disaster Risk Management	UNDCO	United Nations Development Coordination Office
DRR	Disaster Risk Reduction	UNDP	United Nations Development Programme
EDRM	Emergency and Disaster Risk Management	UNDRR	United Nations Office for Disaster Risk Reduction
FAO	The Food and Agriculture Organization of the United Nations	UNECE	United Nations Economic Commission for Europe
GFDRR	Global Facility for Disaster Reduction and Recovery	UNEP	United Nations Environment Programme
GRAF	Global Risk Assessment Framework	UNESCO	United Nations Educational Scientific and Cultural Organization
HCT	Humanitarian Country Team	UNFCCC	United Nations Framework Convention on Climate Change
IAEA	International Atomic Energy Agency	UNFPA	United Nations Population Fund
IASC	Inter-Agency Standing Committee	UNICEF	United Nations Children's Fund
IDP	Internally Displaced People	UNITAR	United Nations Institute for Training and Research
IFI	International Finance Institutions	UNOOSA	United Nations Office for Outer Space Affairs
IHR	International Health Regulations	UNOPS	United Nations Office for Project Services
ILO	International Labour Organization	UNOSAT	UNITAR's Operational Satellite Applications Programme
IOM	The International Organization for Migration	UNSM	United Nations Security Management Team
IPCC	Intergovernmental Panel on Climate Change	UNU	United Nations University
ITC	International Trade Centre	WFP	World Food Programme
ITU	International Telecommunication Union	UN-SPIDER	United Nations Platform for Space-based Information For Disaster Management and Emergency Response
LNOB	Leave No One Behind	UN Women	United Nations Entity For Gender Equality and the Empowerment of Women
MEL	Monitoring, Evaluation and Learning	WHO	World Health Organization
NAP	National Adaptation Plan	WMO	World Meteorological Organization
NDC	Nationally Determined Contribution		
OCHA	The United Nations Office for Coordination of Humanitarian Affairs		
OHCHR	Office of the High Commissioner for Human Rights		
SDG	Sustainable Development Goals		

Introduction

Disasters triggered by natural, biological and technological hazards, and further exacerbated by climate extremes and slow onset events, annually affect a growing number of people, ecosystems and economies.

From 2005 to 2015, disasters caused USD 1.4 trillion in damage, killed 700,000 and affected 1.7 billion people¹. Economic losses are rising, and climate change is increasing the frequency and magnitude of a range of climate-related hazards. It is estimated that by 2050, the number of people in urban areas exposed to cyclones will increase from 310 million to 680 million people, while the number of people at risk of major earthquakes will increase from 370 million to 870 million².

Without significant investment in resilience-building, these impacts threaten to not only decelerate but in extreme cases derail progress towards achieving the Sustainable Development Goals (SDGs) and realizing the 2030 Agenda.

Progress towards sustainable development and peaceful societies is undermined by natural, biological and technological hazards that are intensified by persistent risk drivers such as climate variability and change, inequality, poverty, , gender inequality, demographic pressures, unplanned urbanization and weak governance. The rapid spread and unprecedented global impact of COVID-19 has demonstrated how disasters create ripple effects throughout the systems that hold societies together and drive development. Even in the absence of a major disaster, accumulating and co-existing risks can unleash cascading impacts across sectors, triggering crises with devastating impact on those already left furthest behind. Managing climate and disaster risks in conflict and displacement situations becomes particularly important to prevent exacerbation of vulnerabilities and erosion of resilience.

¹ UNISDR, 2015: HFA Decade - The Economic and Human Impact of Disasters in the last 10 years.

² R. J. Nicholls et al, 2008. Ranking Port Cities with High Exposure and Vulnerability to Climate Extremes: Exposure Estimates.

Enhancing disaster resilience, preventing climate and disaster-related risks, and protecting those left furthest behind require moving beyond business as usual and engaging all of society in climate and disaster risk management.

The Global Assessment Report on Disaster Risk Reduction 2015 concluded that annual global investment of USD 6 billion in appropriate disaster risk management strategies would generate total benefits in terms of risk reduction of USD 360 billion. As demonstrated by the inclusion of [the Sendai Framework for Disaster Risk Reduction](#) and the [Paris Agreement](#) in the 2030 Agenda, disaster risk reduction and climate change adaptation are vital strategies for achievement of the SDGs. These strategies, however, cannot be pursued in siloes and must be applied across the 2030 Agenda to leverage existing sectoral funding and unlock public and private investment in climate and disaster risk management at all levels of society.

The UN Sustainable Development Cooperation Framework provides an opportunity for the United Nations development system to demonstrate the value of climate- and disaster risk-informed development to accelerate SDG progress in the decade of action.

The UN Prevention Agenda, the Sendai Framework all-of-society approach, national climate commitments, and the real-time analytical function of the Common Country Analysis all create entry points for risk-informing the Cooperation Frameworks and pursuing national and local partnerships that unleash capacities and financing.

This Guidance Note helps UN Country Teams (UNCTs) in formulating and implementing Cooperation Frameworks that support countries, communities and people in using climate and disaster risk management approaches to build disaster resilience.

It is one among a larger library of supporting documents to the [Cooperation Framework Guidance](#), and is best read alongside the Cooperation Framework Companion Package. This Guidance Note supplements the *UN Common Guidance on Helping Build Resilient Societies* by providing guidance on how to address climate and disaster risk as one of many dimensions to resilience, within the specific context of the Cooperation Framework cycle.

Interdisciplinary climate and disaster risk management

The world continues on a path towards 2° C warming, with climate change acting as a risk driver of more frequent and extreme weather events and changes in ecosystems and the habitats of people and animals. To manage risks in this uncertain context, effective climate and disaster risk management must integrate different types of expertise to manage the interactions between climate changes, natural hazards, biological hazards and technological hazards, and their impacts on people, communities, and ecosystems. This involves leveraging capacities from several disciplines:

Climate Change Adaptation: The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects.³

Disaster Risk Reduction (DRR): DRR is aimed at preventing new and reducing existing disaster risk and managing residual risk, all of which contribute to strengthening resilience and therefore to the achievement of sustainable development. DRR is the policy objective of disaster risk management.⁴

Disaster Risk Management (DRM): Disaster risk management is the application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses.⁵

Health Emergency and Disaster Risk Management (Health EDRM): Health EDRM encompasses a wide range of functions and components in health and other sectors that enable countries to manage the

health risks of emergencies and disasters from all types of hazards, using an evidence-based approach.⁶

These disciplines often conduct their work within separate communities of practice, use different methodologies, access different funding mechanisms, and are coordinated by different ministries and communities of practice. This often leads to siloed approaches to managing risk.

A climate and disaster risk-informed UN Sustainable Development Cooperation Framework (hereafter 'the Cooperation Framework') promotes integrated risk management practices, supports a whole-of-society approach, and helps prevent crises. To develop it, UNCTs will need to proactively bring together expertise, stakeholders, and evidence across disciplines and sectors to identify the most effective interventions for their country context.

The [National Adaptation Plan \(NAP\) supplement on synergy and coherence between disaster risk reduction and climate change adaptation](#) proposes a number of pathways to coherence between DRR and climate change adaptation. An adapted version including health risks is listed below:

1. Develop capacities for national policy development and implementation that promotes coherence and synergy between climate change adaptation, DRR, and Health EDRM.
2. Build a coherent risk governance system that takes an all-hazards approach.
3. Understand how climate change, natural, biological and technological hazards affect each other.
4. Develop financing strategies for climate and disaster risk-informed investment.
5. Prioritize support to co-efficient disaster and health risk management and adaptation measures.
6. Coordinate data collection, assessment, implementation, monitoring and evaluation.

³ IPCC, 2014. Working Group II Fifth Assessment Report.

⁴ www.undrr.org/terminology/disaster-risk-reduction

⁵ www.preventionweb.net/terminology/view/476

⁶ WHO, 2019. Health Emergency and Disaster Risk Management Framework.

In this Guidance Note, the terms “climate and disaster risks” and “climate and disaster risk management capacities” are used as shorthand for the full range of risks related to climate change impacts and natural, biological, and technological hazards, along with the capacities needed to manage them.

Climate and disaster risk and Leaving No One Behind

Hazards and climate change may affect all those exposed, but they do not affect everyone equally. Climate and disaster risk management efforts must be inclusive of all by addressing the needs and building the capacities of those most in need and at risk, in a way that responds to their specific challenges and vulnerabilities. To help analyse climate and disaster risk and vulnerability of excluded groups, the [UN Operational Guidance on Leaving No One Behind \(LNOB\)](#) intersectionality framework can be viewed through a climate and disaster risk lens:

- **Discrimination:** Particular groups may be legally or socially discriminated against in accessing basic services that maintain household resilience and/or risk mitigation infrastructure such as shelters.
- **Geography:** Living in remote or marginalized areas reduces access to basic services, infrastructure and, often, the efficacy of local-level national climate and disaster risk management mechanisms.
- **Vulnerability to shocks:** Living and/or working in areas affected by climate change impacts and/or in close proximity to hazards increases exposure, disaster risk and cascading effects of shocks.
- **Governance:** Weak climate and disaster risk governance fosters inequality and vulnerabilities.
- **Socio-economic status:** Multi-dimensional poverty constrains people’s risk management options.

Climate and disaster risk management in the humanitarian-development-peace nexus

Climate and disaster risks do not exist in a vacuum but interact with other risks and exacerbate socio-economic vulnerabilities. In fragile contexts, climate and disaster risks may exacerbate other risks by:

- Damaging ecosystems and food production systems, increasing competition for resources.
- Trigger displacement and migration, increasing social tension and governance challenges.

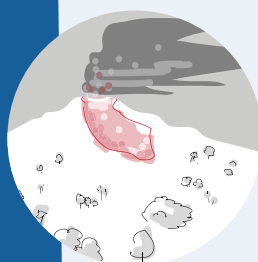
Conflicts and social instability may contribute to increased disaster risk and undermine capacities by:

- Increasing vulnerability to climate and disaster risk by damaging and destroying housing, public shelters, water and sanitation infrastructure, transport and communication infrastructure, energy infrastructure, livelihood assets, waste management sites, and health facilities.
- Weakening risk governance capacities and disrupting climate and disaster risk management-related services, such as health response, early warning and evacuation to safe shelter.
- Driving migration to and unplanned settlement in areas that are exposed to hazards.

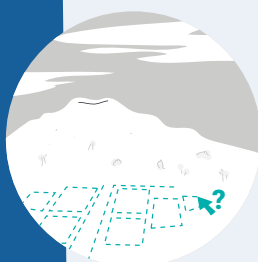
The Prevention Agenda of the UN Secretary-General

1. Support the development and implementation of national disaster risk reduction plans that address growing challenges of climate change, environmental degradation, urbanization and population growth. Special emphasis should be placed on the least developed and most vulnerable countries, including by providing a platform for South-South cooperation and facilitating the use of innovative methods and technologies.
2. Prioritize early warning and early action on preventing violent conflict by:
 - Mapping, linking, collecting and integrating information from across the international system;
 - Supporting national capacities for facilitation and dialogue;
 - Ensuring that UN good offices, mediation, crisis response and peacebuilding services are easily and rapidly deployable.
3. Advance a preventive approach to human rights by:
 - Developing a policy framework that identifies basic elements needed to prevent human rights violations;
 - Establishing a preventive matrix that will chart progress and gaps in the use of a range of human rights instruments;
 - Advancing the responsibility to protect agenda.
4. Build resilience to external economic and financial shocks by helping countries identify vulnerabilities rapidly and adopt adequate social safety nets and policies that promote job-led growth.

Risk in the context of hazard, exposure and vulnerability (from the Global Assessment Report on Disaster Risk Reduction, 2019)



There is no such thing as a natural disaster, only natural [hazards](#)



We make choices as to where we inhabit, how we build and what research we do



[Risk](#) is the combination of [hazard](#), [exposure](#) and [vulnerability](#)



Death, loss and damage is the function of the context of [hazard](#), [exposure](#) and [vulnerability](#)

Key definitions

In the context of disaster risk reduction, definitions of risk and resilience are primarily based on the Sendai Framework for Disaster Risk Reduction (2015-2030). However, these terms are also used in slightly different ways in other communities of practice, such as conflict prevention and climate action. As a reference for the reader of this Guidance Note, the Sendai Framework definition of four key terms – risk, risk drivers, resilience and resilience capacities – are presented here.

As noted by the UN Common Guidance on Helping Build Resilient Societies, resilience is common thread across the three United Nations (UN) pillars of development, human rights, and peace and security. It is reflected in many important global policy agendas and frameworks which acknowledge that risks and their manifestation that can hinder the implementation of the 2030 Agenda for Sustainable Development and the Sustaining Peace Agenda. For processes involving stakeholders from different backgrounds, the Common Guidance therefore offers an broader set of definitions for each of the below.

RISK

“The potential loss of life, injury, or destroyed or damaged assets which could occur to a system, society or a community in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity”. It is also noted that this definition reflects the concept of hazardous events and disasters as the outcome of continuously present conditions of risk.

RISK DRIVERS

“Processes or conditions, often development-related, that influence the level of disaster risk by increasing levels of exposure and vulnerability or reducing capacity.”

RESILIENCE

“The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions through risk management.”

RESILIENCE CAPACITIES

“The combination of all the strengths, attributes and resources available within an organization, community or society to manage and reduce disaster risks and strengthen resilience.” Capacity development is the process by which people, organizations and society systematically stimulate and develop their capacities over time to achieve social and economic goals. It involves learning and various types of training, but also continuous efforts to develop institutions, political awareness, financial resources, technology systems and the wider enabling environment.

The impact on progress towards the Sustainable Development Goals of different hazards



NATURAL HAZARDS

Storms, Tropical Cyclones, Floods, Landslide, Fires, Tsunami, Earthquake, Drought, Heatwave, Cold Snap, Volcanic Activity

Causes loss of life and damages assets, infrastructure, settlements and ecosystems, and can trigger displacement

Losses and damage disrupt economic activities and governance, and access to basic services and education

Asset loss, livelihood and service disruption entrench multi-dimensional poverty and inequalities, and can trigger migration



BIOLOGICAL HAZARDS

Infectious Diseases, Toxins, Plants, Insect Infestations, Human-animal Conflict, Substances, and Invasive Species

Causes loss of life, health, livestock, and/or crops, undermining food security

Losses and health impacts disrupt economic activities and in some cases ecosystem services, services and education

Livelihood and service disruption entrench multidimensional poverty and can trigger social distancing, gender-based violence and stigmatization





TECHNOLOGICAL HAZARDS

Chemical, Nuclear, Radiological and Waste Incidents, Heavy Metal Contamination, and Cyber Hazards

Causes loss of life and health and damages or contaminates assets, infrastructure, food systems, settlements and ecosystems

Losses disrupt economic activities, ecosystem services and in some cases access to basic services and education

Asset loss, livelihood and service disruption entrench multidimensional poverty and inequalities, and can trigger migration



SLOW-ONSET CLIMATE CHANGE-RELATED HAZARDS

Ocean Acidification, Sea Level Rise, Increasing Temperature, Desertification, Salinization

Damages and undermines the resilience of ecosystems, ecosystems services and settlements

Climate stresses and shocks on settlements and ecosystems undermine economic activity and can trigger displacement

Disrupted economic growth and severe weather affect human health and trigger negative coping mechanisms

Negative coping mechanisms and further shocks entrench multidimensional poverty and inequalities, and can trigger migration



Checklist for integrating climate and disaster risk in the Cooperation Framework

The checklist below outlines actions to integrate disaster risk reduction and climate change adaptation in all stages of the Cooperation Framework cycle. It should be read alongside the Cooperation Framework Companion Package and Consolidated Annex for easy cross-reference.



Roadmap

- ☐ Include Climate Change, International Health Regulations and Sendai focal points in the Steering Committee
- ☐ Identify climate and disaster risk stakeholders from government, academia, civil society, and at-risk areas
- ☐ Include climate, public health and disaster risk stakeholders in every step-in cycle, including women and girls
- ☐ If possible, allocate time for training on climate and disaster risk issues for the Cooperation Framework team
- ☐ Share the roadmap with climate, public health and disaster risk stakeholders



Common Country Analysis

- ☐ If a systemic risk scenario exercise is organized for the UNCT, supply climate and disaster risk information
- ☐ Identify capacities required in the Common Country Analysis/Cooperation Framework team for:
 - Conducting gender-inclusive analysis of disaster and climate risks to development, including epidemic risk
 - Identifying and analysing climate and disaster risk created by development choices in different sectors
 - Using geospatial technologies to analyse and present climate and disaster risk
- ☐ Agree on roles of UN entities, regardless of physical location, in climate and disaster risk and capacity analysis
- ☐ Collect national planning documents and reports on disaster and climate risks, including location, exposure, vulnerability, and capacity for management of all relevant natural, biological and technological hazards
- ☐ Identify evidence that can support:
 - Assessment of progress towards the SDGs, including targets related to climate and disaster risk
 - Analysis of vulnerable groups' climate and disaster risk and risk management capacities
 - Analysis of transboundary climate and disaster risk and risk management capacities
 - Analysis of disaster and climate risks created by development choices, including transboundary risks
- ☐ Record evidence gaps on climate and disaster risk – include these in the institutional capacity analysis
- ☐ When assessing SDG and 2030 progress, identify gaps, connections, and synergies for implementing the Sendai Framework, Paris Agreement and the International Health Regulations
- ☐ Include public and private financing for adaptation and risk reduction in assessment of SDG financing
- ☐ Include all relevant climate and disaster risks in the multi-dimensional risk assessment
- ☐ Identify and assess data points related to climate and disaster risks which can be tracked for early warning
- ☐ Include climate and disaster risks, governance and risk management capacities in the
 - Economic Transformation Analysis
 - Social Exclusion Analysis
 - Environment Analysis
 - Governance and Institutional Capacity Analysis
 - Humanitarian-Development-Peace Nexus Analysis

Cooperation Framework Design

- ☐ Confirm common understanding in the UNCT of climate and disaster risk within multidimensional risk analysis
- ☐ Suggest catalytic development solutions that enhance climate and disaster risk management capacities
- ☐ Cross-reference the suggested development solutions against national adaptation, DRR and health plans
- ☐ Include elements that enhance climate and disaster resilience in the theory of change for prioritized solutions
- ☐ Address climate and disaster risk management in the outcome statements in the Results Framework, either through explicit reference to risk management or modifying adjectives indicating risk-informed approach
- ☐ Focus one or more Results Framework output/sub-outcomes on climate and disaster risk management
- ☐ Show disaster and climate change-related risks/assumptions for each outcome in the Results Framework
- ☐ Specify sex, age, disability and geographically disaggregated indicators where relevant
- ☐ Include plans for learning, participation and accountability in post-disaster setting in the MEL plan

UNCT Configuration

- ☐ Include climate and disaster risk management capacities in the mapping of UN entities' capacities
- ☐ Identify new climate and disaster risk management 'asks' as well as continuing programming needs
- ☐ Discuss how and where to source capacity to meet new 'asks' with UN entities in and outside the country
- ☐ If required, revisit UNCT configuration following disaster or in light of new climate projections

Signature

- ☐ Share the signed Cooperation Framework with disaster, health emergency and climate stakeholders

Funding

- ☐ Identify opportunities for integrating climate and disaster risk management and resilience-building in the 15 per cent of Cooperation Framework costing dedicated to gender equality and women's empowerment
- ☐ Reality-check resource mobilization targets in light of fragmented funding, lead time and resource gaps
- ☐ Expand the evidence base on the benefit of investing in preventive action and risk management capacities
- ☐ Prioritize resource mobilization for programming that unlock public/private investment in risk management
- ☐ Prioritize resource mobilization for programming that helps unlock inclusive partnerships, public and private sector financing of adaptation and risk reduction, and affected people's direct access to financial resources

Implementing, Monitoring And Reporting

- ☐ Establish a Risk and Resilience thematic group if necessary, ensuring sufficient breadth of expertise
- ☐ Identify and address gaps in UN implementation capacity for climate and disaster risk programming
- ☐ Include output(s) and indicators that measure risk management capacities in the joint work plans
- ☐ Identify opportunities for joint and joined-up climate and disaster risk management programming and action
- ☐ Include relevant government counterparts in the Results Group covering DRR and climate change adaptation
- ☐ Link the UN monitoring system with the national disaster, climate and health data and information systems
- ☐ Contextualise the Joint Annual Performance Review against disaster and climate impacts in the past year
- ☐ Highlight results and learning from prevention, adaptation, and joint programming in the UN Country Results report to support evidence-based resource mobilization

Evaluation

- ☐ Contextualise the evaluation of the Cooperation Framework against actual disaster and climate impacts

Integrating climate and disaster risk in the Cooperation Framework

As a dynamic process for planning, implementing monitoring and evaluating the UN development system's work at the country level, the Cooperation Framework cycle provides multiple entry points for integrating climate and disaster risk-informed development as an element of resilience-building. It is recommended to read this chapter alongside the Cooperation Framework Companion Package and Consolidated Annex for easy cross-reference. A special addendum for integration of biological related to outbreak, epidemic and pandemic variety is attached as Appendix 1.

Roadmap

When re/forming the Joint UN-Government Steering Committee, suggest that government focal points working on climate change, the International Health Regulations and the Sendai Framework be included as members.

When planning stakeholder participation in the different steps in the Cooperation Framework process, ensure that the stakeholders include climate and disaster risk stakeholders including:

- Key government focal points, including the Sendai Framework and DRR focal points, the Climate Change Focal Point and sub-focals for the Green Climate Fund, the Global Environment Facility and the NAP, the country's coordinator for health emergency management and the International Health Regulations National Focal Point, and the heads of civil protection or disaster management. Ministries of Planning and Finance and line ministries handling key productive sectors, infrastructure and housing, and gender equality and women's empowerment should also be consulted on climate and disaster risks, impacts and capacities in their domain.
- Local government and people living in areas exposed to hazards and climate change, including women, youth, the elderly, indigenous communities, communities dependent on climate-vulnerable ecosystems, slum-dwellers, displaced people, people with disabilities, people living close to chemical, oil and radiological facilities, and communities in coastal, mountainous, and floodplain areas. These can be engaged directly or through their interest groups and organizations.
- Key civil society and volunteer stakeholders, including the national DRR platform, the Red Cross/Red Crescent National Society, private sector networks, and Civil Society Organizations focused on climate and disaster issues or representing vulnerable groups and communities.
- Institutions with technical disaster and risk-related expertise, including the National Statistics Office, the National Meteorological and Hydrological services, the geological survey, social welfare departments, public health institutes, Public Investment Offices and universities and research institutions focusing on DRR, climate change adaptation, and ecosystem management.

When preparing the sections on the different steps in the Cooperation Framework process, describe both the involvement of agencies with a country footprint (e.g. FAO, UNDP, UNFPA, UNICEF, WFP, WHO) as well agencies with relevant expertise, such as regional commissions, IAEA, IOM, ITU, OCHA, UNDRR, UNECE, UNEP, UNESCO, UNITAR, UN Women, WMO, and the UNOOSA.

When preparing the section on key planning assumptions and risk, ensure that the timeline and planned activities are realistic compared to seasonal weather-related risk and/or any on-going epidemics or pandemics that may affect the capacity of stakeholders to participate.

When preparing the timeline of key milestones, consider allocating time and funds to train staff and consultants involved in the Common Country Analysis and Cooperation Framework Design on risk-informed and gender-inclusive development, disaster risk reduction and climate change adaptation.

When the road map is published, share it with the climate, public health and disaster risk management stakeholders mentioned above, so they can prepare for further engagement.

Common Country Analysis

Including disaster, climate and health risk information in the different components of the baseline and annual updates of the Common Country Analysis is crucial to help design a risk-responsive Cooperation Framework and development solutions. This section outlines how the type of analysis recommended in the *UN Common Guidance on Helping Build Resilient Societies* can be integrated in the steps of the Common Country Analysis.

Workplan and methodology

When preparing the **Common Country Analysis workplan and methodology**:

- Scenario exercises are recommended as useful tools for enhancing understanding of multidimensional risks to key economic, social and environmental systems driving development in the country by both the *Cooperation Framework Companion Package* (chapter 2) and *UN Common Guidance on Helping Build Resilient Societies*. If a scenario exercise is conducted as part of the Cooperation Framework process, supply facilitators and participants with information about the climate change projections and the historical probability and impacts of natural, biological and technological hazards on different sectors and groups.
- For further reading on systemic risks, see the [Words into Action guideline on National Risk Assessment chapter on cascading risk](#). For an overview of climate and disaster risk considerations related to each SDG, please see Appendix 2 to this Guidance Note.

- Identify what kind of capacities the team working on the Common Country Analysis will need to use existing evidence on climate and disaster risks and risk management capacities in the assessment and analytical steps of the Common Country Analysis (described in the Companion Package and elaborated below). The team should include personnel with the capacity to analyse information about hazards, exposure, vulnerabilities and risk management capacities. Consider bringing in specialists to ensure that information on climate and disaster risk informs and contributes to the comprehensive *multidimensional risk analysis*.
- Identify what kind of capacities the Common Country Analysis team will need to *present and report* climate and disaster risks and risk management capacities. Consider using geospatial technologies to analyze and present different layers of risk data (hazards, exposure, impacts and vulnerability). Visual representations of causal relationships may help illustrate the nature of systemic risks.
- Ensure that the Common Country Analysis workplan includes engagement with the climate and disaster risk stakeholder groups listed in the Roadmap.

Sourcing country analysis support

When **sourcing country analysis support** from across the UN system, frame support requests in terms of what kind of support the UNCT is seeking. Knowing whether support is needed for analysis of hazards, exposure, vulnerability, risk, climate and disaster impact, or risk management capacity will make it easier for UNDCO and individual UN entities to match requests to their expertise.

Note that platforms such as regional issue-based coalitions, the [Global Risk Assessment Framework](#) (GRAF), the [Capacity for Disaster Reduction Initiative](#) (CADRI), the [Sendai Framework Monitor](#), [United Nations Operational Satellite Applications Programme](#) (UNOSAT), the [Strategic Partnership for IHR and Health Security](#) and the [United Nations Platform for Space-based Information for Disaster Management and Emergency Response](#) (UN-SPIDER) may also be able to provide support.

Establishing the evidence base for the Common Country Analysis

When **establishing the evidence-base for the Common Country Analysis**, it is necessary to include (a) evidence of historical disaster and climate impacts on economic, social and environmental aspects of the country's development situation and (b) projections of future impacts, to help identify and assess risks that can threaten the achievement of the country's development vision.

- This kind of information is contained within:
 - Multi-hazard hazard, exposure, vulnerability and risk assessments, including sectoral and transboundary assessments
 - Hazard, exposure, vulnerability, environmental sensitivity and disaster risk maps
 - Records of climate variability and change, and climate change impacts models and projections
 - Records of disaster and epidemiological morbidity, loss and damage records and Average Annual Loss estimates
 - Climate and disaster risk management capacity assessments, including assessments of capacities for management of transboundary risks such as drought, riverine flooding, desert locust swarming or disease outbreaks
 - National and sectoral disaster risk reduction, emergency response, health and climate change adaptation strategies and plans, including transboundary plans (where applicable)
 - SDG financing assessments undertaken by International Finance Institutions (IFIs)
 - National monitoring and reporting for the Voluntary National Reviews, and on implementation of the Sendai Framework, NAP, Nationally Determined Contributions (NDC) and the International Health Regulations. As some countries consider climate change a human rights issue, information may also be found in the country's Universal Periodic Reviews.

Broader analyses such as multi-dimensional poverty assessments, gender analyses, migration analyses, and records of indigenous knowledge may also contain information about climate and disaster risks, impacts on, and needs of particular groups including women and girls, children and the elderly, people with disabilities and chronic illness, indigenous people, racial, ethnic and religious minorities, the poor and ultra-poor, migrants, internally displaced populations and refugees.

- It is important to use information from authoritative sources - documents may be available from:
 - National Statistics Offices and national climate and disaster risk information systems;
 - National Meteorological and Hydrological Services and the geological survey;
 - Ministries/departments of planning, finance, health, environment, disaster management and climate change, transport, energy, local government and civil protection, and others;
 - National academic and research institutions as well as Civil Society Organizations.
- Information about climate and disaster risks to and impacts on people affected by humanitarian crises or conflict may also be found in:
 - Humanitarian Needs Overviews and Humanitarian or Refugee Response Plans
 - Multi-Sectoral Needs Assessments and Post-Disaster and Post-Conflict Needs Assessments
 - Recovery and Peacebuilding Assessments and Conflict and Development Assessments.

Critical national data and knowledge gaps on climate and disaster risk, vulnerability and resilience may come to light at this stage, including limitations in the capacity to produce sex-, age-, disability- and geographically disaggregated data. These should be noted and included in the **Assessment of progress towards the 2030 Agenda** and the **Governance and Institutional Capacity Analysis**.

Common Country Analysis – External evidence to support assessment and analysis

[Global Assessment Report on Disaster Risk Reduction \(Summary\)](#) by UNDRR

[Special Report – Global Warming of 1.5° C \(Summary\)](#) by IPCC

[NAP Monitor, Nationally Determined Contribution Registry and Climate Finance Portal](#) by UNFCCC

[National disaster risk profiles, Sendai Framework Monitor and Sendai Desinventar](#) by UNDRR

[DRR Capacity Assessment Reports](#) by CADRI

[National risk management profiles](#) by IASC and the European Commission

[National disaster risk profiles](#) by GFDRR

[National profiles on climate change and health](#) by WHO and UNFCCC

[Climate risk country profiles](#) by the World Bank

[States Parties Annual Reporting on the International Health Regulations](#) by WHO

[2019 State of Climate Services – Agriculture and Food Security](#) by WMO

[Displacement Tracking Monitor](#) by IOM

Assessment section

When **preparing the assessment section of the Common Country Analysis report**, integrate climate and disaster risk and resilience by:

- Keeping in mind that the Sendai Framework and Paris Agreement are integral parts of the 2030 Agenda, and that assessment of progress toward fulfilling the 2030 Agenda should include assessment of national capacity to fulfill and report on Sendai Framework targets and indicators and the NAP or national adaptation strategy.
- Ensuring that the SDG financing landscape assessment examines:
 - Loss and damage from disaster and climate change impacts, as monitored under the Sendai Framework and the promoted by the Warsaw International Mechanism.
 - The different streams of funding contributing to building resilience against climate change and disasters. Climate change adaptation, disaster risk reduction, health risk management, civil protection, ecosystems rehabilitation and settlement upgrading are funded from different funding streams, which may lead to funding gaps for specific aspects or time windows within climate and disaster risk management.
 - Climate and disaster risks act as barriers to fostering an investment-grade business environment. If possible, assess climate and disaster risk management investments and risk-sharing by the private sector and the public, including how households invest remittances.

Please consult *the Companion Piece on SDG Financing on Cooperation Framework Funding and SDG financing* for in-depth guidance.

Ensure that climate and disaster risks are included in the **multi-dimensional risk analysis**, utilizing guidance given in the *UN Common Guidance on Helping Build Resilient Societies* and the *Companion Package*, particularly the SDG Risk Framework. The analysis should:

- Identify the natural hazards, biological hazards, technological hazards and slow-onset climate events relevant to the national and sub-national contexts. Identify how they can interact and describe their likely impacts on different groups and the key drivers of development, including economic loss. If information on average annual loss is available, it should be included.
- Acknowledge that not only contextually “typical” disasters, but also low-probability events, accumulation of climate change impacts, concurrent hazards and disasters, and interactions between sudden- and slow-onset events can significantly change the development situation and threaten sustainable progress towards the 2030 Agenda and Leaving No One Behind.

See Appendix 2 to this Guidance Note for an overview of risks to and risks from development choices related to each SDG. See Annex 3 of the *UN Common Guidance on Helping Build Resilient Societies* for an overview of available tools for risk and resilience assessment.

As mentioned in the Cooperation Framework Companion Package, high quality Common Country Analysis should include **early warning** information which can help identify negative changes in the country's development situation. Disaster risk reduction and climate change adaptation practitioners usually use 'early warning' to mean early warning of a hazardous event or food insecurity. However, in the context of the Cooperation Framework, 'early warning' information is information that indicates negative changes in the national and sub-national context, which – if not mitigated – can eventually lead to crises of development, peace or human rights, and trigger the need for humanitarian response. By tracking data points that can indicate increased climate and/or disaster risk or declining risk management capacities, the annual update to the Common Country Analysis can give the UN development system warning and help the UNCT take action within its development programming to prevent later crises related to disasters, climate change and climate variability.

- For natural and technological hazards, changes can be tracked through indicators of disaster mortality, loss and damage from different hazards and for particularly vulnerable groups (such as women, children, youth, the elderly, people with disabilities and chronic illness, indigenous people, migrants and refugees) as well as changes in migration and settlement patterns, economic activity, gender equality and social cohesion in areas exposed to hazards and climate change.
- For biological hazards, changes can be tracked through indicators from human and animal disease monitoring/surveillance, morbidity rates, monitoring of desert locust habitats and reproduction factors, and monitoring of risk factors and incidents at the human-animal-ecosystem interface.
- For slow-onset hazards and climate change, changes can be tracked through authoritative nation and global climate projections, coastal erosion and rainfall records, as well as indicators of social cohesion, gender equality, food security, health and nutrition status, livelihood, biodiversity, water access/quality, and migration from and within climate-vulnerable areas.

Monitoring and early warning for crisis prevention is evolving, and many countries do not yet have the capacities or institutional cultures required to fully implement it. The UNCT may therefore want to utilize innovative data sources, partner directly with particularly vulnerable communities or CSOs, and strengthen capacity of government counterparts to do the same. This may include use of [space technology](#), enhancing national [weather and hydrological forecasting and climate service capacities](#), [crowdsourcing](#), and helping establish networked community hazard monitoring/[disease surveillance](#).

Analysis section

When preparing the analysis section of the Common Country Analysis, analyze how climate and disaster risk is driven by and affects development and groups at risk of being left behind by considering it within the mandatory analyses outlined the Cooperation Framework Guidance:

Within the Economic Transformation Analysis:

- To enrich the *analysis of the structure of the economy*: Consult risk maps and risk assessments to map whether areas of high economic productivity and the transport and energy networks supporting the economy overlap with areas exposed to climate change and hazards. Identify whether any such overlaps present threats to critical agricultural, industry or service sectors.
- To enrich the review of *implications of monetary and fiscal policy on sustainable development*: Review existing climate and disaster risk management budget analyses and expenditure reviews available to identify whether adequate resources are being spent on risk management.
- To enrich the *examination of impacts of external factors on the economy*: Identify which key productive sectors are vulnerable to external climate and disaster shocks. This can include vulnerability of value chains to disasters in other countries; vulnerability of tourism to pandemics or epidemics; or competition over shared climate-vulnerable resources such as water bodies.
- To enrich the *examination of cross-sectoral impacts of economic policies*: Compare existing climate and disaster risk governance frameworks and economic policies to identify synergies and risk-exacerbating tradeoffs between the two, such as increased risk of technological disasters related to industrialization. Assess whether development planning instruments incorporate climate and disaster risk screening and mitigation measures.

See Appendix 2 sections on SDG 1, 2, 7, 8, 9, 12 and 14 for key points and suggested questions to ask about linkages between specific drivers of economic development and climate and disaster risk.

Within the Social Exclusion Analysis:

- To enrich the analysis of the social structure: Use risk maps and climate change projections to help identify patterns of exclusion, social conflict or declining social cohesion that overlap with patterns of hazard exposure, disaster risk and climate change. This should include analysis of exclusion of particular types of settlements (such as slums, refugee camps, IDP camps, indigenous settlements) from national frameworks and mechanisms for climate and disaster risk management.
- To enrich the *analysis of multiple types of discrimination and their intersection*: Determine whether legal status and/or stigmatization limits specific groups' access to risk mitigation infrastructure such as collective shelters, embankments, safe housing and resilient schools and hospitals.
- To enrich the *review of main drivers of exclusion*: Identify legal, spatial, social, technological, language and literacy barriers for different groups' access to risk information and early warning, social safety nets, emergency health services, and life-saving water and sanitation infrastructure. Map migration and mobility trends against time and location of disaster events and areas affected by climate change, to identify linkages.
- To enrich the assessment of manifestations of exclusion: Review morbidity and disaster mortality, loss and damage figures to identify disproportionate impacts on any particular group. Map overlaps between disaster-prone/climate-vulnerable areas and where different social groups are settled and compare differences in multidimensional poverty compared to the national average.

See page 9 for linkages between the LNOB intersectional framework and climate and disaster risk, and the Appendix 2 sections on SDG 1, 5, 10, and 16 for key points and suggested questions to ask about linkages between climate and disaster risk and poverty, gender, inequality, and governance.

Within the Environment Analysis:

To enrich the *analysis of environmental pressures and their drivers*: Identify the key drivers of environmental degradation, and how this environmental degradation exacerbates climate and disaster risks. Conversely, examine how climate change impacts and natural and technological hazards are putting pressure on the environment, including natural resources and ecosystems.

- To enrich the *assessment of the state of the environment (water availability and quality, state of forests and vegetation cover, land use, protected areas or ecosystems, key biodiversity areas and critical habitats, wildlife, air quality, agriculture type and urbanization)*: Assess areas that are vulnerable to climate change and to natural, biological and technological hazards (including transboundary risks). Identify impacts of disasters and climate change on environmental assets/natural capital and review available data on natural capital loss and damage.
- To enrich the *summary of challenges in interactions between people and the environment*: Present information on health impacts, land use, water scarcity, food and energy security related to exposure and vulnerability to climate change and natural hazards. Describe whether and in what ways environmental conditions and management contribute or reduce the risk of disasters.
- To enrich the review of *environmental policy mechanisms*: Review the environmental management frameworks to identify areas of synergy with the Sendai Framework and Paris Agreement targets, commitments, capacity development and reporting.

See Appendix 2 sections on SDG 2, 6, 7, 11, 13, 14, and 15 for key points and suggested questions to ask about linkages between climate and disaster risk, the environment and ecosystems services.

Within the Governance and Institutional capacity analysis:

- To enrich the *examination of the legal framework and institutions*: Review legal and policy frameworks for disaster risk reduction, climate change adaptation, health emergencies, environmental management, and civil protection to identify state responsibilities and people's rights with regards to climate and disaster risk management. Determine whether disaster risk, health emergency and climate change adaptation frameworks are integrated, coherent or siloed, and whether climate and disaster risks are addressed in national development policies and plans. Examine the impact of historical or current disasters (including outbreaks, epidemics and pandemics) or climate change effects on the enjoyment of human rights by people in the country.
- To enrich the *review of mechanisms for participation and civic space*: Determine whether a national DRR platform and platforms for civic participation in climate change adaptation exist, and whether they are inclusive of the organization of women, people with disabilities, youth, indigenous people, volunteer groups, community organizations and private sector.
- To enrich the examination of commitment of evidence-based policy-making: Assess the capacity of the National Statistics Office, National Meteorological and Hydrological Services, national health information systems and duty-bearing climate and disaster risk management institutions for producing and disseminating high-quality, disaggregated data on climate and disaster risks, vulnerability, impacts and capacities. Identify whether forums for science-policy dialogue on natural, biological, technological hazard and climate change-related risks exist.

- To enrich the *review of capacities and capacity gaps for implementation of the SDGs and Leaving No One Behind*: Consult capacity assessments, lessons learnt reports and after-action reviews to identify governance, implementation, financing, knowledge and technology/equipment capacities and capacity gaps of state and non-state climate and disaster risk management actors. This should include identification of capacities and gaps for inclusive and gender-responsive risk management. Pay particular attention to capacities supporting climate and disaster-risk related SDG targets, the NDCs, the NAP or national climate change strategy, localization of the Sendai Framework, Multilateral Environmental Agreement Commitments, sectoral risk reduction or climate change adaptation policies, the International Health Regulations, and transboundary water treaties.

See the Appendix 2 sections on SDG 16 and 17 for key points and suggested questions to ask about linkages between climate and disaster risk, institutions and governance in general; the sections on the other SDGs all contain key points and questions related to risk within specific sectors.

Within the Humanitarian-Development-Peace collaboration section:

- Revisit the multidimensional risk assessment and identify how climate, disaster and health risks can lead to cascading risk across the development/humanitarian/peace domains.
- Examine how disasters, climate change and disease risks may affect national capacity to implement commitments such as human rights commitments, the Global Compact on Refugees, and the Global Compact on Safe and Orderly Migration.
- Identify climate and disaster risks to refugees and people affected by crisis and conflict.
- Identify how conflict have or may affect climate and disaster risk governance and institutional capacity to manage risks.

For further guidance, see the *Companion Piece on Humanitarian-Development-Peace Collaboration*.

The Cooperation Framework

Cooperation Framework – Prioritization

When undertaking the process of **prioritizing catalyzing development solutions** described in the Cooperation Framework:

- Determine which of the climate and disaster risks identified in the Common Country Analysis present the most significant threats to the advancement of those most left behind, and to the key economic, social and environmental systems that enable and sustain development gains.
- Examine linkages between each suggested solution and climate and disaster risk by describing the solution's expected transformative effect on the resilience against climate and disaster risks of the poorest and most vulnerable, and how the solution ensures inclusive and sustainable results that address drivers of climate, disaster and health risks.
- Cross-reference suggested solutions with the national development vision and existing national plans. In many cases risk management interventions with the greatest multiplier effect are already identified in the NAP, climate change adaptation strategies and national DRR strategy. Helping build capacities to address implementation gaps in these plans and strategies is a good entry point for accelerating SDG progress and strengthening national resilience to climate and disaster risks.

When **narrowing down the selection of development solutions to those that the UN is best placed to support**, prioritize those solutions which:

- Develop climate and disaster risk management capacities to (a) strengthen the resilience of those left furthest behind, (b) across several sectors at the same time, and/or (c) enhance integrated climate, disaster and health risk management governance, policies, plans and mechanisms.
- Enable an all-of-society approach to manage risks and fund resilience-building through solutions that address the needs and leverage the capacities of multiple actors – including government, communities, academia, civil society and private sector.
- Support the development of inclusive, integrated multi-hazard early warning systems, as well as interventions that require development and humanitarian (and if applicable, peace) collaboration to manage climate and disaster risks. Examples of such interventions include holistic preparedness for anticipatory action for, response to and recovery from annual flooding, and expansion of national early warning systems to camps for refugees and internally displaced people.
- When in doubt, cross-reference with the [United Nations System Strategic Approach on Climate Change Action](#) and [United Nations Plan of Action on Disaster Risk Reduction for Resilience](#), which describe UN contribution to implementation of the Paris Agreement and the Sendai Framework.

Cooperation Framework – Theory of Change

When **designing the theory of change process**, utilize **tools and methods** which enable analysis of interconnected causal relationships between development processes and climate and disaster risk management, such as problem trees and fishbone frameworks.

When **developing the theory of change for each of the prioritized solutions**, involve the climate and disaster risk stakeholders listed in the Roadmap (see page 19) to articulate the theories of change for different priority solutions, so that the change pathways are risk informed and outcomes resilient.

When **mapping the change pathways that can help reach the desired development changes** by 2030:

- Refer back to the climate and disaster risks identified in the multidimensional risk assessment to identify how they can change the required conditions for each solution, and how that impact would affect the envisioned pathway. Be realistic about the likelihood and potential impact of each risk, including low frequency/high impact and high frequency/low impact events that are felt first and most keenly by those already left furthest behind.
- For each change pathway, identify what measures need to be taken to sustain progress and results both before and after 2030 under conditions of global climate change and more frequent disasters.

Levers of change: measures for integrating climate and disaster risk management in the strategic development solutions of the UN Cooperation Framework

The following sections present a menu of climate and disaster risk management measures⁷ which can be integrated into the different Cooperation Framework development solutions to build climate and disaster risk management capacities across multiple types of risk. For case studies from different countries, see the UN Common Guidance on Helping Build Resilient Societies.

These options can be implemented at transboundary, national, sectoral, and local levels – when integrated in sectoral programmes, they build the capacity of people and systems, strengthen the sustainability of development results, and leverage sectoral investment for resilient outcomes.

⁷ The list of options has been adapted from the typology created by the UN Climate Resilience Initiative A2R, and is indicative, not prescriptive. The majority of climate change adaptation and disaster risk reduction activities fall into one of these broad categories.



Climate and disaster risk information systems and services

The availability of hazard, climate and disaster risk information systems and services is a crucial building block enabling decision-makers, private sector, civil society and the public to make risk-informed, inclusive decisions. It also enables reporting on the SDG and Sendai Framework indicators.

Climate and disaster risk information systems and services require capacity development for:

- Hazard, risk and vulnerability assessments at regional, national, sectoral and community level
- Hazard, climate and health monitoring and analysis, including standardization of terminology
- Sex-, age-, disability- and geographically disaggregated data collection on morbidity, vulnerability, loss and damage, displacement as well as risk management capacities
- Development of climate and disaster risk information products and decision support tools

National Statistics Offices, National Meteorological and Hydrological Services, and sectoral ministries are key partners. Potential partners also include academia and regional organisations.

Example indicator: *Percentage of provincial/district government administrations with access to climate/disaster risk dashboard with information disaggregated to local level*



Awareness-raising, knowledge-sharing and capacity development

Investment in awareness-raising, knowledge-sharing and targeted capacity development unleash the capacities of the public, decision-makers, businesses and civil society to take their own climate and disaster risk management. It is also crucial in building demand for public and private investment in risk management measures, raising levels of compliance with regulations and standards, increasing science-policy dialogue, and stimulating informed public participation in risk governance.

Activities supporting awareness, knowledge and capacity development include:

- Awareness campaigns
- Formal and informal education and training, including vocational and civil servant training
- Establishment of sectoral, national and transboundary platforms for research and exchange

In addition to government counterparts, potential partners include academia, the media, private sector, NGOs, indigenous peoples' organizations, women's organizations, youth organizations, disabled people's organizations and the Red Cross Red Crescent Movement.

Example indicator: *Number of male and female farmers who are members of knowledge platforms on climate change adaptation*



Governance for climate and disaster-risk sensitive development

Clear articulation of how hazards, risks, disaster and climate change impacts are to be managed and by whom is vital to enable accountable development and coordinated, multi-hazard risk management. Central risk governance instruments include government policies and frameworks, planning and budgeting guidelines, climate and disaster-inclusive environmental impact analyses, transboundary agreements and regulation of private and commercial conduct.

Critical capacities are built by supporting:

- Development of national and subnational DRR, public health and climate change adaptation plans/strategies, including for transboundary risks
- Mainstreaming risk reduction and adaptation in public and sectoral policies, budgets and development planning instruments and regulations for land use, agriculture, infrastructure construction, waste management, migration and natural resource management
- Develop the capacity of institutions implementing, enforcing and monitoring risk governance

In addition to government, partners include parliamentarians, civil society and youth groups.

Example indicator: *Number of gender-inclusive sectoral climate and disaster risk management policies, plans and strategies developed*



Risk transfer mechanisms – social protection and insurance

When disasters and climate change impacts disrupt or undermine livelihoods, limited household assets or lack of social protection coverage can trigger use of negative coping strategies and a downward spiral of vulnerability and poverty. Shock-responsive, adaptive or risk-sensitive social protection schemes can protect health, assets and livelihoods, and help prevent use of negative coping mechanism and entrenchment of inequality and poverty. In addition, it can assist at-risk households to build savings and access contingency funds, loans and risk-sharing schemes.

Critical capacities are built through:

- Support to social protection reform and establishment of universal basic income
- Support to establish universal health coverage and access to quality health services for all
- Development of index-based weather insurance and insurance for assets/productive outputs
- Establishment of contingency funds, savings, cash transfer and loan schemes and risk-sharing schemes such as grain banks

In addition to government counterparts, potential partners include regional and sub-regional institutions, insurance companies and the Red Cross Red Crescent Movement.

Example indicator: *Percentage of affected households that have received government support (e.g. payments, food vouchers, assets or inputs) to deal with disasters/climate shocks*



Risk-proofing the built environment

Disasters and climate-related hazards such as salinization and sea-level rise can significantly damage housing, buildings and the water, electricity, transportation and telecommunications infrastructure negatively impacting service provision, education, health services and economic activities. Damages and destruction of housing lead to loss of lives, health and assets, and contribute to sustained poverty in areas affected by recurrent disasters or weather extremes. Damage to facilities handling hazardous materials can also trigger secondary impacts such as spills and technological disasters.

Risk-proofing activities include:

- Construction and retrofitting of risk mitigation infrastructure (e.g. dams and sea dykes)
- Construction and retrofitting of public infrastructures such as roads and bridges, schools, hospitals, airports and ports, water distribution, waste management, drainage and irrigation systems, electricity grids, agricultural facilities and local governance infrastructure

Combining engineering solutions with nature-based solutions (see below) may maximize impact, depending on the location and context. Risk-proofing is supported by strengthening and enforcing risk governance and building technical capacity. In addition to government counterparts, possible partners include households, private sector entities and IFIs.

Example indicator: *Number of men and women that benefit from the construction and retrofitting of sustainable, resilient and resource-efficient infrastructure utilizing local materials.*



Nature-based solutions

Nature-based solutions for risk management are actions that are inspired and supported by nature, including solutions that help to protect, sustainably manage and restore natural or modified ecosystems, and that address disaster risk while providing additional economic, social and environmental benefits. By utilizing nature-based solutions, negative environmental impacts on ecosystems are minimized, helping maintain healthy and diverse marine and terrestrial ecosystems that provide essential ecosystem services and healthy environments in a changing climate.

Nature-based solutions include measures such as:

- “Building with nature” initiatives and “green” and “blue” infrastructure
- Integrated water resource management for flood and drought protection
- Coastal reforestation and afforestation and integrated coastal zone management
- Wildlife habitat protection supporting biological hazard risk management

Nature-based solutions are enabled by capacity development and risk governance. Partners include communities, indigenous and environmental organizations.

Example indicator: *Percentage increase in public investment in forest protection and restoration*



Household and community resilience capacities

When climate and disaster risks are realized as shocks and stressors, they are more likely to have the strongest negative impact on those who are already living in multi-dimensional poverty, experiencing exclusion and discrimination, and lacking access to basic and financial services. Households and communities living in proximity to a hazard or in marginal settlements are more exposed to the impacts of natural and technological hazards, climate change and biological hazards.

Household and community resilience actions bundle health, livelihood and social cohesion activities with a selection of risk management activities – such as risk-proofing the built environment, risk transfer, awareness-raising, early warning systems and forecast based financing, – and tailors them for implementation in a specific location or towards a specific community, such as marginal farmers, remittance-receiving communities, urban slums or camps for internally displaced people.

In addition to local government counterparts, possible partners include women and youth groups, community health networks, cooperatives, farmers' organizations, and small/medium enterprises.

Example indicator: *Percentage of poor people in drought-prone areas with access to safe and reliable water*



Private sector and agricultural climate and disaster risk management

The impacts of disasters and climate change on livelihoods, economic growth and ecosystems can only be reduced in partnership with the private sector, from small and medium enterprises to global corporations and whole industries. Building the capacity of private sector decision-makers to understand climate and disaster risk enables business continuity planning and better risk management. This protects jobs and livelihoods against shocks and unlocks the resources of the private sector for partnerships and innovative action.

Resilience-building actions targeting the private sector bundle managerial capacity development with risk management activities – such as awareness-raising, governance, climatic and disaster risk information systems, and emergency preparedness – and tailors them for co-implementation with different types of private sector entities and business networks.

Example indicator: *Number of businesses that have a business continuity plan and access to risk insurance against extreme weather episodes*



Early warning systems and anticipatory action

When timely, relevant, reliable and accurate alerts can be issued well before a hazardous event, it enables people to make more accurate decisions and early actions to help protect their lives, assets, and infrastructure. Governments, local administrations, communities and households should be able to receive and react to official early warnings and take early action to reduce impacts.

Anticipatory capacities are built by bundling several types of activity – climate and disaster risk information systems, awareness-raising, and preparedness for response – to map hazards, set up monitoring and warning services, establish dissemination structures, and prepare protocols for response. In addition to government counterparts, partners can include the Red Cross Red Crescent Movement, communities, transboundary organisations, and telecommunications companies.

Example indicator:

1. *Outcome: Number of people per 100,000 that are covered by early warning information through local governments or through national dissemination mechanisms*
2. *Output: Percentage of local governments having a plan to act on early warnings*
3. *Sectoral: Percentage of farmers with access to climate change information and warnings*



Emergency preparedness, response and recovery

Preparedness for inclusive, environmentally sensitive response and recovery is crucial to saving lives and livelihoods, ensuring continued effective and timely service delivery, and building back better when a disaster occurs. Preparedness is most effective when linked with early warning systems.

Activities supporting emergency preparedness and response capacities include preparedness for and delivery of first responder services, material relief, food relief, cash relief, and critical services. Realistic contingency and business continuity planning for safety, basic needs and human rights reduces loss of life and stress on critical systems during and after an emergency, enabling the pursuit of early and transformative recovery. In addition to government counterparts, possible partners include humanitarian organizations and health, telecommunications and transport companies.

Example indicator:

1. *Outcome: Number of deaths and missing persons attributed to disasters, per 100,000 population, disaggregated by sex, age and disability*
2. *Output: Sector -specific contingency plans are regularly updated and response operations practiced through drills and simulation exercises*

Cooperation Framework – UN Risk Management and Mitigation

When developing the **risk analysis and mitigation measure table** for the Cooperation Framework:

- Ensure the inclusion of the previously identified climate and disaster risks to the achievement of the national development visions and the SDGs, and measures to address or reduce these risks.
- Identify and address how these climate and disaster-related risks can affect the UN, as well as how climate- and disaster-related risks can inadvertently be created or exacerbated by choices and intervention strategies by the UN. Examples of this include exacerbation of risk to agricultural and environmental systems from economic growth interventions.

Cooperation Framework – Results Framework

As explained in the **UN Common Guidance on Helping Build Resilient Societies**, it may be particularly challenging to capture efforts to build resilience – including to climate and disaster risks – in the Results Framework, as (a) impacts of resilience-building actions may not be apparent for decades, (b) causal linkages are unlikely to be linear, and (c) if a risk is not recognized as a disaster or change in the environment, it can be difficult to measure the impact of programming.

As resilience is multi-scale, dynamic and multidimensional, the Results Framework should capture how the levers of change are applied and affect different results levels within each *Strategic Priority Area*.

When formulating Results Framework statements and identifying indicators, it may be useful to view the theory of change and **result levels** through a disaster and climate resilience lens:

1. *Impact*: Changes in people's lives and improvement in the realization of their rights, achieved in spite of the climate and disaster risks identified in the Common Country Analysis.
2. *Outcomes*: Changes in the resilience to climate changes and disaster impacts of the people, institutions and systems targeted by each strategic priority.
3. *Outputs*: Changes in the climate and disaster risk management capacities of people, institutions, and systems to cope with, withstand, and bounce back from these climate and disaster impacts.

In **formulating outcome and output statements**, there are two ways of showing contribution to building resilience:

1. For outputs and outcomes directly addressing climate and disaster risk management capacities, explicitly identify in the statement which strategies are being used – such as disaster risk reduction, climate change adaptation, climate-smart DRR, and/or environmental management.
2. For outputs and outcomes contributing to building systemic resilience, use modifier adjectives such as “resilient”, “climate-smart”, “adaptive” or “shock-responsive”, or refer to geographical equity and continuity in emergencies. For example:
 - “Resilient, sustainable and equitable growth”
 - “Food security and agricultural productivity have improved for all, irrespective of the individual ability, gender, age, socio-economic status and geographical location”
 - “Green and climate-smart technologies and practices”
 - “Resilient and inclusive primary health care and strengthened social protection, including in time of emergencies”
 - “Inclusive, shock-responsive social protection and services”

When listing **assumptions** for each outcome, remember to explicitly state assumptions about national risk management capacities that are necessary to prevent or limit potential disaster or climate impacts on the change pathway. Refer back to the Common Country Analysis *multidimensional risk assessment* and *Governance and Institutional Capacity assessment* to ensure that assumptions are realistic.

In identifying **indicators**:

- Review the [SDG indicator framework](#) and the [Sendai Monitoring Framework](#) to identify which of the global indicators can be used in the Cooperation Framework results framework. Please see Appendix 2 where relevant SDG targets listed.
- Review the *National Development Plan, NDC, NAP, and national DRR and adaptation strategies* to identify whether there are national indicators that can be used. Such indicators may also have been identified and integrated in the country’s Sendai reporting.
- Consider the recommendation of **UN Common Guidance on Helping Build Resilient Societies** to utilize different types of indicators to measure resilience:
 - Measure the resilience of people and systems to hazards, disasters and climate change over time, including changes when shocks occur through **systems resilience indicators**.
 - Measure the progress of interventions with positive impacts on capacities and which reduce use of negative coping capacities with **resilience capacity indicators** – in this case, climate and disaster risk management indicators.
 - Ensure **integration of the sustainability and resilience principle** in non-disaster/climate specific outcome indicators.

See following table for examples of systems resilience, climate and disaster risk management capacity and resilience-inclusive indicators at Cooperation Framework outcome and output level.

When determining **disaggregation criteria**, keep in mind that due to the inherently spatial nature of hazards, climate change impacts and disasters including epidemic clustering, disaggregation by geographical location is a vital tool for analyzing progress and who is being left behind. Sex-, age-, and disability-disaggregated data will enable identification of those left behind in each location.

When designing the **monitoring, evaluation and learning (MEL) plan**, ensure that it is risk-sensitive by including risk and resilience topics in the UN learning needs assessment and by describing provisions for learning, accountability and participation of rights-holders and duty-bearers in the case of a major disaster.

Examples Of Indicators

Systems resilience indicators

Outcome level	Ratio of land consumption rate to population growth rate (SDG 11.3.1)
	Number of deaths, missing persons and persons affected by disaster per 100,000 people (SDG 11.5.1)
	Direct disaster economic loss in relation to global gross domestic product, including disaster damage to critical infrastructure and disruption of basic services (SDG 11.5.2)
	Proportion of youth (aged 15-24 years) not in education, employment or training, disaggregated by location (adaptation of SDG 8.6.1)
Output level	Number of men and women benefitting from improved, climate-resilient urban infrastructure
	Number of farms and pastoralist households participating in rainfall capture and storage schemes
	<i>Percentage of social protection schemas which consider climate and disaster risks and/or disaster impact within vulnerability criteria for inclusion and targeting</i>

Climate and disaster risk management capacity indicators

Outcome level	Extent to which knowledge for sustainable development (including mitigation, adaptation, impact reduction and early warning) is included in national education curricula (adapted SDG 4.7.1. and 13.3.1)
	Extent of national capacity for implementing International Health Regulations (2005) and health emergency preparedness, including early warning (adapted SDG 3.D1)
Output level	Percentage of trainees which have increased knowledge on national and transboundary water-related disaster risk management
	Number of sectoral disaster risk management and climate change policies, plans and strategies developed

Integrating sustainability and resilience in other indicators

Outcome level	Total government spending in social protection and employment programmes as a proportion of the national budgets and gross domestic product, disaggregated by regular or disaster-responsive (including pandemic) spending (adapted SDG 8.B.1)
	Proportion of sustainable development indicators produced at the national level with full disaggregation, including by geographical location (adapted SDG 17.18.1)
Output level	Number of local government/municipalities supported to develop rural development plans that confirm to national regulations and are gender-sensitive and consider climate and disaster risk

See also pages 30 to 34 for example indicators per "lever of resilient change" disaster and climate resilience option.

Cooperation Framework – UNCT Configuration

When going through the **UNCT re/configuration exercise**, ensure that new disaster and climate resilience ‘asks’ are discussed to identify UN entity capacities to meet these asks.

If a disaster happens and changes the development landscape or resilience capacity development needs significantly, revisit the ‘asks’ during the **next Annual Performance review** to discuss whether support from additional entities is needed to manage risks across the humanitarian, development and peace spheres.

In both the cases, it is important to leverage regional assets for risk management if country capacities (including those of Non-Resident UNCT member Agencies) are limited.

Signature

Once the **Cooperation Framework is published after signature**, share the document with climate and disaster risk management stakeholders (see page 19) to strengthen mutual accountability and foster partnerships.

Funding

When **developing and monitoring the multi-year and annual funding frameworks**,

- Identify opportunities to ensure that the 15 per cent costing dedicated for gender equality programming is risk-informed and contributes to building the disaster resilience and adaptive capacities of women and girls, and that climate and disaster risk management programming is inclusive and gender-responsive. The structural inequalities that disadvantage women and girls in general, also contribute to disproportionately higher disaster and climate impacts on their lives, health, well-being, access to justice and economic prosperity. For in-depth guidance on promoting gender equality and women’s empowerment in the context of disaster and climate change, see the [UN Committee on the Elimination of Discrimination against Women’s recommendation 37, on gender-related dimensions of DRR in a changing climate](#); for a summary, see the Appendix 2 section on SDG 5.
- Ensure that resource mobilization targets are realistic, considering the fragmented funding architecture for climate and disaster risk management, the preparatory lead time required to access vertical funds and climate finance, and resource gaps in disaster recovery situations.

When **initiating joint resource mobilization**:

- Clearly articulate the respective roles and value propositions of agencies involved in outcomes and outputs contributing to disaster and climate resilience, showing collective UNCT impact.
- Base funding dialogues with government, development partners and private sector on national priorities as documented in DRR and climate change strategies and the NAP. Utilize evidence on the benefits of [coherent](#), risk-informed investment and risk management.

Implementing, monitoring and reporting

- Consider investing in **building the country-specific evidence base for the costs and benefits of resilience building**, risk reduction, prevention, risk transfer and adaptation through research, **average annual loss estimations**, and risk-pricing. Advocate for the use of **'crisis modifiers'** allowing redeployment of development funds to anticipated and current crises. Coordinate with UNCTs in neighboring countries to build the case for transboundary risk management.
- Prioritize resource mobilization for initiatives that can influence the policy and investment environment to unlock inclusive partnerships, public and private sector financing of risk reduction, adaptation and resilience-building, and access of vulnerable communities to financial resource before and during crises, including forecast-based financing.
- Convene UN development, humanitarian and peace-building teams to identify possible financing instruments for disaster and climate resilience-building activities within their respective spheres, identify unaddressed gaps, and explore pooled funding.

For more in-depth exploration of funding strategies and good practices, see the **Cooperation Framework Companion Piece on SDG Financing and the UN Common Guidance on Building Resilient Societies**.

When **establishing the governance and management structure for the Cooperation Framework**, integrate resilience, disaster risk reduction and climate change adaptation by:

- Suggesting that representatives of key disaster and climate stakeholder groups (including IFIs, the national Red Cross Red Crescent society, private sector, and specific at-risk groups) be included as National-UN Steering Committee members.
- Evaluating whether the multidimensional risk analysis of the country context warrants the establishment of an additional Thematic Group on Risk and Resilience (see box), being mindful of benefit versus transactional cost.

When **reviewing the collective contributions of the UN entities and their country development programming instruments**, the UNCT should consider whether there are any implementation capacity gaps for climate and disaster risk management. If necessary, contact with specialized non-resident agencies such as UNDRR, UNEP, OCHA, WMO, and UNITAR can be made directly, established through the UNDCO or discussed with the relevant regional issue-based coalitions.

When **developing joint work plans** presenting the programmatic sub-outputs and resource contributions of each resident and non-resident entity to the Cooperation Framework outputs:

- Apply the guidance given on pages 36-37 in finalizing the output statements and indicators and defining sub-outputs and indicators, keeping in mind the need to build different types of climate and disaster risk management capacities for implementation of the NDCs, NAP and national climate and disaster risk management strategies.
- When gathering the Results Groups co-leads to collectively review Joint Work Plans, consider whether to invite agency resource persons to help screen for climate and disaster risks and resilience-building opportunities.

Enabling the prevention agenda – Risk and Resilience Thematic Group

To enable the realization of the Common Country Analysis as a real-time core analytical function and support effective and risk-sensitive implementation of the Cooperation Framework, one option may be to set up a Risk and Resilience Thematic Group as part of the governance and management structure of the Cooperation Framework.

The purpose of the Risk and Resilience Thematic Group would be to periodically review the risk landscape which could affect the implementation of the Cooperation Framework as a whole, to provide inputs on risks and risk management opportunities to the Joint Steering Committee, the results groups and the MEL group. An indicative membership structure would be a representative from each of the results groups, a representative from the RCO (preferably an economist), 2-3 climate, public health, gender and disaster resource persons from resident or non-resident Country Team member agencies, a human rights resource person, and where applicable, representatives from the Humanitarian Country Team and UN Senior Management Team.

The role of a Risk and Resilience Thematic Group is to:

1. Review information on identified climate and disaster risks (and early warning information, where the Common Country Analysis have identified them) to diagnose any changes from baseline/last Common Country Analysis revision, and to discuss any emerging hazards and risks that may need to be incorporated;
2. Recommend critical risk management and resilience-strengthening actions to be taken by the UNCT or results groups in response to the changing or emerging risks, for use in Common Country Analysis updating, Cooperation Framework and workplan revisions, implementation and resource mobilization;
3. Succinctly report changes in the risk landscape and recommendations to the UN Country Team, results group, and Monitoring, Evaluation and Learning (MEL) group, and - where applicable – the Humanitarian Country Team (HCT) and the United Nations Security Management Team (UNSMT).

To ensure that the analysis and recommendations of the group is generated at appropriate times, the group would ideally meet at least twice per year: once before the Common Country Analysis revision, and subsequently at either the halfway mark or when significant events occur. Examples include disasters including disease outbreaks, significant seasonal weather forecasts, or deterioration in social cohesion. The range of risks covered by the group can be expanded into other domains should the UNCT wish it.

- Identify opportunities for joint disaster risk reduction and climate change adaptation programming within or across outputs, for inclusion in joint resource mobilization efforts.
- Identify synergies and opportunities for joined-up approaches across output areas and across the humanitarian-development-peace nexus, ensuring that follow-up actions are minuted and shared with humanitarian, human rights and peace-building actors.

When **implementing, monitoring and adapting the joint work plans**, strengthen integration of resilience, disaster risk reduction and climate change adaptation by:

- Offering Results Group and MEL group members learning opportunities on risk-informed, gender-inclusive development approaches.
- Ensuring that the Results Groups covering disaster risk reduction and climate change adaptation-specific outputs include government representatives from the key duty-bearing ministries involved. These may be scattered across apex offices (such as the Cabinet office or Prime Minister's office) and different line ministries including home affairs, foreign affairs, environment, disaster preparedness, health, energy, and women's empowerment/affairs depending on the risk profile of the country.
- Ensure that the relevant Cooperation Framework monitoring systems are linked to and contribute to the strengthening of national disaster and climate data and information systems, including national disaster management offices, the National Statistics Office, the National Meteorological and Hydrological Services, and the government bodies responsible for NDC and Sendai monitoring and reporting.
- If a Risk and Resilience thematic group is established, ensure that their analysis of the evolving risk context is reviewed and implications discussed by the Results Groups, Extended Results Group meetings and MEL group.

When conducting the **Joint Annual Performance Review**, ensure that discussion of achievements, challenges, opportunities and lessons learned are contextualized against recent disaster and severe weather, water and climate events and (if applicable) shifts in baselines in climate-vulnerable areas. If the multidimensional risk context warrants it, propose amendments to the Cooperation Framework or Joint Work Plan to implement prevention, risk management or recovery measures.

When **preparing the Annual UN Country Results report**, highlight:

- Prevention, climate change adaptation, joint programming, and humanitarian-development-peace nexus results and challenges to support resource mobilization efforts.
- Lessons learnt and innovative pilots that move beyond "business as usual" to address the complexity and dynamism of resilience-building.

Evaluation

When preparing the **governance and management arrangements for evaluation**, ensure that any critical capacity gaps on climate and disaster risks within the Evaluation Steering Committee are compensated for when selecting members of the Consultative Group.

Ensure that the rights-based, inclusive monitoring and **evaluation design** considers the multidimensional risks assessment and any disaster and climate change impacts that have affected economic, social and environmental systems and particular groups within the Cooperation Framework period, not forgetting small or slow-onset events.

Share the final **evaluation report** with climate and disaster risk and resilience stakeholders identified in the roadmap (see page 19).

Appendix 1:

Special addendum for integration of disease outbreaks, epidemics and pandemics in Cooperation Frameworks

Biological hazards are hazards that are of organic origin that directly affect humans, animals and plants and have wider health, economic, social and environmental consequences.

They include pathogenic microorganisms, toxins, and bioactive substances as well as biological vectors (e.g. mosquitoes, rodents) and pests (e.g. locusts). The hazard category also encompasses invasive species and human-animal conflict. Due to the mobility of the organisms or conveyances (e.g. ships) carrying the hazard, biological hazards can also transcend boundaries, both between geographical territories and species. Identifying and addressing risks from these hazards requires effective risk governance and an integrated whole-of-society approach across many sectors (e.g. disaster risk management, public health, agriculture, transport, environment, education) at all levels.

Biological hazards can have direct impacts on human, animal and ecosystem health and affect the development situation of a country or sub-national region.

The effects of containment measures on people and systems can lead to repercussions on human security, sustainable development and fulfilment of human rights. This annex focuses on the subset of biological hazards which are the agents of diseases affecting human health. From a public health perspective, the terms “outbreaks, epidemics and pandemics” are used to describe these hazardous events.

Countries and communities face the risk of outbreaks and epidemics from many types of diseases. These stresses may be further exacerbated by emerging diseases and the effects of climate change.

The COVID-19 pandemic and other epidemics at local, national and global scales have reinforced the need for countries to manage the risk of disease outbreaks by applying a whole-of-society risk management approach. The resulting risks and impacts can be expected to be compounded by the concurrence of disease outbreaks and other types of disasters – making improved understanding of these interlinkages between biological hazards and other natural and human-induced hazards, vulnerabilities and capacities vital to managing risk and building resilience.

As the primary vehicle for harnessing the UN development system’s collective support to countries, the Cooperation Framework must be informed and responsive to the development and operational impact of biological hazards, including the risks of epidemics and pandemics.

As many microbes infect both human and animals sharing ecosystems, taking a “One Health” approach and activating expertise from multiple sectors are necessary to detect, respond to, and prevent outbreaks. When updating and designing Cooperation Frameworks that support a whole-of-society approach to prevent epidemics and pandemics and mitigate the potential health and socio-economic impacts, proposed risk management measures should aim not only at building resilience of national and local health systems but strengthening all-hazards systemic resilience and capacities of communities and all sectors.

The International Health Regulations (2005) (IHR) is a legally binding international agreement which entered into force on 15 June 2007.

The Sendai Framework explicitly refers to enhancing the cooperation between health authorities and other relevant stakeholders to strengthen country capacity for disaster risk management for health, the implementation of the International Health Regulations (2005) and the building of resilient health systems, and to the role of the United Nations system, through the United Nations Plan of Action on Disaster Risk Reduction for Resilience, United Nations Development Assistance Frameworks and country programmes, in supporting Member States with the implementation of the Sendai Framework, “in coordination with other relevant frameworks, such as the International Health Regulations (2005).”

The scope and purpose of the International Health Regulations (2005) is “to prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade.”

Through the IHR, countries have agreed to build their capacities to detect, assess and report public health events. The IHR also requires States Parties to report annually on their capacities to implement the IHR. Guidance and tools are available to enable countries to fulfil their mandatory annual reporting obligations, assess capacities, develop national actions for health security, and conduct simulation exercises and after-action reviews.

An important common conceptual framework to facilitate this is the Health Emergency and Disaster Risk Management (EDRM) that reinforces implementation of the International Health Regulations (2005) and the Sendai Framework:

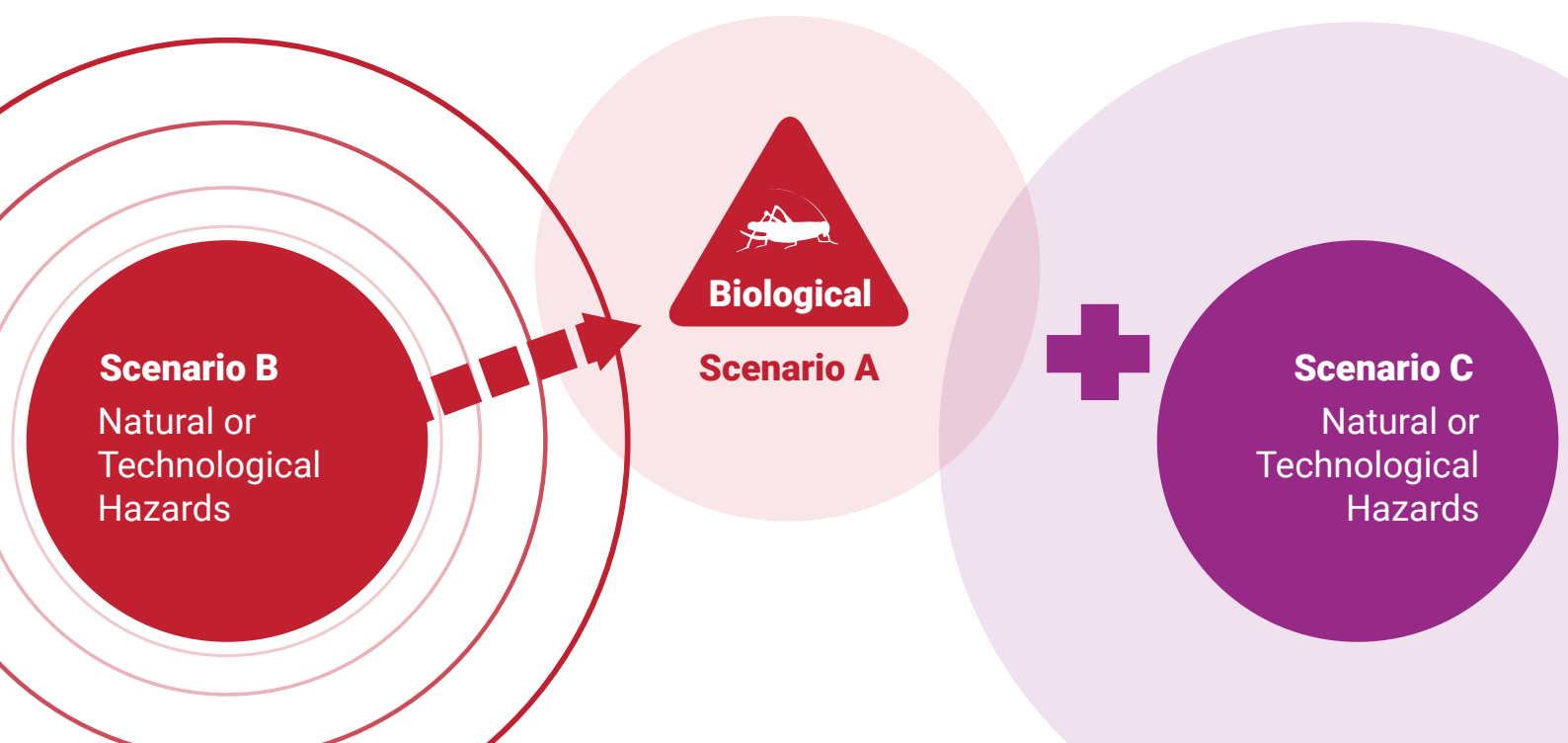
“Health EDRM emphasizes assessing, communicating and reducing risks across the continuum of prevention, preparedness, readiness, response and recovery, and building the resilience of communities, countries and health systems... At the core of effective Health EDRM are efforts to strengthen a country’s health system with a strong emphasis on community participation and action to build resilience and establish the foundation for effective prevention, preparedness, response and recovery from all types of hazardous events including emergencies and disasters.”

Comprehensive assessments of the risks from biological hazards form the basis for effective risk management, help in understanding risk and supporting risk communication to all stakeholders, and acts as a backbone for risk-informed decision making, planning and development.

This addendum to the *Guidance Note on Integrating Disaster Risk Reduction and Climate Change Adaptation in the UN Cooperation Framework* provides indicative guidance to integrate risk of outbreaks, epidemics and pandemics at key stages of the Cooperation Framework cycle. While the focus of this addendum is on human diseases, these principles and practices can be applied to animal and plant diseases which should also be addressed in the Common Country Analysis and Cooperation Framework.

Cooperation Framework Roadmap

- Ensure that there is adequate capacity to analyze the risks and impacts of biological hazards throughout the Cooperation Framework cycle. Epidemics and pandemics are dynamic and so risk monitoring systems are required to assess the evolving nature of risks. Biological hazards should also be integrated into multi-hazard risk assessments, covering hazard, exposure, vulnerability and capacities assessments, at all levels. Consider partnering not only with government and UN entities, but also with health authorities and specialized research institutions to ensure that both strategic and event-based risk assessments and needs analyses remain up to date.
- In the event of an epidemic or pandemic, critically assess the timeline for preparation of the Common Country Analysis and Cooperation Framework in relation to increased pressure on UN and stakeholder capacities (keeping in mind that the annual Common Country Analysis update and Performance Review provides opportunities to adjust and update both in the course of the cycle). Operating the Cooperation Framework in a prolonged epidemic or pandemic, and under restrictive public health and social measures may need advance planning both to ensure a broad consultative process and to ensure effective implementation despite restrictions on movement.
- Assess capacities including strengths and needs, across all sectors to better understand, analyze and implement integrated multisectoral disaster risk management, that includes biological and other hazards. Please see the end of this appendix for a list of technical resources.
- Hazardous event, including disasters, often overlap and sometimes occur as a result of another hazard. Such interconnectedness and cascading nature of hazards needs to be considered through strong scenario-based planning. Three such possible scenarios can be envisioned for biological hazards (see figure):
 - A. Standalone occurrence of a biological hazard
 - B. Occurrence of climate conditions or disasters caused by natural or technological hazards triggering a biological hazard (such as outbreaks of water-borne diseases in aftermath of floods)
 - C. Sequential or simultaneous occurrence of natural or technological hazard-related disasters with biological hazards



Common Country Analysis

- *Ensure that biological hazards are included in the risk assessments:* Ensure that multi-dimensional and multi-sectoral risk assessments capture the full spectrum of risks, including biological hazards (and recurrence of disease outbreaks). Analyze their interconnected and cascading nature to inform policy decisions, planning and actions. Source capacity to understand the dynamic risk elements and health, socio-economic, human rights, gender and multidimensional risk impacts of any ongoing or recent epidemic and pandemics from across the whole UN system.
- *Assess known and emerging biological hazards:* While biological hazards can trigger emergencies of varying duration, severity and affected populations, the ones with the potential to most severely disrupt national development can be identified on the basis of their potential to cause epidemic and pandemics.
- *Sectoral impact:* Due to their potential for significant impact on the functioning of social, economic and environmental systems, epidemics and pandemics create conditions that can decelerate progress towards the SDGs. However, they also create opportunities for acceleration when they are managed effectively. Include analysis of potential risks and impacts of biological hazards in the economic transformation, social exclusion and environment analyses, as well as the governance and institutional capacity sections. Please see page 12 of the Guidance Note on Integrating Disaster Risk Reduction and Climate Change Adaptation in Cooperation Frameworks for a summary of potential biological hazard impacts on the SDGs, and Appendix 2 for impacts on SDGs from different hazards, including biological ones.
- The Governance and Institutional Capacity Analysis should include analysis of capacities for:
 - Development, revision and implementation of coherent all-hazards health emergency and disaster risk management policies, legislation and strategies, including support for the implementation of the IHR (2005) and integration of biological hazards into multisectoral and sectoral DRR strategies and development planning
 - Financial and workforce management for implementing health emergency and disaster risk management and the IHR (2005)
 - Planning and coordination for all-hazards health emergency and disaster risk management, including coordination mechanisms, prevention and mitigation planning and coordination, response and recovery planning and coordination, business continuity planning and simulation exercises
 - Information and knowledge management on health emergency and disaster risk, including, multi-hazard risk assessments and early warning and surveillance, and public communication

In this identification process, existing knowledge of the hazards and awareness of gaps in knowledge are important: a new biological hazard (e.g. emerging disease) even of low severity can also turn into a crisis if knowledge of its prevention, modes and rates of transmission and treatment is not available. Conversely, known diseases like malaria and cholera can more effectively be mitigated due to availability of knowledge and guidance on aspects such as causes, risk drivers, transmission route, and effective treatment.

- *The evidence base:* Ensure that national assessments of health and multisectoral capacities including [national reporting on the IHR](#) and the findings of national and UN COVID-19 socio-economic impact assessments, reports and evidence of pandemic/epidemic impacts on poverty, human rights, gender equality, employment, child rights and the situation of migrants and refugees are included in the evidence base to inform the Common Country Analysis.

- Health infrastructure and logistics systems capacity, including risk-proofing against other hazards and climate change, such as safe and climate resilient health facilities
- Strengthening capacity and resilience of different health care and related services for all types of emergencies, as well as risk management measures in all sectors to reduce the risks of epidemics and pandemics
- Disaster responsive/adaptive social protection and early warning – early action approaches, including the inputs to and applications of disease early warning systems by all sectors for planning and operations
- Local level health emergency and disaster risk management capacities and community-centered planning and action across all sectors (e.g. through community leaders, the local health workforce)
- Monitoring, evaluating and reporting on all-hazards health emergency and disaster risk management and the implementation of the Sendai Framework and the IHR in relation to biological hazards
- Cross-disciplinary collaboration on scenario planning, human-rights based response, transboundary collaboration, use of technology, public-private partnerships, science-policy dialogue, and evidence-based decision-making
- Inclusive, human rights-informed health emergency and disaster risk management including disease surveillance and early warning systems for local outbreaks
- What is the country experience in handling outbreaks, epidemics and pandemics – through prevention, preparedness, response and recovery measures? What national, institutional and community (and international) capacities in all sectors at all levels can be drawn upon for the current and future outbreaks?

Cooperation Framework Design

The design phase of the Cooperation Framework focuses on the prioritized challenges and opportunities identified during the Common Country Analysis and translates them into a Cooperation Framework. Key steps include:

- *Prioritization:* When prioritizing solutions, consider which sectors are at risk and sectors that can help reduce risks and impacts of epidemic and pandemics and build resilience. Pay particular attention to risk management measures required within key sectors, and how sectoral capacities and functions can be leveraged for broader risk management measures:
 - Health
 - Emergency services
 - Water and sanitation
 - Fuel and energy
 - Food production
 - Housing and shelter
 - Telecommunications
 - Media
 - Banking and finance
 - Law and order
 - Education
 - Public transportation
 - Post and courier services
 - Manufacturing
- *Theory of Change:* Assess change pathways and drivers of change, while identifying the risks and factors that may affect the identified pathways. The ongoing COVID-19 pandemic is a good example of a disaster that has severely affected the envisioned path to the achievement of the SDGs and necessitated a revision of the change pathway – see the [2020 UN framework for the immediate socio-economic response to COVID-19](#).
- *Risk Management:* Where identified in the multidimensional risk analysis, biological hazards should be considered as sources of risk to the effective implementation of the Cooperation Framework delivering the 2030 Agenda, and especially the impact on societies, including the most vulnerable groups. The UNCT, working closely with the government and other stakeholders, should identify suitable measures to address and/or help manage and mitigate the identified risks, including:

1. Enhance the capacity to better understand the dynamic nature of biological hazards as well as the multi- and cross-sectoral dimensions of exposure and vulnerability to biological hazards.
2. Support the development of national and local plans and capacities for disaster risk reduction, inclusive of biological hazards, and bring a multisectoral approach to health emergency and disaster risk management and implementation of the IHR.
3. Ensure inclusion of biological hazards in risk assessments and risk registers, where maintained, and strengthen preparedness including emergency response and recovery plans, SOPs and exercise simulations for multi- and cross-sectoral interventions.
4. Support investments in multi-hazard early warning and early action that link risk factors related to social cohesion, disease surveillance, and natural, biological and technological hazards to support governments and people to better understand and prepare for imminent hazards including cascading impacts of biological and other hazards.
5. Given the widespread systemic risks of epidemics at country and local levels and pandemics globally, the UNCT should plan for its role in planning, preparedness, response and recovery in support of countries. When such risks emerge, the UNCT should expedite and adapt its planning and readiness based on risk assessments and on planning assumptions for operational purposes. The Theory of Change underlying the Cooperation Framework should also be revised. [Programme Criticality Assessments](#) can be used to determine risk thresholds for Cooperation Framework interventions.

Resources

[International Health Regulations, 2005](#)

[WHO Health Emergency Disaster Risk Management Framework, 2019](#)

[Bangkok Principles for the implementation of the health aspects of the Sendai Framework for Disaster Risk Reduction 2015-2030, 2016](#)

[Health Emergency and Disaster Risk Management Fact Sheets, 2017](#)

[Whole-of-society pandemic readiness: WHO guidelines for pandemic preparedness and response in the non-health sector, 2009](#)

[A Tripartite Guide to Addressing Zoonotic Diseases in Countries, 2019](#)

[Disaster Resilience Scorecard for Cities: Public Health System Resilience – Addendum, 2018](#)

[UNDRR Words into Action guidelines: National disaster risk assessment: E. Health aspect in disaster risk assessment, 2017](#)

Appendix 2:

Disaster and climate risk analysis of the Sustainable Development Goals

This appendix has been written to support climate and disaster risk-informed Common Country Analysis and Cooperation Framework cycles by providing UN Country Teams basic information about linkages between each SDG and climate and disaster risk and resilience, starting points for analysis of risks and resilience of the systems supporting achievement of the SDG, and basic programming options for helping to build resilience.

The information is presented in tables with the following categories:

Most relevant SDG target: Shows selected SDG targets contributing to (a) building the resilience of people, institutions and systems to the impacts of disasters and climate change, (b) developing capacities to manage, reduce, adapt to or absorb the effects of disaster and climate risk, and (c) ensuring that governance of risks and dividends of resilience are accessible to all, including women and girls. Targets associated with indicators that are common to both the SDGs and the Sendai Framework are marked with an asterisk (*).

How climate and disaster risk can threaten achievement of the SDG: Lists the most immediate ways climate impacts and natural, biological and technological can affect progress towards achieving the SDG.

How risk-blind pursuit of the SDG can generate climate and disaster risk: Explains how pursuit of the SDG and development choices within related sectors can inadvertently create and exacerbate risks related to climate change impacts and natural, biological and technological hazards.

Identifying country-specific climate and disaster risk to achievement of SDG: Lists suggested questions to assess how progress towards the SDG can be slowed down, derailed or even reversed by the realization of climate and disaster risk in a country context.

Identifying risks generated by development:

List suggested questions to assess development choices within sectors related to the SDG can inadvertently create and exacerbate climate and disaster risk.

Cooperation Framework: Helping build disaster- and climate resilient societies and achieve the SDG targets:

Lists options for action to build capacities to better understand, govern, reduce and adapt to, and respond to emergencies triggered by disaster and climate risk, within sectors related to the SDG and together with the main stakeholders to its achievement. Not all the listed activities will be appropriate for UN support in all contexts; best use of resources will depend on the country's development situation, UN country presence, and the institutional capacities of national stakeholders.

The listed SDG targets, risk linkages, analytical questions, suggested resilience-building actions and linked documents do not constitute an exhaustive list, but are meant to give entry points for analysis and action within the scope of Common Country Analysis and Cooperation Framework cycle.

Disaster and climate change impacts disproportionately affect those already furthest behind and those who are experiencing exclusion and discrimination – and can only be effectively managed and mitigated through an all of society approach. UN Country Teams are encouraged to consider social groups or demographics listed in this appendix as indicative, and to further analyze how disaster risk reduction and climate change adaptation can be inclusive of men and women, boys and girls, the elderly, people with disabilities and chronic illness, indigenous people, racial, ethnic and religious minorities, the poor and ultra-poor, migrants, internally displaced populations and refugees.

SDG1 – NO POVERTY

1 NO POVERTY



"Building the resilience of the poor and strengthening disaster risk reduction is a core development strategy for ending extreme poverty in the most afflicted countries. Economic losses from disasters are now reaching an average of \$250 billion to \$300 billion a year. Disaster risk globally is highly concentrated in low- and lower-middle-income countries."

2017 Report of the UN Secretary General on Progress towards the Sustainable Development Goals

Most relevant SDG target	1.5 By 2030, build the resilience of the poor and those in vulnerable situations and reduce their exposure and vulnerability to climate-related extreme events other economic, social and environmental shocks and disasters.*
How climate and disaster risk can threaten achievement of the SDG	<p>Disasters often lead to household and community asset loss and livelihood disruption, potentially triggering negative coping mechanisms undermining resilience. Recurrent disasters from all causes and climate change impacts drive multi-generational poverty.</p> <p>Climate change and hazard events can exacerbate multidimensional poverty by impacting people's health and well-being, damaging ecosystems, infrastructure and food systems, and disrupting economic activities, education, health care and service provision.</p>
How risk-blind pursuit of the SDG can generate climate and disaster risk	If laws, policies and programmes supporting livelihoods, job creation and economic growth do not consider disaster risk or projected climate change impacts, they risk promoting maladaptive practices, introducing new hazards and exacerbating existing risks.
Identifying country-specific climate and disaster risk to achievement of SDG	<p>Are there geographical areas of overlap between pockets of multidimensional poverty, hazard exposure and climate change impact? Who lives there? Who works in the productive sectors located there and how diversified are their sources of income?</p> <p>What have been the livelihood and employment impacts of previous disasters and known climate change impacts?</p>
Identifying risks generated by development	Are the laws, policies and programmes supporting poverty reduction and employment generation sensitive to disaster and climate risks and the needs of men, women, youth, elderly and people with disabilities living in high-risk areas?
Cooperation Framework: Helping build disaster- and climate resilient societies and achieve the SDG targets	<p>Develop the capacity of local government, community volunteers and community organizations for disaster risk reduction, climate change adaptation, first response and disaster management.</p> <p>Establish and develop climate change- and shock-responsive, scalable social safety nets, including for children and families, for anticipatory and adaptive action and response to disasters and climate change.</p> <p>Establish and properly maintain resilience infrastructure such as cyclone shelters, protective embankments, and robust lifeline utility systems and public buildings.</p> <p>Establish and maintain multi-sectoral rapid early warning, alert and response systems including robust means of communication to inform the public prior to and during disasters and outbreaks to prevent and mitigate loss of lives, livelihoods and assets, including small businesses.</p>

SDG2 – ZERO HUNGER

2 ZERO HUNGER



"Understanding the structural and underlying causes of food insecurity and malnutrition is required to identify and prioritize actions to promote food security and nutrition and the right to adequate food for all people... (i) Inadequate disaster preparedness and response is a factor contributing to hunger, which affects all dimensions of food security. The food insecure, many of whom live in marginal areas, are disproportionately exposed to natural hazards and are the least able to cope with its effects... (iii) The impact of climate change on agriculture, including land degradation, increasing uncertainty about crop yields and the intensification of floods and droughts; and also its effects on the most vulnerable."

Global Strategic Framework for Food Security and Nutrition

Most relevant SDG target	2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding, and other disasters and that progressively improve land and soil quality.
How climate and disaster risk can threaten achievement of the SDG	Climate change is contributing to degradation of ecosystems and changes in seasonal weather patterns, undermining agricultural, pastoral and fisheries production, livelihoods and food security. Disaster and climate change impacts affect people's health and well-being and damages food production assets.
How risk-blind pursuit of the SDG can generate climate and disaster risk	If laws, policies and practices supporting agricultural, husbandry, fishery and forestry do not consider disaster risk or projected climate change impacts, they risk promoting maladaptive practices, degrading ecosystems, introducing new hazards and exacerbating existing risks.
Identifying country-specific climate and disaster risk to achievement of SDG	Are there geographical areas of overlap between pockets of food insecurity and malnutrition, hazard and climate change impact? What have been the food security, health, nutrition and agricultural productivity impacts of previous disasters and known climate change?
Identifying risks generated by development	Are the laws, policies and programmes supporting agriculture, forestry and fisheries sensitive to disaster and climate risks and the needs of farmers, fisherfolk, herders, vendors and traders in high-risk areas?
Cooperation Framework: Helping build disaster- and climate resilient societies and achieve the SDG targets	Shifting to, risk-sensitive and climate-smart technologies and practices such as crop diversification, changing livestock breeding practices and grazing patterns, rainwater harvesting, drought and flood-tolerant crop varieties, and farm preparedness planning. Support nature-based solutions ecosystem and territorial level , including ecosystem protection and reforestation/afforestation. Retrofit and construct robust, climate-proof agricultural infrastructure . Strengthen the access of small-scale farmers, herders, fishers and foresters' to resources, credit, insurance, climate services , risk information and social protection to protect their assets and livelihoods. Establish inclusive multi-hazard early warning systems supporting anticipatory action in response to forecasts and indicators of increased risk of hazards such as drought , flood, animal disease and pests. Support business continuity planning for nutrition programmes.

SDG3 – GOOD HEALTH AND WELL-BEING

3 GOOD HEALTH AND WELL-BEING



"Climate change, unplanned urbanization, population growth and displacement, antimicrobial resistance and state fragility are contributing to the increasing frequency, severity and impacts of many types of hazardous events that may lead to emergencies and disasters without effective risk management. The health, economic, political and societal consequences of these events can be devastating. Sound risk management is essential to safeguard development and implementation of the Sustainable Development Goals, including the pathway to universal health coverage (UHC), the Sendai Framework, International Health Regulations (IHR) (2005), Paris Agreement on Climate Change and other related global, regional and national frameworks"

World Health Organization,
Health Emergency and Disaster Risk Management Framework

Most relevant SDG target	3.D Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks.
How climate and disaster risk can threaten achievement of the SDG	<p>Disasters and climate change impacts affect all aspects of public health and well-being and set back health development gains with wide consequences for society; disasters affecting water and sanitation safety and access act as drivers of WASH-related mortality rates.</p> <p>Climate risks (variability and change) drive heat-related mortality rates.</p> <p>Disaster events can overwhelm health systems and services and disrupt essential services and preventative health care, and reduce private income, decreasing people's ability to meet their health needs.</p>
How risk-blind pursuit of the SDG can generate climate and disaster risk	<p>If the construction materials and building design are not resilient, health facilities may collapse or deteriorate if exposed to hazards.</p> <p>Adoption of just-in-time supply systems make medical systems vulnerable to disruptions in the supply chain.</p> <p>Lack of investment in capacities for preventing, managing and responding to outbreaks can result in society-wide knock-on effects.</p>
Identifying country-specific climate and disaster risk to achievement of SDG	<p>Do areas with poor health outcomes overlap with areas affected by hazards or climate change impacts?</p> <p>Is there a history of biological, geophysical or hydrometeorological hazards in the country, and what were the health impacts on different groups? Are there technological facilities whose failure could cause health impacts (e.g. nuclear, chemical facilities)?</p> <p>What is the health care and surge capacity of the country, and how is it spatially distributed? How is the supporting supply chain set up?</p>
Identifying risks generated by development	<p>What health risk management and early warning systems exist?</p> <p>What construction standards apply to construction of medical facilities?</p>
Cooperation Framework: Helping build disaster- and climate resilient societies and achieve the SDG targets	<p>Fully integrate health emergency and disaster risk management in disaster and climate risk assessment, plans and capacity enhancement, including in maternal health and sexual/reproductive health services.</p> <p>Include people with higher levels of vulnerability in the design of policies and plans to manage risks before, during and after disasters.</p> <p>Integrate disaster risk management into primary, secondary and tertiary health care, including assessment of preparedness and hospital safety</p> <p>Establish multi-hazard early warning systems (both natural hazards and disease risks), with inclusive communication with all of the community.</p>

SDG4 – QUALITY EDUCATION

4 QUALITY EDUCATION



"The Comprehensive School Safety framework aims to reduce the risks of all hazards to the education sector... All children should be helped to participate in all aspects of Comprehensive School Safety. This allows them to be better protected and for their energy, knowledge, and ideas to help shape long-term sustainability"

Comprehensive School Safety - A global framework in support of The Global Alliance for Disaster Risk Reduction and Resilience in the Education Sector and The Worldwide Initiative for Safe Schools

Most relevant SDG target	4.7: By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development.
	4.A: Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all.
How climate and disaster risk can threaten achievement of the SDG	<p>Disruption of education may be prolonged if emergencies last long, buildings are damaged/ destroyed, or if reconstruction is delayed.</p> <p>If roads and transport are affected by disaster or climate change, students and teachers may be prevented from safely reaching school.</p> <p>Disasters and climate change trigger negative household coping mechanisms, which may trigger school withdrawal.</p>
How risk-blind pursuit of the SDG can generate climate and disaster risk	<p>If the construction materials and building design are not resilient, school and university buildings may collapse or deteriorate if exposed to geophysical or hydrometeorological hazards, e.g. earthquake or floods.</p> <p>If DRR and climate change adaptation are not included in national curriculums as part of education for sustainable development, the capacity of the population to make resilient choices and participate in governance of risk is lower.</p>
Identifying country-specific climate and disaster risk to achievement of SDG	<p>Do areas where education indicators are low overlap with areas affected by hazards, disaster or climate change impacts?</p> <p>What were the impacts on education from epidemics, earthquakes, floods, droughts, and other disasters in the past?</p> <p>Does the education system have the capacity to switch to remote learning, and do households have the access to equipment and utilities?</p>
Identifying risks generated by development	<p>What zoning, design standards and building codes apply to construction of schools, universities and other education institutions?</p> <p>Does the national curriculum include content related to hazards, disaster risk reduction, and climate change adaptation?</p>
Cooperation Framework: Helping build disaster- and climate resilient societies and achieve the SDG targets	<p>Integrate hazards, risk, disaster and climate content in national curriculums to mobilize children and youth for accountable risk governance and build resilience through education.</p> <p>Increase school safety further by retrofitting and constructing climate-proof, disaster-resistant schools, school disaster management.</p> <p>Establish technical, vocational and tertiary study programmes and scholarship opportunities in fields supporting disaster risk reduction and climate change adaptation, including international scholarships as per the UN Strategic Plan on Climate Change Adaptation.</p>

SDG5 – GENDER EQUALITY

5 GENDER
EQUALITY



“Well-designed disaster risk reduction and climate change initiatives that provide for women’s full and effective participation can advance substantive gender equality and women’s empowerment, while ensuring that sustainable development, disaster risk reduction and climate change objectives are achieved.”

CEDAW General Recommendation no. 37 on Gender-related dimensions of DRR in the context of climate change

Gender inequality heightens exposure to risk, increases vulnerability and constrains women and girls’ capacity to anticipate, adapt and recover from crisis and contribute to resilience-building. Gender-specific barriers prevent women from acquiring and accessing the means and capacities for resilience, causing higher loss of lives and livelihoods in disasters, and contributing to a gendered downward spiral of vulnerability and poverty following crisis.

Most relevant SDG target	5.5 Ensure women’s full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life
How climate and disaster risk can threaten achievement of the SDG	<p>Disaster and climate change impacts increase gender-based violence, women/girls’ proportion of unpaid and domestic work, and can exacerbate barriers to women’s land ownership and tenure security.</p> <p>Disasters and climate change may cause negative changes in household socioeconomic conditions that may cause use of early marriage, trafficking and other negative coping mechanisms, and hinder girls and women from accessing education, sexual and reproductive health services, legal services, and other support services and programmes.</p>
How risk-blind pursuit of the SDG can generate climate and disaster risk	If laws, policies and programmes addressing women’s economic empowerment, livelihoods, and gender equality do not consider disaster and climate risk, they may promote maladaptive practices.
Identifying country-specific climate and disaster risk to achievement of SDG 5	<p>What has been the mortality rate of women, men, boys, girls, elderly and people with disabilities in previous disasters, including epidemics?</p> <p>How do development outcomes differ for men, women, boys and girls in disaster- and climate change-affected areas?</p> <p>Are DRR and climate change adaptation plans gender-responsive?</p>
Identifying how country-specific development choices in this sector contribute to risk generation	<p>Do the laws, policies and programmes promoting women’s empowerment and gender equality address disaster and climate risk?</p> <p>Do the laws, policies and programmes promoting women’s empowerment and gender equality address the needs of women and girls at higher risk – e.g. those living in rural areas and marginal settlements, those with disabilities/chronic illness, and migrants.</p>
Cooperation Framework: Helping build disaster- and climate resilient societies and achieve the SDG targets	<p>Sex, age and disability-disaggregate disaster and climate change data.</p> <p>Facilitate the equal representation and capacitation of women and girls in disaster and climate risk governance and management.</p> <p>Conduct gender impact analyses on national disaster management and climate change adaptation laws, policies and programmes.</p> <p>Strengthen business continuity planning for GBV-, maternal health-, sexual and reproductive health-, legal- and financial services targeting people most in need.</p>

SDG 6 – CLEAN WATER AND SANITATION

6 CLEAN WATER AND SANITATION



"Climate change will affect the availability, quality and quantity of water for basic human needs, threatening the effective enjoyment of the human rights to water and sanitation for potentially billions of people. The hydrological changes induced by climate change will add challenges to the sustainable management of water resources, which are already under severe pressure in many regions of the world. Food security, human health, urban and rural settlements, energy production, industrial development, economic growth, and ecosystems are all water-dependent and thus vulnerable to the impacts of climate change. Climate change adaptation and mitigation through water management is therefore critical to sustainable development, and essential to achieving the 2030 Agenda for Sustainable Development...."

The United Nations World Water Development Report 2020

Most relevant SDG target	6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.
	6.5 By 2030, implement integrated water resources management (IWM) at all levels, including through transboundary cooperation as appropriate.
	6.6 By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes.
How climate and disaster risk can threaten achievement of the SDG	<p>Disasters and climate change can affect industrial and other infrastructure, creating water quality shocks due to chemical and waste spills</p> <p>Climate-related changes to temperatures and rainfall can contribute to drought conditions, water salinization, water scarcity or flooding.</p>
How risk-blind pursuit of the SDG can generate climate and disaster risk	Upstream changes in water management, such as damming or irrigation schemes, can influence water access downstream and increase likelihood of drought, scarcity and exacerbate tension in-country or in neighboring countries.
Identifying country-specific climate and disaster risk to achievement of SDG	<p>What are the main sources of drinking water in-country, and are there known natural, biological or technological hazards nearby or upstream?</p> <p>How is potable water extracted, filtered and transported to households?</p> <p>Is the water and sanitation infrastructure resilient to most likely hazards?</p>
Identifying risks generated by development	Are social and environmental impact assessments and climate change projections applied to water resource management and construction of water and sanitation infrastructure? Are climate-proof standards used?
Cooperation Framework: Helping build disaster- and climate resilient societies and achieve the SDG targets	<p>Establish national and transboundary mechanisms for cooperation and knowledge and information sharing on drought, flood and technological and biological hazards, applying multilateral environmental agreements.</p> <p>Invest in IWM and ecosystem-based DRR and governance, and integrate water issues in DRR strategies and the National Adaptation Plan.</p> <p>Mainstream risk assessment, mapping and management in rural development and management of rivers, flood plains, drylands, wetlands.</p> <p>Regulate, retrofit, construct and build back better water infrastructure.</p> <p>Develop and operationalize drought and flood risk management, monitoring and early warning systems and social safety net programmes.</p>

SDG 7 – AFFORDABLE AND CLEAN ENERGY

7 AFFORDABLE AND CLEAN ENERGY



"Climate change poses significant challenges to energy systems by affecting natural systems, changing climate variables and modulating the frequency and intensity of extreme weather events. These impacts change the water, temperature, and wind regimes that provide the basis for modern energy systems. Climate change induces vulnerabilities and risks for energy production (including fossil fuel extraction), storage, transportation, transmission and consumption."

Global SDG 7 Conference Policy Brief, Interlinkages between energy and climate change

Most relevant SDG target	7.1 By 2030, ensure universal access to affordable, reliable and modern energy services.
How climate and disaster risk can threaten achievement of the SDG	<p>As electricity grids are expanded to service more cities and settlements, larger parts of the grid and the foundational infrastructure become exposed to damage and disruption from natural hazards such as cyclones, earthquakes, and floods.</p> <p>There is considerable uncertainty regarding the impact of climate change on hydropower, solar power and wind power efficiency.</p>
How risk-blind pursuit of the SDG can generate climate and disaster risk	<p>Impacts of natural hazard events on nuclear installations, pipelines, offshore platforms and other infrastructure that process, store or transport energy substances can cause fires, explosions and toxic or radioactive releases, so-called "natech" disasters.</p> <p>Spills from seaports, oil handling facilities, pipelines, ships or shore units can significantly threaten marine and coastal ecosystems.</p> <p>Reliance on fossil fuel domestically or as an export contributes to exacerbating climate change.</p>
Identifying country-specific climate and disaster risk to achievement of SDG	<p>Are there records of disasters damaging energy infrastructure or disrupting electricity access nationally or in specific areas?</p> <p>Are the power-generating facilities serving the country in areas at risk of flooding, inundation, sea level rise or earthquake?</p> <p>What zoning, design standards, building codes and maintenance regulations apply to the infrastructure supporting the electricity grid?</p>
Identifying risks generated by development	<p>What are the main energy sources nationally and in the region? Do they include natural resource extraction that increase risk from natural hazards (such as landslides due to deforestation), or risk of marine pollution or radiological emergencies?</p>
Actions to help build resilient societies and achieve the SDG targets	<p>Integrate energy system resilience into local and national DRR plans.</p> <p>Support transition to renewable energy sources.</p> <p>Construct, retrofit and build back better energy infrastructure only after risk and environmental impact assessment, using climate-proof, resilient materials and design, nurturing a culture of maintenance.</p> <p>Develop and maintain multi-sectoral rapid early warning, alert and response systems including robust means of communication to inform the public prior to and during radiological, nuclear or chemical incidents.</p>

SDG 8 – DECENT WORK AND ECONOMIC GROWTH

8 DECENT WORK AND ECONOMIC GROWTH



"Building the resilience of the poor and strengthening disaster risk reduction is a core development strategy for ending extreme poverty in the most afflicted countries. Economic losses from disasters are now reaching an average of \$250 billion to \$300 billion a year. Disaster risk globally is highly concentrated in low- and lower-middle-income countries."

Progress towards the Sustainable Development Goals, Report of the Secretary-General 2017

Most relevant SDG target	8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavor to decouple economic growth from environmental degradation.
	8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.
How climate and disaster risk can threaten achievement of the SDG	<p>Disasters and high-impact weather events can lead to the destruction or loss of assets, capital and infrastructure, disrupting economic activity.</p> <p>Disrupted activity in one country can trigger material shortages, production interruption and price increases that have ripple effects to other countries in global value chains.</p> <p>Disrupted economic activity negatively affect employment, growth, and recovery (particularly within small and medium enterprises) and may trigger attempts to circumvent worker's protections to cut costs.</p> <p>Disasters and climate change can cause unmanaged migration.</p>
How risk-blind pursuit of the SDG can generate climate and disaster risk	If laws, policies and programmes supporting livelihoods, job creation and economic growth do not consider disaster risk or projected climate change impacts, they risk promoting maladaptive practices, introducing new hazards and exacerbating existing risks.
Identifying country-specific climate and disaster risk to achievement of SDG	<p>What are the registered economic losses from disasters and high-impact weather in the past decade? Which hazards triggered these losses?</p> <p>Which sectors of the economy are driving national economic growth? What are the risk scenarios that could result in significant disruption or deceleration of national growth, and what natural biological or technological hazards and risk drivers could trigger this scenario?</p> <p>Are there records of shut-downs, disrupted production or lost days of labour due to disasters or weather conditions?</p>
Identifying risks generated by development	<p>Do companies comply with resilient building codes and manage chemical and other hazardous wastes according to regulations?</p> <p>Do companies have business continuity plans?</p>
Cooperation Framework: Helping build disaster- and climate resilient societies and achieve the SDG targets	<p>Support private sector to better understand and assess risk, plan for business continuity and protect productive assets and supply chains against disasters including epidemics/pandemics, and include private sector in local DRR and adaptation.</p> <p>Establish robust provisions for workers' rights and scaling up of social safety nets for disaster and emergency situations.</p> <p>Promote mechanisms for disaster risk transfer and insurance, risk-sharing and retention, financial protection, and green recovery.</p>

SDG 9 – INDUSTRY, INNOVATION AND INFRASTRUCTURE

9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



"In the coming decade, the world will invest trillions of dollars in new housing, schools, hospitals and other infrastructure. Climate resilience and disaster risk reduction must be central to this investment. There is a strong economic case for such steps: making infrastructure more climate-resilient can have a benefit-cost ratio of about 6 to 1. For every dollar invested, six dollars can be saved. This means that investing in climate resilience creates jobs and saves money."

Statement of the UN Secretary General on International Day of Disaster Risk Reduction 2019

Most relevant SDG target	9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.
How climate and disaster risk can threaten achievement of the SDG	<p>Disasters and high-impact weather events can lead to the destruction or loss of assets, capital and infrastructure, disrupting industrial activity.</p> <p>Damaged infrastructure may cause disruption in access to water, electricity, telecommunications and transport, with subsequent ramifications on human well-being and economic activity.</p>
How risk-blind pursuit of the SDG can generate climate and disaster risk	<p>Lack of maintenance of protective infrastructure such as dams, embankments and shelters can negate effect of previous risk reduction.</p> <p>Risk-blind urbanization, construction and industrialization can affect water quality, ecosystems and watercourses, creating new risk.</p> <p>Disaster impact on chemical installations, pipelines, offshore platforms and other infrastructure that process dangerous substances can cause fires, explosions and toxic or radioactive releases.</p>
Identifying country-specific climate and disaster risk to achievement of SDG	Are there critical infrastructures or industrial zones located near known hazards or areas of climate change impacts?
Identifying risks generated by development	<p>Are land use and building standards climate-smart and risk sensitive?</p> <p>Are there industries that rely heavily on use of potentially dangerous substances in the country?</p> <p>Are regulations of this enforced?</p>
Cooperation Framework: Helping build disaster- and climate resilient societies and achieve the SDG targets	<p>Build the capacity of chambers of commerce, companies and industry leaders to understand disaster and climate risk, assess risk to their operations and assets, manage risk, and business continuity planning.</p> <p>Establish and enforce regulatory standards for risk assessment and environmental impact assessment to prevent new risks, particularly for economic zones close to settlements and critical ecosystems.</p> <p>Revise existing or develop resilient, climate-proof building codes, infrastructure standards, rehabilitation and reconstruction practices, and upgrade existing infrastructure including airports and ports to reduce risk from natural, biological, chemical, and radiological hazards.</p> <p>Promote use of ITC for business continuity and risk management.</p> <p>Participate in and implement mechanisms for use of science in DRR and adaptation, managing technological risk, transitioning to climate-smart technologies, and shock-responsive innovation.</p>

SDG 10 – REDUCED INEQUALITIES

10 REDUCED
INEQUALITIES



"Resilience-building needs to benefit all people and to leave no one behind by reaching out to those most in need, wherever they are, in a gender-responsive manner that targets their specific challenges and vulnerabilities."

UN Common Guidance on Helping Build Resilience Societies

Most relevant SDG target	10.1 By 2030, progressively achieve and sustain income growth of the bottom 40 % of the population at a rate higher than the national average.
	10.4 Adopt policies, especially fiscal, wage and social protection policies, and progressively achieve greater equality.
	10.7 Facilitate orderly, safe, regular and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies.
How climate and disaster risk can threaten achievement of the SDG	<p>The poorest populations are almost always the most vulnerable to disasters, with precarious livelihoods, lack of safety nets and economic buffers and living in high-risk environments.</p> <p>Inequalities in the distribution of rights, resources and power prevent equitable risk-sharing and access to resilience-building support.</p>
Identifying country-specific climate and disaster risk to achievement of SDG	<p>How have mortality rates varied between sexes, ages, health and social groups in previous disasters, including epidemics?</p> <p>Are there areas of the country that have a history of being affected by hazards or climate change? Do these areas overlap with pockets of poverty? Are there significant settlements of distinct social groups such as ethnic and religious minorities, migrants, refugees, pastoralists, or chronically ill present? How do development indicators perform in these areas compared to the national average?</p> <p>What have been the impacts of disasters (including pandemics) on displacement, mobility and migrants' rights and access to services?</p> <p>Are there any groups who are barred by tradition, legal status, social stigma, dis/ability, or socioeconomic status from accessing and using mitigation infrastructure and life-saving services? E.g. refugees, undocumented migrants, HIV-positive people, casteless people, minority groups, sex workers, migrant workers etc.</p>
Identifying risks generated by development	<p>Are poverty reduction and employment programmes risk-sensitive and screened for environmental and climate impact at all stages?</p> <p>Are DRR and climate change adaptation plans inclusive of the needs and rights of different social groups, including indigenous peoples?</p>
Cooperation Framework: Helping build disaster- and climate resilient societies and achieve the SDG targets	<p>Promote and establish shock-responsive social safety nets and insurance, linked to resilient livelihood and recovery interventions.</p> <p>Disaggregate disaster and climate change impact monitoring by sex, age, disability, location, and other social group characteristics.</p> <p>Design and implement resilience-building programmes and activities specifically targeting most-vulnerable people and communities and utilizing their capacities, including indigenous knowledge.</p> <p>Facilitate the equal representation and capacitation of marginalized or under-represented groups, including the displaced, women and children/youth, in risk governance, risk assessment and analysis, risk reduction and adaptation activities and programmes.</p>

SDG 11 – SUSTAINABLE CITIES AND COMMUNITIES

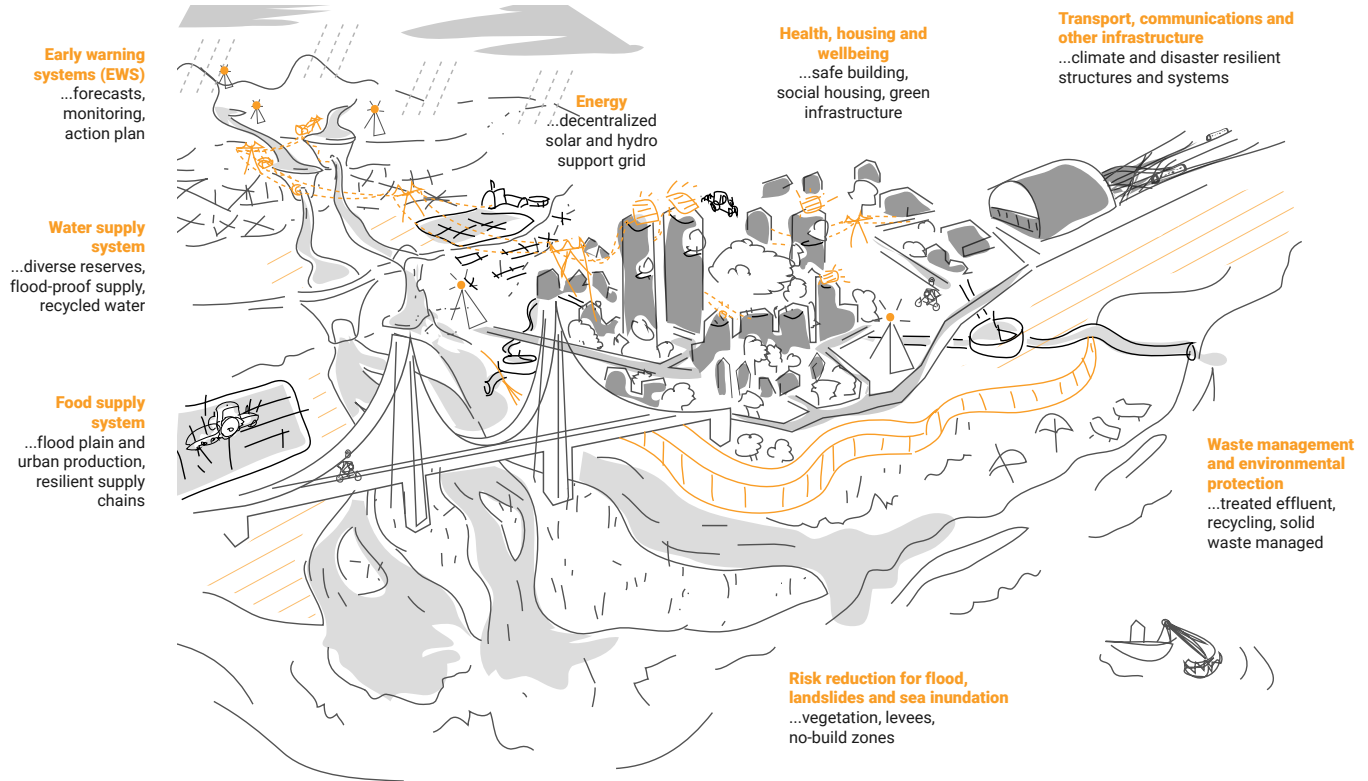
11 SUSTAINABLE CITIES AND COMMUNITIES



"We envisage cities and human settlements that... adopt and implement disaster risk reduction and management, reduce vulnerability, build resilience and responsiveness to natural and human-made hazards and foster mitigation of and adaptation to climate change... We will explore and develop feasible solutions to climate and disaster risks in cities and human settlements, including by collaborating with insurance and reinsurance institutions and other relevant actors with regard to investments in urban and metropolitan infrastructure, buildings and other urban assets, as well as for local populations to secure their shelter and economic needs."

The New Urban Agenda

Most relevant SDG target	11.1 By 2030, ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums.
	11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.
	11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage.
	11.5 By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations. *
	11.B By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations. *
	11.C Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials.
How climate and disaster risk can threaten achievement of the SDG	<p>Disasters high-impact weather, water and climate events decrease the safety, resilience, and sustainability of people, assets and settlements, especially the poorest and those who live in slums and camp settings.</p> <p>Disasters and climate change drive economic loss through damages and destruction of housing and infrastructure, disruption of basic services, commerce and transportation, and rapid and unplanned urbanization due to displacement of affected people.</p>
How risk-blind pursuit of the SDG can generate climate and disaster risk	<p>Risk-blind urbanization and industrialization can affect water quality and watercourses, e.g. infrastructure and housing construction on floodplains, wetlands silting up, polluting incidents and deforestation.</p> <p>Encroachment on natural habitats increase risk of zoonotic diseases with potential for epidemic and pandemic impact.</p> <p>Unplanned and underserviced urban slums can affect vector and water borne diseases' prevalence and incidence.</p>
Identifying country-specific climate and disaster risk to achievement of SDG	<p>What is the urbanization rate and projections on urban growth? How many people live in sub-standard housing or slum conditions?</p> <p>Is urban planning disaster and climate-risk sensitive?</p> <p>What are the recorded urban impacts of disasters and extreme weather, water and climate hazards, e.g. flooding, extreme heat or cold waves?</p>



<p>Identifying risks generated by development</p>	<p>Which areas of the country are affected by disasters, at risk of seismic activity, or projected to be affected by climate change? What kind of settlements and cities are located in these areas?</p> <p>What kind of disaster and severe weather impacts have been reported in cities and urban areas of the country? What impacts have been recorded in slums, informal settlements and IDP/refugee camps?</p> <p>Are zoning, land use and building code regulations risk-sensitive and enforced? Are there protections for wetlands and waterways?</p> <p>Are urban health systems, water and electricity infrastructure, and road infrastructure built to seismic and climate-proof standards?</p>
<p>Cooperation Framework: Helping build disaster- and climate resilient societies and achieve the SDG targets</p>	<p>Invest in public awareness for responsible citizenship, civil society engagement and public-private collaboration on resilience action.</p> <p>Empower local authorities to manage risk and build resilience by establishing appropriate regulation for risk management, building codes, and land use, and capacitate local authorities to enforce legislation and deliver on mandates</p> <p>Ensure integration of urban issues in the National Adaptation Plan and develop local DRR strategies for cities based on assessment of risk and resilience of the city as a system and utilizing nature-based solutions.</p> <p>Ensure preparedness for emergency response and recovery from known hazards and risk, including simulation exercises.</p> <p>Enhance the resilience of local health care systems to deal with specific hazard types and enhance local access to basic health care services and safety-nets for post-disaster assistance for populations at risk, with particular attention to maternal and child health services.</p>

SDG 12 – RESPONSIBLE CONSUMPTION



"We will reduce the negative impacts of urban activities and of chemicals which are hazardous for human health and the environment, including through the environmentally sound management and safe use of chemicals, the reduction and recycling of waste and the more efficient use of water and energy."

Transforming our world: the 2030 Agenda for Sustainable Development

Most relevant SDG target	12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with international frameworks, and significantly reduce their release to air, water and soil to minimize their adverse impacts on human health and the environment.
	12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle.
How climate and disaster risk can threaten achievement of the SDG	Disasters and climate change impacts can damage or destroy chemical and waste management facilities, leading to their release into air, water and soil, affecting ecosystems and settlements.
How risk-blind pursuit of the SDG can generate climate and disaster risk	<p>If solid and hazardous waste management systems are not climate- or disaster-resilient, wayward waste may increase risk by blocking flood drainage or by leaching into ground and surface water.</p> <p>If nuclear facilities, chemical installations, mining facilities, and other waste infrastructure are not built using climate-proof, resilient materials and standards, there is increased risk of catastrophic toxic leaks and waste mass movement endangering people and ecosystems.</p> <p>Risk-blind food production can increase risks from natural and biological hazards, including risks at the human-animal-ecosystem interface.</p>
Identifying country-specific climate and disaster risk to achievement of SDG	Are there chemical processing, waste processing or mining operations in the country? Are they located in or close to areas prone to earthquakes, flooding, extreme precipitation, or tsunami?
Identifying risks generated by development	<p>Are there chemical processing, waste processing or extractive operations in the country? Are they located close to settlements or critical ecosystems? Are risk management regulations in place and enforced? How long would these facilities continue to run safely if staff are prevented from accessing them due to infrastructure damage?</p> <p>How are chemical and solid waste managed in areas prone to flooding?</p>
Cooperation Framework: Helping build disaster- and climate resilient societies and achieve the SDG targets	<p>Build the capacity of companies for understanding disaster and climate risk, enterprise risk management, and business continuity planning.</p> <p>Empower and strengthen the capacity of local authorities to manage risk and build resilience by establishing appropriate regulation for chemical and waste management, and capacitate local authorities to enforce legislation and deliver on mandates.</p> <p>Ratification of relevant multilateral conventions.</p> <p>Develop and maintain multi-sectoral rapid early warning, alert and response systems including robust means of communication to inform the public prior to and during chemical or mining-related incidents.</p>

SDG 13 – CLIMATE ACTION

13 CLIMATE ACTION



"Climate change is one of the greatest challenges of our time and its adverse impacts undermine the ability of all countries to achieve sustainable development. Increases in global temperature, sea level rise, ocean acidification and other climate change impacts are seriously affecting coastal areas and low-lying coastal countries, including many least developed countries and small island developing States. The survival of many societies, and of the biological support systems of the planet, is at risk."

Transforming our world: the 2030 Agenda for Sustainable Development

Most relevant SDG target	13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.*
	13.2 Integrate climate change measures into national policies, strategies and planning.
	13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.
	13.A Implement the commitment undertaken by developed-country parties to the United Nations Framework Convention on Climate Change to a goal of mobilizing jointly \$100 billion annually by 2020 from all sources to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and fully operationalize the Green Climate Fund through its capitalization as soon as possible.
	13.B Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities.
How climate and disaster risk can threaten achievement of the SDG	Disasters with massive societal impact, such as pandemics, earthquakes and radiological emergencies, can potentially detract national, regional or global attention and funding from adaptation.
How risk-blind pursuit of the SDG can generate climate and disaster risk	If climate change adaptation is not informed by risk assessment and analysis of the full range of natural, biological and technological hazards, critical interlinkages may remain unaddressed and risks unchecked.
Identifying country-specific climate and disaster risk to achievement of SDG	What are the disaster risks which – if realized – could potentially affect national capacity and political willingness to implement its climate change adaptation goals?
Identifying risks generated by development	Are climate change adaptation plans, policies and strategies informed by multi-hazard risk assessment encompassing all relevant natural, biological and technological hazards?
Cooperation Framework: Helping build disaster- and climate resilient societies and achieve the SDG targets	<p>Strengthen disaster risk modeling, risk assessment, mapping, and monitoring, including indigenous knowledge and climate services.</p> <p>Strengthen risk governance, early warning, financing strategies and adaptation activities addressing both natural hazards and slow-onset climate change impacts, including transboundary mechanisms.</p> <p>Strengthen national capacity for integrating and ensuring coherence between national DRR strategies and National Adaptation Plans, as well as coherence with water, forestry, agriculture and local planning.</p>

SDG 14 – LIFE BELOW WATER



"We are particularly alarmed by the adverse impacts of climate change on the ocean, including the rise in ocean temperatures, ocean and coastal acidification, deoxygenation, sea-level rise, the decrease in polar ice coverage, coastal erosion and extreme weather events. We acknowledge the need to address the adverse impacts that impair the crucial ability of the ocean to act as climate regulator, source of marine biodiversity, and as key provider of food and nutrition, tourism and ecosystem services, and as an engine for sustainable economic development and growth..."

Our Ocean, Our Future: Call for Action

Most relevant SDG target	14.2 By 2020, sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans.
	14.7 By 2030, increase the economic benefits to Small Island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism
How climate and disaster risk can threaten achievement of the SDG	<p>Climate change impacts such ocean acidification, loss of biodiversity, thermohaline circulation, and increasing temperatures critical challenges to the sustainability of marine and coastal ecosystems and ecosystem services.</p> <p>Disasters such as tropical cyclones, chemical and pollution spills, and oil leaks can critically damage marine and coastal ecosystems.</p>
How risk-blind pursuit of the SDG can generate climate and disaster risk	<p>Development of coastal tourism infrastructure can increase exposure of people, livelihood and assets to tsunami and cyclone risk.</p> <p>Expansion of brackish water aquaculture such as shrimp farming may compound climate change-related salinization, changing ecosystems</p> <p>Offshore and coastal sand and gravel extraction result in coastal erosion, salt intrusion and lowered protection against extreme events.</p>
Identifying country-specific climate and disaster risk to achievement of SDG	<p>Where are the critical marine and coastal ecosystems in the country? What climate change impacts are projected and what natural and technological hazards can potentially affect the coastline?</p> <p>Are there nearby shipping lanes or extractive installations?</p>
Identifying risks generated by development	<p>Are contingency plans, early warning systems in place and is there building code compliance in coastal tourism destinations?</p> <p>Are coastal livelihoods sustainable, eco-friendly and climate-smart?</p>
Cooperation Framework: Helping build disaster- and climate resilient societies and achieve the SDG targets	<p>Mainstream risk assessment, mapping and management into rural development planning and management of coastal flood plain areas.</p> <p>Encourage the establishment of mechanisms and incentives to ensure high levels of compliance with existing laws and regulations addressing land use, environmental and resource management, and chemicals/oil.</p> <p>Integrate nature-based solutions in National Adaptation Plans and DRR strategies, and protect the health of ecosystems acting as natural infrastructure buffering hazard impacts, such as coral reefs, sea grasses, sand dunes and coastal vegetation such as mangroves and saltmarshes.</p> <p>Develop and maintain multi-sectoral rapid early warning, alert and response systems including robust means of communication.</p>

SDG 15 – LIFE ON LAND



"We are also determined to promote sustainable tourism, to tackle water scarcity and water pollution, to strengthen cooperation on desertification, dust storms, land degradation and drought and to promote resilience and disaster risk reduction."

Transforming our world: the 2030 Agenda for Sustainable Development

"...fully functioning wetland ecosystems enhance local resilience against disasters by providing fresh water and important products and by sustaining the lives and livelihoods of local populations and biodiversity."

Resolution XIII.13, 12th Meeting of the Conference of the Parties to the Convention on Wetlands

Most relevant SDG target	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains, and drylands, in line with obligations under international agreements.
	15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally.
	15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world.
	15.4 By 2030, ensure the conservation of mountain ecosystems, including their biodiversity, in order to enhance their capacity to provide benefits that are essential for sustainable development.
How climate and disaster risk can threaten achievement of the SDG	Climate change impacts such as desertification, biodiversity loss, land and forest degradation, glacial retreat, increasing temperatures, sea level rise and salinization create multi-faceted threats and impacts, including threats to the sustainability of ecosystem services; increased displacement and unmanaged human mobility; and loss of land to erosion or sea inundation, which again can lead to loss of livelihood and home, destabilization of communities, and forced displacement.
Identifying country-specific climate and disaster risk to achievement of SDG	Where are the critical terrestrial and coastal ecosystems? What hazards (including technological) are located within or in proximity, and what kind of climate change and disaster impacts are projected for the ecosystem and ecosystem services?
Identifying risks generated by development	Are conservation, environmental protection and rural development policies and legislation informed by climate change projections? Are agriculture and pasture practices contributing to deforestation and land degradation?
Cooperation Framework: Helping build disaster- and climate resilient societies and achieve the SDG targets	Regulate risk assessment, mapping and management in rural development and management of agricultural land and ecosystems. Research and implement nature-based solutions including ecosystem protection, reforestation/afforestation and protective practices Ensure integration of water/water and terrestrial management in local and national DRR strategies and National Adaptation Plans. Establish national and transboundary technological, drought and flood risk management , sand and dust storms monitoring and early warning

SDG 16 – PEACE, JUSTICE AND STRONG INSTITUTIONS

16 PEACE, JUSTICE
AND STRONG
INSTITUTIONS



"Without full respect for human rights, resilience cannot be achieved. Resilience must be built on active, free and meaningful participation from all stakeholders; comply with international and legal human rights norms and standards; be transparent; and promote equality and non-discrimination. The UN should uphold the state's responsibility to respect, protect and fulfil human rights for all individuals under its jurisdiction, including in emergencies, disasters, fragility and conflicts, where individuals' rights have been violated by state and/or non-state actors."

UN Common Guidance on Helping Build Resilient Societies

Most relevant SDG target	16.6 Develop effective, accountable and transparent institutions at all levels.
How climate and disaster risk can threaten achievement of the SDG	Disasters and climate change may exacerbate existing human rights concerns particularly in relation to discrimination, inequality and social cohesion. They can also disrupt service provision, and prevent rights-holders from accessing their rights, justice, and public services.
How risk-blind pursuit of the SDG can generate climate and disaster risk	If humanitarian action and post-conflict recovery is not risk-informed and gender inclusive, interventions and investments can perpetuate pre-crisis risks, create new risks and increase inequalities and discrimination. E.g. legislative reform leaving out risk governance.
Identifying country-specific climate and disaster risk to achievement of SDG	<p>Do national policies and regulatory frameworks for climate and disaster risk management exist? Are they gender-responsive and coherent with sectoral policies/plans? Are duty-bearers capacitated to uphold them?</p> <p>Are there areas of social tension or unrest which are also affected by disasters, extreme weather or climate-related ecosystem pressure?</p>
Identifying risks generated by development	Are regulations for risk-generating sectors of the economy (e.g. industry, construction, extractive industries) enforced? Are duty-bearers tasked to enforce this regulation capacitated?
Cooperation Framework: Helping build disaster- and climate resilient societies and achieve the SDG targets	<p>Ensure inclusive and meaningful representation of marginalized groups in decision-making processes at all levels, and strengthen the capacity of parliamentarians, human rights actors, and civil society organizations to participate in climate and disaster risk management.</p> <p>Support the development of policies, legislative frameworks and strategies that assign duties at all stages of risk management, allocates dedicated resources, and enable response, including local strategies.</p> <p>Mainstream climate and disaster risk screening across government planning processes and build institutional capacity for risk-informed development, risk assessments and resilience-building.</p> <p>Strengthen the capacity of local-level institutions to fulfil their roles in disaster within a human rights framework, including provision of guidance on enforcement of emergency legislation affecting freedom of movement, peaceful assembly, and evacuation/relocation.</p> <p>Establish integrated, multi-hazard early warning systems monitoring and warning for natural hazards, climatic conditions and social tension.</p> <p>Strengthen business continuity planning for legal and electoral process.</p>

SDG 17 – PARTNERSHIP FOR THE GOALS

17 PARTNERSHIPS FOR THE GOALS



"We acknowledge the importance of taking into account the three dimensions of sustainable development. We encourage consideration of climate and disaster resilience in development financing to ensure the sustainability of development results... We commit to investing in efforts to strengthen the capacity of national and local actors to manage and finance disaster risk, as part of national and local development strategies, and to ensure that countries can draw on international assistance when needed."

Addis Ababa Action Agenda

Most relevant SDG target	17.6 Enhance North-South, South-South, and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge-sharing.
	17.9 Enhance international support for implementing effective and targeted capacity-building in developing countries to support national plans to implement all the Sustainable Development Goals.
	17.14 Enhance policy coherence for sustainable development.
	17.19 By 2030, build on existing initiatives to develop measurements of progress on sustainable development that complement gross domestic product, and support statistical capacity-building in developing countries.
How climate and disaster risk can threaten achievement of the SDG	Realization of systemic risks such as pandemics or nuclear incidents can have significant ramifications for the resource availability for national regional and global partnerships for the SDGs.
How risk-blind pursuit of the SDG can generate climate and disaster risk	Unless partnerships are risk-sensitive and equitable, partnership projects and programmes risk promoting maladaptive practices or generate risks that most severely affect those already left behind.
Identifying country-specific climate and disaster risk to achievement of SDG	What are the hazards, risks and climate change scenarios affecting the country's economy? What are the hazards, risks and climate change scenarios affecting countries from which a given country receives remittances?
Identifying risks generated by development	Is information on national hazards, risk and climate change scenarios available to and known by development partners?
Cooperation Framework: Helping build disaster- and climate resilient societies and achieve the SDG targets	<p>Activate and participate in regional and global platforms and partnerships supporting resilience-building.</p> <p>Enhance capacities that underpin climate finance readiness and readiness for international disaster assistance, including legislation.</p> <p>Establish partnerships supporting national and local disaster risk reduction actions and climate change adaptation.</p> <p>Establish partnerships for transfer and exchange of disaster risk reduction and climate change adaptation-related technology.</p> <p>Establish partnerships for transfer and exchange of science, technology and innovation in disaster risk reduction and climate change adaptation, including climate services.</p> <p>Establish partnerships for disaster risk reduction and climate change adaptation capacity development.</p> <p>Establish partnerships for disaster risk reduction and climate change-related statistical capacity.</p> <p>Develop regional strategies for integrated efforts and advocacy.</p>

