

Integrating Disease Outbreaks and Strengthening of Health in Whole-of-Society Disaster Risk Management

A Supplemental Guide for Developing
or Updating National Multi-Hazard
Disaster Risk Reduction Strategies

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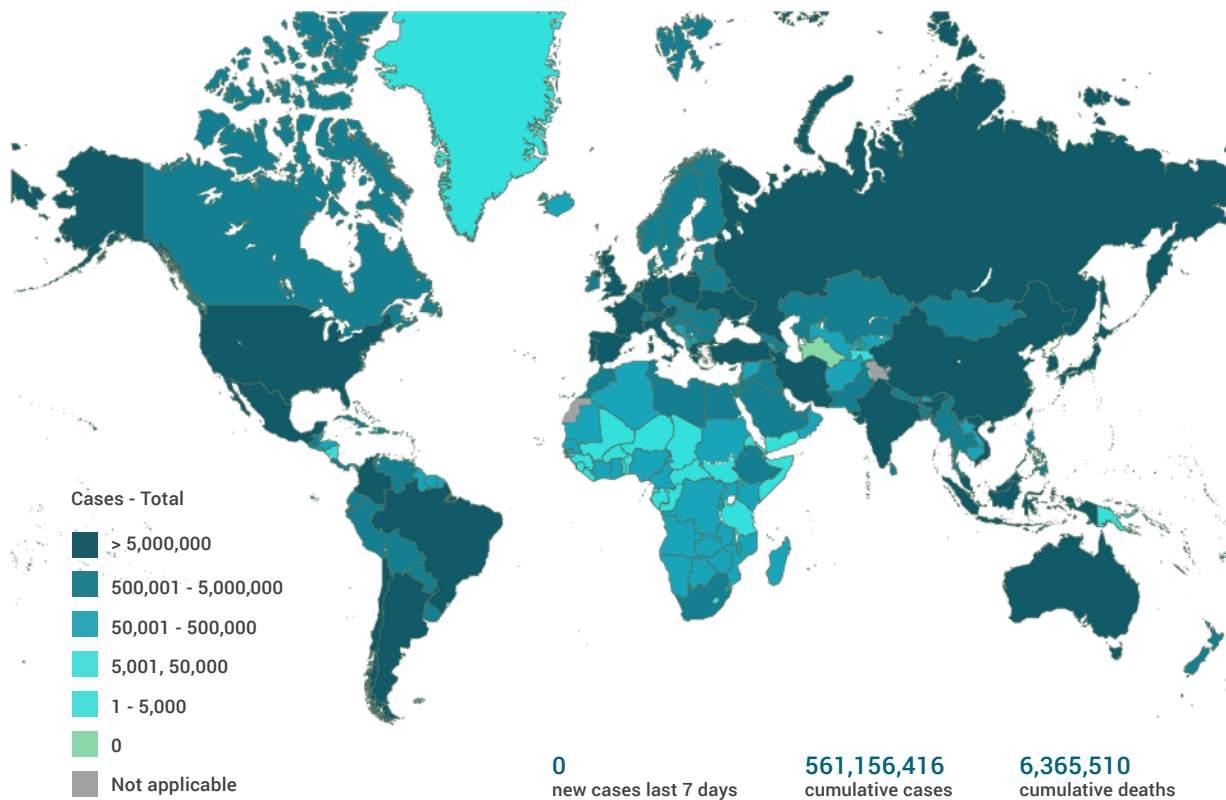
01 | OVERVIEW

The Sendai Framework for Disaster Risk Reduction 2015–2030 (Sendai Framework) places health at the centre of disaster risk management (DRM) by making references to health explicitly in the goal, the expected outcome and the targets, and throughout the priorities for action. It also emphasises the need for multi-hazard risk management approaches that address biological hazards – the causative agents for disease outbreaks, epidemics and pandemics – together with natural, human-caused, environmental, technological and other hazards. The Sendai Framework calls for better integration of health into disaster risk reduction (DRR) by recognising the critical interaction between disasters and the achievement of “health for all”.

Emergencies and disasters associated with all types of hazards often result in significant impacts on people’s health, including deaths, injuries, diseases, disabilities, mental conditions and other health impacts that can be avoided or reduced by risk management measures involving health and other sectors. Emergencies and disasters may cause ill health directly or through damage and disruption of health systems, facilities and services, leaving many with limited access to health care and public health measures in times of emergency. Such events can also impact access to and availability of water, food, power supplies, supply chains, communications, transport, education and other goods and services upon which health systems and people’s health and well-being depend. Disasters are also barriers to progress on the health-related Sustainable Development Goals (SDGs) and often set back hard-earned development gains in health and other sectors.

An ongoing challenge for the health sector, along with the whole of society, is to take more proactive and inclusive approaches to managing the risks of emergencies and disasters, with greater emphasis on stopping the creation of risks, prevention and mitigation, and ensuring that community and country capacities are prepared and capable of timely and effective response and recovery. Resilient health systems based on the primary health-care approach at the community level provide the fundamental capacities to reduce underlying vulnerability, protect health facilities and services, and scale up the response to meet wide-ranging health needs in emergencies and disasters.

Biological hazards that lead to disease outbreaks, epidemics and pandemics pose major threats to public health, to livelihoods and to all of society. The COVID-19 pandemic has demonstrated how a localised disease outbreak can become a global emergency and have widespread impacts on all sectors beyond health in countries across the world – a clear manifestation of the systemic nature of risks.¹ This pandemic has been one of the most challenging disasters the world has experienced in recent times, resulting by mid-2022 in more than 6 million deaths and many other large-scale direct and indirect physical and mental health effects. The pandemic also had significant impacts on employment, industrial production and supply chains, financial markets, savings and remittances, human mobility, agriculture and food security, and access to essential services – including health and education, among others – with especially devastating consequences for people living in poverty and on women in front-line, service-oriented occupations in health and other sectors and in carer roles.^{2,3}



This pandemic emerged within an already complex and changing global risk landscape. Every region of the world is impacted by climate change, which is increasing the impacts of weather-related hazard events, driving up both economic losses and needs for health and other assistance. Climate and disaster risks are outpacing global efforts to build resilience, hindering implementation of the Sendai Framework and the Paris Agreement and achievement of the SDGs. There is an urgent need today for risk management approaches that account for the interconnected and cascading nature of risks and recognise the integral linkages between health and social, economic, financial, political and other systems.

The risk management of disease outbreaks has been traditionally a primary concern of the health sector, with lesser involvement from many other sectors. In recent years, however, the level of joint action between the health sector, national disaster management organizations and other sectors at local, national, regional and global levels for managing health and related risks and impacts of disease outbreaks has increased, and there is a need to build on the momentum generated by the COVID-19 pandemic to reinforce and scale up this collaboration. The whole-of-society and whole-of-government coordination mechanisms that have emerged during COVID-19 must be applied to prevention, preparedness and recovery, as well as in the response to disease outbreaks and other emergencies and disasters. In particular,

the ongoing development and implementation of national and local DRR strategies (Target E of the Sendai Framework) is an important opportunity to position health at the front and centre of risk management efforts by all sectors at all levels of society.

This guide is predicated on the understanding that multi-hazard national DRR strategies should aim to prevent the creation of risks, reduce current and emerging risks, and be responsive to the development and operational impact of all types of risks, including those associated with disease outbreaks, epidemics and pandemics. These strategies should draw upon, synthesise and synergise the risk management actions from a range of stakeholders and sectors – not only health – that contribute to reducing the health risks and impacts of disasters. The design and updating of multi-hazard national DRR strategies should also seek to prevent epidemics and pandemics, mitigate their potential health and socioeconomic impacts, and prepare for timely and effective response and recovery, while also strengthening national and local health systems. Collaboration between all sectors is essential to collectively reduce the health risks and consequences of emergencies and disasters, and to enable a country to implement the health and related aspects of the Sendai Framework, the SDGs, International Health Regulations (IHR) (2005), the Paris Agreement and other relevant national, regional and global frameworks.

02 | PURPOSE AND OBJECTIVES

The purpose of this document is to support countries in strengthening the management of health risks from all types of emergencies and disasters and integrating disease outbreaks into DRR strategies. While the focus of this guide is on national strategies, the principles, processes and actions recommended can be adapted and applied to DRR strategies at local, subnational and other levels.

The guide aims to provide health and DRM practitioners, planners and policymakers across sectors with targeted information to help them strengthen national health systems and integrate the risks of disease outbreaks in national DRR strategies by:

- Anchoring integration of health and DRR under the guiding frameworks such as the Sendai Framework, the IHR (2005), SDGs, Paris Agreement, Bangkok Principles for the implementation of the health aspects of the Sendai Framework, and the WHO Health Emergency and Disaster Risk Management (Health EDRM) Framework;
- Recommending key principles and approaches to integrate health risks, including those associated with disease outbreaks, in the different stages of DRR strategy development and/or updating;
- Identifying a list of additional tools and guidance to support the integration of health and DRR at the national and local levels; and
- Providing a flow chart of steps to follow to incorporate health and disease outbreaks into the 10-steps approach used for the development of national DRR strategies.

03 | GUIDING GLOBAL FRAMEWORKS

Relevant international frameworks provide a basis for addressing the health risks of emergencies and disasters – including disease outbreaks, epidemics and pandemics – in the context of DRR. These include:

- The **Sendai Framework**, which focuses on preventing new and reducing existing risks while it also reinforces the inclusion of biological hazards within the scope of DRR. It makes reference to health 38 times and features public health in its goal and expected outcome.⁴ The Sendai Framework explicitly refers to enhancing the cooperation between health authorities and other relevant stakeholders to strengthen country capacity for DRM for health, the implementation of the IHR (2005) and the building of resilient health systems.
- The **International Health Regulations (IHR) (2005)**, which is a legally binding international agreement that entered into force on 15 June 2007.⁵ The scope and purpose of the IHR (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 (2005), State parties have agreed to build their capacities to detect, assess and report public health events. The IHR (2005) also requires State parties to report annually on their capacities to implement the regulations. 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. State parties also have strategies and plans for the risk management of disease outbreaks, including pandemic influenza risk management plans and preparedness and response plans for specific diseases. These strategies provide direction and priority actions for integration of disease outbreaks in all-hazards and whole-of-society national DRR strategies.
- The **Bangkok Principles for the implementation of the health aspects of the Sendai Framework for Disaster Risk Reduction (2015–2030)**, which places strengthened coordination at the heart of efforts to reduce risk from biological hazards. It recommends seven measures to prevent and/or reduce the risk of disease outbreaks such as epidemics and pandemics that have the potential for huge social and economic impacts. The principles were agreed at the International Conference on the Implementation of the Health Aspects of the Sendai Framework convened by the Thai Government in Bangkok in 2016. They call for an inter-operable, multisectoral approach to promote systematic cooperation, integration and, ultimately, coherence between disaster and health risk management. The principles also build on the commonality between the health sector and DRR, including the shared need for risk assessment, surveillance and early warning systems, resilient infrastructure and coordinated incident management. This strengthened coherence is needed as the interconnected and transboundary nature of hazard risk increases.⁶

- The **WHO Health Emergency and Disaster Risk Management (Health EDRM) Framework**, which provides guidance to countries to put in place capacities and functions within and across health and other sectors to reduce the risks and impacts of emergencies and disasters.⁷ It is built upon and encompasses policies, principles and practice of DRR, epidemic and pandemic preparedness and response, climate change adaptation, humanitarian action and health system strengthening, thus reinforcing and bridging the implementation of the International Health Regulations (2005), the Sendai Framework, the Paris Agreement and the SDGs. At the core of effective Health EDRM are efforts to strengthen a country's health system with a strong emphasis on effective governance and community participation and actions. These combine to build resilience and establish the foundation for effective prevention, preparedness, response and recovery from all types of hazardous events, including emergencies and disasters. The vision of the Health EDRM Framework aligns with the WHO's vision of attaining the "highest possible standard of health and well-being for all people who are at risk of emergencies, and stronger community and country resilience, health security, universal health coverage and sustainable development." The success of Health EDRM relies on joint planning and action by ministries of health and other government ministries, the national disaster management agency, the private sector, communities and community organizations, assisted by the international community.

04

UNDERSTANDING DISEASE OUTBREAKS, EPIDEMICS AND PANDEMICS

The Sendai Framework promotes a multi-hazard risk management approach for natural, human-caused, biological, environmental and technological hazards. The UNDRR/International Science Council (ISC) *Hazard Definition and Classification Review's*⁸ Hazard Information Profiles describe 302 hazards, including 88 biological hazards, of which 60 focus on human health.⁹ Biological hazards are defined as hazards "...of organic origin or conveyed by biological vectors, including pathogenic microorganisms, toxins and bioactive substances. Examples are bacteria, viruses or parasites, as well as venomous wildlife and insects, poisonous plants and mosquitoes carrying disease-causing agents."¹⁰ These hazards of organic origin can cause significant loss of life, affecting people and animals at the population level, as well as plants, crops, livestock, and endangered fauna and flora, and that can lead to severe economic and environmental losses as well as impacts on health and other societal systems.¹¹

These biological hazards may lead to disease outbreaks, including epidemics and pandemics, particularly from microorganisms that are novel or highly virulent. The scale of the outbreak will be determined by a number of factors, such as the properties or characteristics of the disease-causing organism; the number of people exposed and their immunization, health and nutritional status; and the availability of and access to DRM measures, such as safe water supply, diagnostics, vaccines, treatments, and public health and social measures to reduce disease spread and provide care for people with the disease (known cases).

The risks of disease outbreaks are also associated with other hazardous events, such as emergencies due to natural hazards and conflicts. Increased mortality and morbidity from concurrent disease outbreaks in disasters are associated with:

- population displacement
- crowding
- collapsing and weak health services
- poor access to health care
- breakdown of long-term treatment programmes (e.g., tuberculosis, HIV/AIDS)
- exposure to novel infections
- malnutrition
- lack of, or breakdown of, disease-control programmes, including immunisation, vector control and Water, Sanitation and Hygiene (WASH) programmes
- damage to infrastructure (e.g., water purification, sewage treatment, waste disposal)
- contamination of water and food
- interrupted supplies and logistics, and
- poor coordination and management of risks among agencies at local, national, cross-border, regional and supranational levels.¹²

According to the WHO, a disease outbreak is the occurrence of disease cases in excess of normal expectancy in a defined community, geographic area or season.¹³ The number of cases varies according to the disease-causing agent as well as the size and type of previous and existing exposure to the agent. Disease outbreaks are usually caused by an infection, transmitted from person to person (e.g., through touch, respiratory droplets, airborne transmission), animal to person contact (e.g., vectors such as mosquitos, rodents, bats), from the ingestion of or contact with food and water, from the environment (e.g., water, soil) or from other media. Other types of outbreaks may also occur following exposure to chemicals or to radioactive materials.¹⁴ An outbreak may occur in a community, geographical area or several countries. It may last for a few days, weeks or even for several years.

WHO defines an epidemic in a similar way to disease outbreak: “The occurrence in a community or region of cases of an illness, specific health-related behaviour or other health-related events clearly in excess of normal expectancy.” Furthermore, “the number of cases indicating the presence of an epidemic varies according to the agent, size and type of population exposed, previous experience or lack of exposure to the disease, and time and place of occurrence”. While the term “disease outbreak” may be used synonymously with “epidemic”, it usually indicates a more localised event, while an epidemic has a more generalised impact occurring when a disease spreads, often rapidly, resulting in unusually large or unexpected number of cases for a given place and time.¹⁵

A pandemic is a global disease outbreak and affects a wider geographical area than an epidemic. It may be caused by a new virus or a strain of virus that has not circulated among people for a long time, and humans usually have little to no immunity against it. The virus usually spreads quickly from person to person worldwide. Evidence suggests that the likelihood of pandemics has increased over the past century because of increased global travel and integration, urbanization, changes in land use and greater exploitation of the natural environment.¹⁶

Both epidemics and pandemics are likely to have significant consequences on a given population and impacts across multiple sectors, beyond health. COVID-19 has demonstrated how a pandemic often causes social disruption, economic loss and general hardship.¹⁷

Recent epidemics include the multi-country mpox outbreak (2022–), Ebola virus disease in the Democratic Republic of Congo (2018–2020) and West Africa (2013–2016), and the Zika virus disease in the Americas and Pacific regions (2015–2016). However, it should be noted that communities and countries are regularly affected by many types of disease outbreaks of varying scales which require effective risk management and should be considered, along with other small- and medium-scale risks from other types of hazards, within the scope of all-hazards national DRR strategies.

05

KEY PRINCIPLES AND APPROACHES GUIDING INTEGRATION OF DISEASE OUTBREAKS INTO WHOLE-OF-SOCIETY DISASTER RISK REDUCTION

The nature and scale of risks are changing. In an increasingly complex interconnected world, risk has become systemic, challenging governance mechanisms of established risk management. Disasters cascade across sectors, necessitating effective leadership at multiple scales and intersectoral coordination and collaboration. Subsequently, there is no single formula for reducing health risks from emergencies and disasters, including disease outbreaks, that is applicable to all countries and all communities. Risk assessment tools, risk communications

and other risk management measures must be contextualised based on local conditions, characteristics and capacities for these actions to be relevant, appropriate and effective.

The following principles and approaches are based on lessons learned to date and may be considered to ensure effective all-hazards health EDM, including prevention and preparedness for disease outbreaks, are addressed as part of the multi-hazard, multisectoral approach to developing or updating DRR strategies.

A) ESTABLISH HEALTH-CENTRIC MULTISECTORAL RISK-GOVERNANCE MECHANISMS

Effective management of health and other risks of emergencies and disasters requires sustained engagement from policymakers and practitioners from myriad sectors, including disaster risk managers, climate change specialists, health and other sectoral specialists, humanitarian actors, financing institutions, development planners and representatives of groups in society (e.g., people living in vulnerable conditions, women, men, youth, people with disabilities, Indigenous people, marginalised groups). It also requires enabling legislation, policies and strategies that address the full range of risks across sectors and scales. The commitment of heads of governments to supporting the design, financing and implementation of the strategy is paramount. Along with health and other ministries, they should provide leadership, direction, coordination for the governance of planning, implementation

and monitoring of critical actions for managing all risks, including disease outbreaks, at all levels of society.

The key to integrating disease outbreaks and strengthening health in national DRR strategies is the engagement of the health sector and optimising the collaboration between health, the national DRM agencies and other sectors responsible for developing, maintaining and implementing the strategies. The relevant focal points in the ministries of health, along with other health stakeholders, will need to participate in the processes for the development or updating of the national DRR strategies. This will not only enable the whole-of-society action to reduce risks of disease outbreaks specifically but also the management of health risks and impacts of all types of emergencies using a whole-of-society approach.

B) PROMOTE WHOLE-OF-SOCIETY AND INCLUSIVE APPROACHES

Reducing the health risks and impacts of emergencies and disasters requires connected action at all levels of society under the leadership of governments. Given the roles and contributions made by many actors, whole-of-society action is essential. Planning and implementation should take into account the complexity and interdependency of the health sector with other sectors at all levels.

Whole-of-society and sectoral DRR planning should involve representatives of the health sector to assess needs and to determine the actions from multiple sectors that contribute to reducing health risks of emergencies and to maintain the continuity and scale-up of health-care services. Likewise, the health sector has a role in DRR planning and action by other sectors, such as in managing the risks to people's health and well-being, prioritising critical infrastructure, collaborating on the implementation of public health measures and providing psychosocial support, health services, management of mass fatalities, and safe and dignified burials.

The effects of disease outbreaks on public health are affected by risk factors such as the nature of the hazard or pathogen causing the disease, but also by people's health, nutrition and immunization status and other socioeconomic and environmental determinants of health at the individual and community levels. The capacities of health and other systems to provide services

to manage the risks of communities must also be taken into account.¹⁸

Specific disease outbreaks may affect disproportionately the health of subpopulations such as children, adults, older persons and people with underlying health conditions; however, the wider socioeconomic risk can affect all quarters of society, especially people who are poor and displaced people with limited access to health care and other services. Everyone has a level of vulnerability and capacity depending on the potential for the transmission of the disease, and it's linked to and affected by the systems, policies and programmes in place as well as the availability of and accessibility to quality health services and others services.

Ensuring a truly inclusive and participatory process in developing and implementing risk management measures is critical to ensuring that all voices are heard, all risks and needs are identified, and that all expertise, knowledge, perceptions and contributions from the community, including women and children and youth, are enabled in the leadership, planning, design and delivery of measures that affect them. Whole-of-society and inclusive approaches are required to help ensure health-related DRR actions meet the needs of the community at risk, and in particular those groups with higher levels of vulnerability and who are most at risk.

C) EMBED HEALTH CONSIDERATIONS IN RISK ASSESSMENTS, DATA AND MONITORING

Disasters affect the health of individuals and communities both directly and indirectly. Direct effects include death, injury, disability, and illness; indirect health effects include damage to health infrastructure (including utility services such as water, electricity, and sanitation), health systems, and service delivery.¹⁹ Robust risk information that incorporates health-related data on such impacts and other forms of health intelligence provide the foundation for effective disaster risk reduction.

Part of the mandate of the health sector, and in particular ministries of health, is to collect, analyse and report on many relevant data concerning risks (e.g., risk profiles), capacities, finances and impacts that are relevant to risk assessment, monitoring, evaluation and

reporting on all-hazards DRM, including for disease outbreaks. Engagement of the health sector in risk assessments, data and monitoring can be effectively coordinated through focal points in the Ministry of Health,²⁰ who should be encouraged to participate in all-hazards multisectoral disaster risk assessments that cover biological, natural, human-caused, technological and societal hazards, exposures, vulnerabilities and capacities. Similarly, all relevant sectors and sources of risk information should participate in the different forms of assessments of risk, capacity and needs, including strategic and event risk assessments. Data sources include disease surveillance, health-service data for specific emergencies and data derived from health sector reporting for the SDGs.

The design of national DRR strategies should include a monitoring and evaluation framework that integrates health elements including those related to disease outbreaks and promotes coherence in monitoring and reporting between the Sendai Framework, IHR (2005), the Paris Agreement and health-related SDGs. The Sendai Framework has four health-specific global indicators (focusing on mortality, people affected [injured or ill], damage to health facilities and disruption to health services) and another 22 indicators that are directly relevant to health

that could be used as a basis for monitoring at the national level. Many other indicators can be developed for monitoring and reporting on national strategies and Sendai Framework implementation, including indicators based on disaggregated data. Hence, health-related targets and indicators should be key elements of DRR strategy monitoring frameworks and, accordingly, the health sector should be supported to play a key role in collecting, analysing, monitoring and reporting on health-related DRM data.²¹

D) ASSESSING AND BUILDING CAPACITY FOR HEALTH-CENTRIC DRR STRATEGIES

National DRR strategies depend on a wide range of intersecting and interdependent capacities, systems, sectors and communities. Effective implementation of health-centric DRR strategies requires the identification and assessment of those whole-of-society capacities, resources and plans, infrastructure and services critical for managing health risks of emergencies, including the risk of disease outbreaks within and across sectors. A critical appraisal of these should be carried out to identify the strengths, gaps and bottlenecks in the interconnected systems.

It is also important to ensure that risk management approaches identify ways to strengthen capacities

of people, including the health workforce and DRM practitioners, amidst evolving and systemic risks. As new risks and realities evolve, leaders, communities and practitioners constantly need to learn new skills that will allow them to adapt to changing circumstances, tools and technologies. At the same time, effective partnership between health and DRM practitioners requires capacity-strengthening and joint learning. Notably, the health sector must become more aware of DRM practices, while DRM experts will benefit from a better understanding of health emergencies, disease outbreaks and health system resilience frameworks generally.

E) STRENGTHEN HEALTH DIMENSIONS IN PREPAREDNESS, MULTI-HAZARD EARLY WARNING, BUILD BACK BETTER AND RECOVERY

National DRR strategies must take into account the need to enhance preparedness for managing the health risks of emergencies and disasters according to the risk profiles and emerging and imminent threats, including the whole-society action to prevent, prepare, respond and recover from disease outbreaks, epidemics and pandemics. They also need to include the likelihood of concurrent emergencies and disasters.²² While countries were busy responding to the immediate health threats of COVID-19 and other disease outbreaks, some communities also experienced strong cyclones, flooding, landslides, locusts, increased food insecurity, as well as conflict. Several of these threats – such as storms, floods, droughts and heatwaves – are on the rise in many parts of the world due to climate change and can also be risk-drivers of

disease outbreaks. They will continue to increase risks over the coming years, while also creating conditions for other impacts, including new or prolonged displacement.

Multi-hazard early warning systems (MHEWS) enable early action, which is key for any type of hazard, including biological hazards that may lead to disease outbreaks. Having access to information from local, regional and global meteorological forecasting and other early warning mechanisms play a critical role in reducing the health and other consequences of all types of emergencies. Key to MHEWS is the establishment of end-to-end communication so these warnings reach the last mile, allowing for timely action.

Effective early warning for biological hazards relies on robust disease surveillance and early warning systems in public health that provide early detection of biological hazards and disease outbreaks. There is a critical need to engage with the health sector to enhance health risk communication for natural and other hazards and to incorporate measures to address disease outbreaks as part of MHEWS. This includes incorporating biological hazards in the design, delivery and risk communication of health and safety advisories to communities and to health and other services, as well as for emergency preparedness measures.

Additionally, recovery from disasters including disease outbreaks will need to ensure a sound consideration of health risks and impacts of the medium- and long-term effects of emergencies, counting the management of continuing illness

(e.g., post-COVID condition), rehabilitation of injuries, psychosocial support for people and health workers, and the restoration of health services that were affected by the disaster. Applying the principle of “Build Back Better” in the recovery also provides the opportunity to learn lessons and to reinforce and strengthen capacities to manage the risks of emergencies and disasters. Recovery efforts must look beyond simply restoring the physical infrastructure of a community – they should involve a wide array of social, economic and political factors that are necessary to ensure that the health and well-being of the community is restored. A comprehensive approach for Building Back Better and recovery that takes into account the widespread impacts on health and society from disease outbreaks and other forms of disaster should be integrated in the development and revision of the DRR strategy.

G) FINANCING FOR MANAGING THE HEALTH RISKS OF EMERGENCIES AND DISASTERS AND THE INTEGRATION OF DISEASE OUTBREAKS IN DRR STRATEGIES

The availability, access and timely release of financial resources are critical to implement a DRR strategy that effectively addresses reduction of risks of emergencies, including disease outbreaks. Better-targeted funding at all levels and for health and all other sectors – starting with sources of funding from national government – must be configured as part of the DRR strategy. Increasing the availability of funds for strengthening systemic capacities and the implementation of risk management measures for all types of risks – and more specifically, for managing risks associated with disease outbreaks

– is a necessity. The COVID-19 pandemic has had a devastating impact on the national economies of many countries, and it has shown at the same time the limited financial resources that were available to prevent, prepare, mitigate and respond to these risks and their impacts. There is a need for more and better-targeted funding across governments, ministries, sectors, and levels. These funds should cover epidemic and pandemic prevention and preparedness, together with proactive risk management measures for all types of emergencies and disasters in health and other sectors at all levels, in particular at local level.

F) ENSURE COHERENCE AMONG DRR, HEALTH AND OTHER RELEVANT STRATEGIES

Communities and countries face a range of different types of risk according to their respective risk profiles. While countries and governments were responding to the COVID-19 pandemic, other natural, technological and biological hazards did not stop, and this further exacerbated vulnerabilities and exposures of people and systems. National strategies should therefore

coherently link DRR to health EDM, health security, epidemic and pandemic preparedness and response, climate change adaptation and sustainable development. Coherence is key in realizing the global collective ambition to reduce disaster and climate risk and achieve better health and well-being outcomes for all.

06

KEY PRINCIPLES AND INTEGRATION OF DISEASE OUTBREAKS AND STRENGTHENING OF HEALTH IN NATIONAL DRR STRATEGIES: A 10-STEP APPROACH

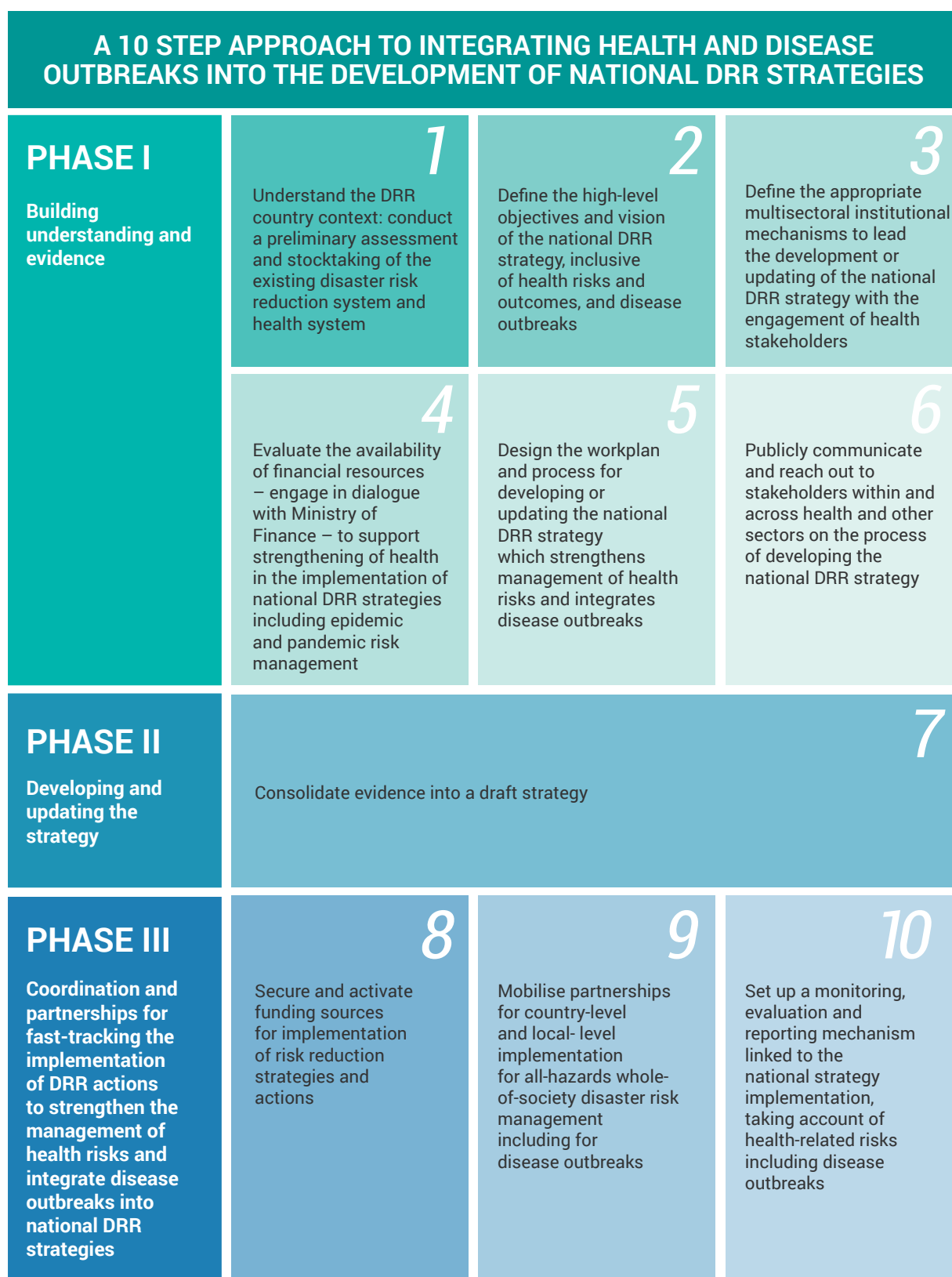
Key learnings from the implementation of the Hyogo Framework for Action 2005 – 2015 (HFA)²³ showed that some sectors were not adequately engaged or involved in the design and implementation of national DRR strategies and that biological hazards were often excluded from the scope of DRR strategies that tended to focus on natural hazards. To address this challenge, the Sendai Framework emphasised the need for integrated risk management approaches, highlighted the importance of integrating DRR in various sectors, including the health sector, and reinforced the inclusion of biological, natural, technological, environmental and other hazards within the scope of DRR. On the other hand, human disease outbreaks have fallen under the responsibility of health authorities, resulting in the need to expand multisectoral participation – such as the One Health approach – to the risk management of epidemics and pandemics involving whole-of-society action.

The level of joint action across sectors for managing health and related risks and impacts of disease outbreaks and other types of emergencies has been accelerated through the enhanced collaboration and coordination mechanisms between the health sector, national disaster management organizations and other sectors at local, national, regional, and global levels. This

has been complemented by the publication of policies and guidance such as the Health EDRM Framework and COVID-19 pandemic planning, coordination and management. Nevertheless, there is still a need to scale up this collaboration and joint action to ensure that national DRR strategies put health at the centre of DRR, are inclusive of disease outbreaks as part of an all-hazards approach, and optimise the roles, responsibilities and actions of the whole of society to manage the risks and impacts of all types of emergencies and disasters.

To support countries in following an all-hazards approach, the Words into Action (WiA) Guidelines on Developing National Disaster Risk Reduction Strategies put forward 10 practical steps to guide countries during the development of their national DRR strategies. The²⁴ WiA guidelines offer good practice examples for aligning a national DRR strategy with the Sendai Framework. The following section details guiding actions to be taken by countries to ensure that disease outbreaks and the health risks of all types of emergencies and disasters are taken into consideration from the start to the finish of the development or updating of a national DRR strategy. The steps and actions should be adjusted to meet the country's context, needs, priorities and capacities, and they are structured under three main phases:

By using this three-phase approach, the design and implementation of national DRR strategies can focus on achieving better outcomes for the health and well-being of people at risk of emergencies and disasters; including disease outbreaks in the all-hazards approach to DRR; recognising the common approaches, interdependencies and contributions from many sectors, actors and stakeholders who play vital roles; and ensuring the collaboration required between health and other systems at community and national levels to manage these risks effectively and efficiently.





PHASE I

Building understanding and evidence

The starting point for integrating disease outbreaks and health risks of all types of emergencies into national DRR strategies is establishing governance systems that include the proactive engagement of the health sector. The health sector holds health-related data and coordinates mechanisms to prepare for, assess, manage and report on health emergencies and disease outbreaks. It is therefore imperative that the relevant focal points in the ministries of health, such as the coordination units for health EDM and for the IHR (2005) (i.e., the National IHR Focal Point), are identified and actively participate in the development or updating of the national DRR strategies. Other policymakers and practitioners from the health sector and

related sectors in line with the whole-of-society approach also have critical roles to play in all aspects of the dynamic assessment, planning, financing, implementation, monitoring and reporting of the strategy. Joint action by health and DRM specialists will have a beneficial impact on reducing the risks and impacts of disease outbreaks specifically, but also the management of health risks and impacts of all types of emergencies. (These points are further developed in Step 3: Define the appropriate multisectoral institutional mechanisms to lead the development or updating of the national DRR strategy with the engagement of health stakeholders.)

STEP 1

UNDERSTAND THE DRR COUNTRY CONTEXT: CONDUCT A PRELIMINARY ASSESSMENT AND STOCKTAKING OF THE EXISTING DRR SYSTEM AND HEALTH SYSTEM

While applying risk- and community-centred approaches as advocated by the Sendai Framework and the WHO Health EDRM Framework, countries should consider the risk context and optimise or strengthen their systems to manage the risks associated with all types of emergencies and disasters. Countries should continue to scale up the implementation of actions aimed at reducing hazards, exposures and vulnerabilities on the health sector to limit or reduce socioeconomic and other impacts on communities and systems. The scope of a national DRR strategy will be defined by the “country risk profile” and the systems and capacities in place to manage risks.

Key considerations for enhancing the understanding of health in the all-hazard DRR approach in a country:

A. COUNTRY RISK PROFILES BASED ON RISK ASSESSMENTS

- Develop and maintain risk profiles so they are up-to-date and based on an assessment of national and cross-border risks, the national and local context, needs, capacities, resources and local approaches to inform and develop adaptable strategies for DRR.
- Ensure that health risks of all types of emergencies and disasters are identified and covered in multi-hazard risk assessments, including the development of National Disaster Risk Assessments that take into account the systemic and cascading nature of risks. These risk assessments should include the potential consequences of hazards for people’s health, lives and livelihoods (in particular in populations with higher levels of risk) as well as socioeconomic and environmental impacts at local and country levels. Health authorities may include strategic health-emergency risks among other risk assessments to inform national multi-hazard risk assessments.²⁵
- Explicitly integrate biological hazards in all risk assessment tools and methodologies at the national and subnational levels. In collaboration with the health sector, identify the existing and emerging human health diseases and risk-drivers in the country that can cause disease outbreaks and epidemics. Analyse their direct and indirect impacts, interdependencies with other risks and how they contribute to vulnerabilities of people, livelihoods and systems. Consider the animal–human–environment interface as a key risk-driver for infectious diseases and make use of the Joint Risk Assessment Operational Tool (JRA OT) – an implementation tool associated with the Tripartite Zoonoses Guide for a multisectoral, One Health approach for a consistent, harmonised approach to assessing risks posed by zoonotic disease hazards.²⁶
- Analyse how risks from one isolated hazard can affect other hazards, and how this interaction of various hazards will make people and systems more vulnerable, including to disease outbreaks.
- Develop a comprehensive understanding of how risk cascades across sectors with health risks and consequences, such as the connection between floods, damage to water supply systems and surface water leading to vector- and water-borne diseases.

- Ensure that the health-related risk information and other relevant information included in the DRR strategy has identified risk-drivers such as climate change, demographic expansion, rapid urbanisation, globalization, migration and state fragility that are increasing the frequency, severity and impacts of emergencies, including disease outbreaks, in communities and countries across the world.²⁷
- Use scientific forecasts in the short, medium and long term and determine how extreme and slow-onset events are exacerbating risks faced at all levels, including the risks of disease outbreaks.
- At local level, engage with communities to identify local hazards, vulnerabilities and capacities; conduct local risk assessments that show exposure and vulnerability of communities and subpopulations to various hazards; analyse the compounded impacts that emergencies, including disease outbreaks (e.g., COVID-19 pandemic), have produced; and identify actions to manage health risks before, during and after events.

B. HEALTH SYSTEMS, DISASTER RISK MANAGEMENT SYSTEMS AND CAPACITIES

Include systems for health emergency and disaster risk management (and health personnel responsible for health EDRM) in the review of national DRR systems so all actors have a shared understanding and familiarity with how the health system manages risks of emergencies, including disease outbreaks, and the roles of other sectors in contributing to health EDRM. Capacity assessments should identify which capacities to strengthen, with attention to those that are transformative in nature and will help change systems, behaviours and actions toward strengthening country, community and organizational resilience.

- Ensure that multisectoral capacity assessments for DRR consider the ability of the health system across sectors and levels of society to manage health risks, including the possible cascading effects and critical interdependencies among sectors and stakeholders.
- Use health and multisectoral capacity assessment tools – such as the IHR State Party Annual Reporting Tool²⁸, CADRI Partnership diagnostic tools²⁹ and other health emergency and DRM assessment tools – to identify capacity gaps and support the development of health-centric national DRR strategies.
- Make use of assessments and existing tools like the Disaster Resilience Scorecard for Cities (City Scorecard) and the Public Health Addendum to strengthen and integrate many aspects of public health that are relevant to disaster prevention, preparedness and response.³⁰
- In collaboration with coordination mechanisms in the health sector, integrate national strategies for strengthening health capacities and systems for managing risks (including national action plans for health security (NAPHS) and health EDRM strategies).
- Establish orientation and joint training sessions and simulation exercises that build collaboration between health and other sectors on DRM, increase the knowledge of health systems for DRM practitioners and strengthen understanding of DRR for health actors.
- Develop the competencies and skills of managers and practitioners in health and all sectors at every level to design and implement risk management programs and actions that reduce current and future risks of disease outbreaks and other types of emergencies and disasters.

STEP 2

DEFINE THE HIGH-LEVEL OBJECTIVES AND VISION OF THE NATIONAL DRR STRATEGY, INCLUSIVE OF HEALTH RISKS AND OUTCOMES, AND DISEASE OUTBREAKS

The overall vision and high-level objectives are a big-picture view of what the country's national DRR strategy aims to achieve and how this will contribute to the overall development targets of the country, including those related to health, such as the pathway to universal health coverage (UHC). It envisions the role of DRR in a pathway towards community and country resilience, contributing to the country's overall development targets and other key outcomes, including reducing the health risks and impacts of emergencies and disasters and improving health and well-being with whole-of-society action.

Key considerations for the integration of disease outbreaks in the high-level objectives and vision of national DRR strategy:

- Include focal points and representatives from ministries of health and other health entities (e.g., hospitals, local health workforce, universities) in defining the strategy to help ensure that health risks and the role of the health sector are strongly incorporated in the vision and high-level objectives.
- While defining the vision and high-level objectives of the DRR strategy, the health risks and outcomes from all types of emergencies and disasters (including deaths, injuries, illness, psychosocial conditions and disability), the risks of disease outbreaks for the whole of society, the protection of health services and infrastructure, and the strengthening of health systems should be included in the overall picture. The high-level objectives and vision should take into consideration how disease outbreaks can increase vulnerabilities and reduce capacities, and how these risks can be reduced when resilience of people and health and other systems are strengthened as part of the national DRR strategy.
- Coherently align development and implementation of national and local strategies for DRR with health EDRM strategies, including national action plans for health security (NAPHS), epidemic and pandemic preparedness planning, as well as the National Adaptation Planning for climate change.
- Review relevant health epidemic and pandemic strategies, NAPHS and learnings from emergency health response reviews (intra-action and after-action)³¹ as the basis for the inclusion of disease outbreaks in national DRR strategies.
- Link national health and DRM strategy development and implementation to local resilience-building efforts with shared objectives, complementarity between national and local levels, and ongoing communication.

STEP 3

DEFINE THE APPROPRIATE MULTISECTORAL INSTITUTIONAL MECHANISMS TO LEAD THE DEVELOPMENT OR UPDATE OF THE NATIONAL DRR STRATEGY WITH THE ENGAGEMENT OF HEALTH STAKEHOLDERS

Inclusive, multisectoral and multi-stakeholder approaches are crucial in the development of all-hazard DRR strategies and for health EDRM. Therefore, there is a need to ensure the participation of all sectors at all levels of society to manage risks, including those associated with disease outbreaks. In this respect, both multisectoral national coordinating mechanisms for DRM and for health EDRM in the health sector should apply whole-of-government and whole-of-society approaches to all aspects of assessment, planning and implementation. Bringing together health authorities and other stakeholders in the process for developing and implementing DRR strategies will help strengthen the country's capacity for planning and action.

Key considerations for ensuring multisectoral institutional mechanisms in national DRR strategies:

- Engage appropriate focal points in the ministry of health (i.e., coordination units for health EDRM and for the IHR [2005]) and other stakeholders from the health sector and related sectors.
- Seek engagement with other relevant health actors, including health-related NGOs and civil society organizations, and representatives of health advocacy groups.
- Recalibrate ways of working to ensure that health leaders are part of the institutional leadership structure and key health stakeholders are part of multisectoral and multi-stakeholder platforms and mechanisms for DRM.
- Ensure that communication and coordination are strengthened across the national DRR system and the health system, and between health and other sectors.
- Identify the roles and responsibilities of different sectors and groups in dealing with disease outbreaks and discuss with them how best to maximise their contributions and capacities in the DRR strategies.
- Ensure that national, subnational and local planning processes for prevention, preparedness, response to and recovery from disease outbreaks involve all sectors.
- Enable agencies with responsibility for coordinating the development of DRR strategies and other contributing sectors to have a shared understanding and familiarity with health governance systems and strategies for managing risks of emergencies, including disease outbreaks, and the roles of all sectors.
- Strengthen the health sector's awareness and understanding of the governance of all-hazards DRM and the respective roles and responsibilities of the health sector and other sectors in DRR strategies.

- Engage national agencies, subnational and local governments, traditional and religious leaders, civil society, research communities, private sector, media and operational experts in all relevant sectors and communities.
- Engage with the communities in their local languages so that Indigenous communities, migrants and refugees are involved.
- Take into account the different needs of communities and diverse populations with higher levels of vulnerability to hazards, including to disease outbreaks.
- Identify health considerations of specific groups – such as people living in poverty, women and girls, people with disabilities, Indigenous peoples and people with chronic health conditions – and make sure the DRR strategy takes them into account.

STEP 4

EVALUATE THE AVAILABILITY OF FINANCIAL RESOURCES – ENGAGE IN DIALOGUE WITH MINISTRY OF FINANCE – TO SUPPORT THE STRENGTHENING OF HEALTH IN THE IMPLEMENTATION OF NATIONAL DRR STRATEGIES, INCLUDING IN EPIDEMIC AND PANDEMIC RISK MANAGEMENT

The availability, access and timely release of financial resources are crucial for the implementation of the DRR strategy. It is important to see the bigger picture by knowing (or estimating) the number of resources needed to prevent, mitigate, prepare for, respond to and recover from disasters, including disease outbreaks.

Key considerations during the evaluation of financial resources to support strategies and actions for the implementation of national DRR strategies and health EDRM, inclusive of disease outbreaks:

- Establish targeted advocacy to national leaders to prioritise domestic spending on strengthening capacities for health EDRM and health systems, including NAPHS and multisectoral epidemic and pandemic prevention and preparedness.
- Map out the various domestic and international financial resources that are available for all-hazards DRM and determine if and how they can be used in managing the risks of disease outbreaks, epidemics and pandemics.
- Map out the various domestic and international financial resources for managing risks of disease outbreaks (including for epidemic and pandemic preparedness) and determine if the national budgetary systems are sufficiently flexible to provide financing for strengthening prevention, preparedness, readiness, response and recovery with an all-hazards approach.

- Enhance planning and engagement with the private sector with respect to financial and other resources.
- Ensure that the system allows for timely release of funds to enable anticipatory actions and reduce the impact of disease outbreaks.
- Document the economic impacts of past disasters on health, health systems and socioeconomic systems, as well as investment cases for strengthening capacities for potential emergencies and disasters for advocacy and planning purposes.

STEP 5

DESIGN THE WORKPLAN AND PROCESS FOR DEVELOPING OR UPDATING THE NATIONAL DRR STRATEGY THAT STRENGTHENS MANAGEMENT OF HEALTH RISKS AND INTEGRATES DISEASE OUTBREAKS

While designing the workplan for developing or updating national DRR strategies with effective stakeholder participation, clear articulation of the processes to develop the objectives, outputs, outcomes, activities and timelines are needed to serve as the country's road map towards resilience to all types of risks. All these elements should be based on solid assessments of risk (risk profiles); governance and coordination mechanisms; roles and responsibilities; capacities and systems in health and other sectors; and financial resources. Such a holistic process will enable stakeholders, under the leadership of national governments, to determine how they collectively will help the country and its people move towards achieving community and country resilience.

Key considerations while designing the workplan and process for developing or updating the national DRR strategy are:

- Adopt an all-hazards approach, based on country risk profiles, inclusive of disease outbreaks.
- Adopt a multi-stakeholder approach and establish a process that enables the participation of the key stakeholders including focal points for health EDRM, the IHR (2005), scientists, decision makers, DRM, and health practitioners and stakeholders from health and other sectors at all levels.

STEP 6

PUBLICLY COMMUNICATE AND REACH OUT TO STAKEHOLDERS WITHIN AND ACROSS HEALTH AND OTHER SECTORS IN THE PROCESS OF DEVELOPING THE NATIONAL DRR STRATEGY

While developing or updating national DRR strategies, the need for robust advocacy for a greater focus on health, the risks associated with disease outbreaks, and how they can be reduced and managed through the strategy must be strongly communicated to all key stakeholders. Without the inclusion of health risks from all types of emergencies and disasters, the focus on people's health and the risks from disease outbreaks may be overlooked by disaster risk managers from other sectors. This will also help communities and stakeholders to accept that DRR is an approach that addresses all types of risks that make people vulnerable to emergencies and disasters, including disease outbreaks.

Key considerations for effective public communication and strong advocacy:

- Advocate for the integration and mainstreaming of health within policy, planning and resource allocation dialogues with key policy decision makers, coordination units, focal points, practitioners and other stakeholders across all sectors. This can be done through strategic and operational coordination at local, subnational and national levels.
- Build trust and engage stakeholders of public, private and civil society organizations at local level (including communities) to contribute the design and implementation of the strategy and the respective risk management measures.
- Ensure risk communications are specifically targeted to groups most at risk in emergencies, including disease outbreaks, and developed through consultation and engagement with these groups.
- Engage national agencies, subnational and local governments, traditional and religious leaders, civil society, research communities, private sector, media and operational experts in all relevant sectors and communities.
- Ensure multiple modes of communication and feedback mechanisms with communities that take into account diverse populations and subpopulations, their risks and priorities for risk management, and local languages and other languages, such as sign language.



PHASE II

Developing and updating the strategy

This phase mainly involves implementing the workplan from Step 5 and putting together evidence, science and reports gathered across Phase I from various sources.

STEP 7

CONSOLIDATE EVIDENCE INTO A DRAFT STRATEGY

Designing DRR strategies helps national governments to strengthen their capacities for reducing the health risks and impacts of emergencies and disasters, including disease outbreaks, epidemics and pandemics that cross borders. The commitment of heads of governments to support the design, financing and implementation of the strategy is paramount. Along with ministries including health, they should provide leadership, direction and coordination for the governance of planning, implementation and monitoring of critical actions for managing all risks, including disease outbreaks, at all levels of society. It is important to recognise that approaches in one country may not be applicable to another country, and that those in a specific province, city or community will need to be adapted for other local contexts due to many local factors including the respective risk and demographic profiles, risk factors and resources.

Key considerations for consolidating evidence into the national DRR strategy:

- Develop or update the whole-of-society DRR strategy based on information identified in Phase I, including the application and integration of:
 - Risk profiles
 - Capacity assessments
 - Existing national strategies and plans related to DRR, health EDRM, NAPHS, epidemic and pandemic preparedness and response, and climate change adaptation
 - Financing mechanisms
- Map the risk management measures and capacity development actions in health strategies (as above) against the structure and organization of national DRR strategies (see Figure 1 for mapping of components across the Sendai Framework, CADRI diagnostic tool, IHR SPAR tool and Health EDRM).
- Plan for whole-of-society action to strengthen inclusion of health considerations and integrate disease outbreaks in all components of DRM, including policy, legal and regulatory frameworks coordination, assessments, planning, financing, human resources, health and related services, communication, monitoring and evaluation.
- Strive to reduce the dual impact of disease outbreaks and other types of disasters by scaling up efforts to reduce underlying vulnerabilities and anticipating the consequences of disasters, especially by providing targeted support to groups at higher levels of risk.
- With respect to multi-hazard early warning systems (MHEWS):
 - Review the extent to which MHEWS are inclusive of disease outbreaks and allow countries and communities to act in an anticipatory manner with a whole-of-society approach.
 - Analyze how communities and countries have acted upon early warnings while taking into account ongoing disease outbreaks, such as the COVID-19 pandemic, and vice versa (i.e.,

disease early warning systems are required to detect cases and anticipate outbreaks of diseases in other emergencies, such as floods, droughts and conflicts).

- Engage with the health sector to address health aspects of MHEWS, monitoring of health-related risks of multiple hazards, inclusion of disease outbreaks, risk communication and emergency preparedness.
- Review multisectoral emergency response plans, standard operating procedures, contingency plans and evacuation plans to:
 - Respond to the health impacts of all types of emergencies and disasters.
 - Address whole-of-society response to disease outbreaks across health and other sectors, such as by incorporating public health and social measures like physical distancing and provision of personal protective equipment for health workers and other workers in high-risk occupations.
 - Make sure contingency planning considers how to put in place special provisions for older people and high-risk groups to limit their exposure to and reduce the impact of disease outbreaks.
- Ensure that preparedness measures focus on strengthening the response capacity of the health system to better deal with emergencies, including providing health services to the surge numbers of patients during epidemics and pandemics.
- Ensure hospitals and other health facilities are made resilient to hazards, including future climate impacts, and have the capacity to deliver life-saving services in emergencies and disasters, including disease outbreaks.
- Explore ways to maximise the use of universal health coverage and social protection mechanisms and identify how to make them more responsive to the needs of the most vulnerable during emergencies and disasters, including disease outbreaks.
- Ensure planning for recovery is carried out before emergencies and disasters, including disease outbreaks, occur and that it is maintained during the evolution of the emergency:
- Focus on physical and mental rehabilitation of people's health and well-being, restoration of health services and strengthening the health sector during recovery programming by applying the principle of "Build Back Better".
- Invest in strengthening evidence based on global and national research agenda and conducting research and development in health and other sectors with respect to whole-of-society governance, planning and coordination, risk assessments, business continuity planning, social determinants, risk communication, reducing community vulnerabilities, local action, application of information and communication technologies, diagnostic advances, contact tracing, and efficacy of vaccines and treatments.
- Set up specific measurable objectives and determine the indicators to monitor and evaluate the progress against the national targets, including those related to health from the Sendai Framework global targets and indicators (e.g., mortality, morbidity, disruption to health services, damage to health facilities) and other health indicators (e.g., from IHR [2005], SDGs, the Paris Agreement, COVID-19 Monitoring and Evaluation Framework).

Figure: Mapping of components across the Sendai Framework, CADRI diagnostic tool, IHR SPAR tool and Health EDRM

SENDAI FRAMEWORK	CADRI DIAGNOSTIC TOOL	IHR (2005) STATE PARTY ANNUAL REPORTING (SPAR)	HEALTH EDRM FRAMEWORK
Strengthening disaster risk governance	Governance	Legislation and financing	Policies, strategies and legislation monitoring and evaluation
	Financing	Human resources	Human resources Financial resources
Enhance disaster preparedness and readiness for effective response		IHR Coordination/ role of IHR focal points National Health Emergency framework	Planning and coordination
Understanding disaster risk	Knowledge	Surveillance Risk communication Points of Entry (POE)	Information and knowledge management Risk communications
	Technology and equipment	Laboratory	Health infrastructure and logistics
Investing in DRR for resilience	Implementation capacity	Health service provision Zoonotic events Food safety Chemical Radiation	Health and related services Community EDRM capacities



PHASE III

Opportunities to strengthen coordination and partnerships for fast-tracking the implementation of DRR actions to strengthen the management of health risks and integrate disease outbreaks into national DRR strategies

The ongoing risk management of the COVID-19 pandemic – including continuing prevention, preparedness, response and recovery measures – along with the experience from other emergencies and disasters provide a unique opportunity and catalyst to fast-track the integration of disease outbreaks and strengthening of health in the development and/or updating of national DRR strategies. Decisive action can be taken within COVID-19 recovery phase (and other emergencies) and to reduce risks of future events as part of the recovery phase of the crisis.

Ensuring the application of the “Build Back Better” principle by national policies and action towards more effective risk management solutions with health at the centre provides opportunities for countries to counter the health and socioeconomic impacts of emergencies and disasters, including the pandemic, and to safeguard jobs and economic growth for years to come. It is an opportunity to make sure that these investments also keep communities healthier and safer from future risks of emergencies and disasters, to scale up urgent climate action, strengthen resilience and enable sustainable development.

STEP 8

SECURE AND ACTIVATE FUNDING SOURCES FOR IMPLEMENTATION OF RISK REDUCTION STRATEGIES AND ACTIONS

Increasing the availability of funds for the implementation of DRR activities, and more specifically for strengthening the whole-of-society management of health risks and disease outbreaks, is a necessity. There is an urgent need to optimise existing resources and to call for not only more funding but better-targeted funding across governments, ministries and sectors at all levels for all-hazards Health EDRM, including for epidemic and pandemic prevention and preparedness, and for other risk management measures. This step builds on the evidence gathered and actions taken in Step 4, above.

Key considerations for securing and activating funding resources:

- Allocate financial resources to support capacity development, implementation of risk management measures and contingency funding for the key sectors in national DRR with respect to:
 - whole-of-society action for all-hazards health EDRM
 - national action plans for health security (NAPHS) and
 - whole-of-society action to manage risk of disease outbreaks, epidemics and pandemics.
- Scale up planning and engagement with the private sector with respect to financial and other resources to support health-related DRM and to mobilise and repurpose resources and capacities during health emergencies.
- Document investment cases for a greater focus on prevention and preparedness for health EDRM, including the prevention and preparedness of epidemics and pandemics.
- Encourage financial institutions to link prevention and preparedness with financial risk planning.
- Consider new ways of investing in the recovery phase from COVID-19 and other emergencies with a focus on “Building Back Better”.

STEP 9

MOBILISE PARTNERSHIPS FOR COUNTRY- AND LOCAL-LEVEL IMPLEMENTATION FOR ALL-HAZARDS DRM, INCLUDING FOR DISEASE OUTBREAKS

Partnerships at all levels will help countries realise the ideals and targets set forth in national DRR strategies. Fragmented approaches in preventing, mitigating, preparing for, responding to and recovering from all types of emergencies and disasters, including the COVID-19 pandemic, will not optimise existing resources, and they are likely to cause more problems that hamper the containment of the disaster. This step builds on the preceding actions, in particular Step 3, related to multisectoral institutional mechanisms.

Key considerations for mobilizing partnerships:

- Ensure that active participation of local governments, civil society and volunteer organizations, communities and individuals on the ground is a key part of the design of local strategies, including prevention and preparedness for disease outbreaks.
- Engage with communities in risk assessments to identify local hazards, vulnerabilities and capacities, and to identify actions to manage health risks before, during and after events.
- Ensure that communication and coordination across the national DRR, the health system, and between health and other sectors are strengthened.
- Coherently align national and local strategies for DRR with national and local health EDM strategies and vice versa.

STEP 10

SET UP A MONITORING, EVALUATION AND REPORTING MECHANISM LINKED TO THE NATIONAL STRATEGY IMPLEMENTATION, TAKING ACCOUNT OF HEALTH-RELATED RISKS INCLUDING DISEASE OUTBREAKS

The design of the national DRR strategies should build in a monitoring and evaluation framework that integrates health elements, including those related to disease outbreaks, and promote coherence in monitoring and reporting relevant to DRR (e.g., IHR [2005], health EDRM, health-related SDGs, climate change). Given the emphasis on health risks and outcomes in the monitoring of disaster risks and impacts, the health sector – and in particular ministries of health – has a significant role to play in the collection, analysis and reporting of many data concerning risks, capacities, finances and impacts that are relevant to national DRR monitoring, evaluation and reporting.

While monitoring progress, periodic evaluations of prevention, preparedness, response and recovery activities should be conducted. Countries also need to evaluate the actions that had been taken within and across sectors at all levels and learn lessons from the Intra-Action Reviews, After-Action Reviews and other forms of review, such as reports and inquiries. These lessons should be then integrated into strategies and action to strengthen capacities, reduce risks and build resilience.

Key considerations for monitoring and evaluation:

- With reference to Step 7, include health indicators in the monitoring and evaluation frameworks of national DRR strategies.
- Strengthen the integration of the health sector in institutional coordination mechanisms for monitoring and evaluation – including the central agency/organization leading the process – and collaborate with all other relevant sectors that collect and contribute data, conduct analyses and produce reports.
- Identify the key areas to be evaluated through qualitative and quantitative measures.
- Describe specific indicators for reporting progress, measuring and communicating levels of effectiveness, and assessing gaps.
- Identify data sources and defining methods for data collection, analysis and reporting for the health-related indicators.
- Use health risk, outcome and impact data from disaster loss databases as well as national and subnational health information systems, disease surveillance systems, and civil registration and vital statistics (CRVS) for monitoring progress in DRR. Use additional sources of health-related data, including national statistics offices and insurance companies, WHO at country, regional and headquarters levels, other UN agencies (UNDRR, World Bank, WMO, UNICEF, UNDP, UNFPA, FAO), UN economic commissions, post-disaster needs assessments and related methodologies adapted for epidemics.

ANNEX

SUPPLEMENTARY TOOLS AND GUIDANCE

Additional sources of guidance from DRM, health and other sectors that can support the integration of disease outbreaks and strengthening of health in national DRR strategies include:

- *International Health Regulations Monitoring and Evaluation Framework*³²
- *WHO Guidance Notes for Sendai Framework Reporting for Ministries of Health*³³
- *Everyone's Business: Whole-of-Society Action to Manage Health Risks and Reduce Socioeconomic Impacts of Emergencies and Disasters*.³⁴
- *WHO Strategic Toolkit for Assessing Risks: A Comprehensive Toolkit for All-Hazards Health Emergency Risk Assessment*.³⁵
- WHO and UNDRR joint working paper: *Inclusion of the Impacts of the COVID-19 Pandemic on Health and Health Services in Reporting for Sendai Framework Monitoring in 2021*.³⁶
- *UNDRR/WHO Joint Public Health Sector Resilience Scorecard Addendum for Making Cities Resilient (MCR)*.³⁷
- *WHO Guidance on Research Methods for Health Emergency and Disaster Risk Management*.³⁸
- *Integrating DRR and Climate Change Adaptation in the UN Sustainable Development Cooperation Framework (with special addendum for integration of disease outbreaks, epidemics and pandemics in cooperation frameworks)*.³⁹
- *NAPHS for All: A 3-Step Strategic Framework for National Action Plan for Health Security*.⁴⁰
- *Operational Framework for Building Climate-Resilient Health Systems*.⁴¹
- *Technical Advisory Document: Integrating Biological Hazards (Including Pandemics) into DRR Planning*.⁴²

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