



World Health
Organization

WHO TECHNICAL GUIDANCE NOTES ON SENDAI FRAMEWORK REPORTING FOR MINISTRIES OF HEALTH



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WHO technical guidance notes on Sendai Framework reporting for Ministries of Health

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The World Health Organization (WHO) *Technical guidance notes on Sendai Framework reporting by ministries of health* was developed by WHO and Public Health England (PHE) to guide the health sector, in particular ministries of health, on their role in collecting and reporting data that are relevant for the Sendai Framework targets and other related frameworks, such as the Sustainable Development Goals (SDGs). They are a complement to the UNISDR *Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction*, which has a multisectoral target audience.

The Guidance Notes were reviewed and finalized at a Technical Workshop on Concepts and Technical Guidance for Health EDRM (Geneva, 21–23 November 2018) with participation from countries and WHO leadership at all levels and experts, including from academia.

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ABBREVIATIONS

DRR	disaster risk reduction
EDRM	emergency and disaster risk management
GPW	General Programme of Work (WHO)
IHR	International Health Regulations (2005)
MHEWS	multi-hazard early warning systems
ODA	official development assistance
OIEWG	Open-ended Intergovernmental Expert Working Group
SDGs	United Nations Sustainable Development Goals
UN	United Nations
UNDRR	United Nations Office for Disaster Risk Reduction (formerly UNISDR)
WHO	World Health Organization





EXECUTIVE SUMMARY

The World Health Organization (WHO) *Technical guidance notes on Sendai Framework reporting by ministries of health* aims to guide the health sector, in particular ministries of health, on their role in collecting and reporting data that are relevant for the Sendai Framework targets and other related frameworks, such as the Sustainable Development Goals (SDGs). The Guidance Notes comprise an overview and specific guidance notes for each of the seven Sendai Framework targets.

The Guidance Notes seek to help operationalize, simplify and standardize the collection and reporting of data through the application of common language and methods. They provide information on the key issues to take into account in the collection of health data and the types of data that should be collated, and potential stakeholders to engage with. They adapt and complement the UNDRR/UNISDR *Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction*, which has a multisectoral target audience.

The Sendai Framework for Disaster Risk Reduction was adopted by 187 UN Member States in 2015 and forms part of the 2030 Agenda for Sustainable Development. Natural, technological, environmental and biological hazards (e.g. infectious diseases) are all within the scope of the Sendai Framework and its monitoring and reporting process. The Sendai Framework guides countries towards enhancing their capacities to reduce risks and consequences of hazardous events at all scales and across all sectors. It exemplifies “health in all policies” as there are more than 30 specific references to health in the Sendai Framework and many priority actions which can be taken by health and other sectors aimed at improving outcomes for health and well-being for people at risk

of emergencies and disasters. The focus on health is reinforced by:

- ◆ the Sendai Framework expected outcome of a “substantial reduction of disaster risk and losses in live, livelihoods and health...”; and
- ◆ the Sendai Framework goal to “prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience”.

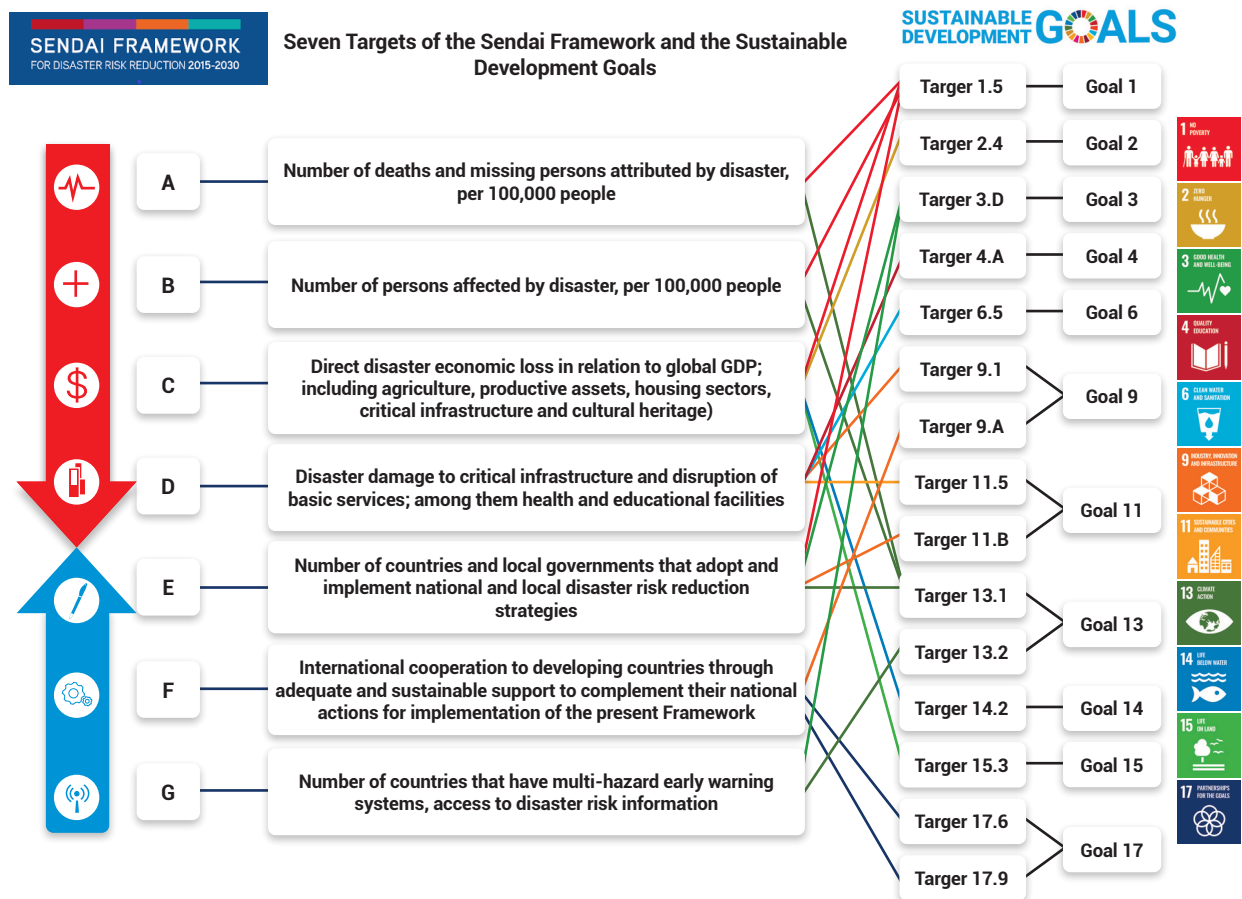
Ministries of health hold vital information that supports national reporting against the seven Sendai Framework global Targets (A–G) and many of the associated 38 indicators. Sendai Framework indicators related to mortality and the number of people affected are also included as indicators for the Sustainable Development Goals (SDGs) and the 13th WHO General Programme of Work (GPW13).

Measuring to what extent health is affected by hazardous events, including emergencies and disasters, is a complex task but essential to reducing risks and mitigating the effects of future events through effective and efficient health emergency and disaster risk management (Health EDRM). The WHO Health EDRM Framework describes the wide range of capacities in health and other sectors that are needed at all levels of society to effectively reduce the health risks and consequences of all types of hazardous events, emergencies and disasters. Deaths, injuries, diseases, disabilities, psychosocial problems and other health impacts can be avoided or reduced by emergency and disaster risk management measures involving health and other sectors.

Assessing health impacts and changes in capacities in health and other sectors is important to monitoring and reporting progress in implementing Health EDM, the Sendai Framework, SDGs, International Health Regulations (IHR) (2005) and the Paris Agreement on Climate Change.

Figure 1 highlights the web of links between targets of the Sendai Framework and the SDGs, including the SDG Target 3d: Strengthen the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks.

FIGURE 1. LINKS BETWEEN SENDAI FRAMEWORK TARGETS AND SUSTAINABLE DEVELOPMENT GOALS



Health can be expected to make key inputs to four health-specific indicators: on mortality (A-2); people injured and ill (B-2); damage and destruction of health facilities (D-2); and disruption to basic health services (D-7). Health data and inputs are relevant to a further 22 indicators and described in more detail in the World Health Organization (WHO) *Technical guidance notes on Sendai Framework reporting for ministries of health*, which aims to guide the health sector, in particular ministries of health, on their role in collecting and reporting data that are relevant for the Sendai Framework targets.

Each Member State has a Sendai Framework Monitoring National Focal Point who has responsibility for national reporting for the Sendai Framework targets. The United Nations Office for Disaster Risk Reduction (UNDRR) has developed a web-based tool to support this reporting (<https://sendaimonitor.unisdr.org/>) and a training package to help Member States in annual reporting against the Sendai Framework global targets.

It is vital that the ministries of health are engaged with the Sendai Framework Monitoring National Focal

Point and work collaboratively with relevant partners to ensure comprehensive and accurate reporting of health-related data. Health sector reporting will also enable ministries of health to measure annual effects and trends of the effect of emergencies and disasters on health, review progress in strengthening capacities and prioritize areas for further action.

Key steps for collecting and reporting data for the Sendai Framework are as follows:

- ◆ Identify a Ministry of Health Focal Point for Sendai Framework for data collection, monitoring and reporting. If not the Ministry of Health, then another health authority could be identified.
- ◆ Identify and engage with the Sendai Framework Monitoring National Focal Point.
- ◆ Agree the methods to be used in health-related Sendai Framework monitoring and reporting.
- ◆ Develop, implement and review plans for Sendai Framework monitoring and reporting by the health sector in order to comply with the national and international timetables for reporting.
- ◆ Ensure that the National Health Focal Point for Sendai Framework reporting is engaged with the Ministry of Health Focal Point for SDG reporting (with the National Office for Statistics).
- ◆ Include Sendai Framework reporting in reporting guidance for the SDGs given the linkages between SDGs and Sendai Framework reporting (Ministry of Health Focal Point for SDG reporting – identify who and include in their reporting guidance).

In order to strengthen country capacities for data collection and reporting, it is proposed that ministries of health undertake the following activities in the shorter term:

- ◆ Raise awareness of Sendai Framework targets and indicators within the health sector and the monitoring and reporting requirements.
- ◆ Organize health sector participation in regional, national and subnational multisectoral face-to-face training and e-learning courses for Sendai Framework reporting.
- ◆ Organize national and subnational health sector training on methods to improve monitoring and reporting on Sendai targets in the health sector.
- ◆ Review UNDRR/UNISDR technical guidance and training for the development of disaster data bases such as Desinventar.

In the medium- and longer-term, ministries of health could consider strengthening national and subnational capacities for civil registration and vital statistics, and developing national case registries for mortality and morbidity related to hazardous events, including emergencies and disasters.

WHO is committed to collaborating with ministries and partners to support countries in strengthening their capacities for collecting and reporting data for the Sendai Framework targets and indicators, and for the related indicators in the SDGs and other relevant frameworks.



OVERVIEW





OVERVIEW

PURPOSE OF THESE GUIDANCE NOTES

The World Health Organization (WHO) *Technical guidance notes on Sendai Framework reporting by ministries of health* aims to guide the health sector, in particular ministries of health, on their role in collecting and reporting data that are relevant for the Sendai Framework targets and other related frameworks, such as the Sustainable Development Goals (SDGs). The Guidance Notes seek to help operationalize, simplify and standardize the collection and reporting of data through the application of common language and methods. They provide information on the key issues to take into account in the collection of health data and the types of data that should be collated, and potential stakeholders to engage with. They adapt and complement the UNDRR/UNISDR *Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction*, which has a multisectoral target audience (1).

The seven targets and 38 indicators of the *Sendai Framework for Disaster Risk Reduction 2015–2030* (Sendai Framework) have been agreed by UN Member States for the Sendai Framework monitoring and reporting process (2,3). Health data are required for a large number of the predefined indicators as shown in Annex 2, which also shows the linkages to the SDGs.

The Sendai Framework Monitor also encourages countries to customize indicators for the purpose of national reporting against the Sendai Framework.

While these Guidance Notes focus on the seven global targets and associated indicators, they also make reference to customizable indicators that would enable countries to monitor health effects, such as repor-

ting on indirect losses that are relevant to the Sendai Framework but outside the scope of the global targets that focus on direct losses. Furthermore, the health sector has a strong interest and role in reporting on societal hazards, such as SDG indicators related to reducing mortality due to violence (SDG Goal 16), and to indicators related to capacities required to reduce risks and consequences through the implementation of the Sendai Framework, *International Health Regulations (2005)* (4) and the *WHO Health Emergency and Disaster Risk Management Framework* (5).

POLICY CONTEXT: SENDAI FRAMEWORK AND 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

Ministries of health hold vital information that can support the national reporting on the seven targets and many of the associated 38 indicators of the Sendai Framework for Disaster Risk Reduction 2015–2030. Some of these indicators are included in the SDGs, the *WHO Global reference list of 100 core health indicators (plus health-related SDGs)* (6) and the *13th WHO General Programme of Work (GPW13)* (7).

The Sendai Framework was adopted by 187 UN Member States in 2015 and forms part of the 2030 Agenda for Sustainable Development. The Sendai Framework provides direction to countries to enhance their capacities to reduce risks and consequences of hazardous events at all scales and within and across all sectors, with considerable emphasis on the role of the health sector and on people's health as a critical goal and outcome of disaster risk reduction (DRR). The Sendai Framework covers small-scale and large-scale, frequent and infrequent, sudden and slow-onset events associated with natural, biological, technological and environmental hazards (refer to Annex 1: WHO

Classification of Hazards)¹. On 2 February 2017, the United Nations General Assembly adopted resolution A/RES/71/644, which describes the indicators for the seven Sendai Framework targets (2).

Along with complementary instruments of the 2030 Agenda for Sustainable Development, such as the Sustainable Development Goals and the Paris Agreement on Climate Change, the Sendai Framework offers UN Member States targets and indicators to enable monitoring and reporting of progress on action to reduce the risks and impacts of emergencies on the health and well-being, and economic, social and environmental development of countries.

Health is integrated throughout the Sendai Framework both in terms of more than 30 specific references to health and the applicability of the priority actions by health and other sectors to improving outcomes for health and well-being; it is central to both:

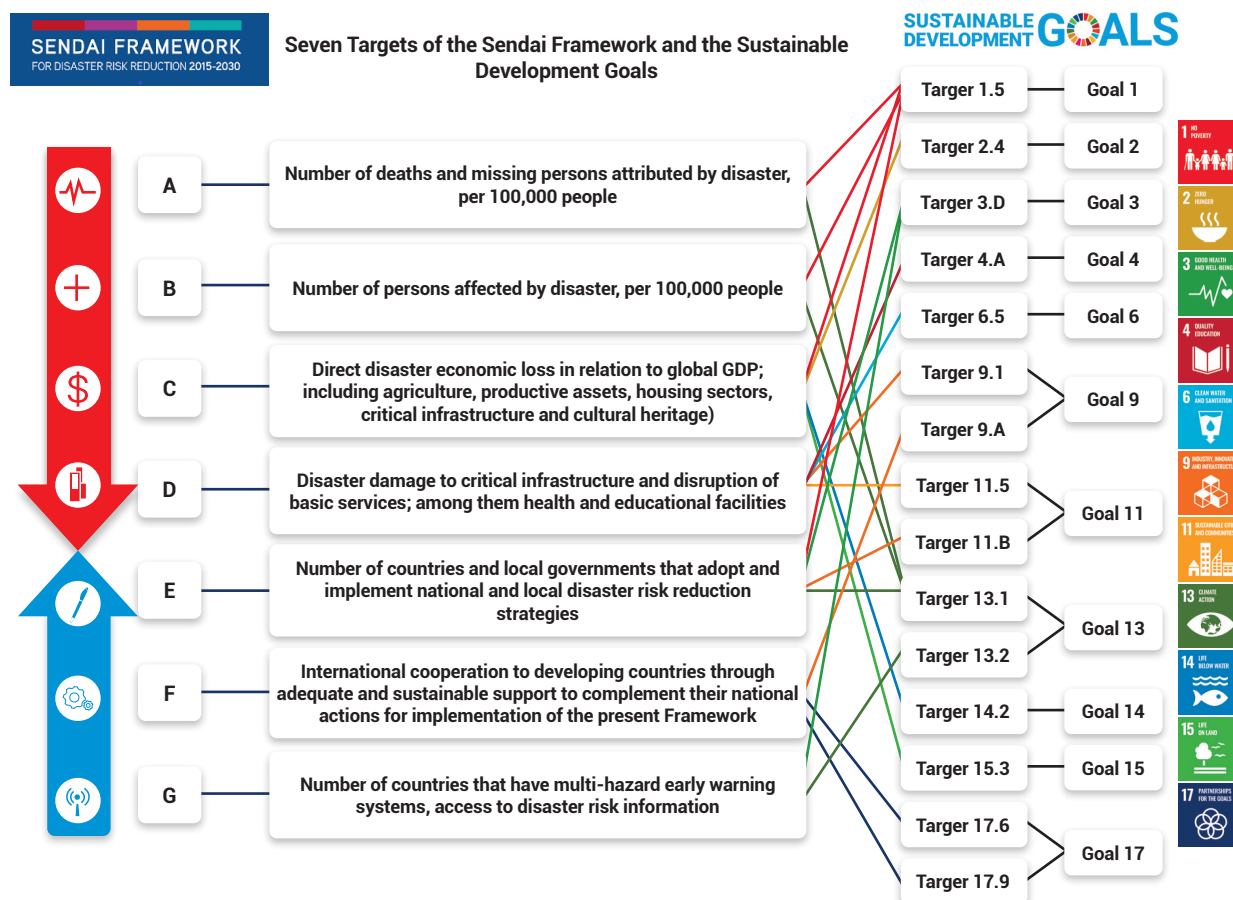
- ◆ the Sendai Framework outcome of a “substantial reduction of disaster risk and losses in lives, livelihoods and health”; and
- ◆ the Sendai Framework goal to “prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience”.²

Figure 1 shows the relationship of the respective goals, targets and indicators between the two UN adopted agreements.

1. The scope of the WHO Classification of Hazards covers all types of hazards, including societal hazards, which are not directly addressed in the Sendai Framework for Disaster Risk Reduction.

2. In addition, SDG Goal 16: Promote peaceful and inclusive societies for sustainable development, includes Target 16.1: “significantly reduce all forms of violence and related death rates everywhere”. This target has four indicators related to the “number of victims of intentional homicide”, “conflict-related deaths”, “proportion of the population subjected to physical, psychological or sexual violence” and “proportion of the population feeling safe walking alone around the area they live”. While societal hazards are not directly addressed in the scope of the Sendai Framework, the health sector has a key role in reducing the health risks and consequences from societal hazards, events and situations within the scope of health emergency and disaster risk management, and in reporting on SDG Goal 16 indicators.

FIGURE 1. LINKS BETWEEN SENDAI FRAMEWORK TARGETS AND SDGs²



WHY IT IS IMPORTANT

All of the Sendai Framework targets are related to health in terms of reducing mortality, morbidity, damage and disruption to health services, and reducing economic losses attributed to emergencies and disasters, as well as strengthening of national and local strategies for DRR, international cooperation, and accessibility and availability of early warning and risk information. It is, therefore, important that ministries of health and other health authorities are actively involved in working with other government agencies, including the Sendai Framework Monitoring National Focal Point (i.e. the national entity responsible for submitting national reports), to ensure that health data are accurately reported in national reporting for the Sendai Framework as well as for other related frameworks (e.g. the SDGs).

Data are central to designing, implementing and evaluating health emergency and disaster risk management (Health EDRM), which refers to the systematic analysis and management of health risks, posed by potential and actual hazardous events, including emergencies and disasters. Health EDRM involves a combination of:

- ◆ hazard, exposure and vulnerability reduction to prevent and mitigate risks
- ◆ preparedness
- ◆ response
- ◆ recovery.

WHO’s Health EDRM Framework describes the wide range of capacities in health and other sectors that are needed at all levels of society to effectively reduce the health risks and consequences of all types

of hazardous events, emergencies and disasters. Effective multisectoral collaboration for Health EDRM is critically important to the successful implementation of the Sendai Framework and national strategies for disaster risk management, as well as making substantial contributions to allied global and regional frameworks such as the SDGs, International Health Regulations (IHR) (2005) and Paris Agreement on Climate Change.

The role of strong health systems and good health and nutritional status in protecting people's health from emergencies is reflected in the Health EDRM Framework, which encompasses emergency and disaster medicine, disaster risk reduction, multi-hazard emergency preparedness, humanitarian response and health systems strengthening. Deaths, injuries, diseases, disabilities, psychosocial problems and other health impacts can be avoided or reduced by emergency and disaster risk management measures involving health and other sectors.

Measuring to what extent health is affected by hazardous events, including emergencies and disasters, is a complex task but essential to reducing risks and mitigating the effects of future events through effective and efficient Health EDRM. Similarly, assessing changes in capacities in health and other sectors is important to monitoring and reporting progress in implementing Health EDRM, the Sendai Framework, SDGs, IHR (2005) and the Paris Agreement on Climate Change.

Improving access and availability of health data will inform understanding and decision-making around current and future risks. Health data are vital to risk and capacity assessments, planning and implementation of measures to reduce the health risks and consequences of different types of events, and to build the resilience of communities and countries. Health data are essential to monitor and evaluate the impacts of action taken by health and other sectors at all levels of society, identify good practice and improve future action.

SENDAI FRAMEWORK MONITORING AND REPORTING PROCESS

The Sendai Framework calls for country self-monitoring to assess progress against the Sendai Framework targets and indicators. The emphasis on self-monitoring means that data recording and reporting can take place using a country's existing databases, while global and national efforts continue to improve the coverage and quality of reporting with a greater emphasis on improving internationally comparative methods. Self-monitoring can ensure country capacities for recording and reporting are not overstretched and that there is a focus on measuring progress at the country level.





Monitoring and reporting of the Sendai Framework targets and indicators requires collaboration across national governments and their respective partners. Ministries of health will need to work with a wide range of ministries to accurately measure the extent and impact of natural, biological and technological hazards on health and well-being, along with the other Sendai Frameworks targets related to health.

A reporting tool, the Sendai Framework Monitor (<https://sendaimonitor.unisdr.org/>) was developed by the United Nations Office for Disaster Risk Reduction (UNDRR) to support Member States in reporting against the Sendai Framework. As of 1 March 2018, Member States have been reporting annually against the indicators for measuring the global targets of the Sendai Framework and DRR-related indicators of the SDGs, using the online Sendai Framework Monitor.

Each country has a Sendai Framework Monitoring National Focal Point who is the national coordinator for national reporting against the Sendai Framework targets via the Sendai Framework Monitor. Figure 2 shows the roles and responsibilities for the different actors in reporting for Sendai Framework monitoring (8).

FIGURE 2. ROLES AND RESPONSIBILITIES FOR SENDAI FRAMEWORK MONITORING

Country: Roles & responsibilities

 Coordinator	Sets up the national monitor: adds users, institutions, configures metadata, creates national custom reporting
 Contributors	Enter data for their assigned indicators
 Validator	Validates report once data entry is complete
 Observers	Have read-only access and are optional

Given the key role of the health sector in Sendai Framework reporting, it is important for ministries of health to contact the Sendai Framework Monitoring National Focal Point and agree the arrangements for the ministries of health to contribute to Sendai Framework monitoring and reporting. These arrangements could include:

- ◆ ensuring that the staff of ministries of health or other health authorities who collect health data relevant to the targets and indicators are enabled to report or given access to report these data onto the Sendai Framework Monitor – either directly or via the National Focal Point (contributor role);
- ◆ enabling a Focal Point in the Ministry of Health or other staff to review and verify health-related data by national health authorities (validator role);
- ◆ identifying other health actors, e.g. other sectors and WHO Country Offices, to review and offer recommendations regarding the data (observer role); and
- ◆ reporting on health sector actions and achievements with respect to the multisectoral targets and indicators, such as the national and local

strategies for DRR, access and availability of risk information and multi-hazard early warning systems (MHEWS), etc.

In particular, the health sector is expected to play a key role in the reporting of the targets and indicators related to biological hazards.

Given that SDGs and Sendai Framework targets and indicators are linked, national and international guidelines and processes for reporting on the SDGs by the health sector should also refer to the guidance and processes for Sendai Framework reporting for those indicators that are shared with the SDG indicators (e.g. SDG 1.5.1).

ADDRESSING THE CHALLENGES OF COLLECTING AND REPORTING

Collecting and reporting data for the Sendai Framework indicators and for Health EDRM, in general, can be challenging. Some of the common challenges countries may come across when collecting, monitoring and reporting data are described in Table 1. For

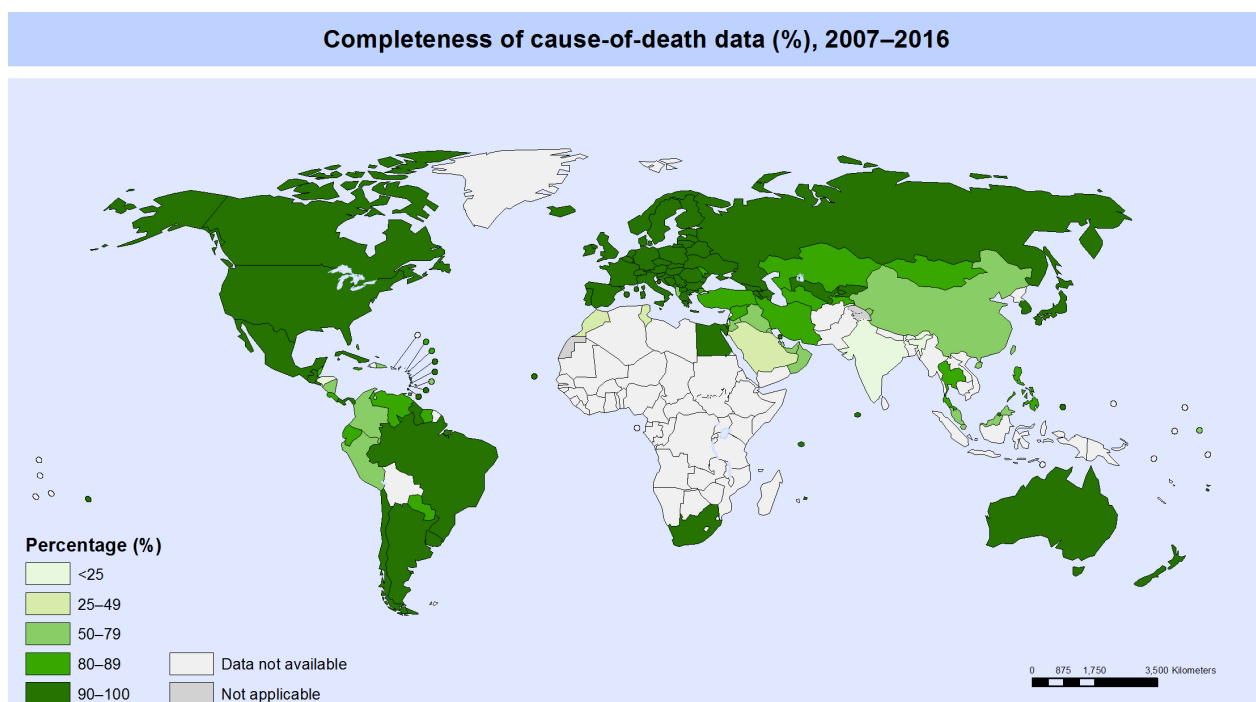
the purposes of global Sendai Framework reporting, Member States are advised to collect and report data that are already available through national health information systems and other relevant reporting systems. Table 2 describes criteria for data monitoring and reporting, including disaggregated data by income, age, gender and disability, which are important considerations given that the risks and consequences of hazardous events are strongly influenced by the vulnerability of sub-populations. See Annex 3 for an overview of the qualities of good data.

The limited availability and application of globally agreed technical standards pose key challenges for sharing and comparison of “damage and loss” data (9). Nonetheless, it is important to emphasize that no indicator will provide an absolutely precise, accurate and exhaustive measure of losses. It would

be impossible to remove a level of uncertainty or inaccuracy from loss estimations, for which the sourcing of data is subject to the legal procedures and time-frame criteria of a specific country, as well as the exhaustiveness of data collection.

Numerous countries do not have access to reliable loss data of hazardous events, including emergencies and disasters. In 2014, WHO demonstrated that “cause of death” data varied significantly across the globe with some countries recording cause of mortality in less than 25% of cases (Figure 3). The strengthening of national civil registration and vital statistics capacities would assist the ability of countries to report against Targets A and B. The Sendai Framework recommends the development of a “case registry and a database of mortality caused by disaster in order to improve the prevention of morbidity and mortality” (2).

FIGURE 3. CIVIL REGISTRATION COVERAGE OF CAUSE OF DEATH (%), 2007–2016



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

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Source: http://gamapserver.who.int/mapLibrary/Files/Maps/Global_CivilRegistrationDeaths_2007_2016.png, accessed on 3 March 2020.

In terms of disaster losses, the main focus of the Sendai Framework targets is on the direct impact of hazardous events on populations, infrastructure, etc. The focus on direct impacts provides a good basis for measuring the impact of hazardous events in a more systematic manner. However, in order to measure the full consequences of events on communities and countries, including the indirect losses and impacts over longer timeframes (e.g. ongoing mental health problems, exacerbation of noncommunicable diseases, evaluations of recovery measures), more

extensive methods will need to be applied to obtain more expansive sets of data. These data are important to understand the full impact of emergencies and disasters, and to inform planning, implementation and investment in Health EDRM, including measures to reduce the risks of future events by building resilience and applying the principles of “build back better”. Therefore, it is proposed that the countries, through ministries of health, may consider developing customizable indicators to address indirect impacts and losses.

TABLE 1. COMMON CHALLENGES

CHALLENGE	PROBLEM	POSSIBLE SOLUTIONS
Temporal dimension	Defining the time period to monitor and measure data following a hazardous event will vary depending on the nature of the event.	For sudden-impact natural hazards, the UNDRR/DisInventar method suggests the date of appearance of first reports of physical damage can mark the beginning of the event and the date of the last report of damage associated with the event be taken as the end date. It also recommends annual reporting as a minimum for slow-onset events (such as droughts) that may span more than one year. In the case of biological hazards, an “event” is determined when a greater than expected number of cases is detected (e.g. when the threshold of cases for the associated disease are exceeded). This is often specific to a local or country context. Deaths must meet the case definition for the disease, and the end date is when the outbreak is declared over (1).
Thresholds	Deciding on thresholds for monitoring of losses due to a hazardous event, e.g. classifying what is a hazardous event; determining categories of people or assets at risk of loss.	<ol style="list-style-type: none"> 1. For biological hazards, determination of the number of cases of an infectious disease that classify as a “hazardous event” (if a threshold is to be used.) 2. Decide age categories for disaggregation of data. <p>The most important recommendation to countries is to emphasize that criteria and method of data collection, where possible, should be fixed for the entire timespan of data collection and reporting (2005–2030) to enable comparative analyses over time. Age-specific mortality, e.g. child mortality (under 5 years) and infant mortality (under 1 year), are key indicators for monitoring progress in health development (see Table 2).</p>

Attribution	Deciding what consequences/losses to attribute to a hazardous event, e.g. classifying direct or indirect effects.	<p>For biological hazards, mortality and morbidity can be attributed to events by counting cases that meet the case definitions. For sudden-impact events from natural hazards, deaths and injuries are often due to physical trauma that can be attributed to the event, but which may not be recorded as such.</p> <p>Mortality and morbidity due to outbreaks of disease that are directly related to natural hazard events (e.g. leptospirosis following a flood or cyclone) may be recorded against the natural hazard event.</p> <p>Establishment and strengthening of civil registration and recording of causes of death, illness and injuries for different type of hazardous events should be implemented.</p>
Data coverage	Not all countries systematically collect event/disaster loss and damage data.	<p>Enhancement of data reporting systems on all types of events, including from disease surveillance systems, and from sites or offices across the country. Working closely with other sources of emergency data, including disaster management offices and law enforcement. Consider undertaking archival work to recover records of disaster loss and damage, including biological hazard/infectious disease data since 2005 to ascertain the completeness of data and then begin the systematic recording of all new loss.</p>
Validity and bias	Accuracy of data in measuring the issues identified.	<p>Health sector should be actively engaged with the data collection/production process, including sharing agreed methodologies, quality assurance of sources, acknowledging caveats and limitations of the data.</p>
Precision and uncertainty	Being aware of the levels of uncertainty associated with the data collected and the ability for this data to permit statistical inferences.	<p>Improved coverage of data collection for hazardous events. Statistical analysis to determine issues around precision and uncertainty. Consideration for working with resources such as academic partners as well as national statistics offices.</p>
Double counting	Double counting is inevitable when monitoring certain targets, e.g. Target B – affected people – since people are likely to be counted twice if their property is damaged, and they are injured.	<p>Using the suggested methods and indicators will provide a robust and verifiable proxy of the total number of affected. Potential for double counting should be explained in analysis and interpretation of data.</p>
Timeliness of recording and reporting	There is often a lag between when a hazardous event happens and when it is possible to submit data.	<p>Routine data collection in a timely fashion facilitates early reporting but may require statistical analysis to determine issues around timeliness. Consideration for working with resources such as academic partners as well as of national statistics offices to test these issues.</p>

TABLE 2. CRITERIA FOR MONITORING AND REPORTING DATA

CRITERIA	CHALLENGES	POSSIBLE SOLUTIONS
Hazard	Different taxonomies in use.	Refer to the WHO Classification of Hazards (Annex 1) for guidance or the Sendai Framework Monitoring National Focal Points Classification as defined in the <i>United Nations General Assembly resolution A/RES/71/644</i> (1)
Geography	Geographical boundaries are not always static.	Ideally by subnational administrative unit, similar or equivalent to municipality. See results of informal consultation on indicators for global targets (10) Example: INSPIRE Administrative Units Theme (http://inspire-regadmin.jrc.ec.europa.eu/dataspecification/ThemeOverview.action?themeld1=au) (11)
Income	Different methods to classify income groups. Difficult to record impact on the informal economy, including non-monetary transactions (e.g. housewives services to families).	Use of the international poverty line and other means of disaggregating levels of income (12)
Sex	Vulnerability, exposure and consequence data should be disaggregated by sex. There are genders that do not fall directly into either category.	Disaggregation by women/men Example: Economic Commission for Latin America and the Caribbean: (ECLAC)(13); UN Statistical Commission (14)
Age	Many different age classifications are in use.	Disaggregation by infants (0–5 years), children (5–14 years), adults (15–64 years) and older people (65+ years) Example: ECLAC (13); UN Statistical Commission (14)
Disability	Wide spectrum of approaches to the description, measurement and collection of data on disability, levels and scale of functioning, e.g. impairments, activity limitations and participation restrictions, in general and in context of hazardous events. Difficulties in providing a standard approach for Sendai Framework reporting.	Countries to apply national approaches to describing disability and the level and scale of functioning. Refer to https://www.who.int/classifications/icf/en/ (15) For secondary data, refer to national disability, health system and disaster-related data. For primary data, refer to: https://www.who.int/disabilities/data/en/ (16) and https://www.who.int/classifications/icf/whodasii/en/ (17)

KEY STEPS IN MONITORING AND REPORTING OF HEALTH DATA FOR THE SENDAI FRAMEWORK PROCESS:

The following steps to facilitate monitoring and reporting by ministries of health are recommended:

- ◆ identify a Ministry of Health Focal Point for Sendai Framework (data collection), monitoring and reporting; if not the Ministry of Health, then another health authority could be identified;
- ◆ identify and engage with the Sendai Framework Monitor National Focal Point.
- ◆ determine whether the health sector has already contributed to Sendai Framework reporting;
- ◆ agree the methods to be used in health-related Sendai Framework monitoring and reporting;
- ◆ develop, implement and review plans for Sendai Framework monitoring and reporting by the health sector in order to comply with the national and international timetables for reporting;
- ◆ ensure that the National Health Focal Point for Sendai Framework reporting is engaged with the Ministry of Health Focal Point for SDG reporting (with the National Office for Statistics); and
- ◆ include Sendai Framework reporting in reporting guidance for the SDGs given the linkages between SDGs and Sendai Framework reporting (Ministry of Health Focal Point for SDG reporting – identify who and include in their reporting guidance).

CAPACITY DEVELOPMENT

Countries in need of strengthening capacities for monitoring and reporting of health data for the Sendai Framework, the SDGs and for Health EDRM in general, may consider the following measures for capacity development in the shorter, medium and longer term.

Shorter term:

- ◆ raise awareness of Sendai Framework targets and indicators within the health sector and the monitoring and reporting requirements;
- ◆ organize health sector participation in regional, national and subnational multisectoral face-to-face training and e-learning courses for Sendai Framework reporting;
- ◆ organize national and subnational health sector training on methods to improve monitoring and reporting on Sendai targets in the health sector; and
- ◆ review UNDRR/UNISDR technical guidance and training for the development of disaster data bases such as Desinventar (18).

Medium and longer term:

- ◆ strengthen national and subnational capacities for civil registration and vital statistics;
- ◆ develop national case registries;
- ◆ develop methods to attribute health-related mortality and morbidity to hazardous events; and
- ◆ develop guidance and tools to improve reporting (e.g. in-depth mortality surveys).

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ANNEX 1. WHO CLASSIFICATION OF HAZARDS

GENERIC GROUPS ¹	1. NATURAL					2. HUMAN-INDUCED ^{2,3}		3. ENVIRONMENTAL
	1.1 GEOPHYSICAL ⁴	1.2 HYDRO-METEOROLOGICAL		1.3 BIOLOGICAL ⁵	1.4 EXTRATERRESTRIAL ⁴	2.1 TECHNOLOGICAL	2.2 SOCIETAL	3.1 ENVIRONMENTAL DEGRADATION ¹⁷
SUBGROUPS	Earthquake: - ground-shaking	1.2.1 HYDROLOGICAL ⁴ Flood: - riverine flood - flash flood - coastal flood - ice jam flood Mass movement (hydro-meteorological trigger): - landslide - rock fall - subsidence	1.2.2 METEOROLOGICAL ⁴ Storm: - extratropical storm - tropical cyclone [cyclonic wind, cyclonic rain, cyclone (storm) surge] - convective storm [tornado, wind, rain, winter storm, blizzard, derecho, lightning, thunderstorm, hail, sand/dust storm] Extreme temperature: - heatwave - coldwave - severe winter condition [e.g. snow/ice, frost/freeze, dzud] ⁶ Fog	1.2.3 CLIMATOLOGICAL ⁴ Drought Wild fire: - land fire [e.g. brush, bush, pasture] - forest fire Glacial lake outburst (flood)	Airborne diseases Waterborne diseases Vector-borne diseases Foodborne outbreaks ⁷ Insect infestation: ⁴ - grasshopper - locust Animal diseases Plant diseases Aeroallergens Antimicrobial resistant microorganisms Animal-human contact - venomous animals [snakes, spiders]	Industrial hazards: ¹ - chemical spill - gas leak - radiation [radiological, nuclear] Structural collapse: - building/bridge failures Occupational hazards - mining Transportation: ^{8,11} - air, road, rail, water, space Explosions Fire ⁸ Air pollution: ⁹ - haze ¹⁰ Infrastructure disruption: - power outage ¹¹ - water supply - solid waste, waste water - telecommunication Cybersecurity Hazardous materials in air, soil, water: ^{12,13} - biological, chemical, radiological Food contamination ^{7,h}	Acts of violence Armed conflicts: ¹⁴ - international - non-international Civil unrest Stampede Terrorism: - Chemical, biological, radiological, nuclear, and explosives ^{15,16} Financial crises: - hyperinflation - currency crisis	Erosion Deforestation Salinization Sea level rise Desertification Wetland loss/degradation Glacier retreat/melting Sand encroachment
Main types	Tsunami Mass movement (geophysical trigger): - landslide - rock fall - subsidence							
-subtypes								
[sub-subtypes]	Liquefaction Volcanic activity: - ash fall - lahar - pyroclastic flow - lava flow Wave action: - rogue wave - seiche							

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ANNEX 2. SENDAI FRAMEWORK INDICATORS REQUIRING HEALTH DATA

HEALTH-SPECIFIC INDICATORS

INDICATOR	LINK TO SDG INDICATORS (AND OTHER SENDAI INDICATORS)
A-2	3.9 (linked to Sendai indicator A-1)
B-2	3.3 (linked to Sendai indicator B-1)
D-2	Linked to Sendai indicators C-3, C-5
D-7	Linked to Sendai indicator C-3

INDICATORS REQUIRING HEALTH DATA

INDICATOR	HEALTH DATA TO ADD (INCLUDING LINK TO OTHER SENDAI INDICATORS)	LINK TO SDG INDICATORS
A-1	Number of deaths and missing persons attributed to disasters, per 100 000 population (compound indicator)	Indicator A-2 1.5, 11.5, 13.5
B-1	Number of directly affected people attributed to disasters, per 100 000 population (compound indicator)	Indicator B-2 1.5, 13.1
C-1	Direct economic loss attributed to disasters in relation to global GDP (compound indicator)	Indicators C-3 and C-5 (see below) 1.5, 11.5
C-3	Direct economic loss due to all other damaged or destroyed productive assets attributed to disasters	Economic loss in US dollars of D-2 complemented by D-7 for total loss in this indicator
C-5	Direct economic loss resulting from damaged or destroyed critical infrastructure attributed to disasters	Economic loss in US dollars of D-2 to be added to this indicator

D-1	Damage to critical infrastructure attributed to disasters (compound indicator)	Indicators D-2 and D-7 (outlined in Core Health Indicators above)	11.5
E-1	Number of countries that adopt and implement national disaster risk reduction (DRR) strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030	Data on inclusion of health sector strategies in multisectoral national DRR strategies; inclusion of biological hazards among hazards	1.5.3 (repeat of 11b.1 and 13.1.2), 3d.1
E-2	Percentage of local government that adopt and implement local disaster risk strategies in line with national strategies	Data on inclusion of health sector strategies in multisectoral local DRR strategies; inclusion of biological hazards among hazards	1.5.4 (repeat of 11b.2 and 13.1.3), 3d.1
F-1	Total official international support (official development assistance [ODA] plus other flows), for national DRR actions	International support to health sector/activities	
F-2	Total official international support (ODA plus other official flows) for national DRR provided by multilateral agencies	International support (multilateral) to health sector/activities	
F-3	Total official international support (ODA plus other official flows) for national DRR actions provided bilaterally	International support (bilateral) to health sector/activities	17.2, 17.3
F-4	Total official international support (ODA plus other official flows) for the transfer and exchange of DRR technology	International support to health sector/activities (for DRR technology)	17.7
F-5	Number of international, regional and bilateral programmes and initiatives for the transfer and exchange of science, technology and innovation in DRR for developing countries	Programmes and initiatives (in science, technology and innovation) in health sector	17.6
F-6	Total official international support (ODA plus other official flows) for DRR capacity-building	International support to health sector/activities (for capacity-building)	17.9
F-7	Number of international, regional and bilateral programme and initiatives for DRR-related capacity-building in developing countries	Programmes and initiatives for DRR-related capacity-building in the health sector	
F-8	Number of developing countries supported by international, regional and bilateral initiatives to strengthen their DRR-related statistical capacity	Initiatives in the health sector for DRR-related statistical capacity development	17.19
G-1	Number of countries that have (MHEWS) (compound indicators G-2 to G-5)	Inclusion of risks to health and biological hazards in MHEWS, e.g. data on disaster surveillance systems	13.3, 3d
G-2	Number of countries that have multi-hazard monitoring and forecasting systems	Inclusion of risks to health and biological hazards in monitoring and forecasting systems, e.g. extreme weather events, extreme temperatures, influenza	13.1
G-3	Number of people per 100 000 that are covered by early warning information through local governments or through national dissemination mechanisms	Inclusion of early warning information related to health risks and biological hazards and health sector role in communicating risk	

G-4	Percentage of local governments having a plan to act on early warnings	Inclusion of health sector actions, risks to health and biological hazards in local plans	11b, 13.1,
G-5	Number of countries that have accessible, understandable, usable and relevant disaster risk information and assessment available to the people at national and local levels	Inclusion of risks to health, biological hazards, health actions and role of health sector in risk information and risk assessment	3d, 13.2, 13.3
G-6	Percentage of the population exposed to or at risk from disasters protected through pre-emptive evacuation following early warning <i>Member States in a position to do so are encouraged to provide information on the number of evacuated people.</i>	Data from the health sector on number of people who evacuated due to early warning	

ANNEX 3. DATA QUALITY PRINCIPLES

Data to measure indicators should conform as far as possible to the following principles:

- ◆ **Useful:** Data collected must be applicable to any country in the world and, where possible, allow comparison among countries or regions.
- ◆ **Feasible:** Data should be easy to collect regardless of the level of development or income of each country.
- ◆ **Transparent:** The method used for collecting data should be well established, with any caveats or limitations declared.
- ◆ **Consistent:** Data must be recorded and reported in a consistent way.
- ◆ **Precise:** Data must have a measure of dispersion.
- ◆ **Verifiable:** Data should be traceable back to the original sources.
- ◆ **Relevant:** Data should meet users' needs.
- ◆ **Complete:** Data should serve users' needs as much as possible.
- ◆ **Timely:** Time between recording and publication of data should be minimized.
- ◆ **Accessible:** All data on public matters and/or funded by public funds, including those data produced by the private sector, should be made public and "open by default", with narrow exemptions for genuine security or privacy concerns.
- ◆ **Data governance:** Data quality should be protected and improved by strengthening national statistics offices, and ensuring they are functionally autonomous and are independent of sector ministries and political influence.

Source: Background paper to support guidance for a data quality framework for health and social care. Dublin: Health Information and Quality Authority; October 2018 (<https://www.hiqa.ie/sites/default/files/2018-10/Background-to-support-guidance-on-data-quality-framework.pdf>, accessed 31 March 2019).



TARGET

A



**SUBSTANTIALLY REDUCE GLOBAL DISASTER
MORTALITY BY 2030, AIMING TO LOWER
AVERAGE PER 100 000 GLOBAL MORTALITY
BETWEEN 2020-2030 COMPARED TO 2005-2015**

EXECUTIVE SUMMARY

Global Target A indicators aim to measure rates of mortality and missing persons attributable to hazardous events, including disasters in a country or population, thus providing a basis for analysing how these indicators may change over time. This Guidance Note aims to guide the health sector, in particular ministries of health, on their role in collecting and reporting data that are relevant to Target A with a focus on reporting against indicator A-2 – number of deaths attributed to disasters, per 100 000 population – which also contributes to indicator A-1. It includes a summary of the general guidance provided by the United Nations Office for Disaster Risk Reduction (UNDRR) to support UN Member States in monitoring and reporting against Target A of the Sendai Framework for Disaster Risk Reduction 2015–2030.^{1,2}

KEY TASKS FOR MINISTRIES OF HEALTH

- ◆ Effective cooperation with the Sendai Framework Monitoring National Focal Point so that ministries of health can provide mortality data due to hazardous events, including emergencies and disasters.
- ◆ Collation, collection and reporting of accurate data on mortality attributable to hazardous events. These data can then be included in the national reporting against indicator A-2, ensuring improved accuracy in registration and reporting of mortality figures.

- ◆ Development and application of a consistent approach to measuring and reporting of mortality rates attributable to hazardous events that can be used across different events, including disaster reports, to ensure comparability within the country.
- ◆ Roles, as appropriate, in providing health records necessary in the (disaster) victim identification (DVI) processes following a hazardous event.

INTRODUCTION

Hazardous events, including emergencies and disasters, are known to exact a heavy toll on people's lives and health, social development, and the economy and environment of communities and countries, however, the degree to which impacts can be quantified remains challenging. Target A of the Sendai Framework aims to "substantially reduce global disaster mortality by 2030". Indicators related to Target A are included in the Sustainable Development Goals (SDGs), the World Health Organization (WHO) *Global reference list of 100 core health indicators*³ and the Impact Framework for the 13th WHO General Programme of Work (GPW13)⁴.

The purpose of this Guidance Note is to support ministries of health in the process of data collection and analysis of indicators to monitor and report progress and achievement against global Target A of the Sendai Framework and for the respective SDG, WHO GPW and WHO Global Health Observatory reporting frameworks.

1. Sendai Framework for Disaster Risk Reduction 2015–2030. Geneva: United Nations Office for Disaster Risk Reduction; 2015 (http://www.unisdr.org/files/43291_sendaiframeworkfordrren.pdf, accessed 31 March 2019).

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A1. INDICATORS

The following table lists the indicators recommended by the Open-ended Intergovernmental Expert Working Group (OIEWG) for the measurement of global Target A of the Sendai Framework, and were

endorsed by the United Nations General Assembly in its resolution A/RES/71/276, *Report of the Open-ended Intergovernmental Expert Working Group on indicators and terminology relating to disaster risk reduction*¹.

No.	INDICATORS FOR MEASUREMENT AT THE GLOBAL LEVEL	HEALTH DATA REQUIRED FROM THE HEALTH SECTOR	LINK TO SDG INDICATORS
A-1	Number of deaths and missing persons attributed to disasters, per 100 000 population	Yes	1.5, 11.5, 13.1
A-2	Number of deaths attributed to disasters, per 100 000 population	Yes	3.9
A-3	Number of missing persons attributed to disasters, per 100 000 population	Yes	

A2. POLICY CONTEXT

WHY IS THIS IMPORTANT	<p>Progress has been achieved by countries and other relevant stakeholders in reducing risks associated with emergencies and disasters, leading to a decrease in mortality in the case of some hazards. Despite this, hazardous events still exact a considerable death toll on populations.</p> <p>Ministries of health have a key role to play in reducing mortality (and other health consequences), implementing the Sendai Framework and ensuring the accurate reporting of mortality data following a hazardous event. The Sendai Framework recognizes the specific need “to establish a mechanism of case registry and a database of mortality caused by disaster in order to improve the prevention of morbidity and mortality”.²</p>
ISSUES/CHALLENGES	<p>As stated in the report of the Open-ended Intergovernmental Expert Working Group (OIEWG) (A/RES/71/644), countries may choose to use a national methodology or other methods of measurement and calculation to measure the number of deaths and missing attributed to disasters. Countries should keep the metadata consistent if the methodology is changed.</p> <p>Countries should consider how the following challenges are addressed:</p> <p>Location: Each death should be counted in the country where the person was exposed (usually where the death occurred), regardless of the nationality of the dead person.</p> <p>Types of hazard: Biological, technological and natural hazards are within the scope of the Sendai Framework and should be covered in Target A for Sendai Framework reporting. For full details of hazards, see the Overview Annex 1: WHO Classification of Hazards. See Section A3 on customizable indicators regarding mortality due to societal hazards, e.g. violence.</p>

1. Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction. Note by the Secretary-General. New York (NY): United Nations; 2016 (A/71/644; <https://www.unisdr.org/we/inform/terminology>, accessed 18 February 2019).

2. Sendai Framework for Disaster Risk Reduction 2015–2030. Geneva: United Nations Office for Disaster Risk Reduction; 2015 (http://www.unisdr.org/files/43291_sendaiframeworkfordrren.pdf, accessed 31 March 2019).

	<p>Attribution to an event/emergency/disaster: Each type of hazardous event has a pattern of mortality and morbidity. Data should focus on causes of death that can be attributed to the hazardous event. Data should include deaths that are directly caused by the event or as a direct result of the hazardous event (e.g. outbreaks of disease associated with drought conditions).</p> <p>For example:</p> <ul style="list-style-type: none"> ◆ Biological hazards: An “event” is usually determined when the number of cases is higher than expected, e.g. it exceeds a certain threshold of cases for the hazard (which is often context specific). Deaths must meet the case definition for the disease and the end date is when the outbreak is declared over. Countries will have to define which biological hazards should be included, monitored and reported over time, focusing on those biological hazards that have the potential to cause emergencies and disasters. A country’s list of notifiable diseases may provide a basis for defining which biological hazards to include in the reporting of data. ◆ In the case of heatwave, the attribution of some causes of deaths can be directly related to heat (e.g. heat stress); also, the methodology of determining excess mortality in the heatwave period can be used. <p>Scale of hazardous events: All deaths associated with different scales of hazardous events, including emergencies and disasters, should be covered.</p> <p>Disaggregation by disability: Refers to “pre-event disability”.</p> <p>Temporal aspects for attribution and cutoff: Refer to the Overview.</p> <p>Methods and criteria should be fixed or if changed then they should provide consistent results for the entire timespan of data collection (2015–2030) and for the baseline that is expected to be extracted from data for 2005–2015.</p>
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A3. METHODS

WHAT IS MEASURED	<p>Sendai Framework: The pattern over time in national mortality for deaths and missing persons attributable to hazardous events (i.e. natural, technological, biological, environmental hazards). The focus of the health sector will be mortality data, although there may be a role in providing support to the identification of victims and to missing persons. See also customizable indicators in this section.</p> <p>Metadata on the methodology and criteria that are being applied to data collection, calculation and reporting for these indicators by a country should be described, documented and maintained to facilitate a consistent approach, comparability and data improvements across the reporting period.</p>
KEY TERMS	<p>Death: Number who die during/directly after the disaster as a direct result of the hazardous event.</p> <p>Missing persons: Number of people whose whereabouts are unknown since the hazardous event.</p>
HEALTH INPUT	<ul style="list-style-type: none"> ◆ Data on deaths attributable (directly caused or a direct result of) to hazardous events, including emergencies and disasters. ◆ Role in (disaster) victim identification processes to assist in identifying missing persons.

<p>WHOM TO ENGAGE WITH</p>	<p>Ministries of health must engage with the Sendai Framework National Focal Point to ensure the inclusion of health data on mortality and missing persons in reporting for Target A. Ministries should also work with the health sector and partners at national, subnational and local levels to ensure their accountability for data collection and reporting in accordance with the timeframes and deadlines for national reporting. Contact details for organizations may already be available through national health and multisectoral plans related to emergencies, disasters, climate change, etc.</p> <p>Following are some suggested organizations/mechanisms for data gathering, but this list is not exhaustive, and will depend on Member State arrangements and the type of hazardous event.</p> <ul style="list-style-type: none"> ◆ Ministry of Health ◆ Sendai Framework Monitoring National Focal Point ◆ Health statistics office/health information management systems ◆ National disease surveillance system ◆ National disaster management offices ◆ National statistics offices ◆ National Focal Point in the Ministry of Health for SDG reporting ◆ WHO Country Offices, WHO Regional Offices, WHO Health Emergencies Programme, WHO Global Health Observatory ◆ National security bureau, law enforcement, police ◆ Ministries responsible for emergencies, civil protection ◆ Insurance companies
<p>INDICATOR FORMULA</p>	<p>Indicator A-1. Number of deaths and missing persons attributed to disasters, per 100 000 population</p> $[(a + b)/c] * 100\ 000$ <p>Indicator A-2. Number of deaths attributed to disasters, per 100 000 population</p> $[(a)/c] * 100\ 000$ <p>a = number of deaths attributed to disasters b = number of missing persons attributed to disasters c = represented population</p>
<p>INDICATOR COMPONENTS</p>	<p>There is recognition that Member States use a diverse range of tools to gather and report data on mortality. Therefore, the examples of data sources, owners and analysis in this section are not exhaustive but represent common examples.</p> <p>Data sources. Civil registration and vital statistics/active mortality surveillance (optional: mortality surveys).</p> <p>Data owners. Ministry of Health, national and subnational disaster management organizations, international emergency response organizations (e.g. health cluster, WHO).</p> <p>Data analysis. Dependent on the source. Annual data, e.g. civil registration and vital statistics, identify cause of death within timeframe and calculate excess mortality. For event data, calculate the sum of deaths.</p>
<p>REPRESENTED POPULATION</p>	<p>The represented population for Sendai Framework reporting for global targets is the national population. There are different ways to measure this depending on the data sources available, but it is important to ensure the same data source/method is used each year. Reporting against Target A should be rates per 100 000 (even if the population is less than 100 000 people).</p> <p>Available through the national census (National Statistics Office), World Bank, or UN Statistical Commission.</p>

INTERPRETATION CONSIDERATIONS

Attribution: As per the Overview. Include deaths that are directly caused by the event or as a direct result of the hazardous event (e.g. outbreaks of disease associated with drought conditions).

It is recommended that data do not include those people whose deaths were an indirect result of the event, e.g. deaths that occur as a result of disruption or unavailability of health services, or months or years after an event. The interpretation of direct and indirect effects may vary across different types of events.

Statistical analysis: Analysis may be required to calculate excess mortality for some types of hazards, e.g. in heatwaves. Excess mortality is thus mortality that is attributable to the "emergency" conditions. It can be expressed as a rate (the difference between observed and non-emergency mortality rates), or as a total number of excess mortality. In the case of the indicator, the total number of excess mortality should be used.

Coverage: Coverage of survey data is unlikely to be complete.

Bias: Surveys are liable to introduce sampling bias.

CUSTOMIZABLE INDICATORS

Countries may consider customizable indicators that measure the pattern over time in national mortality from: (i) both direct and indirect causes of death; and/or (ii) attributable to all types of hazardous events per 100 000 population.

The health sector has a key role in reducing mortality both directly and indirectly attributable to all types of hazardous events, including acts of violence and conflict. Beyond the data required for the global targets and indicators for Sendai Framework reporting, indirect causes of death may be attributed to the effect of the event on the availability and accessibility of health (and other) services; and the temporal dimension of mortality may extend to many months and years after an event, e.g. in the case of mental health and noncommunicable diseases.

A4. REPORTING

This Guidance Note outlines the key role that ministries of health have in providing data to support reporting against Sendai Framework global Target A.

Each country's Sendai Framework Monitoring National Focal Point has responsibility for submitting national reports for the Sendai Framework. UNDRR has developed a web-based tool to support Member States in reporting against the indicators. The Sendai Framework Monitor (<https://sendaimonitor.unisdr.org/>) not only functions as a reporting tool, but also as a management tool to help countries develop disaster risk reduction (DRR) strategies, make risk-informed policy decisions and allocate resources to manage risks.

As of 1 March 2018, Member States have been reporting against the indicators for measuring the global targets of the Sendai Framework, and DRR-related indicators of the SDGs, using the online Sendai Framework Monitor. It is important that the relevant officials in the ministries of health are either linked to the National Focal Point or are granted access to the Sendai Framework Monitor to input health data as outlined in Section A3.

Member states are expected to report annually against the Sendai Framework, however, data should be recorded after hazardous events occur.

For further information about how to use the Sendai Framework Monitor tool for reporting, please refer to the Sendai Framework Monitoring National Focal Point.



TARGET

B



**SUBSTANTIALLY REDUCE THE NUMBER OF
AFFECTED PEOPLE GLOBALLY BY 2030, AIMING
TO LOWER THE AVERAGE GLOBAL FIGURE PER
100 000 BETWEEN 2020–2030 COMPARED TO
2005–2015**

EXECUTIVE SUMMARY

Global Target B indicators aim to measure how many people are affected by hazardous events, including disasters in a country or population, thus providing a basis for analysing how these indicators may change over time. Affected people may experience short-term or long-term consequences to their lives, livelihoods or health and to their economic, physical, social, cultural and environmental assets. This Guidance Note aims to guide the health sector, in particular ministries of health, on their role in collecting and reporting data that are relevant to Target B with a focus on reporting against indicator B-2 – number of injured or ill people attributed to disasters, per 100 000 population – which also contributes to indicator B-1. It includes a summary of the general guidance provided by the United Nations Office for Disaster Risk Reduction (UNDRR) to support UN Member States in monitoring and reporting against Target B of the Sendai Framework for Disaster Risk Reduction 2015–2030.^{1,2}

KEY TASKS FOR MINISTRIES OF HEALTH

- ◆ Effective cooperation with the Sendai Framework Monitoring National Focal Point so that ministries of health can provide relevant data on the number of people who are injured or ill due to a hazardous event, including emergencies and disasters.

- ◆ Collation, collection and reporting of accurate data on affected people (specifically those who are injured or ill) attributable to hazardous events.
- ◆ Development and application of a consistent approach to measuring and reporting the rates of people who are injured or ill as a direct or indirect result of hazardous events to ensure comparability within country.

INTRODUCTION

Hazardous events, including emergencies and disasters, are known to exact a heavy toll on people's health and the social development, economy and environment of communities and countries, however, the degree to which impacts can be quantified remains challenging. Target B of the Sendai Framework aims to "substantially reduce the number of affected people globally by 2030". Indicators related to Target B are included in the Sustainable Development Goals (SDGs) and the World Health Organization (WHO) *Global reference list of 100 core health indicators (plus health-related SDGs)*.³

The purpose of this Guidance Note is to support ministries of health in the process of data collection and analysis of indicators to monitor and report progress and achievement against global Target B of the Sendai Framework and for the SDG and Global Health Observatory reporting frameworks.

1. Sendai Framework for Disaster Risk Reduction 2015–2030. Geneva: United Nations Office for Disaster Risk Reduction; 2015 (http://www.unisdr.org/files/43291_sendaiframeworkfordrren.pdf, accessed 31 March 2019).

2. Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction: collection of technical notes on data and methodology. Geneva: United Nations Office for Disaster Risk Reduction; 2017 (https://www.unisdr.org/files/54970_techguidancefordigitalhr.pdf, accessed 31 March 2019).

3. 2018 Global reference list of 100 core health indicators (plus health-related SDGs). Geneva: World Health Organization; 2018 (<https://apps.who.int/iris/bitstream/handle/10665/259951/WHO-HIS-IER-GPM-2018.1-eng.pdf>, accessed 31 March 2019).

B1. INDICATORS

The following table lists the indicators recommended by the Open-ended Intergovernmental Expert Working Group (OIEWG) for the measurement of global Target B of the Sendai Framework, and were endorsed by

the United Nations General Assembly in its resolution A/RES/71/276, *Report of the Open-ended Intergovernmental Expert Working Group on indicators and terminology relating to disaster risk reduction*.¹

No.	INDICATORS FOR MEASUREMENT AT THE GLOBAL LEVEL	HEALTH DATA REQUIRED FROM THE HEALTH SECTOR	LINK TO SDG INDICATORS
B-1	Number of directly affected people attributed to disasters, per 100 000 population	Yes	1.5, 13.1
B-2	Number of injured or ill people attributed to disasters, per 100 000 population	Yes	3.3
B-3	Number of people whose damaged dwellings were attributed to disasters	No	
B-4	Number of people whose destroyed dwellings were attributed to disasters	No	
B-5	Number of people whose livelihoods were disrupted or destroyed, attributed to disasters	No	

B2. POLICY CONTEXT

WHY IS THIS IMPORTANT

People can be affected directly or indirectly by hazardous events, including emergencies and disasters. Affected people may experience short-term or long-term consequences to their lives, livelihoods or health and in the economic, physical, social, cultural and environmental assets.

Progress has been achieved by countries and other relevant stakeholders in reducing risks associated with emergencies and disasters, leading to a decrease in the number of people affected by some hazardous events. Despite this, hazardous events still have a considerable impact on many people's lives and affect their health in various ways.

Ministries of health have a key role to play in reducing the number of people injured and ill (and other health consequences), implementing the Sendai Framework and ensuring the accurate reporting of morbidity data following a hazardous event. The Sendai Framework recognizes the specific need "to establish a mechanism of case registry and a database of mortality caused by disaster in order to improve the prevention of morbidity and mortality".²

1. Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction. Note by the Secretary-General. New York (NY): United Nations; 2016 (A/71/644; <https://www.unisdr.org/we/inform/terminology>, accessed 18 February 2019).

2. Sendai Framework for Disaster Risk Reduction 2015–2030. Geneva: United Nations Office for Disaster Risk Reduction; 2015 (http://www.unisdr.org/files/43291_sendaiframeworkfordrren.pdf, accessed 31 March 2019).

ISSUES/CHALLENGES

As stated in the report of the Open-ended Intergovernmental Expert Working Group (OIEWG) (A/RES/71/644), countries may choose to use a national methodology or other methods of measurement and calculation to measure the number of people affected, including those injured or ill attributed to disasters, given the variation in data collection processes around the world. Several indicators contribute to the total number of people "affected" thus it is important to emphasize that no single indicator will provide an absolutely precise, accurate and exhaustive measure of the affected population. The major role of the health sector is focused on indicator B-2 – number of injured or ill people attributed to disasters, per 100 000 population – which also contributes to indicator B-1.

In relation to B-2, countries should consider how the following challenges are addressed:

Location: Each injured or ill person should be counted in the country where they were exposed to the hazard (usually where the injury or case of illness occurred), regardless of the nationality of the affected person.

Types of hazard: Biological, technological, natural and environmental hazards are within the scope of the Sendai Framework and should be covered in Target B for Sendai Framework reporting. For full details of hazards, see the Overview Annex 1: WHO Classification of Hazards. See Section B3 on customizable indicators below regarding morbidity due to societal hazards, e.g. violence, conflict.

Attribution to an event/emergency/disaster: As per the Overview. The type of hazard event is likely to affect the method of attribution of injury and illness to the event. It is recommended to focus on direct causes of injury and cases of illness, which are more feasible to attribute, collect and report.

For example:

- ◆ Biological hazards: An "event" is usually determined when the number of cases is higher than expected, e.g. it exceeds a threshold of cases for the hazard or disease (which is often context specific). Illness must meet the case definition for the disease and the end date is when the outbreak is declared over. Countries will have to define which biological hazards should be included, monitored and reported over time, focusing on those biological hazards that have the potential to cause emergencies and disasters. A country's list of notifiable diseases may provide a basis for defining which biological hazards to include in the reporting.

Scale of hazardous events: All injuries and illness associated with different scales of hazardous events, including emergencies and disasters, should be covered

Disaggregation by disability: Refers to "pre-event disability".

Temporal aspects for attribution and cutoff: Refer to the Overview.

Methods and criteria should be fixed or if changed should provide consistent results for the entire timespan of data collection (2015–2030) and for the baseline that is expected to be extracted from data for 2005–2015.

There should be a recognition that mental ill-health is likely to affect a large number of people following a disaster, and there are multiple challenges in measuring and recording these data.

B3. METHODS

<p>WHAT IS MEASURED</p>	<p>Sendai Framework: The pattern over time in a country of the number of affected people, which is attributable to hazardous events (i.e. natural, technological, biological, environmental hazards). The focus of the health sector will be on morbidity data related to the number of injured and ill. See also customizable indicators in this section.</p> <p>Metadata on the methodology and criteria that are being applied to data collection, calculation and reporting for these indicators by a country should be described, documented and maintained to facilitate a consistent approach, comparability and data improvements across the reporting period.</p>
<p>KEY TERMS</p>	<p>Injured or ill: People suffering from a new or exacerbated physical or psychological harm, trauma or an illness as a result of a disaster.</p>
<p>HEALTH INPUT</p>	<ul style="list-style-type: none"> ◆ Data on the number of people injured or ill attributable (directly caused or a direct result of) to hazardous events/emergencies/disasters. ◆ Role in identifying the number of people affected as a result of injury and illness (e.g. disruption to livelihoods).
<p>WHOM TO ENGAGE WITH</p>	<p>Ministries of health must engage with the Sendai Framework National Focal Point to ensure the inclusion of health data in reporting for Target B. Ministries should also work with the health sector and partners at national, subnational and local levels to ensure their accountability for data collection and reporting in accordance with the timeframes and deadlines for national reporting. Contact details for organizations may already be available through national health and multisectoral plans related to emergencies, disasters, climate change, etc.</p> <p>Following are some suggested organizations/mechanisms for data gathering, but this list is not exhaustive, and will depend on Member States' arrangements and the hazardous event.</p> <ul style="list-style-type: none"> ◆ Ministry of Health ◆ Sendai Framework Monitoring National Focal Point ◆ Health statistics office/health information management systems ◆ National disease surveillance system ◆ National disaster management offices ◆ National statistics offices ◆ National Focal Point in the Ministry of Health for SDG reporting ◆ WHO Country Offices, WHO Regional Offices, WHO Health Emergencies Programme, WHO Global Health Observatory ◆ Other sectors contributing (e.g. agriculture, business, insurance)
<p>INDICATOR FORMULA</p>	<p>Indicator B-1. Number of directly affected people attributed to disasters, per 100 000 population</p> $[(a + b + c + d)/e] * 100\ 000$ <p>Indicator B-2. Number of injured or ill people attributed to disasters, per 100 000 population</p> $[(a)/e] * 100\ 000$ <p>a = number of injured or ill people attributed to disasters (people suffering from a new or exacerbated physical or psychological harm, trauma or illness as a result of a disaster) e = represented population</p> <p>NB: b, c and d refer to damaged and destroyed dwelling and livelihoods that there disrupted or destroyed. It is not expected that the health sector provides inputs for these elements.</p>

<p>INDICATOR COMPONENTS</p>	<p>There is recognition that Member States use a diverse range of tools to gather and report data on injury and illness, therefore, the examples of data sources, owners and analysis mentioned in this section are not exhaustive but represent common examples.</p> <p>Data sources. <i>Preferred:</i> hospital statistics, disease surveillance systems. <i>Other:</i> surveys</p> <p>Data owners. Ministries of health, national and subnational disaster management organizations, international emergency response organizations (e.g. health cluster, WHO).</p> <p>Data analysis. Dependent on the source. Hospital statistics: include relevant coded episodes within specified timeframe.</p>
<p>REPRESENTED POPULATION</p>	<p>The represented population for Sendai Framework reporting for global targets is the national population. There are different ways to measure this depending on the data sources available, but it is important to ensure the same data source/method is used each year. Reporting against Target B should be rates per 100 000.</p> <p>Available through national census (National Statistics Office), World Bank or UN Statistical Commission.</p>
<p>INTERPRETATION CONSIDERATIONS</p>	<p>Attribution: As per the Overview. Consider "directly" affected as people who have suffered injury, illness or other health effects as a direct result of the hazardous event.</p> <p>NB: The Sendai Framework monitoring definition of people directly affected also includes people who were evacuated, displaced or relocated, or who have suffered direct damage to their livelihoods, economic, physical, social, cultural and environmental assets. Consideration should be made as to the feasibility of collecting and reporting data on these people or whether to focus on the people injured and ill as direct result of the hazardous event.</p> <p>It is recommended that data do not include those people who were indirectly affected: people who have suffered consequences, other than or in addition to direct effects, over time due to disruption or changes in economy, critical infrastructures, basic services, commerce, work or social, health and physiological consequences.¹</p> <p>Statistical analysis: Analysis may be required to calculate excess injury and illness, etc. Excess morbidity is thus morbidity that is attributable to the "emergency" conditions. It can be expressed as a rate (the difference between observed and non-emergency morbidity rates), or as a total number of excess illness or injury. In the case of the indicator, the total number of excess ill or injured should be used.</p> <p>Double counting: As per the formula for indicator B-1, double counting is unavoidable.</p> <p>Requirement of death statistics: Although not included in the formula, the number of deaths may be included in the morbidity statistics (e.g. in epidemics). For the purposes of Sendai Framework reporting, morbidity data should not include mortality data.</p> <p>Coverage: Coverage of survey data is unlikely to be complete.</p> <p>Bias: Surveys are liable to introduce sampling bias.</p>

1. Recognizing the difficulties of assessing the full range of all affected (direct and indirect), the OIEWG recommended the use of an indicator that would estimate "directly affected" as more feasible than collecting data on indirectly affected.

CUSTOMIZABLE INDICATORS

Countries may consider customizable indicators that measure the pattern over time of the number of people affected: (i) both directly and indirectly; and/or (ii) attributable to all types of hazardous events per 100 000 population.

The health sector has a key role in reducing morbidity both directly and indirectly attributable to all types of disasters and hazardous events. Beyond the data required for the global targets and indicators for Sendai Framework reporting, indirect causes of morbidity may be attributed to the effect of the event on the availability and accessibility of health (and other) services; and the temporal dimension of morbidity may extend to many months and years after an event, e.g. in the case of mental health and noncommunicable diseases. Further consideration could be given to reporting on the links between health and other wider determinants of health and well-being, livelihoods, quality of life, etc.

B4. REPORTING

This Guidance Note outlines the key role that ministries of health have in providing data to support reporting against Sendai Framework global Target B.

Each country's Sendai Framework Monitoring National Focal Point has responsibility for submitting national reports for the Sendai Framework. UNDRR developed a web-based tool to support Member States in reporting against the indicators. The Sendai Framework Monitor (<https://sendaimonitor.unisdr.org/>) not only functions as a reporting tool, but also as a management tool to help countries develop disaster risk reduction (DRR) strategies, make risk-informed policy decisions and allocate resources to manage risks.

As of 1 March 2018, Member States have been reporting against the indicators for measuring the global targets of the Sendai Framework, and DRR-related indicators of the SDGs, using the online Sendai Framework Monitor. It is important that the relevant officials in the ministries of health are either linked to the Sendai Framework Monitoring National Focal Point or are granted access to the Sendai Framework Monitor to input health data as outlined in Section B3.

Member States are expected to report annually against the Sendai Framework, however, data should be recorded after hazardous events occur.

For further information about how to access the Sendai Framework Monitor tool for reporting, please refer to the Sendai Framework Monitoring National Focal Point.



TARGET

C



**REDUCE DIRECT DISASTER ECONOMIC LOSS
IN RELATION TO GLOBAL GROSS DOMESTIC
PRODUCT (GDP) BY 2030**

EXECUTIVE SUMMARY

Global Target C indicators aim to measure the direct economic loss due to the impact of hazardous events, including disasters, in a country, thus providing a basis for analysing how these indicators may change over time. The reporting of direct economic loss for this target is based on data related to infrastructure (e.g. health facilities), agriculture, housing and cultural heritage, which are collected by different sectors, including the health sector. This Guidance Note aims to guide the health sector, in particular ministries of health, on their role in collecting and reporting data that are relevant to Target C with a focus on reporting the economic losses associated with damaged or destroyed health facilities (indicator C-5). Losses from other types of health infrastructure can also be reported in C-5. Indicator C-3 on economic loss of productive assets includes data from C-5 and can also consider data on the impacts of hazardous events on health sector products and services if they are considered to be productive assets.

This Guidance Note includes a summary of the general guidance provided by the United Nations Office for Disaster Risk Reduction (UNDRR) to support UN Member States in monitoring and reporting against Target C of the Sendai Framework for Disaster Risk Reduction.^{1,2} Data for these indicators are linked with reporting for indicator D-2 concerning the number of damaged or destroyed health facilities. Data from indicators C-3 and C-5 contribute to the compound indicator C-1.

KEY TASKS FOR MINISTRIES OF HEALTH

- ◆ Effective cooperation with the Sendai Framework Monitoring National Focal Point so that: (i) the National Focal Point is aware of the need to include health data for Target C; and (ii) ministries of health can provide relevant data on economic losses in the health sector due to a hazardous event, including emergencies and disasters.
- ◆ Collation, collection and reporting of accurate data on the economic loss of damaged or destroyed health facilities and losses due to the impacts of events on productive assets (e.g. health products and services, usually in the private sector), which are converted into US dollars for reporting purposes.
- ◆ Inclusion of economic losses of all health facilities and services affected by hazardous events, e.g. private, public, non-government, education/university health facilities.
- ◆ Development and application of a consistent approach to measuring and reporting the economic loss in the health sector due to hazardous events to ensure comparability within each country over time.

INTRODUCTION

Despite progress in the implementation of disaster risk management measures, particularly with respect to building physical resilience, economic losses from all types of hazardous events, including emergencies

1. Sendai Framework for Disaster Risk Reduction 2015–2030. Geneva: United Nations Office for Disaster Risk Reduction; 2015 (http://www.unisdr.org/files/43291_sendaiframeworkfordrren.pdf, accessed 31 March 2019).

2. Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction: collection of technical notes on data and methodology. Geneva: United Nations Office for Disaster Risk Reduction; 2017 (https://www.unisdr.org/files/54970_techguidancefdigitalhr.pdf, accessed 31 March 2019).

and disasters, remain substantial. In the case of extreme weather events, reported losses are increasing. Target C seeks to develop reliable and consistent economic loss calculations that will improve understanding of the immediate and cascading economic impact of hazardous events, including disasters, on affected communities and countries.

The purpose of this Guidance Note is to support ministries of health in the process of data collection and analysis of indicators to monitor and report progress and achievement against global Target C of the Sendai Framework and for the Sustainable Development Goal (SDG) reporting framework. The calculation of economic loss for indicators C-3 and C-5 is based on

data collected from Target D concerning the number and types of health facilities damaged or destroyed (D-2) primarily, and from the level of disruption to health services (D-7).

C1. INDICATORS

The following table lists the indicators recommended by the Open-ended Intergovernmental Expert Working Group (OIEWG) for measurement of global target C of the Sendai Framework, and were endorsed by the United Nations General Assembly in its resolution A/RES/71/276, *Report of the Open-ended Intergovernmental Expert Working Group on indicators and terminology relating to disaster risk reduction*.¹

No.	INDICATORS FOR MEASUREMENT AT THE GLOBAL LEVEL	HEALTH DATA REQUIRED FROM THE HEALTH SECTOR	LINK TO SDG INDICATORS (AND OTHER SENDAI INDICATORS)
C-1	Direct economic loss attributed to disasters in relation to global GDP (compound indicator)	Yes – health data need to be included in the compound indicator	1.5, 11.5 (and linked to Sendai indicators for Target D)
C-2	Direct agricultural loss attributed to disasters	No	
C-3	Direct economic loss due to all other damaged or destroyed productive assets attributed to disasters	Yes	Linked to Sendai indicators D-2 and D-7
C-4	Direct economic loss in the housing sector attributed to disasters	No	
C-5	Direct economic loss resulting from damaged or destroyed critical infrastructure attributed to disasters	Yes	Linked to Sendai indicator D-2
C-6	Direct economic loss to cultural heritage damaged or destroyed attributed to disasters	No	

1. Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction. Note by the Secretary-General. New York (NY): United Nations; 2016 (A/71/644; <https://www.unisdr.org/we/inform/terminology>, accessed 18 February 2019).

C2. POLICY CONTEXT

<p>WHY IS THIS IMPORTANT</p>	<p>Economic loss and health impacts of all types of hazardous events are closely connected from the personal to national to global levels. Economic losses push millions of people into poverty each year with consequences for their health and the ability to access health care. Reported losses from extreme weather events continue to increase due to a combination of increased frequency and severity of hazards (as modified by climate change), increased exposures and vulnerabilities, e.g. due to urbanization and insufficient capacity to manage these risks.</p> <p>Detailed assessments of economic loss are often carried out by governments and multilateral organizations following large-scale disasters by using a range of methods, e.g. post-disaster needs assessments (PDNAs), Economic Commission for Latin America and the Caribbean (ECLAC).¹ However, the economic losses associated with small- and medium-scale events, which may account for up to half of all economic losses, are rarely assessed or even documented.</p>
<p>BASELINE DATA AND VARIATION</p>	<ul style="list-style-type: none"> ◆ In 1998–2017 disaster-hit countries reported direct economic losses valued at US\$ 2908 billion, of which climate-related disasters caused US\$ 2245 billion or 77% of the total. High-income countries accounted for 61% of the losses, while only 13% were in low-income countries.² ◆ Countries experiencing large-scale epidemics have suffered significant economic impacts, e.g. the 2014 West Africa Ebola epidemic cost more than US\$ 3.6 billion; Liberia’s economic losses amounted to 10% of GDP.³ The expected annual losses from pandemic risk is estimated to be about US\$ 500 billion or about 6% of global income per year.⁴ ◆ Based on the UNDRR/UNISDR 2017 <i>Sendai Framework data readiness review</i>, data for “direct economic loss due to all other damaged or destroyed productive assets attributed to disasters” are currently available in 36 countries (representing 41% of reporting countries), while data for “direct economic loss resulting from damaged or destroyed critical infrastructure” are currently available in 48 countries (representing 55% of reporting countries).⁵
<p>ISSUES/CHALLENGES</p>	<p>Temporal aspects of data collection: See the Overview.</p> <p>Types of hazard: See the Overview. Hazards within the scope of the Sendai Framework should be covered in Target C. Customizable indicators should consider all types of hazards. For full details of hazards, see the Overview.</p> <p>Scale of hazardous events: Economic losses associated with different scales of hazardous events, including emergencies and disasters, should be covered.</p> <p>Facility size: There are different methods for categorizing the type and size of health facilities and calculating the losses associated with damage to these facilities. The UNDRR/UNISDR/technical guidance provides a method for describing small, medium and large facilities (e.g. area of premises, construction cost, equipment, associated infrastructure, number of workers).</p>

1. Disaster loss and needs assessment tools and methodology. World Bank Global Facility for Disaster Reduction and Recovery (GFDRR) (<https://www.gfdr.org/damage-loss-and-needs-assessment-tools-and-methodology>, accessed 19 March 2019).

2. Economic losses, poverty and disasters 1998–2017. Brussels and Geneva: Centre for Research in Epidemiology of Disasters and United Nations Office for Disaster Risk Reduction; 2018 (https://www.unisdr.org/2016/iddr/CRED_Economic%20Losses_10oct_final.pdf, accessed 19 March 2019).

3. A healthier humanity: the WHO investment case. Geneva: World Health Organization; 2018.

4. Fan YF, Jamison DT, Summers LH. Pandemic risk: How large are the expected losses? *Bull World Health*. 2018; 9(2):77–144.

5. Disaster-related data for sustainable development: Sendai Framework data readiness review 2017, Global Summary report 2017. Geneva: United Nations Office for Disaster Risk Reduction; 2017 (https://www.unisdr.org/files/53080_entrybgpaperglobalsummaryreportdisa.pdf, accessed 19 March 2019).

C3. METHODS

<p>WHAT IS MEASURED</p>	<p>Sendai Framework: The pattern over time in direct disaster economic loss in relation to national GDP due to hazards within the scope of the Sendai Framework. This includes the damage and destruction of health facilities and other impacts on health infrastructure, manufacturers and services. See also customizable indicators in this section.</p> <p>Metadata on the methodology and criteria that are being applied to data collection, calculation and reporting for these indicators by a country should be described, documented and maintained to facilitate a consistent approach, comparability and data improvements across the reporting period.</p>
<p>KEY TERMS</p>	<p>Economic loss: Total economic impact that consists of direct economic loss and indirect economic loss.</p> <p>Direct economic loss: Monetary value of total/partial destruction of physical assets existing in the affected area.</p> <p>Indirect economic loss: Decline in economic value added as a consequence of direct economic loss and/or human and environmental impacts. (NB: This is not the focus of Target C).</p> <p>Replacement cost: The cost of replacing damaged assets with materials of like kind and quality. Calculation of damage is undertaken by the cost in US dollars of the reconstruction. It combines several components, including construction cost, equipment and additional infrastructure.</p> <p>Health-care facilities: Includes health centres; clinics; local, regional and tertiary hospitals; and outpatients centres. It may also include health laboratories and general facilities used by primary health providers.</p>
<p>HEALTH INPUT</p>	<ul style="list-style-type: none"> ◆ Data on the economic value of damage and destruction of health facilities attributable to hazardous events, emergencies and disasters. Member States can determine which types of facilities to include in the data collection and reporting. For example, the health sector could also consider reporting where possible on damage to other health infrastructure (e.g. laboratories, pharmaceutical supply depots) as part of C-5. These data contribute to C-5 and form part of the calculation for health aspects of C-3. ◆ Data on the impact of hazards on health sector manufacturers or health services if considered to be productive assets, e.g. pharmaceutical industry, other private sector health activities (contribution to C-3, combined with C-5). ◆ It is recommended that the calculation of economic loss for indicators C-3 and C-5 is based on data collected from Target D concerning the number and types of health facilities damaged or destroyed (D-2) and from the level of disruption to health services (D-7). ◆ Data for C-3 and C-5 support the calculation of compound indicator C-1. <p>A basic approach to C-5 would involve calculation of the losses based on the value of the facilities damaged or destroyed by size (e.g. small, medium, large) or some other form of classification standard for health facilities (e.g. health centre, district hospital, tertiary hospital.) Further details could be provided by calculating losses from: (i) a wider range of facilities; (ii) more details on the level of damage and destruction for the facilities; and/or (iii) specialized types of facility (e.g. laboratories). It is also important to ensure that data are collected for all facilities and services, including those operated by different sectors, including the government/Ministry of Health, private hospitals, education/university and non-government sectors.</p>

<p>WHOM TO ENGAGE WITH</p>	<p>Ministries of health must engage with the Sendai Framework Monitoring National Focal Point to ensure the inclusion of health data in reporting of direct economic losses following a hazardous event; and with the health sector to ensure their accountability for data collection and reporting in accordance with the timeframes and deadlines for national reporting. Contact details for organizations may already be available through national health and multisectoral plans related to emergencies, disasters, climate change, etc.</p> <p>Following are some suggested organizations/mechanisms for data gathering, but this list is not exhaustive, and will depend on Member State arrangements and the type of hazardous event.</p> <ul style="list-style-type: none"> ◆ Ministry of Health ◆ Sendai Framework Monitoring National Focal Point ◆ Health statistics office/health information management systems ◆ National disease surveillance system ◆ National disaster management offices ◆ National statistics offices ◆ National Focal Point in the Ministry of Health for SDG reporting ◆ World Health Organization (WHO) Country Offices, WHO Regional Offices, WHO Health Emergencies Programme, Global Health Observatory ◆ Other sectors contributing to health (e.g. education/universities, business, insurance) ◆ Operators of health-care facilities from all sectors in the country
<p>INDICATOR FORMULA</p>	<p>Indicator C-1: Direct economic loss attributed to disasters in relation to global GDP (compound indicator)</p> <p style="text-align: center;">$(a + b + c + d + e)/f$ where f is GDP</p> <p>Health sector contributes to b (C-3) and d (C-5)</p> <p>NB: a, c and e refer to direct agricultural loss, losses in the housing sector, loss of cultural heritage.</p> <p>Indicator C-5 ("d" in the formula above): Direct economic loss resulting from damaged or destroyed infrastructure (including health facilities)</p> <p>C-5 = Sum of direct economic loss estimated for D-2, D-3, D-4, where D-2 is the number of destroyed or damaged health facilities attributed to disasters</p> <p>NB: D-3 and D-4 refer to educational facilities and other critical infrastructure units and facilities.</p> <p>C-5 (Health facilities) Method 1: Data not disaggregated (no distinction of damaged/destroyed)¹</p> <ul style="list-style-type: none"> ◆ Health facility (economic loss) = number of affected facilities * average facility size (m²) * construction cost per facility* (1 + additional % equipment + additional % associated infrastructure) * affected ratio ◆ Convert the value expressed in national currency into US dollars and derive the total national loss value in US dollars ◆ In this equation the affected ratio is the ratio (as a percentage) of the estimated number of facilities damaged or destroyed divided by the total number of facilities in the affected area

1. These formulae for C-5 and C-3 are amended versions of those in the UNISDR Guidance Note (UNDRR will amend future versions).

	<p>C-5 (Health facilities) Method 2: Data disaggregated in damaged and destroyed (these are added together)¹</p> <ul style="list-style-type: none"> ◆ Damaged health facilities (economic loss) = number of damaged facilities * average facility size (m²) * construction cost per facility * (1+ additional % equipment + additional % associated infrastructure) ◆ Destroyed health facilities (economic loss) = number of destroyed facilities * average facility size (m²) * construction cost per facility * (1+additional % equipment * additional % associated infrastructure) ◆ Convert the value expressed in national currency into US dollars and derive total national loss value in US dollars <p>NB: The above methods are estimations of economic loss based on estimated levels of damage or destruction of health facilities. In other situations (e.g. in small-scale events) more detailed information on the level of damage and destruction and associated losses may be available for specific facilities and other health infrastructure.</p> <p>Indicator C-3 ("b" in the formula for C-1): Direct economic loss due to all other damaged or destroyed productive assets attributed to disasters (this is a broad set of assets from different economic sectors that includes health)</p> <p>In the health sector, C-3 = C-5 (health facilities) + the economic losses due to damage and loss of productive assets (e.g. pharmaceutical manufacturers, private sector services)</p>
<p>INDICATOR COMPONENTS</p>	<p>There is recognition that Member States use a diverse range of tools to gather and report data, therefore, the data sources and requirements mentioned in this section are not exhaustive but represent common examples.</p> <p>Data requirements:</p> <ul style="list-style-type: none"> ◆ Minimum = total number of health facilities affected; hazardous events (by hazard type). ◆ Recommended = number of facilities damaged and destroyed, by administrative/geographical area, size of facilities (estimate). ◆ Desirable = damage to other health infrastructure (e.g. laboratories, pharmacies), number of health workers per facility, types of facilities, construction cost per m² for types of facilities. <p>Data sources: Health facility databases (public, private, education (university), non-government), laboratory networks, health information systems; damage and loss assessments in emergencies; surveys (national/international).</p> <p>Data owners: Ministry of Health, public health agencies, national hospital associations, national disaster management offices.</p>
<p>INTERPRETATION CONSIDERATIONS</p>	<ul style="list-style-type: none"> ◆ Health is a component of C-1, C-3 and C-5. To reduce the risk of double counting, consider that C-5 will be included in C-3. ◆ Variations in the classification of facilities (by size, by level, by type). ◆ Estimations and ratios depend on the availability of: (i) data on the total number of health facilities by size or type in an affected area; and (ii) the estimated proportion of facilities damaged or destroyed. ◆ Refer to <i>UNDRR/UNISDR Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction</i>, page 71, for proposed facility size definitions.² ◆ Estimations of the level of damage to health facilities compared with facilities that are either undamaged (functioning) or destroyed.

1. These formulae for C-5 and C-3 are amended versions of those in the UNISDR Guidance Note (UNDRR will amend future versions).

2. Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction: collection of technical notes on data and methodology. Geneva: United Nations Office for Disaster Risk Reduction; 2017 (https://www.unisdr.org/files/54970_techguidancefdigitalhr.pdf, accessed 31 March 2019).

	<ul style="list-style-type: none"> ◆ There is a need to consider how to measure the economic losses associated with the loss of services as a productive asset in C-3; e.g. a health facility in an epidemic may not experience physical damage, however, economic losses may arise from the impact of the event on the quantity and quality of services provided. ◆ The construction cost per square metre will change due to technical developments and the price level will also influence the unit price. ◆ A range of estimates using many varied methodologies are likely to produce wide error bars for the compound indicators.
<p>CUSTOMIZABLE INDICATORS</p>	<p>Countries may consider customizable indicators that measure the pattern over time of: (i) both direct and indirect economic losses; and/or (ii) losses that are attributable to all types of hazards, including those beyond the scope of the Sendai Framework (e.g. violence and conflict).</p> <p>In future, the economic loss due to disruption of health services (from all sectors) and the impact of the livelihoods of the health workforce could be considered the calculation of economic loss of productive assets.</p> <p>The health sector has a key role in reducing direct and indirect economic loss due to all types of hazards, particularly in protecting health facilities and reducing the economic losses due to biological hazards through prevention, early detection and control measures. Further reporting could be considered for linking the number of people whose health is affected with the effect on people's livelihoods as an example of economic loss. The health sector has key role in reducing the risks to people's livelihoods by protecting their health and well-being.</p>

C4. REPORTING

This Guidance Note outlines the key role that ministries of health have in providing data to support reporting against Sendai Framework Target C.

Each country's Sendai Framework Monitoring National Focal Point has responsibility for submitting national reports for the Sendai Framework. UNDRR developed a web-based tool to support Member States in reporting against the indicators. The Sendai Framework Monitor (<https://sendaimonitor.unisdr.org/>) not only functions as a reporting tool, but also as a management tool to help countries develop DRR strategies, make risk-informed policy decisions and allocate resources to manage risks.

Member States are expected to report annually against the Sendai Framework, however, data should

be recorded at the national level after hazardous events occur.

As of 1 March 2018, Member States have been reporting against the indicators for measuring the global targets of the Sendai Framework, and DRR-related indicators of the SDGs, using the online Sendai Framework Monitor. It is important that the relevant officials in the ministries of health are either linked to the Sendai Framework Monitoring National Focal Point or are granted access to the Sendai Framework Monitor to input health data as outlined in Section C3.

For further information about how to access the Sendai Framework Monitor tool for reporting, please refer to the National Sendai Framework Monitoring Focal Point.

ANNEX C1. EXAMPLES OF CALCULATIONS OF DESTROYED/DAMAGED HEALTH SERVICES FROM THE UNISDR TECHNICAL GUIDANCE¹

Step 1: Collect good quality data on physical damage, ideally disaggregated and described in metadata:

- ◆ Type, size and level of damage of productive assets can have large variations in terms of reconstruction cost.
- ◆ Depending on availability of data, countries can collect information on physical damage with increasing levels of detail.

Member States will need to define the level of disaggregation at which data will be collected, which will have a significant impact on the precision and accuracy of the estimations and will define the extent of the effort for data collection.

The Metadata mechanism will allow countries to define the classes of items that will be used to report when no individual asset reporting will be done. In order to make the estimation of losses more precise, it is suggested that countries consider additional disaggregation criteria; e.g. size typologies (such as small, medium, large health facilities) and/or the different levels of damage (partially, fully destroyed).

The decision of including more disaggregation criteria involves imposing additional burden to the data collection:

- ◆ Option 1: Basic disaggregation – only the total number of assets affected (damaged or destroyed) is collected and reported per type of asset. (Minimum)
- ◆ Option 2: Number of assets damaged and destroyed (or by brackets of damage ratio such as light damage, medium damage, total loss) are collected and reported separately per type of asset.
- ◆ Option 3: Number of assets damaged and destroyed (or by brackets of damage ratio) is collected and reported by size category, level of damage and type of asset. (This is broken down further on page 47 of the UNDRR/UNISDR Technical Guidance.)

1. Refer to pages 46–47 of: Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction: collection of technical notes on data and methodology. Geneva: United Nations Office for Disaster Risk Reduction; 2017 (https://www.unisdr.org/files/54970_techguidancefdigitalhr.pdf, accessed 31 March 2019).



TARGET

D

**SUBSTANTIALLY REDUCE DISASTER DAMAGE TO
CRITICAL INFRASTRUCTURE AND DISRUPTION
OF BASIC SERVICES, AMONG THEM HEALTH
AND EDUCATIONAL FACILITIES, INCLUDING
THROUGH DEVELOPING THEIR RESILIENCE BY
2030**

EXECUTIVE SUMMARY

Global Target D indicators aim to measure: (i) the damage and destruction of key infrastructure (e.g. health facilities); and (ii) the number of disruptions to basic services (e.g. health services) due to hazardous events, including disasters, in a country, thus providing a basis for analysing how these indicators may change over time. This Guidance Note aims to guide the health sector, in particular ministries of health, on their role in collecting and reporting data that are relevant to Target D with a focus on reporting the number of health facilities that are damaged and destroyed (D-2), and the number of occasions when health services at health facilities are disrupted (D-7). It includes a summary of the general guidance provided by the United Nations Office for Disaster Risk Reduction (UNDRR) to support UN Member States in monitoring and reporting against Target D of the Sendai Framework for Disaster Risk Reduction 2015–2030.^{1,2} Data for these indicators are linked with reporting for Target C; specifically, data on damage and destruction of health facilities and other health infrastructure (D-2) are required for measuring economic losses (C-5 and C-3).

KEY TASKS FOR THE MINISTRIES OF HEALTH

- ◆ Effective cooperation with the Sendai Framework Monitoring National Focal Point so that: (i) the National Focal Point is aware of the need to include health data for Target D; and (ii) ministries of health can provide relevant data on damage to health infrastructure and disruption to health services.
- ◆ Collation, collection and reporting of accurate data on the damaged and destroyed health facilities and disruption of health services affected

by events, including public, private, non-government facilities and services.

- ◆ Development and application of a consistent approach to reporting damaged and destroyed facilities and disruption to health to ensure comparability within each country.

INTRODUCTION

Health facilities are highly valuable community assets and critical for providing life-saving care in emergencies and disasters. There have been substantial efforts by Member States, partners and health facility managers and staff, e.g. through the Safe Hospitals Initiative and Smart Hospitals programmes, to protect the investment in health facilities from hazards and to ensure that health facilities are safe, secure and sustainable, and will continue to function in emergency or disaster situations. Nevertheless, health facilities are often damaged or destroyed, and services are disrupted due to the effects of all types of emergencies and disasters.

The purpose of this Guidance Note is to support ministries of health in the process of data collection and analysis of indicators to monitor and report progress and achievement against global Target D of the Sendai Framework and for the Sustainable Development Goal (SDG) reporting framework.

Indicators for Target D refer to two separate but interconnected situations. The first is the situation where critical infrastructure, including health facilities, is damaged or destroyed, and the second is when basic services, including health services, are disrupted (which could potentially happen with or without damage) due to hazardous events. Data on damage or destruction of health facilities (D-2) contribute to the compound indicator D-1, while data on the dis-

1. Sendai Framework for Disaster Risk Reduction 2015–2030. Geneva: United Nations Office for Disaster Risk Reduction; 2015 (http://www.unisdr.org/files/43291_sendaiframeworkfordrren.pdf, accessed 31 March 2019).

2. Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction: collection of technical notes on data and methodology. Geneva: United Nations Office for Disaster Risk Reduction; 2017 (https://www.unisdr.org/files/54970_techguidancefordigitalhr.pdf, accessed 31 March 2019).

ruption of health services contribute to compound indicator D-5. Data for these indicators are linked with the economic loss data for Target C, in that C-5 and C-3 are based on data on damage and destruction of health facilities and other health infrastructure (D-2), while data on disruption to health services, which are considered to be productive assets, informs the economic loss of productive assets (C-3).

D1. INDICATORS

The following table lists the indicators recommended by the Open-ended Intergovernmental Expert Working Group (OIEWG) for the measurement of global Target D of the Sendai Framework, and were endorsed by the United Nations General Assembly in its resolution A/RES/71/276, *Report of the Open-ended Intergovernmental Expert Working Group on indicators and terminology relating to disaster risk reduction*.¹

No.	INDICATORS FOR MEASUREMENT AT THE GLOBAL LEVEL	HEALTH DATA REQUIRED FROM THE HEALTH SECTOR	LINK TO SDG INDICATORS (AND OTHER SENDAI INDICATORS)
D-1	Damage to critical infrastructure attributed to disasters (compound indicator)	Yes	11.5 (and linked to Sendai indicator C-1)
D-2	Number of destroyed or damaged health facilities attributed to disasters	Yes	Linked to Sendai indicators C-3 and C-5
D-3	Number of destroyed or damaged educational facilities attributed to disasters	No	
D-4	Number of other destroyed or damaged critical infrastructure units or facilities attributed to disaster	No	
D-5	Number of disruptions to basic services attributed to disasters (compound indicator)	Yes	Linked to Sendai indicator C-3
D-6	Number of disruptions to educational services attributed to disasters	No	
D-7	Number of disruptions to health services attributed to disasters	Yes	Linked to Sendai indicator C-3
D-8	Number of disruptions to other basic services attributed to disasters	No	

1. Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction. Note by the Secretary-General. New York (NY): United Nations; 2016 (A/71/644; <https://www.unisdr.org/we/inform/terminology>, accessed 18 February 2019).

D2. POLICY CONTEXT

<p>WHY IS THIS IMPORTANT</p>	<p>Damage and destruction of health-care facilities is important because of the disruption to health services (and consequential health consequences) and the costs of repair and rebuilding of these vital community and health sector assets. Disruption of health services may not be due to damage but may be the result of the disruption to other services upon which the functioning of the health facility depends, for example, power or water supply, supply chain or the unavailability of staff who have been affected by the event. Increased cases of disease and death are the expected health consequences from failure to access health and other basic services during and after hazardous events. For example, patients with chronic conditions who are unable to obtain medications or equipment may develop complications, or an interrupted safe water supply may lead to contaminated water and the risk of waterborne outbreaks of disease.</p> <p>In emergencies and disasters, data on damage to health facilities and disruption to health facilities are collected through various forms of assessment, however, these data are not often conducted systematically nor for all types of events.</p> <p>Data held by ministries of health and other parts of the health sector are vital in ensuring that full reporting of damage of health facilities and disruption to health services is undertaken after each event. Data should reflect the impact of hazardous events on health facilities in public, private, non-government, education/university sectors in the country.</p>
<p>BASELINE DATA AND VARIATION</p>	<p>For Member States that have been working with the DesInventar system¹, national disaster loss databases do not necessarily include historical data on damage to railways, ports, airports and other infrastructures, such as health facilities.</p> <p>Based on the UNDRR/UNISDR 2017 <i>Sendai Framework data readiness review</i>, data for the "number of health facilities destroyed or damaged" are currently available in 56 countries (representing 64% of reporting countries) and for the "number of disruptions to health services attributed to disasters" are currently available in 39 countries (representing 45% of reporting countries).²</p>
<p>ISSUES/CHALLENGES</p>	<p>Temporal aspects of data collection: Refer to the Overview with regard to timeframes and cutoffs for data collection for small-scale, sudden-onset, large-scale, slow-onset and long-duration events. Rapid assessments of damage and disruption can be followed by more detailed assessments. It is useful to collect data on damage and disruption both during the event (where there is an operational imperative) and after the event (where data are likely to be more complete).</p> <p>Types of hazard: See the Overview. Hazards within the scope of the Sendai Framework should be covered in Target D for Sendai Framework reporting. Customizable indicators should consider all types of hazards. For full details of hazards, see the Overview Annex 1: WHO Classification of Hazards.</p> <p>Scale of hazardous events: Economic losses associated with different scales of hazardous events, including emergencies and disasters, should be covered.</p> <p>Definitions: Defining the thresholds for levels of damage: as a basic approach, it is proposed that countries could categorize damage to health facilities in terms of: (i) destroyed – no functions can be performed; (ii) damaged (partial damage) – functionality is recoverable or some services are performed; and (iii) undamaged or limited damage with little effect on the level of services or function.</p>

1. Desinventar Sendai, UNDRR [website] (<https://www.desinventar.net/>, accessed 28 November 2019).

2. Disaster-related data for sustainable development: Sendai Framework data readiness review 2017, Global Summary report 2017. Geneva: United Nations Office for Disaster Risk Reduction; 2017 (https://www.unisdr.org/files/53080_entrybgpaperglobalsummaryreportdisa.pdf, accessed 31 March 2019).

Disruption to services: It is challenging to measure disruption to services unless there are reference packages of health services that each level of facility is expected to deliver, data on the status of those services prior to the event, and an assessment of the level of services during and after the event to determine if there has been a reduction in services. As indicated above, it is proposed that countries could categorize disruption in the following categories: (i) no functionality/no services; (ii) a reduction in health services; and (iii) continuity of services with little or no effect.

Available data: The collection of data on damage and disruption to health services will prove challenging in countries which do not have a complete registry of the numbers, names, location, level and size of health facilities before, during and after an event.

Based on the UNDRR/UNISDR 2017 *Sendai Framework data readiness review*, 22% of reporting countries indicated that they do not collect the number of health facilities destroyed or damaged, while another 14% did not respond to this issue.¹ Health data on damage and disruption may be available for specific locations or specific events. These data should be compiled into national figures for all events. For reporting on damage, countries are advised to focus on the damage to health facilities. For reporting on disruption, countries are advised to link this data to damage to health facilities, and to the level of disruption (as indicated above) noting that disruption may not be due to direct damage to the health facility, e.g. loss of water supply or other infrastructure, unavailability of staff.

Statistical processing: Disaster loss data are greatly influenced by large-scale catastrophic events, which represent important outliers in terms of the scale of damage to critical infrastructure.

Facility size: There are different methods for categorizing the type and size of health facilities and calculating the losses associated with damage to these facilities. The UNDRR/UNISDR Technical Guidance provides a method for describing small, medium and large facilities (e.g. area of premises, construction cost, equipment, associated infrastructure).²

Tools: The World Health Organization (WHO) Health Resources and Services Availability Monitoring System (HeRAMS) tool enables monitoring of health facilities, services and resources availability in emergencies and the reason for gaps in service availability. HeRAMS, in full or modified form, could assist countries in reporting against this indicator.³

1. Disaster-related data for sustainable development: Sendai Framework data readiness review 2017, Global Summary report 2017. Geneva: United Nations Office for Disaster Risk Reduction; 2017 (https://www.unisdr.org/files/53080_entrybgpaperglobalsummaryreportdisa.pdf, accessed 31 March 2019).

2. Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction: collection of technical notes on data and methodology. Geneva: United Nations Office for Disaster Risk Reduction; 2017 (https://www.unisdr.org/files/54970_techguidancefdigitalhr.pdf, accessed 31 March 2019).

3. Health Resources Availability Monitoring System (HeRAMS). WHO [website] (<http://www.who.int/hac/herams/en/>, accessed 31 March 2019).

D3. METHODS

<p>WHAT IS MEASURED</p>	<p>Sendai Framework: The pattern over time of the damage to critical infrastructure and disruption to basic services attributable to hazards (within the scope of the Sendai Framework) in the country. See also customizable indicators in this section.</p> <p>Metadata on the methodology and criteria that are being applied to data collection, calculation and reporting for these indicators by a country should be described, documented and maintained to facilitate a consistent approach, comparability and data improvements across the reporting period.</p>
<p>KEY TERMS</p>	<p>Disruption: One or a combination of the following:</p> <ul style="list-style-type: none"> ◆ Interruptions, either single- or multiple-, short- or long-term, of the health services as a consequence of the event. Ministries of health may consider the following classification: (i) no functionality/no services; (ii) a reduction in health services; and (iii) continuity of services with little or no change on quantity or quality. ◆ Damage to health facilities and disruption of infrastructure (e.g. water) upon which health facilities depend. ◆ A measurable/noticeable reduction in the quantity and quality of the service. ◆ Reduction in the population covered by the service. <p>Critical infrastructure: The physical structures, facilities, networks and other assets that provide services that are essential to the social and economic functioning of a community or society. These include health facilities and other health infrastructure.</p> <p>Basic services: Services that are needed for all of society to function effectively or appropriately (include health-care services; it is proposed to focus on health services provided at health facilities).</p> <p>Health-care facilities: Includes health centres; clinics; local, regional and tertiary hospitals; and outpatients centres. It may also include health laboratories and general facilities used by primary health providers.</p>
<p>HEALTH INPUT</p>	<ul style="list-style-type: none"> ◆ Data on the number in the formula below for “a” = number of destroyed or damaged health facilities attributed to disasters (D-2). ◆ Data on the number of disruptions to health services attributed to disasters (D-7). ◆ D-2 contributes to D-1 and D-7 contributes to D-5. ◆ D-2 is linked to the economic loss of damage to infrastructure (C-3 and C-5) and both D-2 and D-7 are connected to C-3 (economic loss of productive assets). <p>A basic approach to D-3 would calculate the numbers of facilities damaged or destroyed by size (small, medium, large) or some other form of classification standard for health-care facilities (e.g. health centre, district hospital, tertiary hospital). Further details could be provided by counting: (i) a wider range of facilities; (ii) the level of damage and destruction; and/or (iii) specialized types of facility (e.g. laboratories). It is also important to ensure that all data are collected for all facilities and services, including those operated by different sectors, including the government, private, education/university and non-government sectors.</p>
<p>WHOM TO ENGAGE WITH</p>	<p>Ministries of health must engage with the Sendai Framework Monitoring National Focal Point to ensure the inclusion of health data in reporting of damages and disruption to basic services for Target D, and with the health sector to ensure their accountability for data collection and reporting in accordance with timeframes and deadlines for national reporting. Contact details for organizations may already be available through national health and multisectoral plans related to emergencies, disasters, climate change, etc.</p> <p>Following are some suggested organization/mechanisms for data gathering, but this list is not exhaustive, and will depend on Member States' arrangements and the hazardous event.</p>

	<ul style="list-style-type: none"> ◆ Ministry of Health ◆ Sendai Framework Monitoring National Focal Point ◆ Health statistics office/health information management systems ◆ National disease surveillance system ◆ National disaster management offices ◆ National statistics offices ◆ National Focal Point in the Ministry of Health for SDG reporting ◆ WHO Country Office, WHO Regional Offices, WHO Health Emergencies Programme, Global Health Observatory ◆ Other sectors contributing to health (e.g. business, insurance) ◆ Operators of health-care facilities from all sectors in the country (public, private, non-government, education/universities)
INDICATOR FORMULA	<p>Indicator D-1. Damage to critical infrastructure attributed to disasters (compound indicator)</p> <p style="text-align: center;">$[(a + b + c)/d] * 100\ 000$</p> <p>a = number of destroyed or damaged health facilities attributed to disasters (indicator D-2) d = population</p> <p>NB: b and c refer to educational facilities and other critical infrastructure.</p> <p>Indicator D-2. Number of destroyed or damaged health facilities attributed to disasters</p> <p>Indicator D-5. Number of disruptions to basic services attributed to disasters (compound indicator)</p> <p style="text-align: center;">$[(e + f + g)/d] * 100\ 000$</p> <p>f = number of disruptions to health services attributed to disasters d = population</p> <p>NB: e and g refer to educational services and other basic services.</p> <p>Indicator D-7. Number of disruptions to health services attributed to disasters</p>
INDICATOR COMPONENTS	<p>There is recognition that Member States use a diverse range of tools to gather and report data, therefore, the data sources and requirements mentioned in this section are not exhaustive but represent common examples.</p> <p>D-2: Damage to health facilities</p> <p>Data requirements:</p> <ul style="list-style-type: none"> ◆ Minimum = total number of health facilities affected; hazardous events (by hazard type). ◆ Recommended = number of facilities damaged and destroyed, by administrative geographic area, damaged/destroyed, size of facilities (estimate). ◆ Desirable = damage to other types of health facilities, other health infrastructure (e.g. laboratories, pharmacies). <p>Data sources. Health facility databases (public, private, education [university], non-government), laboratory networks, health information systems; damage and loss assessments in emergencies.</p>

	<p>D-7: Disruption to health services. Interruption of the service either partial or full; decrease in the quantity and quality of service; reduction in the coverage of the service; or the infrastructure supporting the service was damaged or destroyed (see page 3 of the <i>UNDRR/UNISDR Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction</i>).¹</p> <p>Data requirements:</p> <ul style="list-style-type: none"> ◆ Minimum = number of disruptions based on number of health facilities damaged or destroyed, for hazardous events (by hazard type). ◆ Recommended = number of disruptions by administrative/geographical area, reduction of services in health facilities. ◆ Desirable = disruption to other health infrastructure and other types of health facilities, reduction in staffing levels. <p>Data sources (D-2 and D-7): Health facility databases (public, private, education [university], non-government), disease surveillance systems, laboratory networks, health information systems; damage and loss assessments in emergencies (national/international), HeRAMS.</p> <p>Data owners: Ministry of Health, public health agencies, national hospital associations, infrastructure providers, national disaster management offices.</p>
<p>REPRESENTED POPULATION</p>	<p>The represented population for Sendai Framework reporting for global targets is the national population. There are different ways to measure this depending on the data sources available, but it is important to ensure the same data source/method is used each year. Reporting against Target D should be rates per 100 000.</p> <p>Available through the national census (National Statistics Office), World Bank or UN Statistical Commission.</p>
<p>INTERPRETATION CONSIDERATIONS</p>	<ul style="list-style-type: none"> ◆ Variations in the classification of facilities (by size, level or type). ◆ Estimations depend on the availability of (i) data on the total number of health facilities by size or type in an affected area; and (ii) the estimated proportion of facilities damaged or destroyed. ◆ Critical infrastructure classifications defined by UNDRR includes major categories and list of proposed elements (see <i>UNDRR/UNISDR Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction</i>, page 71, for facility size definitions; page 93 for measures of service definitions.² ◆ Estimations of the level of damage to health facilities compared with facilities that are either undamaged (functioning) or destroyed. ◆ Setting thresholds for the levels of disruption to services (e.g. duration, level). The disruption to services also depends on the level or package of services prior to the event. ◆ Counting the number of disruptions does not reflect the level of disruption to services. ◆ Biological hazards (e.g. epidemics) may not cause damage to health facilities but can cause disruption to health services.

1. Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction: collection of technical notes on data and methodology. Geneva: United Nations Office for Disaster Risk Reduction; 2017 (https://www.unisdr.org/files/54970_techguidancefdigitalhr.pdf, accessed 31 March 2019).

2. Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction: collection of technical notes on data and methodology. Geneva: United Nations Office for Disaster Risk Reduction; 2017 (https://www.unisdr.org/files/54970_techguidancefdigitalhr.pdf, accessed 31 March 2019).

CUSTOMIZABLE INDICATORS

Countries, through the ministries of health, may consider customizable indicators that measure the pattern over time of: (i) number of destroyed or damaged health facilities attributable to all types of hazardous events (including societal hazards); and (ii) number of disruptions to health services attributable to all types of hazardous events (including societal hazards, e.g. violence, conflict).

The health sector has a strong interest in reducing damage to health facilities and disruption to health services due to all types of hazards, particularly in protecting health facilities and reducing disruption due to biological hazards through disease prevention, early detection and control measures. Further reporting could be considered for linking biological hazards as a cause of disruption to other critical infrastructure and services.

D4. REPORTING

This Guidance Note outlines the key role that ministries of health have in providing data to support reporting against Sendai Framework Target D.

Each country's Sendai Framework Monitoring National Focal Point has responsibility for submitting national reports for the Sendai Framework. UNDRR developed a web-based tool to support Member States in reporting against the indicators. The Sendai Framework Monitor (<https://sendaimonitor.unisdr.org/>) not only functions as a reporting tool, but also as a management tool to help countries develop disaster risk reduction (DRR) strategies, make risk-informed policy decisions and allocate resources to manage risks. Member States are expected to report annually against the Sendai Framework, however, data should be recorded after hazardous events occur.

As of 1 March 2018, Member States have been reporting against the indicators for measuring the global targets of the Sendai Framework, and DRR-related indicators of the SDGs, using the online Sendai Framework Monitor. It is important that the relevant officials in the ministries of health are either linked to the National Focal Point or are granted access to the Sendai Framework Monitor to input health data as outlined in Section D3.

For further information about how to access the Sendai Framework Monitor tool for reporting, please refer to the Sendai Framework Monitoring National Focal Point.



TARGET

E

**SUBSTANTIALLY INCREASE THE NUMBER
OF COUNTRIES WITH NATIONAL AND LOCAL
DISASTER RISK REDUCTION STRATEGIES BY
2020**

EXECUTIVE SUMMARY

Global Target E indicators aim to measure the number of countries that adopt and implement national and local strategies on disaster risk reduction (DRR) in line with the multi-hazard scope of the Sendai Framework, thus providing a basis for analysing how these indicators may change over time. Strategies should include all relevant sectors, including the health sector. The United Nations Office for Disaster Risk Reduction (UNDRR) has defined characteristics of national strategies, including goals, objectives across different timescales, concrete targets, risk management measures, indicators and timeframes that are aimed at preventing the creation of disaster risk, the reduction of existing risk and the strengthening of economic, social, health and environmental resilience. This Guidance Note aims to guide the health sector, in particular ministries of health, on their role in collecting and reporting data that are relevant to Target E with a focus on reporting the health sector components of national and local DRR strategies. It includes a summary of the general guidance provided by UNDRR to support UN Member States in monitoring and reporting against Target E of the Sendai Framework.^{1,2}

KEY TASKS FOR MINISTRIES OF HEALTH

- ◆ Effective cooperation with the Sendai Framework Monitoring National Focal Point so that: (i) the National Focal Point is aware of the need to include health data for Target E; and (ii) ministries of health can provide relevant data on national and local health emergency and disaster risk management (Health EDRM) strategies.
- ◆ Collation, collection and reporting of accurate data on the number of national and local DRR

strategies that include the health sector for the scope of hazards in the Sendai Framework, including biological hazards.

- ◆ Working across the health sector and with national and local disaster management offices and partners to ensure that all national and local DRR strategies include health components.
- ◆ Working with health sector and partners at national and local levels for the development, implementation and reporting of Health EDRM strategies that are linked with multisectoral strategies and will support the implementation of the Sendai Framework and related frameworks, such as the Sustainable Development Goals (SDGs) and the International Health Regulations.

INTRODUCTION

The Sendai Framework provides guidance on multi-sectoral strategies and actions aimed at preventing new risk, reducing existing risk and strengthening resilience to biological, natural, technological and environmental hazards. Target E seeks to measure the adoption and implementation of DRR strategies at national and local levels that support the implementation of the Sendai Framework: the health sector has a key role in these strategies. Target E is in line with Targets 1.5, 11.b and 13.1 in the Sustainable Development Goals, and also supports SDG Health Goal Target 3d: Strengthening the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks.

The purpose of this Guidance Note is to support ministries of health in the process of data collection and analysis of indicators to monitor and report progress and achievement against global Target E of the Sendai Framework and for the SDG reporting framework.

1. Sendai Framework for Disaster Risk Reduction 2015–2030. Geneva: United Nations Office for Disaster Risk Reduction; 2015 (http://www.unisdr.org/files/43291_sendaiframeworkfordrren.pdf, accessed 31 March 2019).

2. Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction: collection of technical notes on data and methodology. Geneva: United Nations Office for Disaster Risk Reduction; 2017 (https://www.unisdr.org/files/54970_techguidancefdigitalhr.pdf, accessed 31 March 2019).

E1. INDICATORS

The following table lists the indicators recommended by the Open-ended Intergovernmental Expert Working Group (OIEWG) for the measurement of global Target E of the Sendai Framework, and were endorsed by

the United Nations General Assembly in its resolution A/RES/71/276, *Report of the Open-ended Intergovernmental Expert Working Group on indicators and terminology relating to disaster risk*.¹

No.	INDICATORS FOR MEASUREMENT AT THE GLOBAL LEVEL	HEALTH DATA REQUIRED FROM THE HEALTH SECTOR	LINK TO SDG INDICATORS
E-1	Number of countries that adopt and implement national DRR strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030	Yes	1.5.3 (repeat of 11b.1 and 13.1.2), 3d.1
E-2	Percentage of local governments that adopt and implement local DRR strategies in line with national strategies	Yes	1.5.4 (repeat of 11b.2 and 13.1.3), 3d.1

Note: As each country has its own administrative arrangements and responsibilities for DRR at local, subnational and national levels, countries are expected to align the indicators with their respective arrangements.

E2. POLICY CONTEXT

WHY IS THIS IMPORTANT	<p>Multisectoral policy context. National and local multisectoral DRR strategies should include health sector strategies. Multisectoral strategies should recognize that all sectors contribute to the reduction of mortality, injured and ill, and other health consequences. Strategies should include biological hazards along with natural and technological hazards, and environmental hazards based on assessment of local and national risks.</p> <p>Health sector policy context. Health EDRM strategies (and other health sector strategies) should be able to demonstrate that they are contributing to the implementation of many elements of the Sendai Framework for Disaster Risk Reduction. Integrating disaster risk management into primary, secondary and tertiary health care will reduce the health risks and consequences of emergencies and disasters and enhance health security, universal health coverage, sustainable development and the resilience of communities and countries.</p>
BASELINE DATA AND VARIATION	<ul style="list-style-type: none"> ◆ Based on the UNDRR/UNISDR 2017 <i>Sendai Framework Data readiness review</i>, data for the “number of countries that adopt and implement national disaster risk reduction strategies” are currently available in 47 countries (representing 54% of reporting countries).² While for Target E-2, 34 countries (39% of reporting countries) reported that there are local DRR strategies led by local governments. ◆ As of 31 March 2019, 52 countries have completed national actions plans for health security.³

1. Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction. Note by the Secretary-General. New York (NY): United Nations; 2016 (A/71/644; <https://www.unisdr.org/we/inform/terminology>, accessed 18 February 2019).

2. Disaster-related data for sustainable development: Sendai Framework data readiness review 2017, Global Summary report 2017. Geneva: United Nations Office for Disaster Risk Reduction; 2017 (https://www.unisdr.org/files/53080_entrybgpaperglobalsummaryreportdisa.pdf, accessed 31 March 2019).

3. Strategic Partnership for International Health Regulations (2005) and Health Security. WHO [website] (<https://extranet.who.int/sph/country-planning>, accessed 31 March 2019).

	<p>Based on the World Health Organization (WHO) global survey of country capacities for Health EDRM (2015 – unpublished):</p> <ul style="list-style-type: none"> ◆ 56 out of 69 countries (81%) had national multisectoral legislation or policies for EDRM, with 10 (14%) in progress. ◆ 41 out of 60 countries (68%) had sub-national multisectoral legislation or policies for EDRM, with 7 (12%) in progress. ◆ Of the countries that had national multisectoral policies or legislation, in 40 countries (71%) all of the policies mandated responsibilities for the health sector, and in 15 (27%) only some policies referred to the health sector. ◆ Of the countries that had subnational multisectoral policies or legislation, all of the policies in 33 countries (66%) mandated responsibilities for the health sector, and some policies in 14 countries (28%). ◆ 41 out of 69 countries (59%) had national multisectoral plans to develop EDRM capacities, with 23 (33%) in progress. ◆ 28 out of 60 countries (47%) had subnational multisectoral plans to develop EDRM capacities, with 22 (37%) in progress. ◆ 58 out of 91 countries (64%) had a national health policy on Health EDRM, with 21 (23%) in progress. ◆ 46 out of 81 countries (57%) had subnational health policy on Health EDRM, with 14 (17%) in progress. ◆ 37 of 90 (41%) countries had national capacity development plans to strengthen Health EDRM, with 29 (32%) in progress. ◆ 29 of 79 (37%) countries had subnational capacity development plans to strengthen Health EDRM, with 21 (27%) in progress. ◆ In 2008, two thirds of 60 surveyed countries reported a policy on health sector emergency preparedness and response programmes at the national and provincial levels, and policy on health sector emergency preparedness and response plans.¹
ISSUES/CHALLENGES	<ul style="list-style-type: none"> ◆ The milestone for achievement and reporting of this milestone is 2020. ◆ Countries should determine the administrative levels for both development and reporting of national and local multisectoral and health strategies: e.g. national/central, subnational (provincial, state), district, local. Ministries of health will need to review alignment with health boundaries, taking into account where health may be devolved to subnational levels. ◆ Inclusion of health sector strategies in the national and local multisectoral strategies: strategies for implementing Health EDRM, the International Health Regulations (2005) and building resilient health systems are part of the national and local DRR strategies. ◆ Strategies should include the full scopes of hazards in the Sendai Framework, including biological hazards. ◆ Strategies should address the 10 key elements of the indicator in order to be considered to be aligned with the Sendai Framework (see <i>UNDRR/UNISDR Technical Guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction</i>, page 125).² Health sector strategies may not follow the same structure.

1. Global assessment of health sector emergency preparedness and response. Geneva: World Health Organization; 2008 (http://www.who.int/hac/about/Global_survey_inside.pdf, accessed 31 March, 2019).

2. Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction: collection of technical notes on data and methodology. Geneva: United Nations Office for Disaster Risk Reduction; 2017 (https://www.unisdr.org/files/54970_techguidancefdigitalhr.pdf, accessed 31 March 2019).

E3. METHODS

<p>WHAT IS MEASURED</p>	<p>Sendai Framework: The number of countries, by 2020, with national DRR strategies in line with the Sendai Framework and the percentage of local governments with DRR strategies in line with national strategies. The health sector should ensure that these multisectoral strategies at national and local levels include health sector strategies, roles and actions. See also customizable indicators below.</p> <p>Metadata on the methodology and criteria that are being applied to data collection, calculation and reporting for these indicators by a country should be described, documented and maintained to facilitate a consistent approach, comparability and data improvements across the reporting period.</p>
<p>KEY TERMS</p>	<p>DRR strategies: Define goals and objectives across different timescales and with concrete targets, indicators and timeframes aimed at preventing the creation of disaster risk, the reduction of existing risk and the strengthening of economic, social, health and environmental resilience.</p> <p>National: Ministries at the national or central level.</p> <p>Local: Form of subnational public administration with responsibility for DRR (health sector should align with local multisectoral strategies for the purpose of reporting).</p>
<p>HEALTH INPUT</p>	<p>Data on the inclusion of:</p> <ul style="list-style-type: none"> ◆ Reduction in health risks and consequences as a key outcome of local and national DRR strategies. ◆ Health EDM strategies and components in local and national DRR strategies (including health sector roles and activities). ◆ Biological hazards in national and local DRR strategies.
<p>WHOM TO ENGAGE WITH</p>	<p>Ministries of health must engage with the Sendai Framework National Focal Point to ensure the inclusion of health data in reporting for Target E. Ministries should also work with the health sector and partners at national, subnational and local levels to ensure their accountability for data collection and reporting in accordance with the timeframes and deadlines for national reporting.</p> <p>Following are some suggested organizations/mechanisms for data gathering, but this list is not exhaustive, and will depend on Member States' arrangements and the hazardous event.</p> <ul style="list-style-type: none"> ◆ Ministry of Health ◆ Subnational ministries of health, health authorities at the local level ◆ Sendai Framework Monitoring National Focal Point ◆ National disaster management offices ◆ Local and subnational disaster management offices ◆ WHO Country Office, WHO Regional Offices, WHO Health Emergencies Programme
<p>INDICATOR FORMULA</p>	<p>Indicator E-1. Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015–2030</p> $[(a\%/100) + (b\%/100) + (c\%/100) + (d\%/100) + (e\%/100) + (f\%/100) + (g\%/100) + (h\%/100) + (i\%/100) + (j\%/100)] * 0.1$ <p>a = have different timescales, with targets, indicators and timeframes b = have aims at preventing the creation of risk c = have aims at reducing existing risk d = have aims at strengthening economic, social, health and environmental resilience e = address the recommendations of Priority 1, Understanding disaster risk: based on risk knowledge and assessments to identify risks at the local and national levels of the technical, financial and administrative disaster risk management capacity</p>

	<p>f = address the recommendations of Priority 2, Strengthening disaster risk governance to manage disaster risk: mainstream and integrate DRR within and across all sectors with defining roles and responsibilities</p> <p>g = address the recommendations of Priority 3, Investing in DRR for resilience: guide to allocation of the necessary resources at all levels of administration for the development and the implementation of DRR strategies in all relevant sectors</p> <p>h = address the recommendations of Priority 4, Enhancing disaster preparedness for effective response and to the principles of "build back better" in recovery, rehabilitation and reconstruction: strengthen disaster preparedness for response and integrate DRR response preparedness and development measures to make nations and communities resilient to disasters</p> <p>i = promote policy coherence relevant to DRR such as sustainable development, poverty eradication and climate change, notably with the SDGs and the Paris Agreement on Climate Change</p> <p>j = have mechanisms to follow-up, periodically assess and publicly report on progress</p>
	<p>Indicator E-2. Percentage of local governments that adopt and implement local disaster risk reduction strategies in line with national strategies.</p> <p style="text-align: center;">I/m</p> <p>I = number of local governments with aligned local DRR strategies m = total number of local governments</p>
INDICATOR COMPONENTS	<ul style="list-style-type: none"> ◆ The computation methodologies for E-1 (national strategies) and E-2 (local strategies) are intended to monitor progress at global and national as well as local levels, and the quality improvement in national DRR strategies over time. ◆ Quantitative indicators for national and local DRR strategies, including the key elements of a strategy, are weighted equally by assigning 10% (or 0.1) to each element. ◆ For E-1, it is recommended that progress in each indicator is benchmarked according to the following weighting:¹ <ul style="list-style-type: none"> ○ Comprehensive implementation (full score): 1.0 ○ Substantial implementation, additional progress required: 0.75 ○ Moderate implementation, neither comprehensive nor substantial: 0.50 ○ Limited implementation: 0.25 ○ If there is no implementation or no existence of a national DRR strategy, it will be 0
REPRESENTED POPULATION	<p>The number of local governments provides the denominator for indicator E-2. Countries should determine the administrative levels for reporting of national and local strategies in accordance with national governance arrangements.</p>
INTERPRETATION CONSIDERATIONS	<p>Information should be provided on the appropriate levels of government below the national level with responsibility for DRR.</p> <p>The health sector can provide information on the elements above for national and local DRR strategies. It will be useful for the health sector to measure the level of integration of health into national and subnational DRR policies and plans for each of these elements.</p>

1. Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction: collection of technical notes on data and methodology. Geneva: United Nations Office for Disaster Risk Reduction; 2017

CUSTOMIZABLE INDICATORS

Countries, through the ministries of health, may consider customizable indicators that measure how many countries have national and local Health EDRM strategies that contribute to the implementation of the Sendai Framework for Disaster Risk Reduction and other related frameworks.

The following indicators could be considered:

- ◆ The number of countries with national and local Health EDRM strategies that demonstrate the implementation of the Sendai Framework for Disaster Risk Reduction (using the 10 elements above).
- ◆ The number of national strategies to build capacity for the implementation of the International Health Regulations (2005), e.g. national action plans for health security.
- ◆ The number of national health sector policies, plans and strategies (NHPSPs) that integrate national Health EDRM strategies or equivalents.

Furthermore, health sector approaches to DRR strategies could also include societal hazards, such as violence and conflict that are outside the scope of the Sendai Framework.

E4. REPORTING

This Guidance Note outlines the key role that ministries of health have in providing data to support reporting against Sendai Framework Target E.

Each country's Sendai Framework Monitoring National Focal Point has responsibility for submitting national reports for the Sendai Framework. UNDRR developed a web-based tool to support Member States in reporting against the indicators. The Sendai Framework Monitor (<https://sendaimonitor.unisdr.org/>) not only functions as a reporting tool, but also as a management tool to help countries develop DRR strategies, make risk-informed policy decisions and allocate resources to prevent new disaster risks. For Target E, the milestone for reporting is 2020.

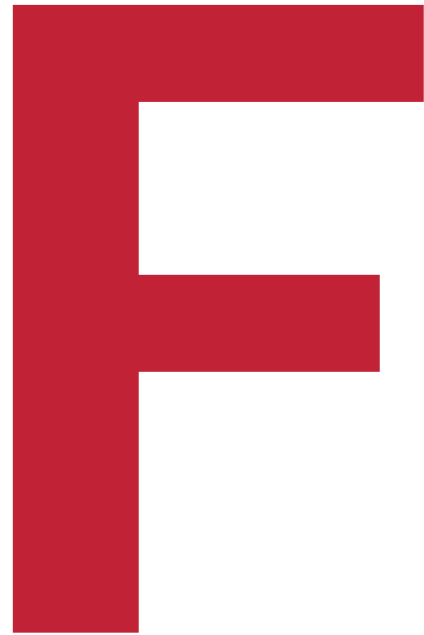
As of 1 March 2018, Member States have been reporting against the indicators for measuring the global targets of the Sendai Framework, and DRR-related indicators of the SDGs, using the online Sendai Framework Monitor. It is important that the relevant officials in the ministries of health are either linked to the National Focal Point or are granted access to the Sendai framework Monitor to input health data as outlined in Section E3.

For further information about how to access the Sendai Framework Monitor tool for reporting, please refer to the Sendai Framework Monitoring National Focal Point.



TARGET

F



**SUBSTANTIALLY ENHANCE INTERNATIONAL
COOPERATION TO DEVELOPING COUNTRIES
THROUGH ADEQUATE AND SUSTAINABLE
SUPPORT TO COMPLEMENT THEIR NATIONAL
ACTIONS FOR IMPLEMENTATION OF THIS
FRAMEWORK BY 2030**

EXECUTIVE SUMMARY

Global Target F indicators aim to measure the level of official international support for actions for national disaster risk reduction (DRR) through official development assistance (ODA), and multilateral and bilateral assistance to developing countries, thus providing a basis for analysing how these indicators may change over time. There are specific indicators related to the transfer and exchange of science, technology and innovation, to capacity-building and strengthening statistical capacities for DRR. This Guidance Note aims to guide the health sector, in particular ministries of health, on their role in collecting and reporting data that are relevant to Target F. It includes a summary of the general guidance provided by the United Nations Office for Disaster Risk Reduction (UNDRR) to support UN Member States in monitoring and reporting against Target F of the Sendai Framework.^{1,2}

KEY TASKS FOR MINISTRIES OF HEALTH

- ◆ Effective cooperation with the Sendai Framework Monitoring National Focal Point so that ministries of health can provide health data to national reporting on international cooperation.
- ◆ Collation, collection and reporting of accurate data on international cooperation in the health sector for the implementation of disaster risk management measures.
- ◆ Identify potential data sources for health aspects of ODA commitments and develop a methodology for reporting against the indicators that can be sustained across the Sendai Framework timeline.

INTRODUCTION

The commitment to provide international cooperation to developing countries for national DRR actions was made in the Sendai Framework. Target F seeks to enhance international cooperation to developing countries, with particular emphasis on least-developed countries, Small Island Developing States, landlocked developing countries and African countries, as well as middle-income countries facing specific challenges. The international cooperation flows to a wide range of sectors, including health, so the reporting from providers and recipients of international cooperation should include data on assistance to the health sector.

The purpose of this Guidance Note is to support ministries of health in the process of data collection and analysis of indicators to monitor and report progress and achievement against global Target F of the Sendai Framework and for the respective Sustainable Development Goal (SDG) reporting framework.

1. Sendai Framework for Disaster Risk Reduction 2015–2030. Geneva: United Nations Office for Disaster Risk Reduction; 2015 (http://www.unisdr.org/files/43291_sendaiframeworkfordrren.pdf, accessed 31 March 2019).

2. Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction: collection of technical notes on data and methodology. Geneva: United Nations Office for Disaster Risk Reduction; 2017 (https://www.unisdr.org/files/54970_techguidancefdigitalhr.pdf, accessed 31 March 2019).

F1. INDICATORS

The following table lists the indicators recommended by the Open-ended Intergovernmental Expert Working Group (OIEWG) for the measurement of global Target F of the Sendai Framework, and was endorsed by

the United Nations General Assembly in its resolution A/RES/71/276, *Report of the Open-ended Intergovernmental Expert Working Group on indicators and terminology relating to disaster risk reduction*.¹

No.	INDICATORS FOR MEASUREMENT AT THE GLOBAL LEVEL	HEALTH DATA REQUIRED FROM THE HEALTH SECTOR	LINK TO SDG INDICATORS
F-1	Total official international support (ODA plus other flows), for national DRR actions	Yes	
F-2	Total official international support (ODA plus other official flows) for national DRR provided by multilateral agencies	Yes	
F-3	Total official international support (ODA plus other official flows) for national DRR actions provided bilaterally	Yes	17.2, 17.3
F-4	Total official international support (ODA plus other official flows) for the transfer and exchange of DRR technology	Yes	17.7
F-5	Number of international, regional and bilateral programmes and initiatives for the transfer and exchange of science, technology and innovation in DRR for developing countries	Yes	17.6
F-6	Total official international support (ODA plus other official flows) for DRR capacity-building	Yes	17.9
F-7	Number of international, regional and bilateral programme and initiatives for DRR-related capacity-building in developing countries	Yes	
F-8	Number of developing countries supported by international, regional and bilateral initiatives to strengthen their DRR-related statistical capacity	Yes	17.19

1. Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction. Note by the Secretary-General. New York (NY): United Nations; 2016 (A/71/644; <https://www.unisdr.org/we/inform/terminology>, accessed 18 February 2019).

F2. POLICY CONTEXT

<p>WHY IS THIS IMPORTANT</p>	<p>Target F seeks to enhance international cooperation to developing countries to implement national actions for DRR. It focuses on financial resources, and support for science, technology development and transfer, and capacity-building. Ministries of health should seek to ensure that all international, multilateral or bilateral support in the health sector for national disaster risk management actions is included in the reporting against Target F. This target seeks to map the funding to all aspects of DRR, which may be applied to standalone projects, health emergency and disaster risk management strategies or as part of wider multisectoral cooperation programmes. This should include funding and other forms of assistance for managing the risk of hazardous events within the scope of the Sendai Framework, namely natural, biological, technological and environmental hazards.</p> <p>Ministries of health work with a range of partners to develop and implement capacities for Health emergency and disaster risk management (Health EDRM), across all levels of care and administration for prevention, preparedness, response and recovery from emergencies. In developing countries, funding for health can come from a range of providers, including international donors, multilateral agencies and through bilateral cooperation (e.g. foundations, development banks. The development of pharmaceuticals (e.g. drugs, vaccines), equipment and innovative approaches to health information management may be considered as examples of technology transfer between countries with varying levels of development and resources. This needs to be captured to identify the wide-ranging work being undertaken to strengthen DRR in the health sector.</p>
<p>BASELINE DATA AND VARIATION</p>	<p>The development of baselines for monitoring progress in achieving global targets will vary from country to country, subject to selected timeframes and data availability. Where data do not exist or have low visibility – for example, financial flows to/from the nongovernmental organizations or the private sector – significant work will be required to establish workable baselines. This may include the determination of data collection methodologies and tools at the global and national levels, respectively, and the development of capacities and competencies for countries where baselines do not exist.</p>
<p>ISSUES/CHALLENGES</p>	<p>Disaggregation: See the Overview.</p> <p>Data sources: See the Overview.</p>

F3. METHODS

<p>WHAT IS MEASURED</p>	<p>Target F seeks to measure the total official international support (ODA plus other official flows) for national DRR through governments, multilateral agencies and bilateral assistance. There are specific indicators that address support for transfer and exchange of science, technology and innovation, capacity-building and strengthening of statistical capacities for DRR. See also customizable indicators in this section.</p> <p>Metadata on the methodology and criteria that are being applied to data collection, calculation and reporting for these indicators by a country should be described, documented and maintained to facilitate a consistent approach, comparability and data improvements across the reporting period.</p>
<p>KEY TERMS</p>	<p>International cooperation. Concerns Official Development Finance (ODF), which is used by the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) to measure inflow of resources to recipient countries and includes bilateral ODA, grants and concessional and non-concessional development lending by multilateral financial institutions, and other official flows for development purposes (including refinancing loans) that have too low a grant element to qualify as ODA.</p>

	<p>ODA. This is a list of countries and territories maintained by the OECD with per capita incomes below US\$ 12 276 in 2010. ODA is designed to promote the economic development and welfare of developing countries. The list is periodically updated and currently contains over 150 countries or territories.¹</p>
<p>HEALTH INPUT</p>	<p>Data on levels of international cooperation provided to the health sector in developing countries for national DRR actions in the form of ODA and multilateral and bilateral support. Data should be organized using the three categories that are consistent with the acknowledged principles of global cooperation, as used in SDGs and the Sendai Framework: (i) financial resources; (ii) technology development and transfer; and (iii) capacity-building.</p> <p>Data for the implementation of actions for Health EDRM, including strengthening of capacities for biological, technological, natural and environmental hazards.</p> <p>For example:</p> <ul style="list-style-type: none"> ◆ Training of health care providers in Health EDRM, including emergency preparedness and response across health services. ◆ Strengthening capacities for the implementation of the International Health Regulations (2005), e.g. for national action plans for health security. ◆ Designing and implementing water and sanitation infrastructure to withstand hazards and reduce risks to health. ◆ Retrofitting existing health infrastructure such as health centres and hospitals with disaster-resilient building codes. ◆ Assessing changes in risk associated with all types of hazards (e.g. exposure and susceptibility to infectious diseases and extreme weather events for groups with specific vulnerabilities). ◆ Incorporating disaster-related health risks into clinical practice guidelines, and curricula for continuous medical education and training. ◆ Implementing preventive measures to counteract increased exposure to epidemic diseases.
<p>WHOM TO ENGAGE WITH</p>	<p>Ministries of health must engage with the Sendai Framework Monitoring National Focal Point to ensure the inclusion of health data on international cooperation for Target F; with Ministries of Finance, International Development, foreign affairs, and other relevant ministries; and with the health sector to ensure accountability for reporting of data in accordance with the timeframes and deadlines for national reporting.</p> <p>Following are some suggested organizations/mechanisms for data gathering, but this list is not exhaustive, and will depend on Member States' arrangements for providing and receiving international cooperation.</p> <ul style="list-style-type: none"> ◆ Ministry of Health, e.g. directorate of planning and financing or equivalent ◆ Sendai Framework Monitoring National Focal Point ◆ Ministries of Finance; Planning and Development; International Cooperation; Foreign Affairs ◆ National disaster management offices ◆ World Health Organization (WHO) Country Offices, WHO Regional Offices, WHO Health Emergencies Programme, Global Health Observatory
<p>INDICATOR FORMULA</p>	<p>This indicator is calculated using the sum of ODA, and where available other official flows and flows from all donors to developing countries in support of national DRR actions. Data are compiled by the OECD DAC from returns submitted by its member countries and other aid providers (via the Creditor Reporting System);¹ data can be disaggregated by provider and recipient, and are usually reported annually and expressed in US dollars at the average annual exchange rate.</p>

1. Net ODA. OECD [website] (<https://data.oecd.org/oda/net-oda.htm>, accessed 28 November 2019).

2. Creditor Reporting System. OECD [website] (<https://stats.oecd.org/Index.aspx?DataSetCode=CRS1>, accessed 28 November 2019).

<p>INDICATOR COMPONENTS</p>	<p>These indicators can be classified to the above-mentioned categories as follows:</p> <ul style="list-style-type: none"> ◆ Financial resources: includes indicators F-1, F-2, F-3, F-4 and F-6, which aim to measure different types and flows, in support of national actions for DRR in developing countries. ◆ Technology development and transfer: includes indicators F-4 and F-5, which aim to measure, respectively, flows and trends in activity, in support of the transfer and exchange of science, technology and innovation for DRR for developing countries. ◆ Capacity-building: includes indicators F-6, F-7 and F-8, which aim to measure flows and trends in activity, in support of DRR-related capacity, including statistical capacity, for developing countries.
<p>INTERPRETATION CONSIDERATIONS</p>	<p>Ministries of health will need to determine what types of international cooperation and for which actions should be included in reporting against these indicators. It could include all measures to reduce risks of emergencies and disasters across the spectrum of emergency prevention, preparedness, response and recovery for all types of hazards. This is potentially a wide range of actions when health systems strengthening and prevention measures are considered.</p>
<p>CUSTOMIZABLE INDICATORS</p>	<p>The health sector has a strong interest in implementing DRR for all types of hazards. Given that the scope of the Sendai Framework is biological, technological, natural and environmental hazards, Member States may consider customizable indicators that include societal hazards (including violence and conflict).</p>

F4. REPORTING

This Guidance Note outlines the key role that ministries of health have in providing data to support reporting against Sendai Framework Target F.

Each country's Sendai Framework Monitoring National Focal Point has responsibility for submitting national reports for the Sendai Framework. UNDRR developed a web-based tool to support Member States in reporting against the indicators. The Sendai Framework Monitor (<https://sendaimonitor.unisdr.org>) not only functions as a reporting tool, but also as a management tool to help countries develop DRR strategies, make risk-informed policy decisions and allocate resources to manage risks.

As of 1 March 2018, Member States have been reporting against the indicators for measuring the global targets of the Sendai Framework, and DRR-related indicators of the SDGs, using the online Sendai Framework Monitor. It is important that the relevant officials in the ministries of health are either linked to the National Focal Point or are granted access to the Sendai framework Monitor to input health data as outlined in Section F3.

For further information about how to use the Sendai Framework Monitor tool for reporting, please refer to National Sendai Framework Monitoring National Focal Point.





TARGET

G

**SUBSTANTIALLY INCREASE THE AVAILABILITY
OF AND ACCESS TO MULTI-HAZARD EARLY
WARNING SYSTEMS AND DISASTER RISK
INFORMATION AND ASSESSMENTS TO THE
PEOPLE BY 2030**

EXECUTIVE SUMMARY

Global Target G indicators aim to measure the availability and access to multi-hazard early warning systems (MHEWS) and risk information and assessments, thus providing a basis for analysing how these indicators may change over time. The number of people who evacuated pre-emptively due to early warning is also addressed in indicator G-6. MHEWS should include all major hazards, including biological hazards, while the health sector is a vital contributor, user of disaster risk information and risk assessments, including hazards, exposures, vulnerabilities and capacities. The health sector is also a facilitator of evacuation plans and provider of health services for evacuees at facility and community levels. This Guidance Note aims to guide the health sector, in particular ministries of health, on their role in collecting and reporting data that are relevant to Target G. It includes a summary of the general guidance provided by the United Nations Office for Disaster Risk Reduction (UNDRR) to support UN Member States in monitoring and reporting against Target G of the Sendai Framework.^{1,2}

KEY TASKS FOR MINISTRIES OF HEALTH

- ◆ Effective cooperation with the Sendai Framework Monitoring National Focal Point so that: (i) the National Focal Point is aware of the need to include health data for Target G; and (ii) ministries of health can provide relevant data on MHEWS, disaster risk information, risk assessments and evacuation.
- ◆ Collation, collection and reporting of accurate data from the health sector on the inclusion

of public health data and biological hazards in MHEWS and in disaster risk information and risk assessments.

- ◆ Collaboration with other sectors to specify the major hazards to be included in MHEWS.
- ◆ Working with national, regional and local health systems, including public, private and nongovernmental organizations, to ensure participation of health services in the development and implementation of MHEWS, conducting risk assessments, and making risk information accessible and available to populations at risk of hazardous events. The health sector provides health services to people before, during and after evacuations, including at evacuation centres, due to hazardous events.

INTRODUCTION

A people-centred MHEWS comprises four key elements: (i) disaster risk knowledge (data and disaster risk assessments); (ii) detection, monitoring, analysis and forecasting of the hazards; (iii) communication or dissemination of authoritative, timely, accurate and actionable warnings; and (iv) preparedness at all levels to respond to the warnings received. Target G indicators seek to measure the availability of MHEWS as well as the access to risk information and assessments, including health risks, at national and local levels. The purpose of this Guidance Note is to support ministries of health in the process of data collection and analysis of indicators to monitor and report progress and achievement against global Target G of the Sendai Framework and for the Sustainable Development Goal (SDG) reporting framework.

1. Sendai Framework for Disaster Risk Reduction 2015–2030. Geneva: United Nations Office for Disaster Risk Reduction; 2015 (http://www.unisdr.org/files/43291_sendaiframeworkfordrren.pdf, accessed 31 March 2019).

2. Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction. Geneva: United Nations Office for Disaster Risk Reduction; 2017 (https://www.unisdr.org/files/54970_techguidancefdigitalhr.pdf, accessed 31 March 2019).

G1. INDICATORS

The following indicators are recommended by the Open-ended Intergovernmental Expert Working Group (OIEWG) for the measurement of global Target G of the Sendai Framework, and were endorsed by

the United Nations General Assembly in its resolution A/RES/71/276, *Report of the Open-ended Intergovernmental Expert Working Group on indicators and terminology relating to disaster risk reduction*.¹

No.	INDICATORS FOR MEASUREMENT AT THE GLOBAL LEVEL	HEALTH DATA REQUIRED FROM THE HEALTH SECTOR	LINK TO SDG INDICATORS
G-1	Number of countries that have MHEWS (compound G-2 to G-5)	Yes	13.3, 3d
G-2	Number of countries that have multi-hazard monitoring and forecasting systems	Yes	13.1
G-3	Number of people per 100 000 that are covered by early warning information through local governments or through national dissemination mechanisms	Yes	
G-4	Percentage of local governments having a plan to act on early warnings	Yes	11b, 13.1,
G-5	Number of countries that have accessible, understandable, usable and relevant disaster risk information and assessment available to the people at national and local levels	Yes	3d, 13.2, 13.3
G-6	Percentage of the population exposed to or at risk from disasters protected through pre-emptive evacuation following early warning <i>Member States in a position to do so are encouraged to provide information on the number of evacuated people.</i>	Yes	

1. Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction. Note by the Secretary-General. New York (NY): United Nations; 2016 (A/71/644; <https://www.unisdr.org/we/inform/terminology>, accessed 18 February 2019).

G2. POLICY CONTEXT

<p>WHY IS THIS IMPORTANT</p>	<p>The inclusion of a dedicated target to substantially increase the availability of and access to MHEWS in the Sendai Framework for Disaster Risk Reduction 2015–2030 is a strong endorsement of the value of early warning systems to achieving reductions in loss of life, the numbers of people affected by disasters, economic losses and damage to critical infrastructure.</p> <p>MHEWS, risk assessments and risk information should include risks to public health from hazards within the scope of the Sendai Framework, including natural, technological, environmental and biological hazards.</p> <p>MHEWS are an integral part of risk management that includes identifying and assessing risks and strengthening emergency preparedness, including multi-hazard plans and specific hazard plans, e.g. for potential and actual disease outbreaks (cholera, Ebola virus disease), drought, floods, cyclones and other extreme weather. Ministries of health need to ensure that risks to health and early warning for infectious diseases are considered in the tracking of MHEWS and reporting against Target G. The health sector has a strong record of developing and implementing early warning systems, especially for infectious diseases. For example, integrated disease surveillance and response (IDSR) work to monitor, relay and respond early to any potential outbreaks. Ministries of health should consider the integration and strengthening of disease early warning systems with MHEWS.</p> <p>Risk assessments are fundamental to understanding health risks and developing and implementing risk-informed health emergency and disaster risk management (Health EDRM) strategies and measures across the spectrum of prevention, preparedness, response and recovery. Ministries of health have developed systems to assess health risks for different types of hazards (including biological hazards) and communicate them locally, regionally, nationally or across boundaries. Access to risk information and assessments at both national and local levels form part of indicator G-5.</p> <p>National reporting on strategic health emergency risk assessments, disease surveillance and risk communication (e.g. under State Party Annual Reporting for the International Health Regulations (2005) all support Target G and, therefore, can contribute to reporting against these indicators.¹</p>
<p>BASELINE DATA AND VARIATION</p>	<p>Based on the World Health Organization (WHO) global survey of country capacities for Health EDRM (2015 – unpublished):</p> <ul style="list-style-type: none"> ◆ 34 out of 62 countries (55%) had conducted a national multisectoral, multi-hazard disaster risk assessment in the last 2 years; 13 (21%) in the last 2–5 years; and 3 (5%) over 5 years ago. ◆ Countries had included hazards in national multisectoral risk assessment in the following proportions: geological, 44 out of 47 (94%); hydro-meteorological, 48 out of 49 (98%); biological, 40 out of 48 (83%); technological, 30 out of 43 (70%); and societal, 33 out of 45 (73%). ◆ Globally, 51% of countries had conducted a national multi-hazard health disaster risk assessment in the last 2 years; 12% in the last 2–5 years; and 5% more than 5 years ago. ◆ Globally, the health sector of countries had received early warning for specific hazards in the following proportions: floods/storms/cyclones, 84%; tsunamis, 61%; drought/food insecurity, 74%; biological, 96%; and chemical, 70%. ◆ Globally, 97% of country health sectors had distributed early warnings on biological hazards, including epidemics within the health sector; 83% to other sectors; and 87% to the national disaster management office.

1. International Health Regulations (2005): State Party self-assessment annual reporting tool. World Health Organization; 2018 (<https://apps.who.int/iris/handle/10665/272432>, accessed 28 November 2019).

ISSUES/CHALLENGES

MHEWS will vary considerably from country to country; instead of counting the number of the systems, UNDRR has suggested a focus on functionality (e.g. the degree of achievement of elements of MHEWS) to measure progress in each of the four interrelated key elements of early warning systems. While traditionally MHEWS have focused on natural hazards, ministries of health should ensure that MHEWS and multi-hazard risk assessments cover risks to health, including biological hazards, and are included in Member State reporting on Target G.

The selection of major hazards to be included in MHEWS remains a national determination, recognizing that hazardous events differ significantly among countries in terms of both frequency and intensity.

Member State reporting of the coverage of MHEWS could be based on the number and kind of different warning dissemination channels providing the authoritative warning information (e.g. radio access rate, internet access rate, population coverage of mobile phone networks for short message systems [SMS]; and local communication systems.

G3. METHODS

WHAT IS MEASURED

Sendai Framework: The number of countries that have: (i) MHEWS; and (ii) access and availability of multi-hazard risk assessments and risk information for hazards within the scope for the Sendai Framework. There is also an indicator for the number of people who evacuated pre-emptively due to early warning.

Metadata on the methodology and criteria that are being applied to data collection, calculation and reporting for these indicators by a country should be described, documented and maintained to facilitate a consistent approach, comparability and data improvements across the reporting period.

KEY TERMS

Early warning system: An integrated system of hazard monitoring, forecasting and prediction, disaster risk assessment, communication and preparedness activities systems and processes that enables individuals, communities, governments, businesses and others to take timely action to reduce disaster risks in advance of hazardous events.

Multi-hazard: The selection of multiple major hazards that the country faces, and the specific contexts where hazardous events may occur simultaneously, cascadingly or cumulatively over time, and taking into account the potential interrelated effects.

Evacuation: Moving people and assets temporarily to safer places before, during or after the occurrence of a hazardous event in order to protect them. Evacuated people are categorized here as directly affected.

Monitoring: Data available through established networks observed by well-trained staff.

Forecasting: Through data analysis and processing, modelling and prediction based on accepted scientific and technical methodologies and disseminated within international standards and protocols.

Warning messages: Includes risk/impact information with clear emergency preparedness to trigger response reactions generated and disseminated in a timely and consistent manner.

Risk assessment: Qualitative or quantitative approach to determine the nature and extent of disaster risk by analysing potential hazards and evaluating existing conditions of exposure and vulnerability (and capacity) that together could harm people, property, services, livelihoods and the environment on which they depend.

<p>HEALTH INPUT</p>	<ul style="list-style-type: none"> ◆ Each country can specify the major hazards to be included in MHEWS; the health sector should be included in decision-making on which hazards are included in MHEWS and reporting. ◆ For Sendai Framework reporting, the country's determination of major hazards is based on hazard weighting, which may be linked to health consequences from all hazards (e.g. mortality, people affected) and health data on biological hazards. ◆ Data on the inclusion of health sector actions, risks to health (exposure, vulnerabilities and capacities) and biological hazards in: <ul style="list-style-type: none"> ○ MHEWS ○ monitoring and forecasting systems ○ coverage of local early warning information ○ local action plans to act on early warnings ○ multi-hazard risk assessments and risk information. ◆ Health sector may have data on the number of people who evacuated due to early warning.
<p>WHOM TO ENGAGE WITH</p>	<p>Ministries of health must engage with the Sendai Framework Monitoring National Focal Point to ensure the inclusion of health data in reporting for Target G. Ministries should also work with the health sector and partners at national, subnational and local levels to ensure their accountability for data collection and reporting in accordance with the timeframes and deadlines for national reporting.</p> <p>Following are some suggested organizations/mechanisms for data gathering, but this list is not exhaustive, and will depend on Member States' arrangements and the hazardous event.</p> <ul style="list-style-type: none"> ◆ Ministry of Health ◆ National disease surveillance systems, disease early warning systems ◆ Subnational ministries of health, health authorities at the local level ◆ Sendai Framework Monitoring National Focal Point ◆ National disaster management offices ◆ Local and subnational disaster management offices ◆ National meteorological and hydrological services ◆ WHO Country Offices, WHO Regional Offices, WHO Health Emergencies Programme.
<p>INDICATOR FORMULA</p>	<p>Indicator G-1. Number of countries that have multi-hazard early warning systems</p> <p>UNDRR advises that reporting against this indicator entails computing the arithmetic average of the scores of the four indicators, where each Member State would report scores from 0 to 1 for each of the four indicators G-2 through G-5 for the major hazards identified by the country:¹</p> <ul style="list-style-type: none"> ◆ G-2: Number of countries that have multi-hazard monitoring and forecasting systems ◆ G-3: Number of people per 100 000 that are covered by early warning information through local governments or through national dissemination mechanisms ◆ G-4: Percentage of local governments having a plan to act on early warnings ◆ G-5: Number of countries that have accessible, understandable, usable and relevant disaster risk information and assessment available to the people at the national and local levels. <p>Scores should reflect the weighting of major hazards based on estimated and historical impacts, expert criteria or country priorities.</p> <p>G-6: Percentage of population exposed to/at risk from disasters protected through pre-emptive evacuation following early warning.</p> <p>Member States in a position to do so are encouraged to provide information on the number of evacuated people.</p>

1. Technical guidance for monitoring and reporting on progress in achieving the global targets of the Sendai Framework for Disaster Risk Reduction: collection of technical notes on data and methodology. Geneva: United Nations Office for Disaster Risk Reduction; 2017 (https://www.unisdr.org/files/54970_techguidancefdigitalhr.pdf, accessed 31 March 2019).

<p>INDICATOR COMPONENTS</p>	<p>For indicators G-2 through G-4 and G-6, it is recommended that progress in each indicator is benchmarked according to the following weighting:</p> <ul style="list-style-type: none"> ◆ Comprehensive achievement (full score): 1.0 ◆ Substantial achievement, additional progress required: 0.75 ◆ Moderate achievement, neither comprehensive nor substantial: 0.50 ◆ Limited achievement: 0.25 <p>For indicator G-5, risk information and assessment should take account of the rate of accessibility and availability of disaster risk information by hazard types (e.g. risk communication mechanisms). There is also scope to monitor the progress in the quality of risk information and assessments, which should be based on the following criteria: (i) on the most scientific approach available; (ii) be the product of national consultation that is shared, coordinated and used by national institutions; and (iii) have clear responsibilities for decision-making, planning and storing data and information. It is recommended that progress in each requirement is measured using the following benchmarks:</p> <ul style="list-style-type: none"> ◆ Comprehensive achievement (full score): 1.0 ◆ Substantial achievement, additional progress required: 0.75 ◆ Moderate achievement, neither comprehensive nor substantial: 0.50 ◆ Limited achievement: 0.25
<p>INTERPRETATION CONSIDERATIONS</p>	<ul style="list-style-type: none"> ◆ Selection of major hazards to be included in MHEWS, risk information and risk assessments are determined at the national level. These will differ across countries, recognizing that the risks of hazardous events differ significantly among countries in terms of both frequency and intensity. ◆ For the health sector, it will be important to review how health information and biological hazards are addressed for reporting of these indicators. ◆ For Target G there is a risk of double counting for some indicators related to early warning, risk information and risk assessments because the same population or geographical areas may have access to risk information through multiple risk communication systems. The access to the risk information and early warning systems may not correspond to the community at risk for the hazardous events.
<p>CUSTOMIZABLE INDICATORS</p>	<p>Countries, through the ministries of health, may consider the development and reporting of customizable indicators, e.g. health specific indicators for early warning systems, and risk assessment and risk information for all hazards. The following indicators could be considered:</p> <ul style="list-style-type: none"> ◆ Number of countries in which the health sector contributes and applies multi-hazard monitoring and forecasting systems. ◆ Number of people per 100 000 that are covered by surveillance and early warning systems through local governments or through national dissemination mechanisms for biological hazards. ◆ Percentage of local governments having plans for emergency preparedness and response to act on disease early warnings. ◆ Number of countries in which the health sector has accessible, understandable, usable and relevant risk information and assessments available to the people at the national and local levels (including conducting multi-hazard health emergency risk assessments). ◆ Number of countries in which the health sector has participated in evacuation planning, i.e. planning to meet the health needs of people who evacuate following early warning.

G4. REPORTING

This Guidance Note outlines the key role that ministries of health have in providing data to support reporting against Sendai Framework Target G.

Each country's Sendai Framework Monitoring National Focal Point has responsibility for submitting national reports for the Sendai Framework. UNDRR developed a web-based tool to support Member States in reporting against the indicators. The Sendai Framework Monitor (<https://sendaimonitor.unisdr.org/>) not only functions as a reporting tool, but also as a management tool to help countries develop disaster risk reduction (DRR) strategies, make risk-informed policy decisions and allocate resources to manage risks. Member States are expected to report annually against the Sendai Framework, however, data should be recorded after hazardous events occur.

As of 1 March 2018, Member States have been reporting against the indicators for measuring the global targets of the Sendai Framework, and DRR-related indicators of the SDGs, using the online Sendai Framework Monitor. It is important that the relevant officials in the ministries of health are either linked to the National Focal Point or are granted access to the Sendai framework Monitor to input health data as outlined in Section G3.

For further information about how to use the Sendai Framework Monitor tool for reporting, please refer to the Sendai Framework Monitoring Focal Point.

