Sendai Framework Monitoring in Europe and Central Asia

A Regional Snapshot

March 2026

SENDAI FRAMEWORK
FOR DISASTER RISK REDUCTION 2015-2030

UNDRR
UN Office for Disaster Risk Reduction

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About UNDRR

The United Nations Office for Disaster Risk Reduction works towards the substantial reduction of disaster risk and losses to ensure a sustainable future. UNDRR supports the implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030, which sets out a people-centred approach towards achieving a substantial reduction in disaster losses from human-caused and natural hazards and a shift in emphasis from disaster management to disaster risk management. The Regional Office of Europe and Central Asia covers 55 countries and works with countries and stakeholders to reduce disaster risk in Europe and Central Asia.

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EXECUTIVE SUMMARY

As of 20 July 2025, a total of 40 countries from the Europe and Central Asia region reported to the Sendai Framework Monitor (SFM) between 2020 and 2024. The COVID-19 global pandemic severely impacted human life in more than one way, as became painfully clear when the number of disaster-related deaths and injuries reported by Member States were analysed. During this period, over 373,000 people lost their lives as a result of disasters, with close to 214,000 deaths (the majority of which occurred between 2020 and 2022) attributed to COVID-19. Moreover, the total number of injured or ill people as reported by 34 countries exceeded 23.7 million, again hugely impacted by the pandemic.

Countries also reported disaster losses due to a number of geological, hydrometeorological and technological disasters, including fires, floods, earthquakes, rock falls, mudflows and landslides, avalanches, frost, lightning, technological and chemical incidents, and road and rail accidents.

Direct economic loss is estimated to have averaged 0.14 per cent of the gross domestic product (GDP) of all the reporting countries between 2015 and 2024. According to statistical analyses and studies, economic losses are only increasing over time and the last three years all fall within the worst five years of annual economic losses. As severe and extreme weather- and climate-related events are expected to intensify, it is unlikely that the associated economic losses will decrease by 2030.

Over 14,000 instances of disruptions to basic services attributed to disasters (including health, educational and other basic services) were reported by 26 countries in the SFM between 2020 and 2024, pointing to the need to urgently address the resilience of critical infrastructure systems in the region.

That said, important and significant progress has also been noted in a number of areas: by the end of 2024, 36 countries in the region reported having a national disaster risk reduction (DRR) strategy, compared with only 15 countries in 2015. Moreover, 35 countries reported having multi-hazard early warning mechanisms in place, compared with 17 countries in 2015, while a growing number of cities are working on urban resilience through the Making Cities Resilient (MCR) 2030 initiative.

According to the available reported data in SFM, international and regional cooperation in DRR has resulted in countries in the region receiving close to $57 million in official development assistance (ODA) between 2020 and 2024. At the same time, Member States in Europe and Central Asia have provided just over $21 billion of ODA to other countries, thus contributing greatly to strengthening DRR capacities across geographies and communities.

The SFM enables countries to report disaggregated data on hazard type, income (those affected with earnings below the national poverty line), sex, age and disability, and to develop their own custom indicators if necessary.

Fourteen countries in the Europe and Central Asia region provided gender-disaggregated data in their reporting on SFM Targets A and B. The proportion of countries able to provide sex-disaggregated data in the region highlights the urgent need to enhance the gender component and strengthen data capacity in disaster-related statistics. By increasing the availability and use of sex, age, income and disability-disaggregated data, more inclusive and evidence-based approaches can be developed that address the unique risks faced by different groups of people.

By tracking indicators such as mortality and affected populations, economic loss and damage to infrastructure in the SFM, vulnerabilities linked to disasters such as floods, droughts and storms can be identified. This information supports evidence-based decision-making and can help policymakers to identify risk trends and prioritize investments in climate-resilient infrastructure, early warning systems and adaptive measures.

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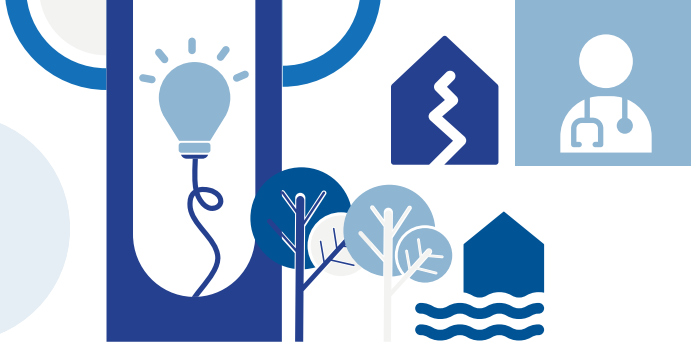
INTRODUCTION



The period from 2020 to 2024 was challenging for the countries in the Europe and Central Asia region, marked by the major impacts of the COVID-19 pandemic, coupled with a rise in security and other crises, and a tangible increase in extreme climate events and disasters.

In July 2021, heavy rains in Germany, Belgium and the Netherlands caused one of the largest and most devastating floods in Western Europe for decades. The disaster caused the deaths of more than 240 people and resulted in damage to infrastructure worth billions of euros.[1] Record-breaking rainfall and flash floods hit Spain three years later, in October 2024, causing more than 200 deaths and massive disruptions to transport and power in Valencia.[2]

In 2023, a series of earthquakes took the lives of over 53,000 people in Türkiye and made over 3.3 million people homeless.[3] The earthquakes also had devastating consequences on agriculture and rural areas. The United Nations Food and Agriculture Organization (FAO) reports that more than 13,000 livestock shelters were destroyed, approximately 815,000 heads of livestock lost, fisheries impacted, and markets and supply chains disrupted.[4]

Some of this huge toll on human life and economic development was reflected in country reporting to the Sendai Framework Monitor (SFM), giving the impression that progress towards achieving some of the targets of the Sendai Framework had deteriorated. This, however, is not the whole picture and there was significant progress in a number of areas. By the end of 2024, for example, 36 countries in the region reported having a national DRR strategy, compared with only 15 countries in 2015; 35 countries reported having multi-hazard early warning mechanisms in place, compared with 17 countries in 2015; and a growing number of cities were working on urban resilience through the Making Cities Resilient (MCR) 2030 initiative: 229 cities are now members of MCR2030.

Against the backdrop of these events, the importance of collecting disaster loss and damage data has become more apparent than ever. Tracking losses and damages at the national and local levels helps better understand risk, identify trends and remaining gaps, and ensure policies, strategies and political decisions are evidence-based. Since the launch of the Early Warning for All initiative by the United Nations Secretary-General in March 2022, risk

1 Hagenlocher, M. and others (2023). Building Climate Resilience: Lessons from the 2021 Floods in Western Europe, UNU-EHS, UNU-CRIS & UNU-MERIT. Available at: https://collections.unu.edu/eserv/UNU:9123/UNU-EHS_CRI_230518pdf.pdf.

2 WMO (2024). Devastating rainfall hits Spain in yet another flood-related disaster. Available at: https://wmo.int/media/news/devastating-rainfall-hits-spain-yet-another-flood-related-disaster.

3 UNDP (2023). Available at: www.undp.org/turkiye-syria-earthquakes.

4 FAO (2023). Türkiye: Earthquake response and recovery plan, 2023–2026. Available at: https://openknowledge.fao.org/items/8532d115-4feb-4784-8519-da02c3b9cdc4.

information and disaster data collection and reporting have been recognized as paramount for achieving both the timely protection and long-term resilience of communities.

The SFM online portal was established to enable Member States to report on progress towards implementation of the Sendai Framework. The portal can be accessed by the public and complements the SDG database for indicators related to the Sustainable Development Goals (SDGs). The Monitor has also been crucial in developing annual reports, such as the Secretary-General's report on the implementation of the Sendai Framework and the annual report on the SDGs. UNDRR has developed Sendai Framework target-specific reports (Target E in 2020 and 2025, Target F in 2021 and Target G in 2023) to provide in-depth status updates on topical issues, while partner organizations have also benefited from such official data and statistics.

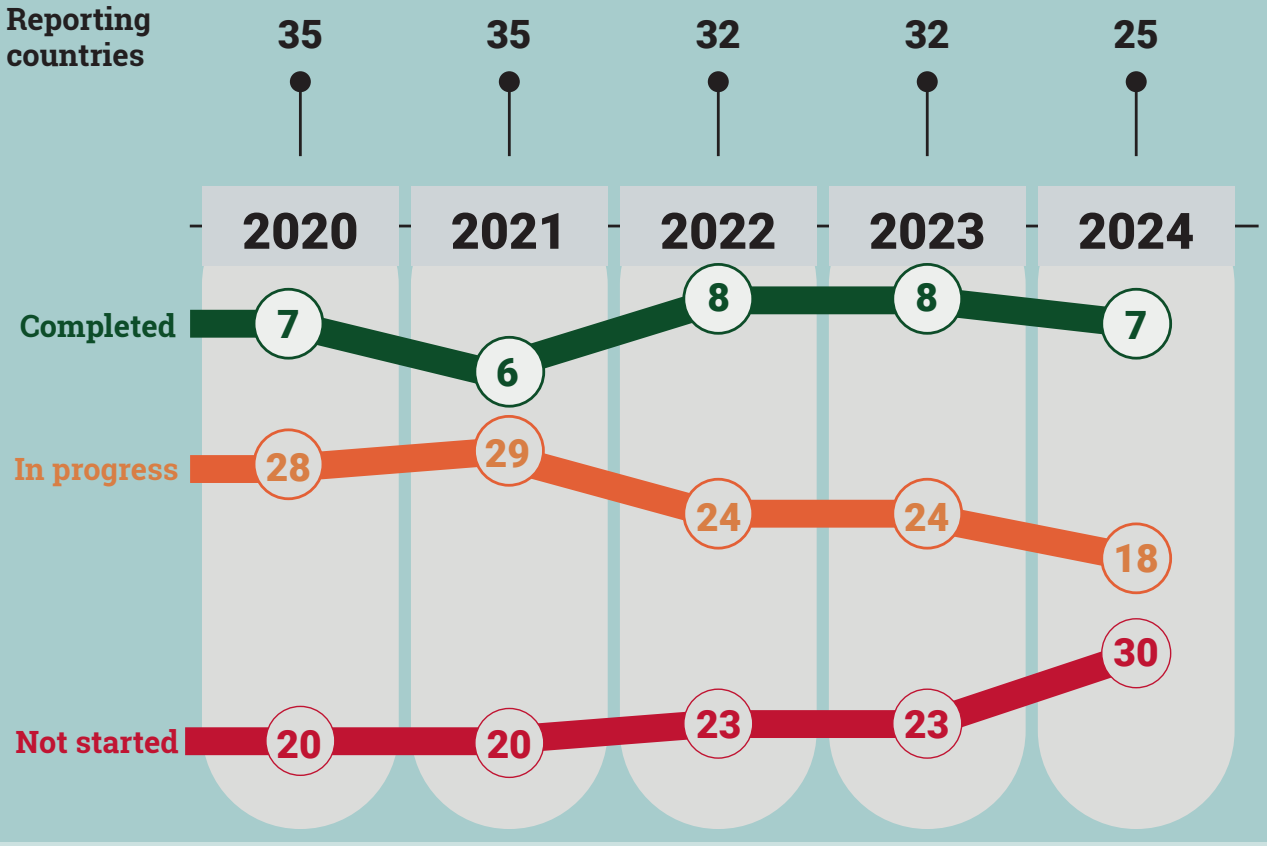
This report, produced by the UNDRR Regional Office for Europe and Central Asia, offers a snapshot of the aggregated data reported by Member States across the Europe and Central Asia region. It is based on data reported in the SFM system by 20 July 2025, following a previous edition of this report released in December 2020. Since the monitoring system is an open-ended reporting mechanism, the figures given here, especially of losses and damages, are only a snapshot at a given point in time, building on the current status of reporting countries across the region.

Discussions with Sendai Framework National Focal Points and the analysis of the data highlight the key challenges that Member States are facing. This report points to a set of important thematic issues, which aim to support continuous efforts in monitoring and ultimately achieving the Sendai Framework and the Sustainable Development Goals.

The Member States that had reported to the SFM between 2020 and 2024 as of 20 July 2025 are as follows: Albania, Andorra, Armenia, Austria, Belarus, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Georgia, Germany, Hungary, Italy, Kazakhstan, Kyrgyzstan, Lithuania, Luxembourg, the Republic of Moldova, Monaco, Montenegro, the Kingdom of the Netherlands, Poland, Portugal, Romania, the Russian Federation, Serbia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, Türkiye, Ukraine, the United Kingdom of Great Britain and Northern Ireland, and Uzbekistan. UNDRR would like to express its appreciation for their efforts and continued commitment to DRR.

REPORTING OVERVIEW

How many Member States have engaged in Sendai Framework Monitoring across the Europe and Central Asia region?



By the end of 2024

MCR 2030 Making Cities Resilient

229 cities

are members of MCR2030.

35 countries

have multi-hazard early warning mechanisms in place

36 countries

in the region reported having a national DRR strategy

A total of 40 countries reported to the SFM between 2020 and 2024.

While there appears to be a trend of decreasing participation in SFM reporting – 41 countries reported in 2017, 35 in 2020 and 25 in 2024 – this is not entirely reflective of the actual progress being made, since countries are encouraged to report retroactively for previous years. This means that the totals for past reporting years continue to increase over time but can create the impression that reporting in 2024 declined when, in fact, it reflects an ongoing commitment to the SFM.

Nonetheless, this observation also underscores the need for swift and decisive action to further strengthen participation. Countries are encouraged to start, resume or continue their reporting efforts, recognizing that it is never too late to revisit previous reporting years and contribute to collective progress towards the SFM. By doing so, they can play a critical role in advancing the shared goals of effective monitoring and sustainable development.

Significant advancements have been made since 2015 in understanding the drivers and systemic nature of risk, as well as in creating expert networks and mechanisms for sharing technical knowledge and good practices. Reflecting these advances in SFM reporting remains a key area for improvement. Addressing this gap is essential for monitoring progress towards the Sendai Framework and the SDGs effectively, as well as for enabling comprehensive analysis at all levels – from local to global – that informs evidence-based policymaking.

Encouragingly, several countries have already expressed their intention to begin reporting and to develop or update their national disaster loss databases. This will greatly contribute to enhancing disaster knowledge and advancing Priority 1 of the Sendai Framework (Understanding Disaster Risk). Member States are strongly encouraged to join these efforts, take advantage of the opportunity to improve reporting and reach out to UNDRR for any necessary technical support.

Specific support to Member States for data collection and analysis, enabling cross-reporting on Targets A to D of the Sendai Framework and SDGs, is available through the newly developed DELTA Resilience system (Disaster & Hazardous Events, Losses and Damages Tracking & Analysis). Building on the robust methodology of the well-established and widely used DesInventar Sendai platform, Delta Resilience allows for the systematic collection of disaster related data in compliance with the recommendations of the Sendai Framework.

With only five years remaining until 2030, reliable and validated disaster loss and risk data are critical to informing policy decisions, prioritizing investments, and safeguarding development gains in support of the Sustainable Development Goals and the post-2030 agenda.

Section 1

State of reporting 2020–2024

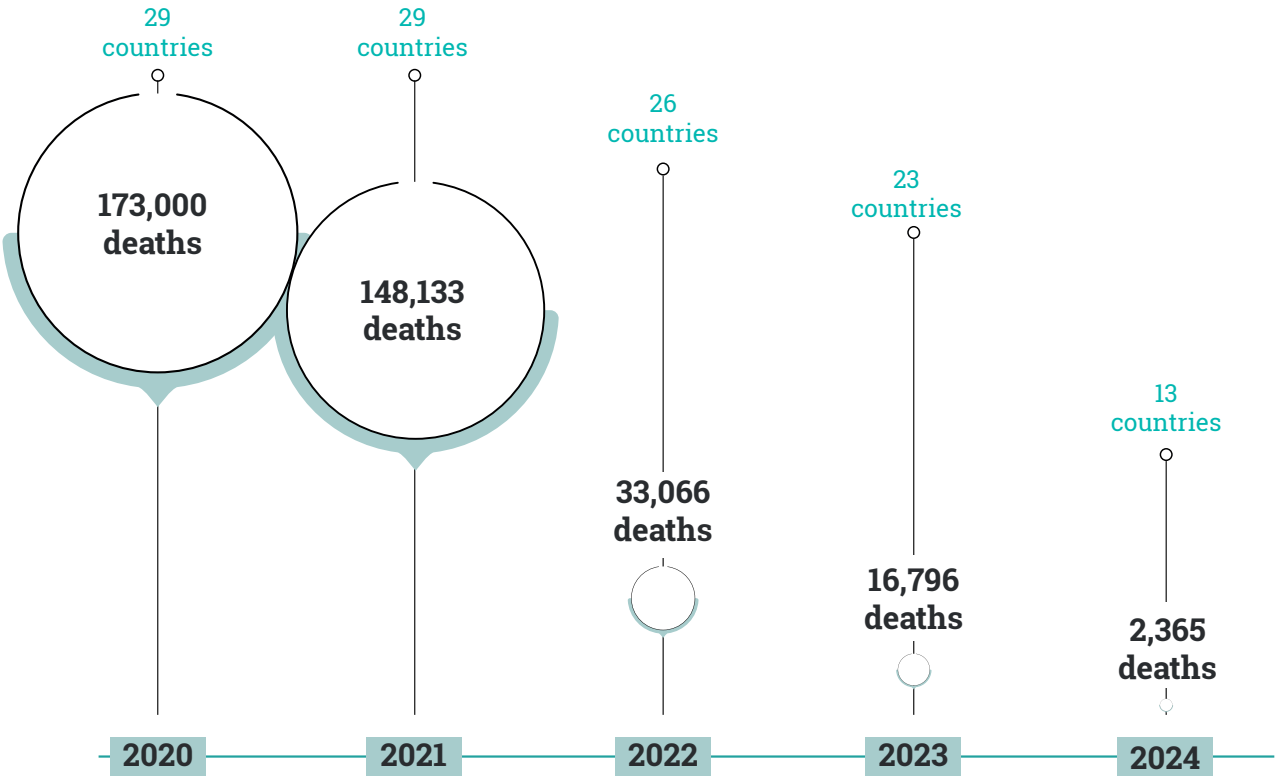
- Target A
- Target B
- Target C
- Target D
- Target E
- Target F
- Target G

Photo © UNDRR

TARGET A

Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality between 2020 and 2030 compared with 2005–2015.

Between 2020 and 2024, over 373,000 people lost their lives due to disasters, with approximately 214,000 deaths attributed to COVID-19 (the majority of which occurred between 2020 and 2022). Other deaths reported resulted mainly from technological disasters, heatwaves, avalanches, fires and floods.[5]



[5] It should be noted that a number of large-impact events, such as the 2023 earthquakes in Türkiye, have not been recorded in SFM as of 20 July 2025, rendering the actual human and economic toll of disasters in the region much higher.

Collaboration for better data

Strengthening collaboration between the statistical and DRR communities at the global, regional and national levels is a key recommendation of the Open-ended Intergovernmental Expert Working Group (OIEWG). Engaging National Statistical Offices to integrate SFM data into national statistics promotes the reporting and use of disaster risk data by all sectors.

Country experiences: Andorra commences SFM reporting

Andorra began collecting data related to disaster losses through the online monitoring tool of the Sendai Framework in 2024. The country has made significant efforts to collect data in line with the reporting requirements of the SFM targets and link ongoing initiatives with the Sendai Framework. The majority of the data required to measure the targets were obtained through the Statistics Department of the Government of Andorra, which is responsible for collecting, centralizing, analysing and disseminating information to the population. Collaboration with other departments and more specialized sectors has also been essential in the work carried out.

Covering an area of 468 km² and located in the heart of the Pyrenees between France and Spain, Andorra, despite being threatened by numerous risks, fortunately did not record any disasters or notable emergencies during 2023. This is reflected in the recorded values for **Targets A**, **B**, **C** and **D**, which are directly linked to mortality, affected persons, economic losses, and critical infrastructure and services impacted by disasters.

Regarding **Target E** on DRR strategies, which are implemented by the Government of Andorra through the Department of Civil Protection and Emergency Management, it should be noted that a new Civil Protection Act was approved in 2022, establishing the creation of the National Civil Protection Commission as the National Platform for the United Nations International Strategy for Disaster Reduction. The commission, along with national and local authorities, not only allows the implementation of the law to be monitored but also helps establish a broad perspective of the risks associated with the territory. The aim is to develop joint strategies based on understanding risk, strengthening governance, investing in early warning systems and increasing preparedness among the population.

Finally, the Department of Civil Protection and Emergency Management is currently dedicating considerable efforts to planning, prevention and raising public awareness. In this regard, several initiatives address **Target G**, including the existing action protocols to respond to the main risks in the territory, the implementation of preventive procedures to provide public information and establish restrictions in more extreme cases, the installation of early warning systems, training programmes for the population aimed at fostering a culture of prevention, and the identification of populations exposed to geological risks and avalanches. This aligns with indicator G6-a, in a technical effort carried out in collaboration with the Cartography Department of the Government of Andorra.

NB: Zero values (number = 0) must also be entered into the system; otherwise, it will treat the indicator as unreported.

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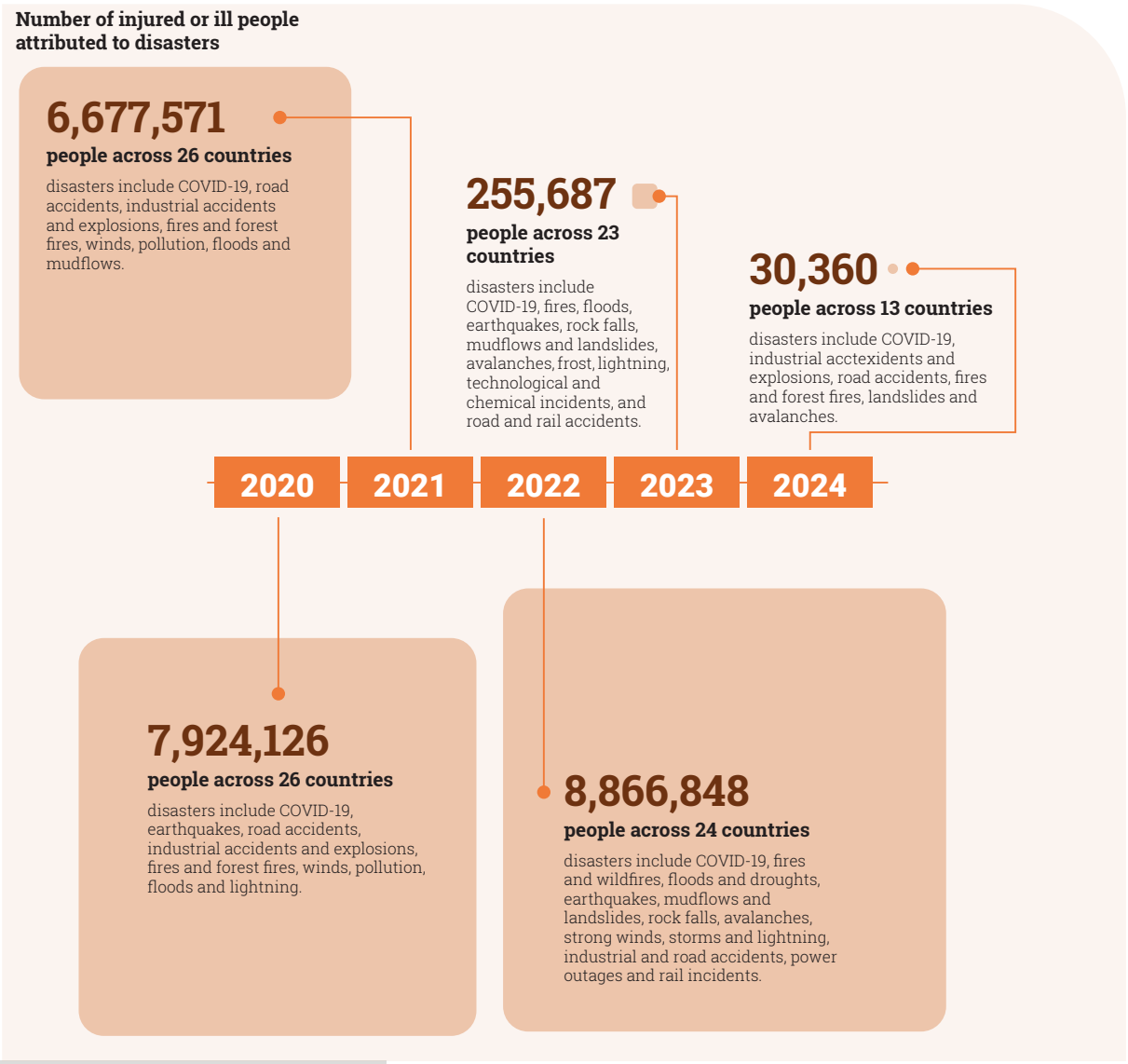
TARGET B

Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 between 2020 and 2030 compared with 2005–2015.

In the five years between 2020 and 2024, the total number of injured or ill people as reported by 34 countries exceeded 23.7 million. Looking at the long-term trend, the number of disaster-affected people in the region increased from 156 per 100,000 population between 2005 and 2014, to 311 between 2015 and 2024. The number of injured or ill people between 2020 and 2024 was significantly impacted by the COVID-19 pandemic.[6]



[6] It should be noted that a number of large-impact events, such as the 2023 earthquakes in Türkiye, have not been recorded in SFM as of 20 July 2025, rendering the actual human and economic toll of disasters in the region much higher.

Links between SFM targets

Several SFM targets have a sectoral emphasis to present an overview of disaster impacts, such as health, education, housing, infrastructure and the productive sector. For instance, health-related statistics inform five Sendai Framework indicators, namely:

A-2	Number of deaths attributed to disasters, per 100,000 population.
A-3	Number of missing persons attributed to disasters, per 100,000 population.
B-2	Number of injured or ill people attributed to disasters, per 100,000 population.
D-2	Number of destroyed or damaged health facilities attributed to disasters.
D-7	Number of disruptions to health services attributed to disasters.

Similarly, relevant national or municipal authorities can report on housing losses, where the following indicators are relevant:

B-3	Number of people whose damaged dwellings were attributed to disasters.
B-4	Number of people whose destroyed dwellings were attributed to disasters.
C-4	Direct economic loss in the housing sector attributed to disasters (disaggregated according to damaged and destroyed dwellings).

Understanding these links is important to making decisions on what is reported, such as attribution of a particular disaster to injury or illness, or disaggregation by housing type and sector in estimating the associated losses.

Country experiences: Czechia resumes SFM reporting

In 2015, the National Platform for Disaster Risk Reduction was officially established as an advisory body to the Minister of the Environment of Czechia. All activities connected to Sendai Framework monitoring have since been coordinated by this platform.

Czechia resumed its Sendai Framework monitoring in 2024 , having not reported since 2018, and restarted the process with an initial discussion on the data collection mechanism. The country already collects certain data on emergencies (for example, on the interventions of the integrated rescue system and the number of deaths due to various causes). However, when restarting the process of Sendai Framework reporting, it became apparent that in many areas the data collected did not align fully with SFM indicators. Moreover, different entities collect different data components in such a way that they cannot be systematically and efficiently reported in a logical interconnection. As a result, data collection is fragmented and occurs at different levels of the state. There are also cases where data are available at the local but not at the central level, despite the latter being the primary authority for the area.

Another challenge lies in the national approach to delineating types of hazards, which needs to be resolved so that the range of data to be reported can be clearly defined. There are ongoing discussions between experts on what types of hazards to include with respect to the Czech environment, depending on the risk analysis, as well as with respect to climate change (future-oriented thinking). This applies in particular to Targets A to D. Sendai Framework monitoring is viewed through the lens of Czech crisis management, which deals with even minor emergencies (namely frequent, small-scale events).

This crisis system is, among other things, formally supported by crisis documentation, which together with the *Environmental Security Concept 2021 – 2030 with a view to 2050* acts as a national strategy for DRR (Target E). Target F falls under the Ministry of Foreign Affairs and data collection is ongoing with a representative of the ministry providing these data for monitoring purposes. Data are similarly provided for Target G, which falls under the responsibility of the Czech Hydrometeorological Institute.

Consideration of a national approach to Sendai Framework monitoring in Czechia is still under way. The plan is for data that are not currently available to be estimated retrospectively if a national methodology is successfully identified, although the primary focus will be on securing data and system-integrated cooperation in the future.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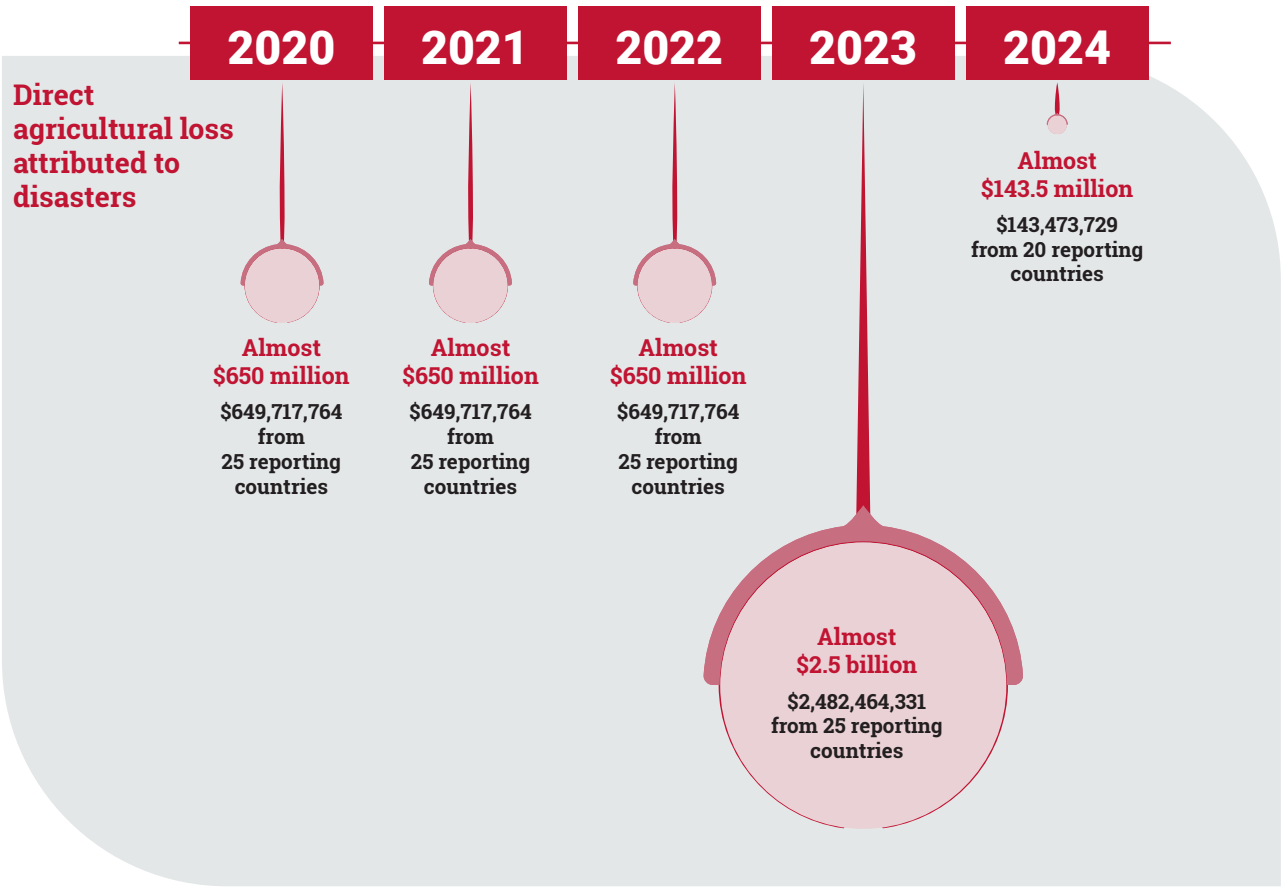
TARGET C

Reduce direct disaster economic loss in relation to global gross domestic product (GDP) by 2030.

Direct economic loss averaged 0.14 per cent of the GDP of all reporting countries between 2015 and 2024. According to statistical analyses and studies, economic losses are only increasing over time and the last three years all fall within the worst five years of annual economic losses. As severe weather- and climate-related extreme events are expected to intensify, it is unlikely that the associated economic losses will decrease by 2030.[7]

Below is a snapshot of direct agricultural losses for the four year period, as of 20 July 2025. It needs to be noted that these figures have increased over time with additional countries reporting by the end of 2025.



[7] European Environment Agency (2024). Economic losses from weather- and climate-related extremes in Europe. Available at: https://www.eea.europa.eu/en/analysis/indicators/economic-losses-from-climate-related

Disaggregation requirements under Target C-3

Disaggregation is essential for reporting under Target C-3, which pertains to the number of productive asset facilities (for example, in the industrial, commercial and service sectors) that have been damaged or destroyed due to disasters. The implementation of a detailed metadata structure and disaggregation enables more comprehensive reporting on lost productive assets, categorized by size, sector and other relevant parameters. This approach contributes to more robust data in alignment with Target C-3. UNDRR recommends adopting the International Standard Industrial Classification of All Economic Activities (ISIC) for consistent classification.

Data sources

Several countries have noted that they collect data from insurance companies and compensation schemes to calculate the economic losses attributed to disasters. As climate change impacts further fuel the possibility of hazards becoming disasters (forest fires, droughts, floods, etc.), it is important to work with insurance companies to cooperate on collecting data, as well as developing measures to encourage insurance policies and risk-transfer mechanisms to mitigate economic losses.

Country experiences: Spain develops the IMPACTO tool to assess loss and damage

In **Spain**, disaster risk management responsibilities are split across three different territorial levels (national, regional and local) and numerous sector-specific departments at each of those levels. As a result, data on disasters are scattered across multiple locations, managed by multiple entities and organized according to multiple criteria. Until now, data for SFM reporting purposes have therefore been difficult to obtain and not always complete, coming from different sources at different governance levels and from a range of sectors (public, insurance, agriculture, etc.), which has proved challenging.

The Spanish Directorate-General for Civil Protection and Emergencies, which is the Sendai Framework, launched a project (co-financed by the EU) in May 2023 to develop a tool to collect nationwide homogeneous and verified data on disaster damage and losses. The tool currently being developed, named IMPACTO, is based on four pillars: one module for entering data about the event (type, date, location and parameters); a second for collecting information on the damages and losses caused by the events (service interruptions, number of affected people, etc.); a third to analyse the impact of each event across the territory; and a fourth that produces outputs according to the needs of different users (reports, graphs, maps, etc). The tool will standardize information on disaster damages and losses and will be available to the various government departments and public authorities responsible for policy and decision-making on DRR, as well as other public and private organizations and the general public.

Once it is implemented, IMPACTO is expected to become a crucial element for decision-making, with a view to adopting prevention measures leading to a reduction in disaster risk over the medium and long term. It will also allow for accurate reporting for SFM purposes, since the data to be provided have been adapted to its requirements, as well as to shared criteria accepted by all entities with responsibilities in the field, bearing in mind the need to integrate previous work in data collection.

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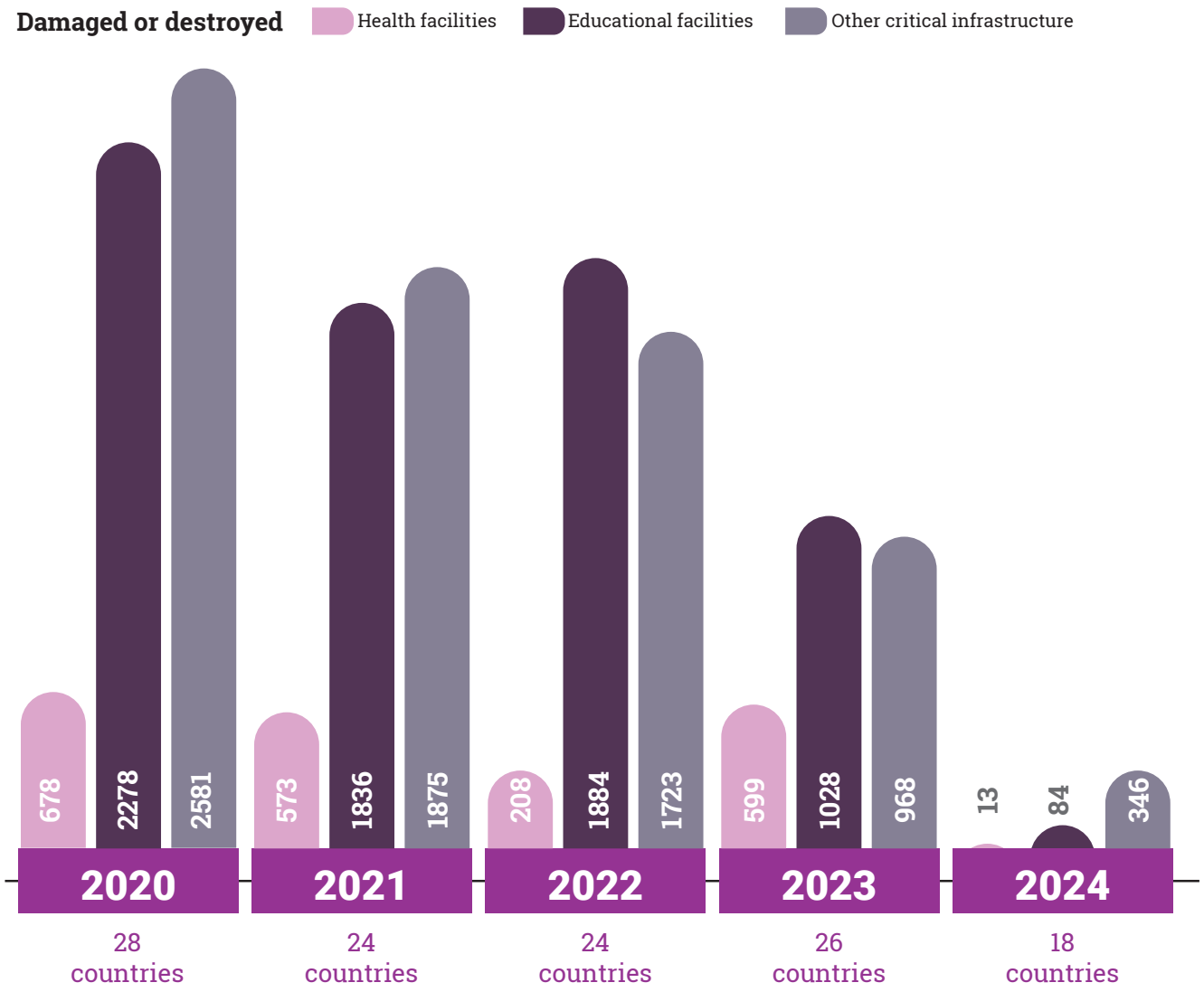
TARGET D

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.

In order for critical infrastructure and services to be resilient to the negative impacts of disasters and climate change, infrastructure projects need to be backed by sufficient resources and based on risk-informed policies, supported by credible data disaggregated by type of hazard and type of infrastructure and/or service. Between 2020 and 2024, a total of 14,359 instances of disruptions to basic services attributed to disasters (including health, educational and other basic services) were recorded in the SFM, reported by 26 countries.



Collecting infrastructure-related data

The SFM urges nations to report in a more disaggregated manner on "other" damaged and destroyed critical infrastructure and disruption of services (indicator D4) by including the option to report data related to specific subsectors, such as energy, transportation, telecommunications, water and waste, and others; few countries currently complete all or any of the subsector information. Countries have, however, noted that collecting data for Target D is challenging due to the lack of commonly agreed definitions or understanding of what constitutes critical infrastructure, and especially critical services. Moreover, they face difficulties in identifying national and local data sources and compiling data in a single format following common definitions.

A few steps are suggested in order to address some of these issues:

- Establishing national definitions for critical infrastructure and services
- All stakeholders understanding the purpose of collecting disaster loss data for Target D and how it translates into concrete risk reduction activities
- Setting up minimum mandatory reporting requirements for investors, owners and operators of infrastructure and services, based on a balanced combination of obligations and incentives that do not threaten economic interests
- Engaging with the insurance sector, which could be beneficial in collecting disaster loss data
- Working together with national statistical offices, academia and publicly available data set initiatives to include comprehensive data on Target D (such as the DesInventar Sendai platform)
- Cross-referencing the data provided in Post-Disaster Needs Assessments, etc.[8]

[8] See: www.undrr.org/publication/addressing-infrastructure-failure-data-gap-governance-challenge

Country experiences: Belgium – towards improved and more coherent data collection

The National Crisis Centre (NCCN), in its role as the Technical Focal Point, took charge of Belgium's monitoring exercise under the Sendai Framework for the first time during the 2020–2024 reporting period. This marked a significant step in systematically addressing DRR in Belgium. The Federal Public Service for Foreign Affairs, as the National Focal Point, facilitated engagement with international institutions. However, the responsibility for organizing and executing the process lay primarily with the NCCN, which coordinated efforts with several institutions, including Statbel, the Federal Planning Bureau, and various academic and governmental bodies.

This first attempt highlighted significant challenges in data collection and centralization. In Belgium's federal context, data are often dispersed across multiple levels of government and institutions, requiring substantial efforts to gather and validate information. While some progress was made, the outcomes remained modest. Data for 29 of the 38 Sendai Framework indicators were successfully collected; however, significant gaps persist, particularly in areas such as damage to critical infrastructure and the economic impacts of disasters, where more efforts are needed for checking the availability of the data, retrieving them, or ensuring they are sufficiently aligned with the methodological requirements of the Sendai Framework. These challenges reflect the broader need for a more coordinated and resourced approach to DRR in Belgium.


Photo © Shutterstock

The methodology included:

- **Consultation**: Stakeholder consultations introduced the objectives of the Sendai Framework and outlined future reporting requirements.
- **Data collection**: Extensive outreach to Federal Public Services and expert agencies began the process of aligning existing data with the Framework's 38 indicators.
- **Consolidation**: The data collected, though limited, was validated and integrated into the Sendai Framework Monitor platform for submission.

While this exercise underscored Belgium's initial steps towards DRR reporting, it also brought to light the critical need for better data centralization and awareness of its value in shaping disaster risk reduction policies. The progress achieved thus far serves primarily to establish a foundation for future efforts, with a strong focus on building awareness among stakeholders about the importance of reliable data for policymaking.

Several lessons emerged from this process:

- Collaborative engagement with a wide range of stakeholders enhanced the process but also highlighted the need for sustained resources and institutional coordination.
- The exercise revealed the necessity for additional investments to address gaps and streamline data collection and validation in future monitoring cycles.

Moving forward, the NCCN is committed to enhancing this process, advocating for the necessary resources to support DRR monitoring, and building on this beginning to create a more comprehensive and effective system.

TARGET E

Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020.

Target E serves to boost government decision-making and the establishment of appropriate governance mechanisms for resilience to disasters, based on the clear understanding that national and local DRR strategies play a critical and fundamental role in effective and coordinated DRR implementation.

By 2024, 36 countries had reported they had national and/or local DRR strategies in place.

At the subregional level, a regional DRR strategy for Central Asia was developed in 2021, coordinated by the regional Centre for Emergency Situations and Disaster Risk Reduction (CESDRR) in Almaty, with the support of UNDRR's EU-funded initiative in Central Asia.

At the local level, a growing number of cities (currently 229) are working on urban resilience through the MCR2030 initiative.

36 countries reported they had national DRR strategies in place.

229 cities are working on urban resilience

Country experiences: Albania works towards improved disaster data collection for risk management

In Albania, the new law no. 45/2019 ***"On Civil Protection"*** marks an important moment for the transition from emergency management to risk management, in line with the goals and recommendations of the Sendai Framework.

The approval of the law was accompanied by some important innovations in the field, such as the establishment of the National Agency for Civil Protection (NCPA) and the introduction of new risk management instruments at the national and local levels, with risk assessment and DRR strategies established at both levels. Another important element in this context was the necessity of developing a national database. As a result, the Decision by the Council of Ministers (DCM) No. 345 of 26 May 2022 on determining the method of collecting and administering disaster loss data was adopted and a system for data collection developed.

The NCPA systematically collects and records disaster loss data for multiple purposes, largely driven by different compensation schemes or insurance mechanisms. Disaster loss data can usually be found in national or local institutions.

The process of establishing a disaster loss database broadly comprises two main phases: data collection and data recording. Data are generated during the disaster loss data collection phase; the NCPA implements a number of very diverse practices for this phase, including the collection of data and estimation of losses by ad hoc or permanent commissions, local municipalities, national authorities, a pool of experts, insurance mechanisms and claims for compensation from affected populations or other stakeholders, namely commercial companies or industries.

The data collection process set out in DCM No. 345 mainly comprises the following steps:

1. Municipalities collect data.
2. Prefectures verify and complete missing data.
3. Line ministries and other institutions complete the data according to the area of responsibility.

The challenges that the NCPA is currently facing include:

- Collecting data on victims disaggregated by income and disability, as the Sendai Framework Monitoring recommends, has proved very difficult.
- Insufficient data prevent full quantification of the problem, potentially resulting in an underestimation of the full costs and in underinvestment in this priority.
- The lack of distinction between different types of information, such as human versus economic losses, complicates reporting on Target C. Human losses are easier to detect, because they are recorded immediately and as a matter of urgency through the Crisis Management Centre. Economic losses, by contrast, are harder to assess and evaluate.
- In most cases, the information provided by the mayors of municipalities is incomplete, inaccurate and unreliable.
- In some cases, the information for the same disaster, recorded by two or more independent sources, does not match.

Photo © UNDRR

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.

Disasters impact all countries, but developing countries, and especially least developed countries (LDCs), landlocked developing countries (LLDCs), and small island developing states (SIDs) are disproportionately impacted. Target F aims to enhance international cooperation to developing countries to implement national DRR actions. It focuses on financial resources, support for science, technology development and transfer, and capacity-building.

Total official international support for national DRR actions for 2020 to 2024 was as follows:

Received:
$56,915,355
(close to $57 million)

Provided:
$20,789,083,470
(close to $21 billion)

Cross-country initiatives: the Santiago Network

Target F of the Sendai Framework aims to track international and bilateral cooperation in terms of providing and receiving ODA for DRR, but also in terms of capacity-building, science and technology transfer, and the development of statistical capacity.

The Santiago Network was established in 2019 during the Conference of the Parties (COP) 25, with the aim of catalysing technical assistance from various organizations, bodies, networks and experts to support developing countries in averting, minimizing and addressing loss and damage caused by climate change. Its mandate includes facilitating comprehensive access to the knowledge, resources and technical assistance needed to address climate risks (which are closely linked to DRR).[9]

Technical assistance is provided through the network based on demand and developed through an inclusive, country-driven process, taking into account the needs of vulnerable people, indigenous peoples and local communities.

The Santiago Network aims to catalyse technical assistance by assisting in, among other things:

- Identifying, prioritizing and communicating technical assistance needs and priorities
- Identifying types of relevant technical assistance
- Actively connecting those seeking technical assistance with best-suited organizations, bodies, networks and experts
- Accessing available technical assistance

The assistance provided can include both financial and non-financial elements. All requests for technical assistance are submitted, reviewed and delivered in accordance with the process outlined in the guidelines and procedures for responding to requests for technical assistance.

Member States are invited to engage in the Santiago Network as providers of assistance or to submit a request for technical assistance if they fulfil the requirements. The assistance provided and/or received through the network can then also be reported under Target F of the SFM.

Photo © Shutterstock

[9] UNDRR (2024). The Santiago Network. Available at: www.undrr.org/what-we-do/santiago-network

TARGET G

Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to people by 2030.

The 2024 Global Status of Multi-Hazard Early Warning Systems report[10] noted that countries with 'substantial' to 'comprehensive' multi-hazard early warning systems (MHEWS) have a disaster-related mortality ratio that is nearly six times lower than countries with 'limited' to 'moderate' MHEWS comprehensiveness, showcasing the importance and value of having well-developed national and local systems.

In 2024, over 60 per cent (35 out of 55) of countries in Europe and Central Asia reported having MHEWS. Between 2015 and 2024, close to 650 million people in Europe and Central Asia were protected through evacuation.

[10] Available at: www.undrr.org/reports/global-status-MHEWS-2024

Country experiences: Germany – participatory approaches to data collection

Monitoring disaster losses and damages in line with the SFM continues to present challenges in Germany. Currently, the country does not collect data on disaster losses in a coordinated national database, since the responsibilities for disaster risk management and data collection are spread across different authorities and levels. Germany reports on Targets E, F and G in the SFM. The data for Target F are provided by the Federal Ministry of Economic Cooperation and Development.

In July 2022, the Federal Cabinet adopted the German Strategy for Strengthening Resilience to Disasters, thereby fulfilling Target E of the Sendai Framework.

However, challenges persist in the effective monitoring of Targets A to D:

- Detection of a disaster that may be relevant to the SFM: there are no rules and regulations that require the federal government to be notified.
- Standardization of loss data: the SFM provides a methodology for standardization, but the loss data collected do not necessarily fit into this methodology. There are currently no common procedures.
- The structure of responsibilities is very diverse.

A participatory approach

Germany is exposed to numerous hazards that can seriously impact the population, their livelihoods, and public safety and order. To bridge the gap towards a national disaster loss database, a section on past disasters has been incorporated into the Federal Government's information portal katrima.de (available at www.katrima.de/DE/Schadensereignisse/Schadensereignisse_node.html).

This section presents a number of selected national, European and international disasters. Each event profile includes a brief summary of the incident, as well as information on location, date, hazard category, impact, sectors affected, and damages and losses. The community is invited to submit further information, analysis and reports on individual events in order to provide an overall picture of the losses incurred.

Photo © Wu Zhiyi/World Bank

Section 2

Sendai Framework Monitoring: thematic insights

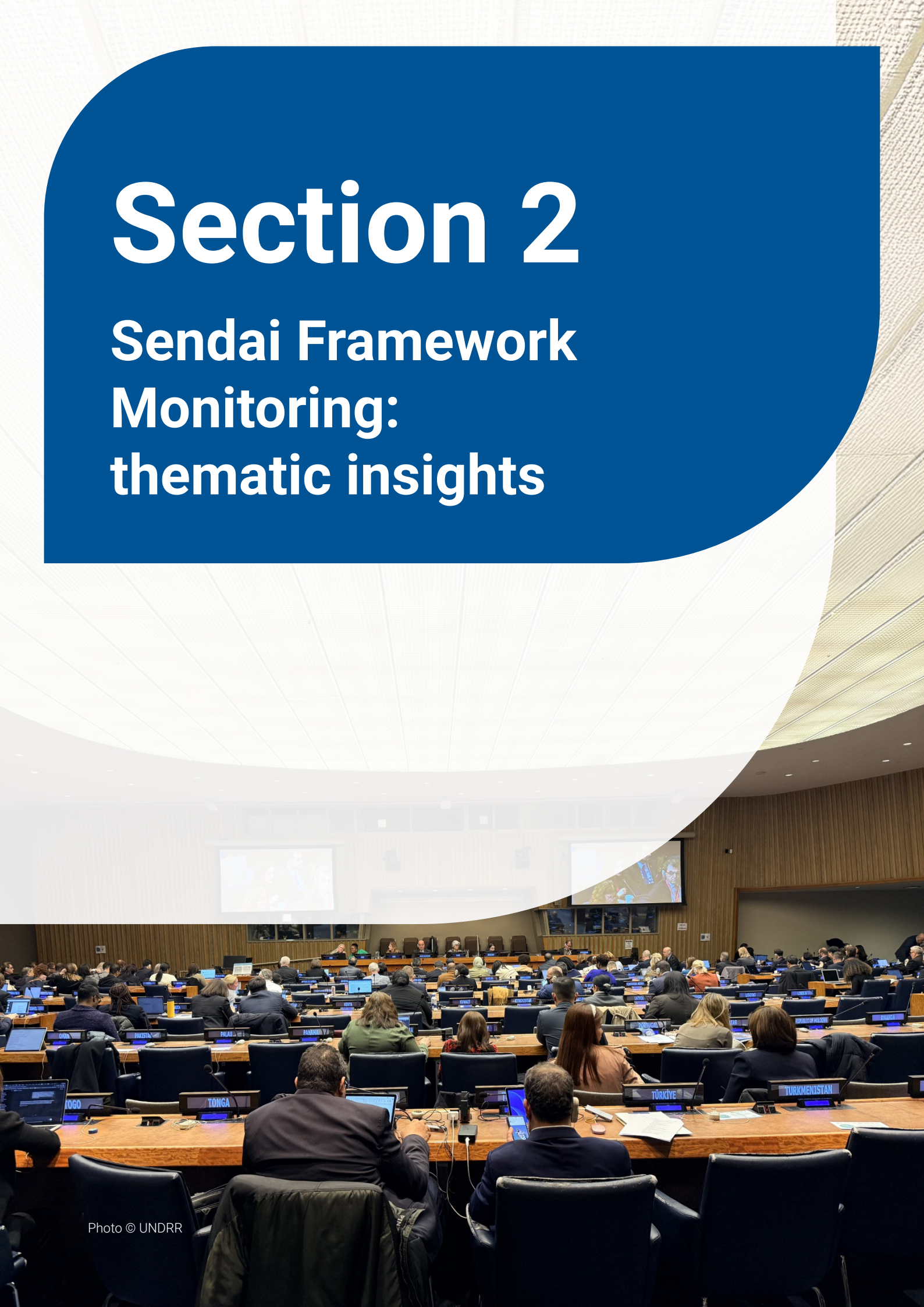


Photo © UNDRR

1. SFM terminology and definitions

To support the process of data collection and reporting, as well as to ensure a common understanding, the Open-ended Intergovernmental Expert Working Group on Indicators and Terminology (OIEWG) has developed a list of terms and published a Sendai Hazard Definition and Classification Review Technical Report after consultations with more than 800 partners from scientific institutions, including national scientific advisers, the research funding community and numerous international organizations.[11]

The report contains 302 hazard information profiles and is a key tool for building common definitions for developing comparable data sets for monitoring and review. It provides a **common set of hazard definitions to governments and stakeholders to inform approaches, policies and investments, whether these are integrated into sectoral interventions or DRR strategies and actions**. The development of the target indicators also supports the calculation of disaster losses and damages. Furthermore, having an agreed basis to track the quality and coverage in DRR strategies and early warning systems assists the monitoring of related processes, including the Early Warning for All initiative, which seeks to provide early warning system coverage for every person on Earth by 2027.

Additionally, in 2024, UNDRR and the International Science Council (ISC) initiated the review of the UNDRR/ISC Hazard Information Profiles (HIPs), which were initially released in 2020 to supplement the Hazard Definition and Classification Review Technical Report. The updated HIPs aim to support a better understanding and definition of hazards, with a focus on employing a multi-hazard approach. The definitions are organized into eight groups: Meteorological & Hydrological, Extraterrestrial, Geological, Environmental, Chemical, Biological, Technological and Societal. They provide a common understanding that empowers governments and stakeholders to strategize and act effectively in risk reduction and management. The updated HIPs were released in 2025. **Member States are invited to consult these guides when collecting and reporting data to the SFM.**

Recently, efforts have been made to develop a Global Disaster-related Statistics Framework (G-DRSF). The draft G-DRSF is a collaborative effort consolidating over an extensive, multi-year process, informed by annual Global Expert Forums organized by all UN Regional Commissions. The Inter-Agency and Expert Group on Disaster-Related Statistics (IAEG-DRS) lead the development of the G-DRSF, with major contributions from all core-group members of the IAEG-DRS, including the United Nations Economic Commision for Europe (UNECE), UNDRR, the disaster risk reduction, official statistics, geospatial information, and other national and international stakeholders. Once finalized, the Framework will support stakeholders by addressing data gaps through providing technical guidelines, definitions and classifications for a basic range of statistics relevant to all phases of disaster risk management.

[11] UNDRR (2023). The Report of the Midterm Review of the Implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030. Available at: https://sendaiframework-mtr.undrr.org/publication/report-midterm-review-implementation-sendai-framework-disaster-risk-reduction-2015-2030.

2. Importance of metadata to SFM Reporting

Metadata

Metadata play a critical role in the SFM reporting process, serving as its backbone by fulfilling two essential functions. First, they provide crucial baseline data on the countries, such as exchange rates, demographic information and other key variables. Secondly, metadata are crucial in calculating key indicators and compound indicators for Sendai Framework Global Targets A, B, and C, including on death and missing persons per 100,000 population, affected persons per 100,000 population, and direct economic loss in current USD as a share of national GDP. As a consequence, the accurate and timely reporting and summary of national populations, GDP and exchange rates from local currency units to USD is of utmost importance to ensure the validity and accuracy of SFM data.

Metadata are vital for standardizing and harmonizing data to enable precise and reliable assessments of disaster impacts across different regions and contexts. Equally important, metadata also facilitate the disaggregation of data by sex, age, income and disability groups, while also serving as the key determinants for sectoral loss monitoring, including in the agricultural, housing and productive assets sectors, allowing for a more detailed and nuanced understanding of reportable losses. This disaggregation includes categories such as sex, hazard type, geographical location and specific loss categories, thereby enhancing the granularity of the data. By breaking down information in this way, metadata enable a more targeted analysis, which supports evidence-based decision-making, policy formulation and the identification of groups as risk or areas that may require special attention in DRR efforts.

3. Importance of collecting and reporting disaggregated and sex- disaggregated data

The SFM enables countries to report disaggregated data on hazard type, income (those affected with earnings below the national poverty line), sex, age and disability, and to develop their own custom indicators if needed. Disaggregation in the SFM looks specifically at:

- Sex: male and female
- Age:
  - children (0–14 years)
  - adults (15–64 years) and
  - seniors (65 years and older)
- Disability: people with an existing "pre-event" disability who are affected by a disaster, as opposed to people who develop a disability as a result of a hazardous event or disaster.[12]

Fourteen countries in the Europe and Central Asia region provided sex-disaggregated data in their reporting on SFM Targets A and B. Within the region, 12 countries reported sex-disaggregated data on mortality and missing persons (Global Target A), accounting for 28 per cent of all Europe and Central Asia regioncountries reporting on this target. Additionally, 10 countries reported sex-disaggregated data on affected populations (Global Target B). The proportion of countries in the region able to provide sex-disaggregated data highlights the urgent need to enhance the gender component and strengthen data capacity in disaster-related statistics.

[12] UNDRR (2021). Sendai Framework Monitor (SFM) Sex, Age And Disability Disaggregated Data (SADDD). Available at: www.undrr.org/media/76930/download?startDownload=20241221.

Overall, there is still a lack of comparable sex-disaggregated data on how disaster risk and impacts differ based on sex. Many countries struggle to collect, analyse and use such data,[13] which can lead to DRR efforts overlooking critical needs and unintentionally reinforcing gender inequalities. By increasing the availability and use of sex, age, income and disability-disaggregated data, more inclusive and evidence-based approaches can be developed that address the unique risks faced by different groups of people. Key Objective 1 of the Gender Action Plan to Support Implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030 specifically emphasizes the need for gender-disaggregated data.[14]

A gender analysis of reports to the Midterm Review of the Sendai Framework included some good data practices and challenges included in Member State reports. Some of these, along with other good practices, were as follows:

- **Switzerland** noted that better-disaggregated data could be supported by digitalization, automatic real-time processing and centralized data production.[15]
- Sub-national authorities in **Denmark** are obliged to collect data on equal treatment disaggregated by sex.[16]
- The **Finland** Government Action Plan for Gender Equality 2020–2023 requires ministries to develop collection and analysis of gender-disaggregated data.[17]
- In **Greece**, there is a law stipulating that that public services and legal entities should collect gender-based statistics, and a formalized collaboration between the National Statistical Authority and the General Secretariat for Demography to gather sex-disaggregated data.[18]
- **Kyrgyzstan** is creating a centralized digital data/information system for DRR and emergency situations accessible to all stakeholders, including local communities and the public.[19]
- In **Spain,** the national statistical office has a legal obligation to collect disaggregated data by sex. It also has a website dedicated to gender statistics.[20]
- **Sweden** has a dedicated unit in Statistics Sweden that is responsible for promoting the production of sex-disaggregated data.[21]

Countries are encouraged to share good data practices to promote the collection and analysis of data disaggregated by sex, gender, age and disability to better inform DRR efforts.

[13] As noted in the cross-cutting analysis of reports to the MTR of the Sendai Framework: UNDRR (2023). Accelerating Action on Gender Equality in Disaster Risk Reduction by 2030: A Cross-cutting Analysis of Reports to the Midterm Review of the Sendai Framework Highlighting Good Practices and Areas to Strengthen for Gender-responsive and Socially Inclusive Disaster Risk Reduction.

[14] "Key Objective 1: Increase the availability of sex, age, income and disability disaggregated data and qualitative information on gender and disaster risk", p. 4.

[15] Switzerland, Consultative Group on Disaster Risk Reduction, Switzerland's Voluntary National Report to the Mid-Term Review of the Implementation of the Sendai Framework, p. 24. Available at: https://sendaiframework-mtr.undrr.org/publication/switzerland-voluntary-national-report-mtr-sf.

[16] European Institute for Gender Equality (2022). 'Denmark. Legislative and policy framework'. Available at: https://eige.europa.eu/gender-mainstreaming/countries/denmark?language_content_entity=en (accessed 26 November 2024).

[17] European Institute for Gender Equality (2022). 'Finland. Legislative and policy framework'. Available at: https://eige.europa.eu/gender-mainstreaming/countries/finland?language_content_entity=en (accessed 26 November 2024).

[18] European Institute for Gender Equality (2022). 'Greece. Legislative and policy framework'. Available at: https://eige.europa.eu/gender-mainstreaming/countries/greece (accessed 26 November 2024).

[19] Kyrgyzstan, Ministry of Emergency Situations, Midterm Review on Implementation of Sendai Framework for Disaster Risk Reduction for 2015-2030 in the Kyrgyz Republic (Bishkek, Kyrgyzstan, 2022), p. 61. Available at: https://sendaiframework-mtr.undrr.org/publication/kyrgyzstanvoluntary-national-report-mtr-sf.

[20] European Institute for Gender Equality (2022). 'Spain. Legislative and policy framework'. Available at: https://eige.europa.eu/gender-mainstreaming/countries/spain?language_content_entity=en (accessed 26 November 2024).

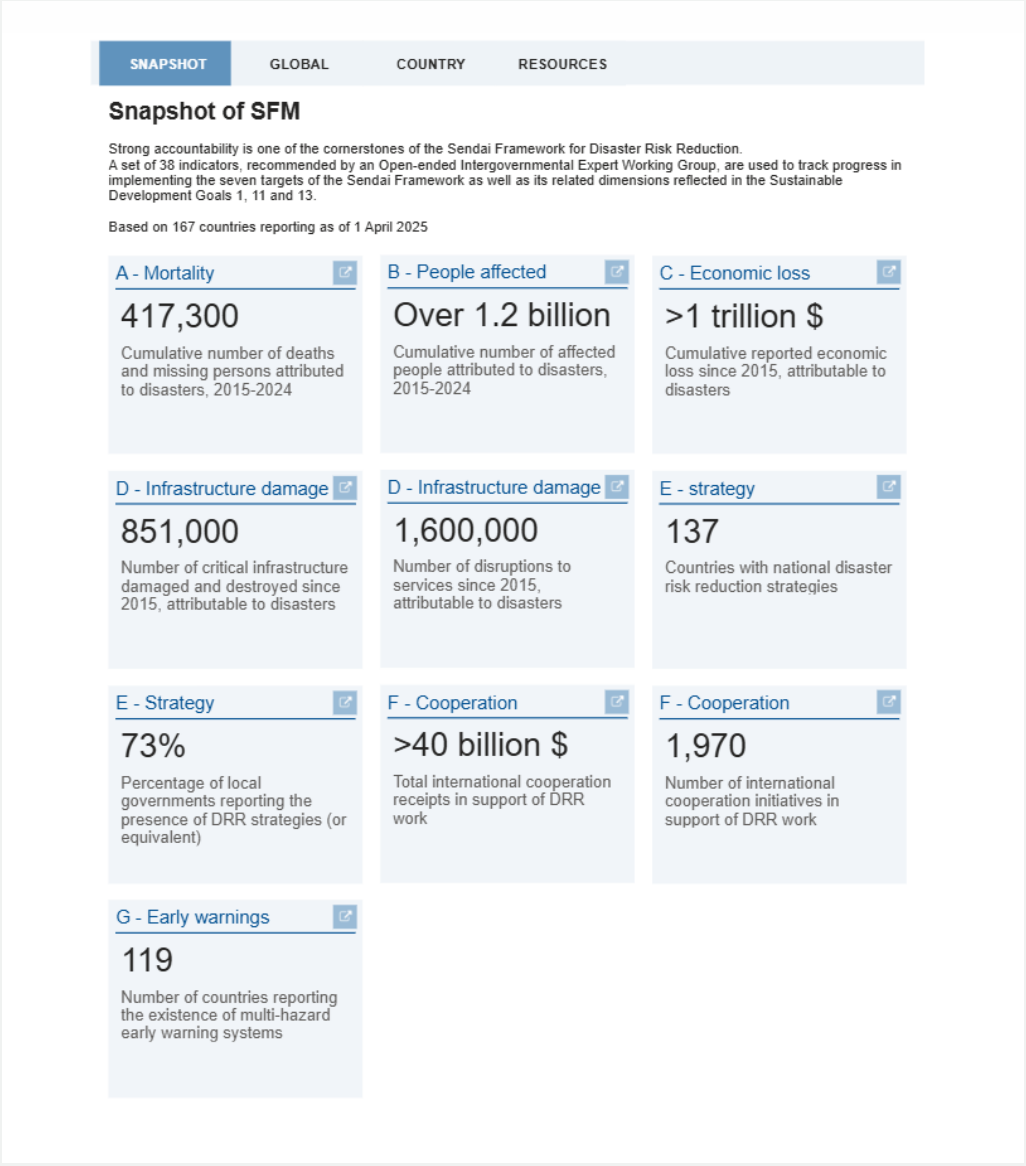
[21] European Institute for Gender Equality (2022). 'Sweden. Legislative and policy framework'. Available at: https://eige.europa.eu/gender-mainstreaming/countries/sweden (accessed 26 November 2024).

Governance structures should be strengthened to support gender-disaggregated data implementation, which could include mandating the systematic collection and use of sex- or gender-disaggregated data by relevant parties, increasing funding and resources for institutional capacity development, and enhancing awareness of the importance of including sex- and gender-disaggregated data at all levels of data collection, analysis and implementation.

4. SFM analytics module

The newly enhanced SFM Analytics module provides comprehensive access to the full spectrum of data reported through the SFM, encompassing over 100,000 data points submitted since 2005 by 167 Member States. This upgraded tool enables users to explore both high-level and detailed insights on the implementation of the Sendai Framework for Disaster Risk Reduction, structured in alignment with the Framework's targets and indicators.

The SFM Analytics module, available at: https://sendaimonitor.undrr.org/



Users can navigate through a global snapshot of progress, offering an overview of implementation trends across all seven global targets. For more granular analysis, the module facilitates in-depth examination of progress at the indicator level, enabling time comparisons and country-specific assessments. Each country profile page consolidates all data submitted across the 38 global indicators, including, where available, sex-disaggregated data on human impacts, which is crucial for understanding differential vulnerabilities, inequality of risk and the outcomes of resilience measures.

The module also supports longitudinal analysis by allowing users to explore specific indicators across multiple years, thereby identifying patterns and shifts in DRR efforts. Integrated links to supplementary resources offer additional context and guidance, positioning the SFM Analytics module as a key enabler of evidence-based decision-making and global accountability in DRR.

5. The Sendai Framework and comprehensive climate action

The DRR and climate change action communities share many commonalities in their development objectives: both address climate change hazards and risks; both share concerns about the increasing magnitude of climate change impacts; and both focus on reducing impacts in society, economy and the environment. Nonetheless, some key differences exist: DRR data and policies often focus on rapid onset and extreme events, while climate change actions and adaptation include slow onset events that may not develop into disasters. **Realizing and exploring these commonalities and differences are key to harmonizing risk understanding among the DRR and climate change action data communities.** Comprehensive approaches for understanding risk and impact data are required so that synergies between DRR and climate change adaptation can be strengthened and mutually beneficial opportunities identified. More information on comprehensive approaches to risk management, including data collection and analysis, can be found here.

Data collected through the SFM and other data collection and analytical systems, such as DesInventar Sendai and the enhanced DELTA Resilience: Disaster losses and damage tracking system, can promote cooperation and equitable resource allocation by identifying the regions most vulnerable to climate impacts. Data highlight gaps in preparedness and resilience, inspiring targeted investments and collaboration between governments, the private sector and civil society. SFM data can help align climate finance with risk reduction priorities, by mainstreaming DRR into development planning. Ultimately, leveraging SFM data ensures that climate adaptation and mitigation efforts are both strategic and impactful.

6. The Early Warning for All (EW4All) initiative and the Sendai Framework

According to the Global Status of Multi-hazard Early Warning Systems 2024 report, evidence continues to suggest that concrete progress has been made by countries in improving the coverage and comprehensiveness of life- and livelihood saving MHEWS. Examining Sendai Framework Monitor Target A and Target G together, global data show that countries with 'limited' to 'moderate' MHEWS comprehensiveness have **six times higher disaster-related mortality** and **nearly four times more disaster-affected people** compared with countries that have 'substantial' to 'comprehensive' MHEWS.

SFM Targets G-2 to G-5 map to the four elements of MHEWS and the four pillars of the Early Warnings for All Initiative.

Sendai Framework Global Targets vis-à-vis EW4All Pillars

MHEWS Pillar and EW4All Outcomes	Sendai Framework Global Target and Indicators
Pillars 1–4	**G-1 (Compound of G2–G5):** Number of countries that have MHEWS
Pillar 1: Risk Knowledge **Outcome:** All countries produce and use risk information that informs and strengthens MHEWS, resulting in actionable and risk-informed warnings and targeted response	**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
Pillar 2: Observations & Forecasting **Outcome:** Empower countries to monitor and forecast priority hazards as well as generate, disseminate and use impact-based, actionable early warnings to save lives, protect property and livelihoods	**G-2**: Number of countries that have multi-hazard monitoring and forecasting systems
Pillar 3: Warning, dissemination & communication **Outcome:** All countries ensure that clear and understandable alerting messages reach all those at risk, allowing to take the necessary actions to save lives, livelihoods and to support longer-term resilience	**G-3**: Number of people per 100,000 that are covered by early warning information through local governments or through national dissemination mechanisms
Pillar 4: Preparedness to respond **Outcome:** Strengthened preparedness to respond at all levels leads to prevention or mitigation of the impacts of hazards and crises, including climate-related events	**G-4**: Percentage of local governments having a plan to act on early warnings
Pillars 1–4	**G-6**: Percentage of population exposed to or at risk from disasters protected through pre-emptive evacuation following early warning

Europe and Central Asia region, reporting and coverage status, Target G (as of 31 March 2025)

Indicator	Limited No of countries	Moderate No of countries	Substantial No of countries	Comprehensive No of countries	Non-reporting No of countries	Total reporting countries	Total countries
G-1	**5**	**13**	**7**	**10**	**20**	**35**	**55**
G-2		2	5	12	36	**19**	55
G-3		2	2	28	23	**32**	55
G-4	3	1	1	25	25	**30**	55
G-5	1	1	6	7	40	**15**	55

Within the region, the average self-assessed G-1 score improved from 0.45 for the scores indicated in the countries' initial reporting, to 0.58 for the final reporting (to 31 March 2025). This signifies a 29 per cent improvement in the comprehensiveness of MHEWS.

In total, 35 countries in the Europe and Central Asia region reported the existence of multi-hazard early warning systems, with 10 countries indicating that they had comprehensive coverage (with a self-assessed score of MHEWS [SFM indicator G-1] between 0.75 and 1), 7 countries having substantial coverage (self-assessed score between 0.5 and 0.75), 13 countries having moderate coverage (self-assessed score between 0.25 and 0.5) and 5 countries having limited coverage (self-assessed score below 0.25 but greater than 0.1).

7. ADDITIONAL DATA SOURCES: THE RISK DATA HUB OF THE DISASTER RISK MANAGEMENT KNOWLEDGE CENTRE

The **Risk Data Hub (RDH)**[22] of the **Disaster Risk Management Knowledge Centre (DRMKC)** is a pioneering platform designed to centralize and standardize risk, damage and loss data **across the European Union**. Developed with the goal of supporting risk assessment and risk analysis processes, the RDH facilitates the collection, sharing and analysis of data that are crucial for understanding and mitigating risks. This comprehensive repository offers a variety of data sets, tools and resources that can be utilized by policymakers, researchers and practitioners in the field of DRR. By leveraging the rich data sets and analytical capabilities of the RDH, **stakeholders can more effectively measure and report on their progress towards the goals of the Sendai Framework**. The RDH's standardized data can be used to track the reduction of disaster risk, guide the development of risk-informed policies and ensure that efforts are aligned with the global benchmarks set by the Sendai Framework.

[22] Available at: https://drmkc.jrc.ec.europa.eu/risk-data-hub#/

The RDH collects and organizes data on disaster-related fatalities, **affected people** and **economic losses**.[23] Metrics such as population fatalities (A1) are directly **mapped to Sendai Target A indicators**. The RDH tracks metrics for populations affected (B1) and injured (B2) during disaster events. These insights allow for the systematic monitoring of trends and progress towards reducing the impact of disasters on people. The RDH's ability to correlate hazard events with affected populations provides insights into which hazards disproportionately impact communities, enabling targeted interventions. Metrics such as economic impact (C1–C6) align directly with Sendai Framework Target C indicators. The RDH aggregates data from multiple sources, such as EM-DAT, the National Oceanic and Atmospheric Administration (NOAA) and the Dartmouth Flood Observatory, ensuring comprehensive coverage of disaster events.

The RDH is currently developing a tool to enable Member States and national authorities to record disaster loss data consistent with the hazard and assets taxonomies currently considered in the RDH. The latter provides ready-to-use visual outputs for mortality, affected populations and economic losses, aiding in the effective communication of trends and insights to stakeholders. By leveraging the RDH, national authorities can ensure that their reporting for the Sendai Framework is data-driven, standardized and aligned with international best practices. This capability supports evidence-based policymaking and facilitates targeted DRR efforts.

The subsequent analyses demonstrate the application of the RDH in monitoring progress towards achieving Targets A, B and C of the Sendai Framework.

Analytics

Figure 1 shows fatalities for the EU27 countries for the period 2015 to 2023: 2022 has a high number of fatalities for meteorological events related to the 2022 heatwaves in Europe, with over 18,000 and over 11,300 fatalities recorded for Italy and Spain respectively.

Figure 2 presents disaster loss data related to injured and ill people, both captured under the compound indicator B1, while 2023 shows a high number of people affected due to hydrological events, mainly floods in Germany and Slovenia, and meteorological events such as storm Ciaran and storm Domingos, which particularly affected France.

Figure 3 illustrates the findings on the economic losses that occurred in the EU27 area between 2015 and 2023. The economic losses were summed by hazard subgroup and year for these countries. The amount was then standardized by the amount of GDP of the EU27 (including GDP for all countries, both those that experienced economic losses for the year concerned and those that did not). The economic losses come from multiple data sources (for more information on the main loss data sources considered in the RDH, see the web page Main Loss Data Sources) and thus had to be harmonized. Both EM-DAT and NOAA report economic losses in USD. Losses were converted to local currencies (LCU) for the year of the event. Economic losses in LCU for all sources were then converted to EUR with a reference year of 2015 (EUR 2015). Finally, the values were adjusted for inflation. Information about the deflator and GDP were obtained from the ARDECO Explorer (GDP data from 29 November 2024).

[23] The Risk Data Hub adopts as standards the Risk Data Library Standards (RDLS) exposure category (available at: https://docs.riskdatalibrary.org/en/latest/reference/codelists/#exposure-category) and the Global Exposure Database for All (GED4ALL) schema (available at: https://drmkc.jrc.ec.europa.eu/risk-data-hub#/methodologies/asset_categories.

It is clear from Figure 3 that 2021 is the year with the most significant relative economic losses over the period 2015 to 2023. The peak in economic losses for 2021 is mostly related to the European floods of that year, which affected multiple countries, with economic losses of over €44.5 billion (EUR 2015) in Germany and €2.1 billion (EUR 2015) in Belgium. Significant meteorological events also affected France and Spain, with losses of over €6.2 billion and €2.1 billion (EUR 2015), respectively.

Figure 1: Number of deaths for the EU27 for 2015–2023 extracted from the Risk Data Hub disaster loss database

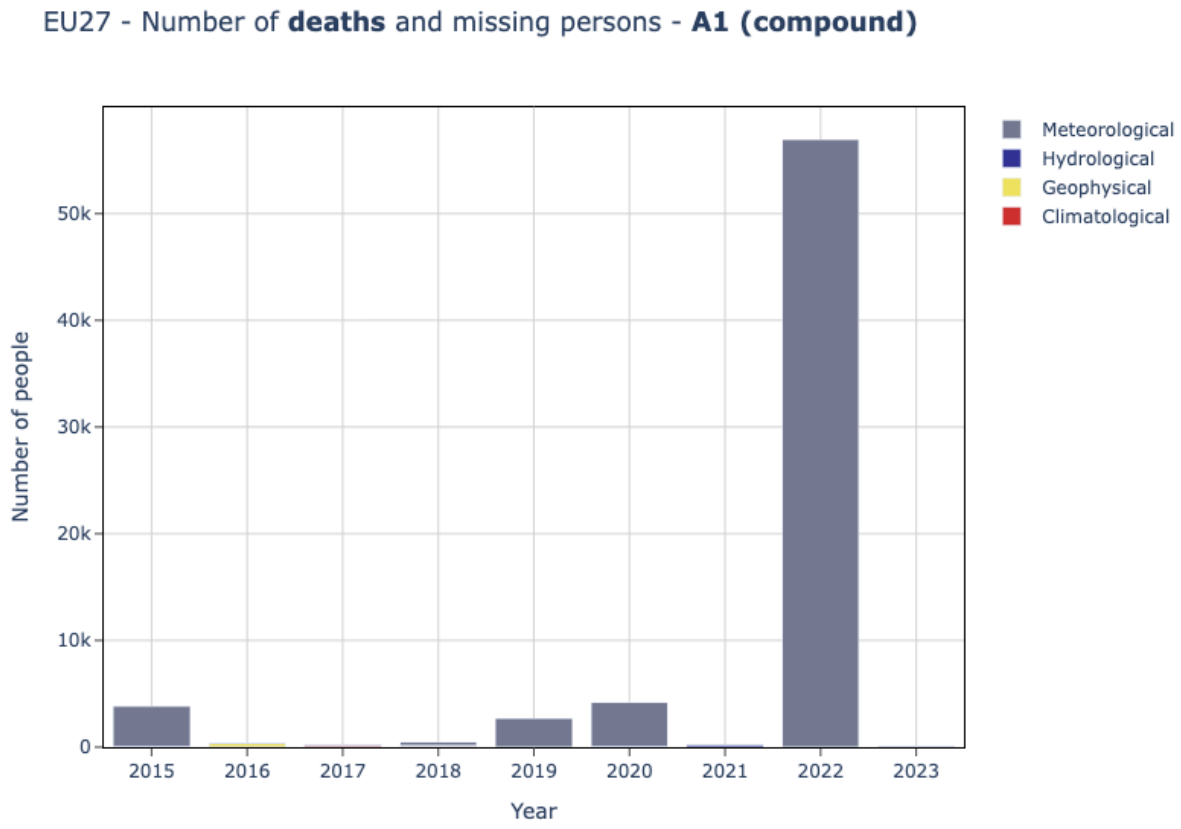


Figure 2: Number of people affected (not including fatalities) for the EU27 for 2015–2023 extracted from the Risk Data Hub disaster loss database

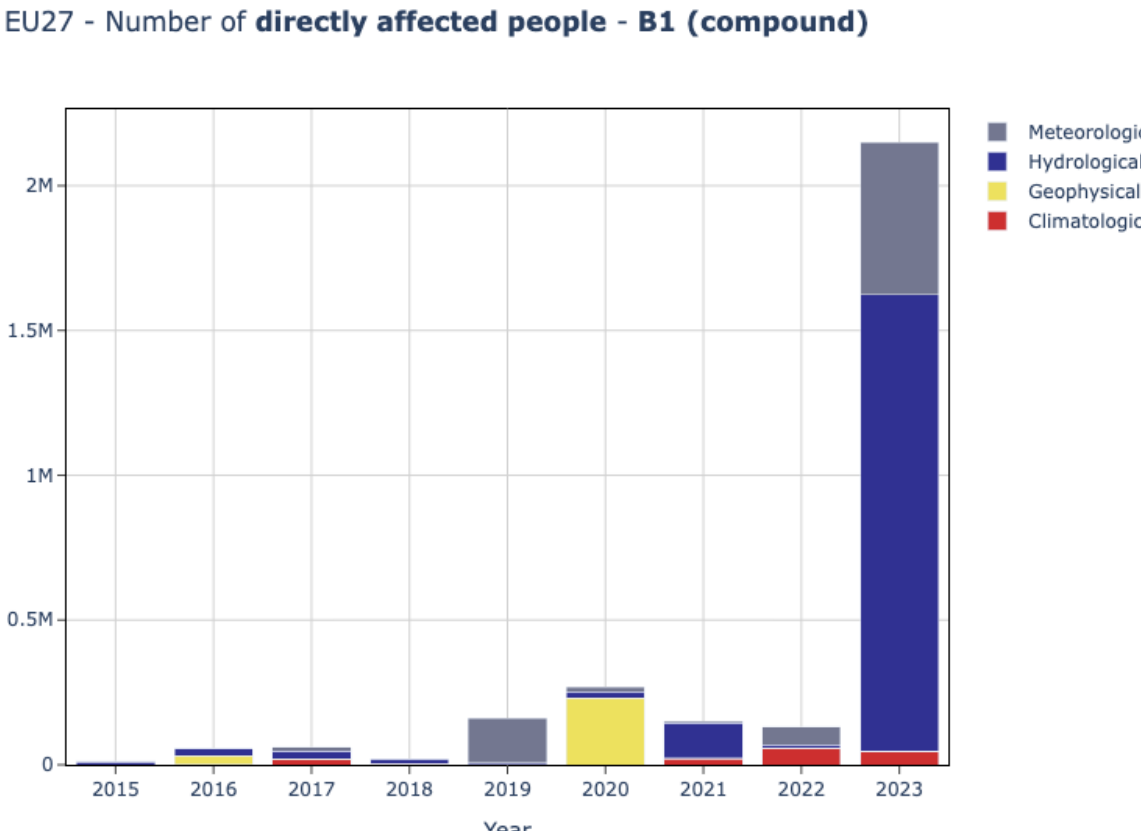
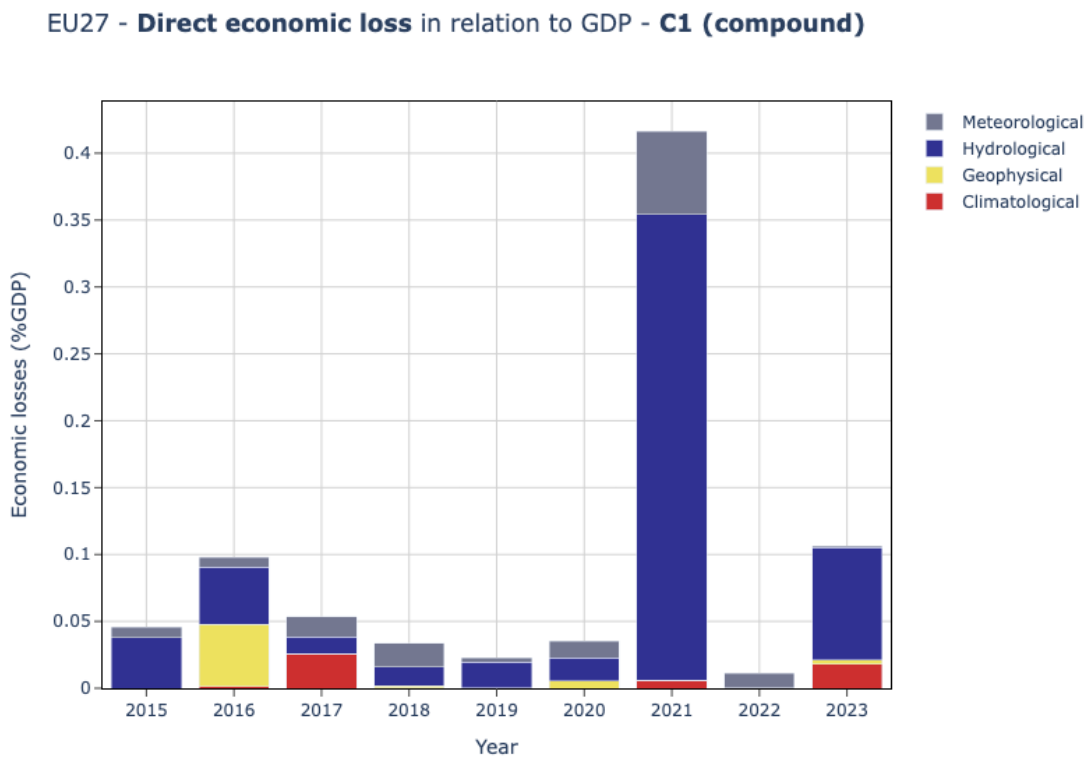


Figure 3: Direct economic losses for the EU27 for 2015–2023 standardized by the gross domestic product of the EU27



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