

Sendai Framework for Disaster Risk Reduction

Goal, Targets and Metrics

Sixth Workshop under the Glasgow – Sharm el-Sheikh programme on the global goal on adaptation: Target-setting, metrics, methodologies and indicators

4-5 June 2023, Bonn



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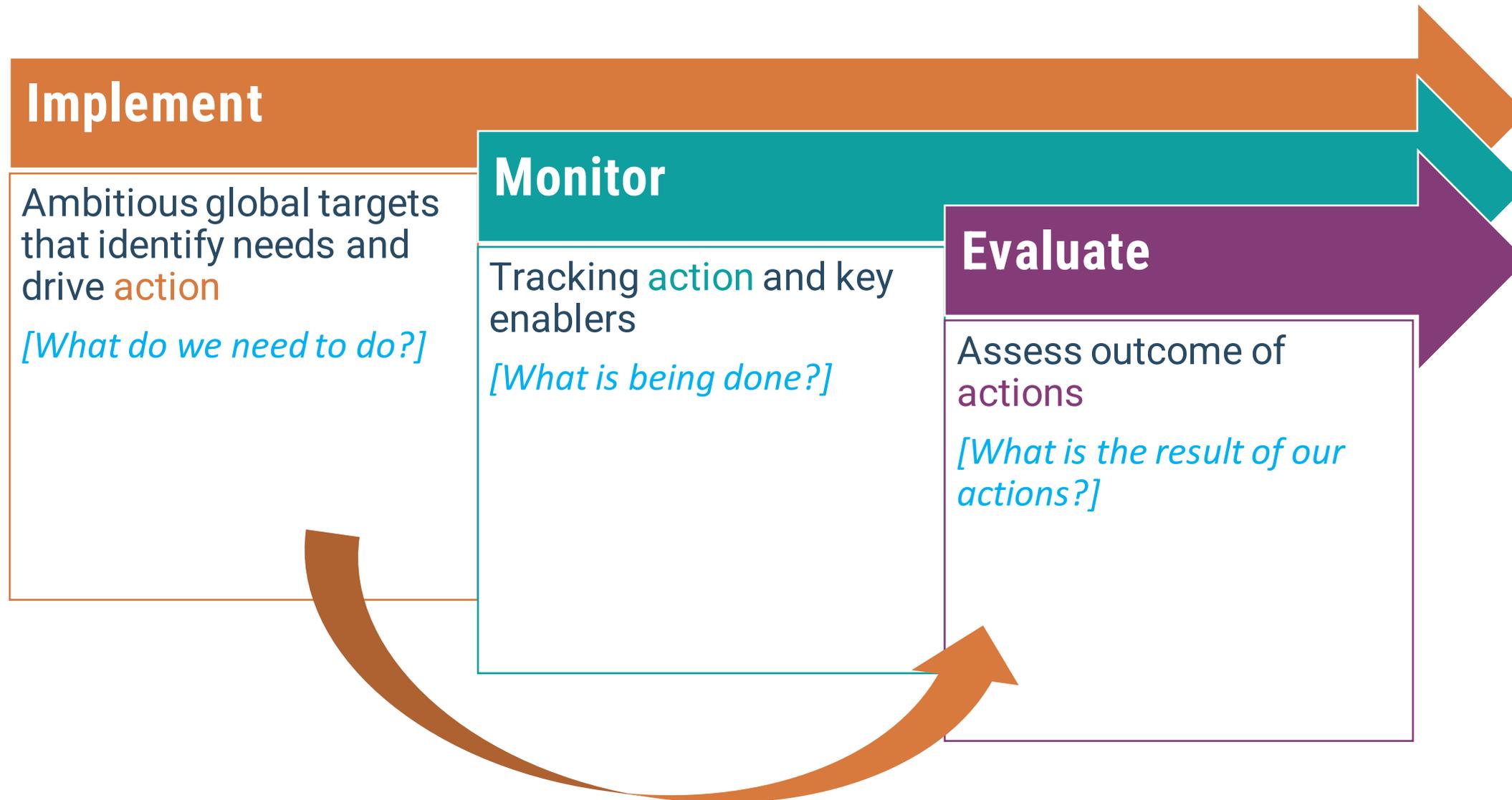
UN Office for Disaster Risk Reduction



SENDAI FRAMEWORK
FOR DISASTER RISK REDUCTION 2015-2030

The Sendai Framework logo consists of a horizontal bar with four colored segments: red, purple, orange, and teal. Below the bar, the text "SENDAI FRAMEWORK" is written in a bold, sans-serif font, and "FOR DISASTER RISK REDUCTION 2015-2030" is written in a smaller, all-caps font below it.

Key Message 1: Setting goal, targets and metrics



SUMMARY of the Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters (Hyogo Framework)

Expected outcome, strategic goals and priorities for action 2005-2015

Expected Outcome
The substantial reduction of disaster losses, in lives and in the social, economic and environmental assets of communities and countries

Strategic Goals

The integration of disaster risk reduction into sustainable development policies and planning

Development and strengthening of institutions, mechanisms and capacities to build resilience to hazards

The systematic incorporation of risk reduction approaches into the implementation of emergency preparedness, response and recovery programmes

Priorities for Action

Key Activities	<p>1. Ensure that disaster risk reduction (DRR) is a national and a local priority with a strong institutional basis for implementation</p> <ul style="list-style-type: none"> • DRR institutional mechanisms (national platforms); designated responsibilities • DRR part of development policies and planning, sector wise and multisector • Legislation to support DRR • Decentralisation of responsibilities and resources • Assessment of human resources and capacities • Foster political commitment • Community participation 	<p>2. Identify, assess and monitor disaster risks and enhance early warning</p> <ul style="list-style-type: none"> • Risk assessments and maps, multi-risk: elaboration and dissemination • Indicators on DRR and vulnerability • Data & statistical loss information • Early warning: people centered; information systems; public policy • Scientific and technological development; data sharing, space-based earth observation, climate modeling and forecasting; early warning • Regional and emerging risks 	<p>3. Use knowledge, innovation and education to build a culture of safety and resilience at all levels</p> <ul style="list-style-type: none"> • Information sharing and cooperation; • Networks across disciplines and regions; dialogue • Use of standard DRR terminology • Inclusion of DRR into school curricula, formal and informal education • Training and learning on DRR: community level, local authorities, targeted sectors; equal access • Research capacity: multi-risk; socio-economic; application • Public awareness and media 	<p>4. Reduce the underlying risk factors</p> <ul style="list-style-type: none"> • Sustainable ecosystems and environmental management • DRR strategies integrated with climate change adaptation • Food security for resilience • DRR integrated into health sector and safe hospitals • Protection of critical public facilities • Recovery schemes and social safety-nets • Vulnerability reduction with diversified income options • Financial risk-sharing mechanisms • Public-private partnership • Land use planning and building codes • Rural development plans and DRR 	<p>5. Strengthen disaster preparedness for effective response at all levels</p> <ul style="list-style-type: none"> • Disaster management capacities: policy, technical and institutional capacities • Dialogue, coordination & information exchange between disaster managers and development sectors • Regional approaches to disaster response, with risk reduction focus • Review & and exercise preparedness and contingency plans • Emergency funds • Voluntarism & participation
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Cross Cutting Issues

Multi-hazard approach

Gender perspective and cultural diversity

Community and volunteers participation

Capacity building & technology transfer

Contributing to the achievements of the internationally agreed development goals (including the MDGs)

Hyogo Framework for Action: 2005-2015

1 outcome

3 Goals

5 Priorities for Action

22 indicators

SENDAI FRAMEWORK

FOR DISASTER RISK REDUCTION 2015-2030

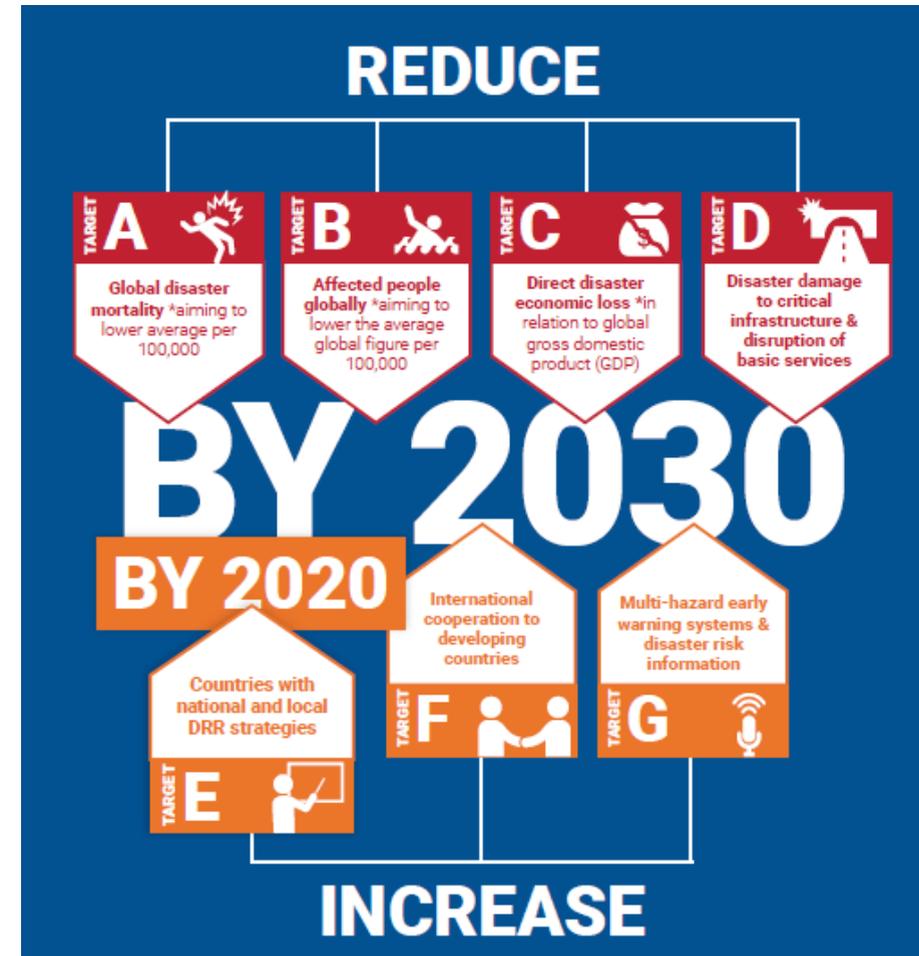
1 GOAL



4 PRIORITIES FOR ACTION



7 TARGETS

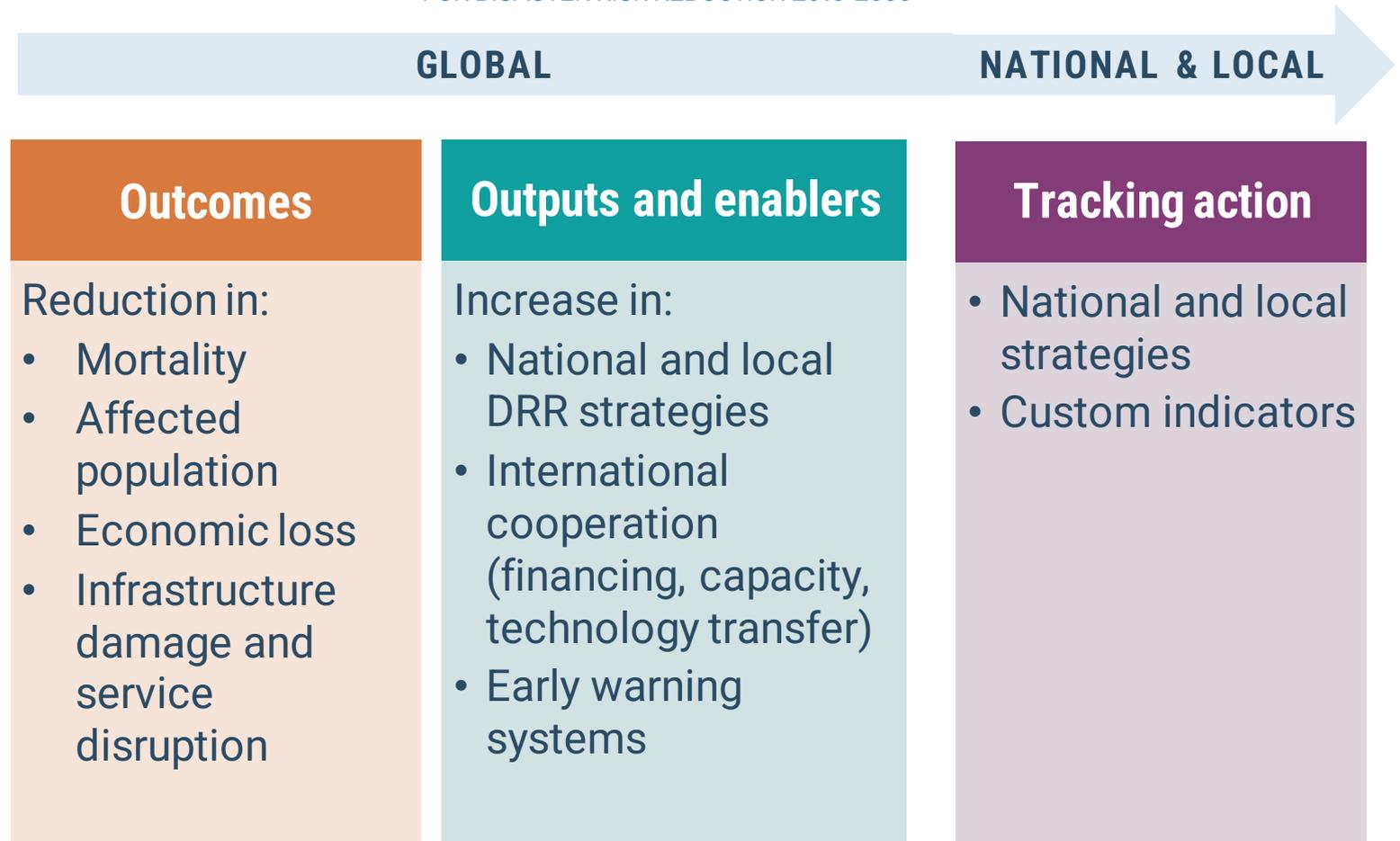


Key Message 2: Balancing global goal vs national implementation

- **No single, uniform and universally applicable metric for disaster risk reduction**
 - Disaster risk is a function of hazard, vulnerability and exposure – differs over time and space
- **Metrics of success:**
 - Outcome – Reduction in losses and damages
 - Outputs and enablers – Data, Governance, Financing and Early Warning
 - Inputs/Implementation – Country-specific



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Key Message 3: Enabling aggregations for a global goal

- **Universal applicability**
 - Applicable in all contexts (geographic and socioeconomic)
 - Temporal comparison
- Aggregation of data on **losses and damages** – from local to global
 - Success (or failure) of disaster risk management measured through decrease (or increase) in disaster impact/ losses and damages (globally & nationally)
- **Quantified**
 - Mix of composite and individual quantitative indicators
 - Standardized: The reduction of disaster losses is assessed relative to the size of a country's population and economy
 - International benchmarking of progress relative to a quantitative baseline 2005-2015 (Targets A & B)
 - Indexing based on scores
- **Data and methodological standards** - balance between precision and practicality
 - Common taxonomy and definitions
 - Minimum standards and metadata
 - Methodologies for the measurement of indicators and the processing of statistical data with relevant technical partners.

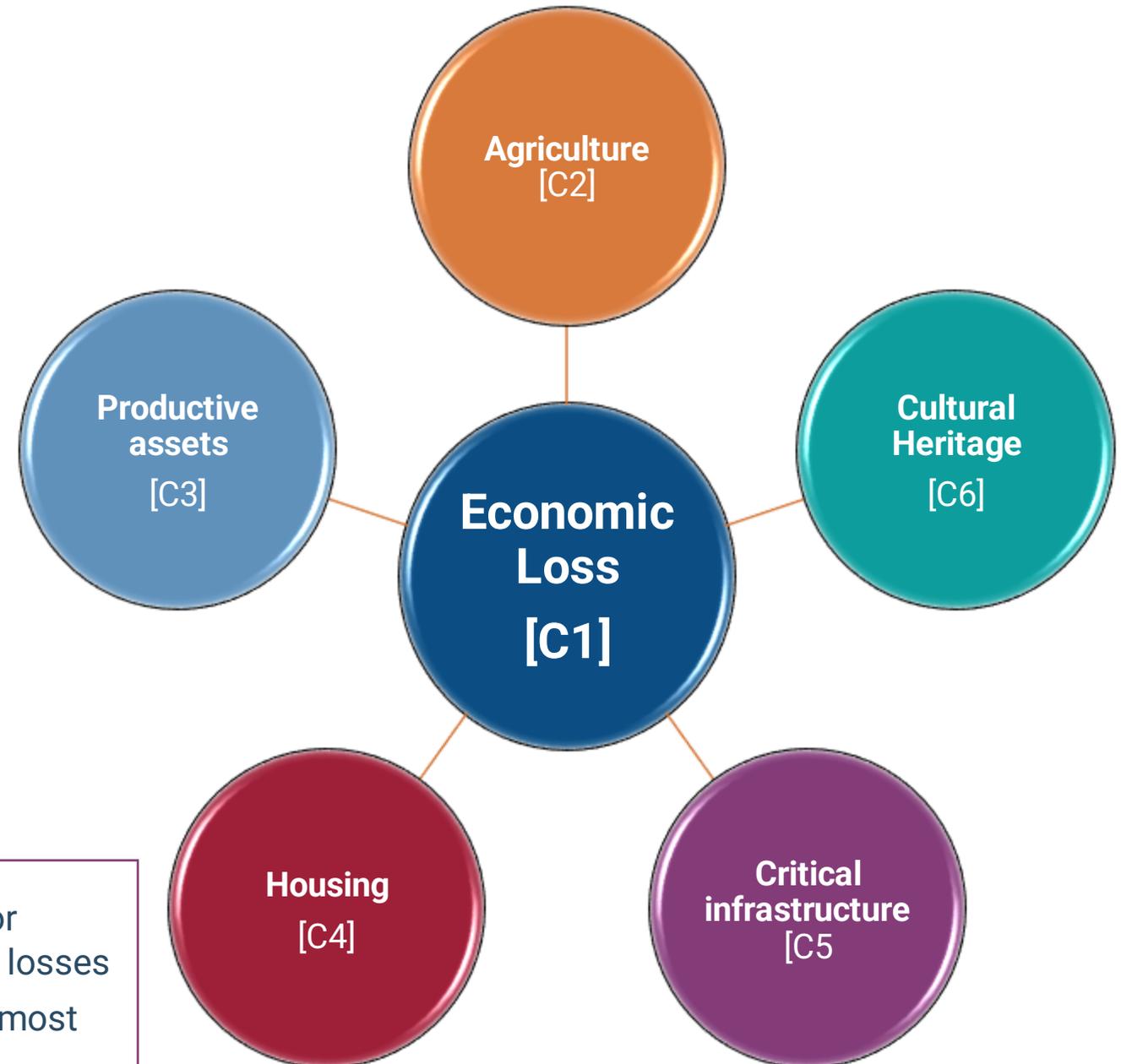
Example of Aggregation: Reduce economic losses [Target C; SDG 1.5, 11.5]

Target: Reduce direct economic loss in relation to global GDP by 2030

Three steps: (i) data collection, (ii) conversion of physical value into economic value, and (iii) conversion from national currency into US\$

Loss assessment for each sector backed by methodologies and taxonomy

C-1 compound indicator is expressed as a simple sum of Indicators C-2 to C-6 in relation to GDP.



Average global economic loss:

0.57% of global GDP in 2021

Reported by 43 countries in 2021

- Understand increase or decrease in economic losses
- Helps understand the most vulnerable sectors

Example of Aggregation: Increase DRR Strategies [Target E; SDG 1.5, 11.b, 13.1]

Target: Substantially increase the number of countries with national and local DRR strategies by 2020

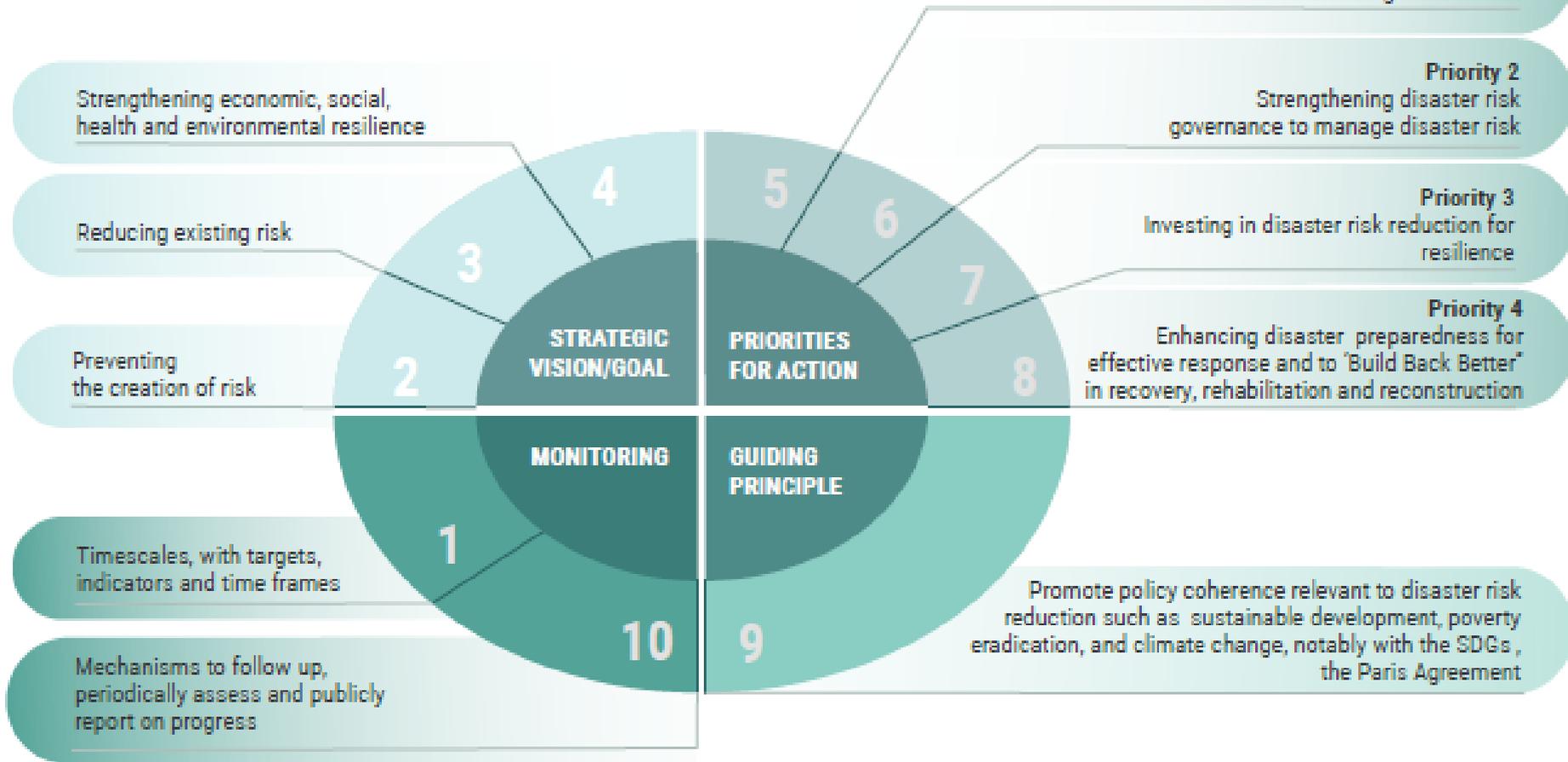
Using quantitative indicators – including the key elements of a strategy – Member States monitor continuing and gradual improvement in strategy development

The ten key elements are weighted equally by assigning 10% (or 0.1) to each element.

Index of alignment: Arithmetic average

1. Comprehensive : 1.0
2. Substantial : 0.75
3. Moderate : 0.50
4. Limited : 0.25
5. No alignment or no existence: Zero

Level of alignment of a national strategy with the Sendai Framework



Average global score: 0.66

Reported by 126 countries
(as of Dec 2022)

- Quality of plans and efficacy in meeting the targets
- Indicates the level of implementation.

Example of Aggregation: Increase Early Warning Systems [Target G]

Target: Substantially increase the availability of and access to multi-hazard early warning systems [MHEWS] by 2030

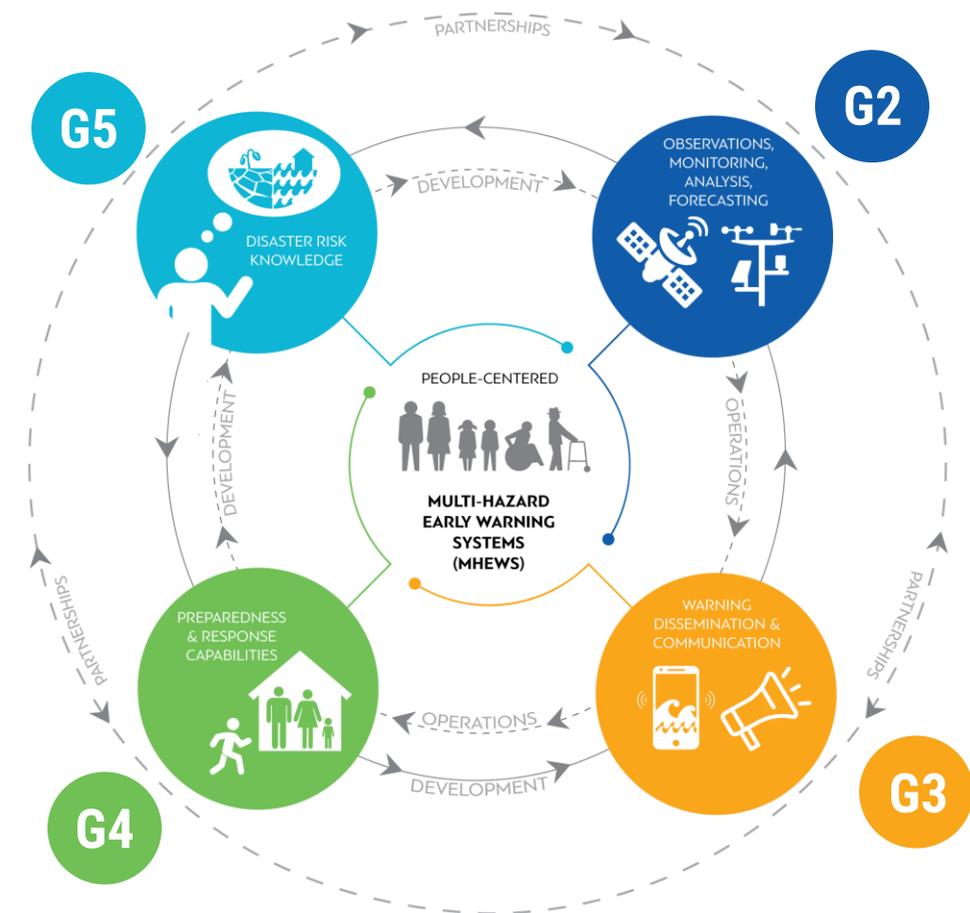
Using quantitative indicators – including the key elements of MHEWS – Member States monitor existence and quality of MHEWS

The four elements are weighted equally by assigning 25% (or 0.25) to each element.

Index of coverage: Arithmetic average of the scores of the four indicators G-2 to G-5

1. Comprehensive : 0.75 and above
2. Substantial : 0.50 - 0.75
3. Moderate : 0.25 - 0.50
4. Limited : Below 0.25
5. No EWS: Zero

Pillars of Early Warning Systems / Target G Indicators



Average global score: 0.47

Reported by 98 countries
(as of Dec 2022)

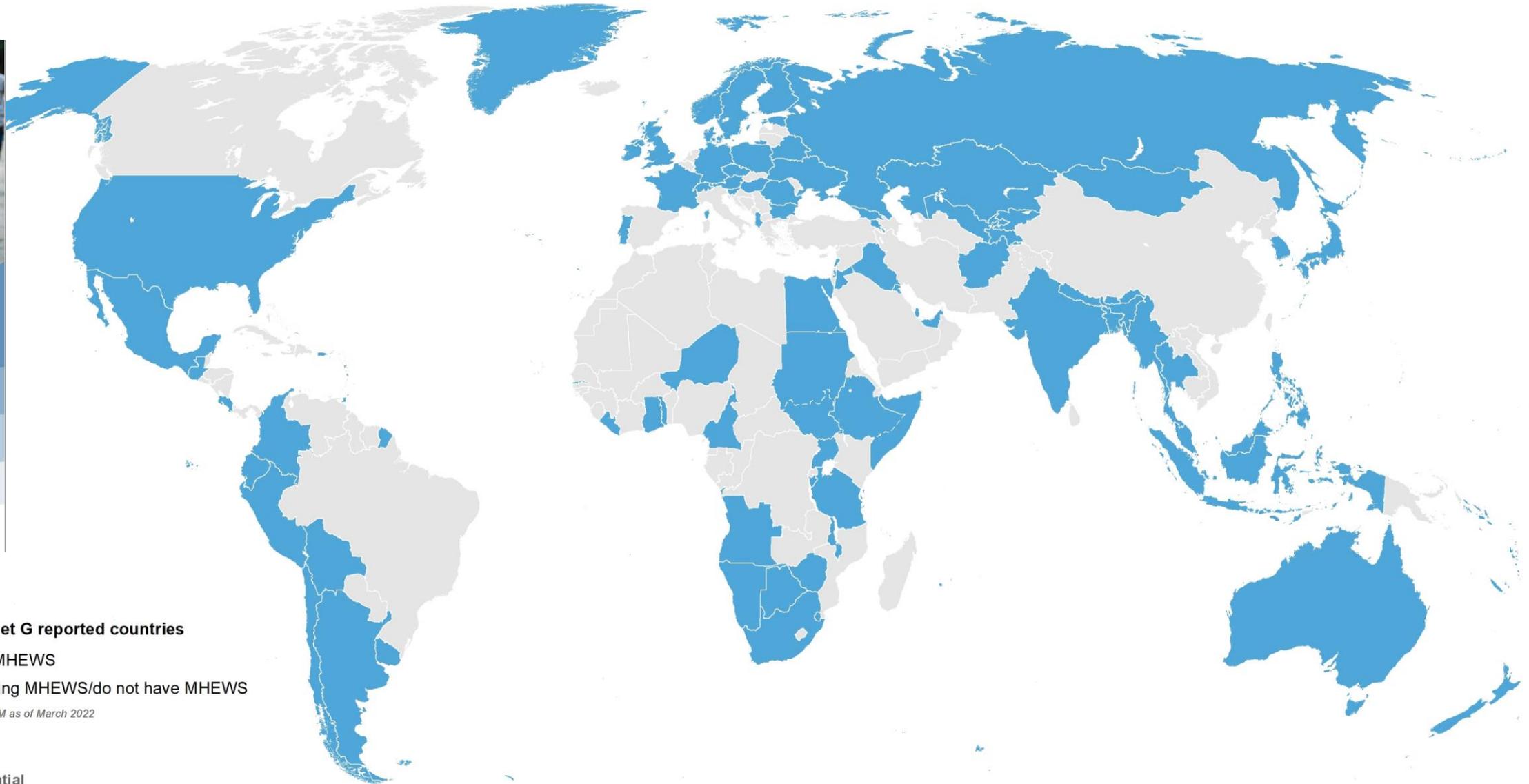
- Elements of MHEWS needing special attention, nationally and globally
- Global coverage and progress

Example of Aggregation: Early Warning Systems [Target G]



Global status
of multi-hazard
early warning systems

Target G



Sendai Framework Target G reported countries

- Reported having MHEWS
- Did not report having MHEWS/do not have MHEWS

Source: SFM as of March 2022

UNITED NATIONS Geospatial

The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.
Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.
Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.
A dispute exists between the Governments of Argentina and the United Kingdom of Great Britain and Northern Ireland concerning sovereignty over the Falkland Islands (Malvinas).

Key Message 4: From targets to metrics...and standards

Time ➤

2015

2017

2017

2017

2017-2018

Output ➤

Sendai Framework
for Disaster Risk Reduction
2015 - 2030

One Goal;
7 Targets

38 Indicators
+Terminologies

Alignment
between
Sendai and
SDG Metrics

Data Readiness
Review:
Availability,
Quality, Access

Methodologies,
Minimum
Standards,
Metadata

Process ➤

Intergovernmental
negotiations & UNGA
Resolution

Intergovernmental
negotiations [OIEWG]
& UNGA Resolution

Intergovernmental
negotiations [IAEG-
SDG] & UNGA
Resolution

Technical process
coordinated by
UNDRR

Technical process
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UNDRR

Key Message 4: From targets to metrics...and standards

Time ➤

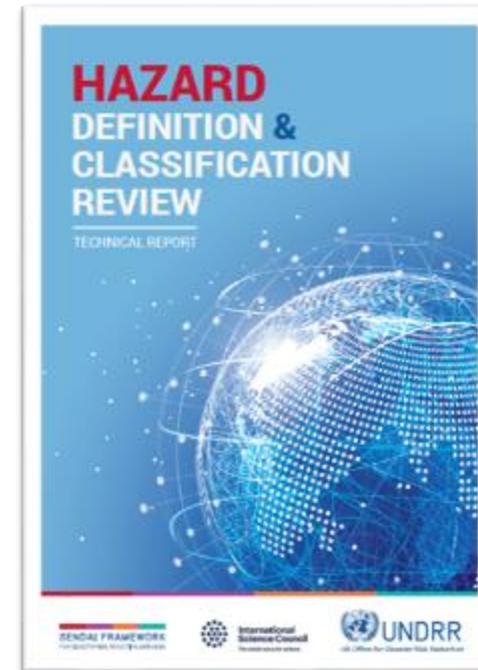
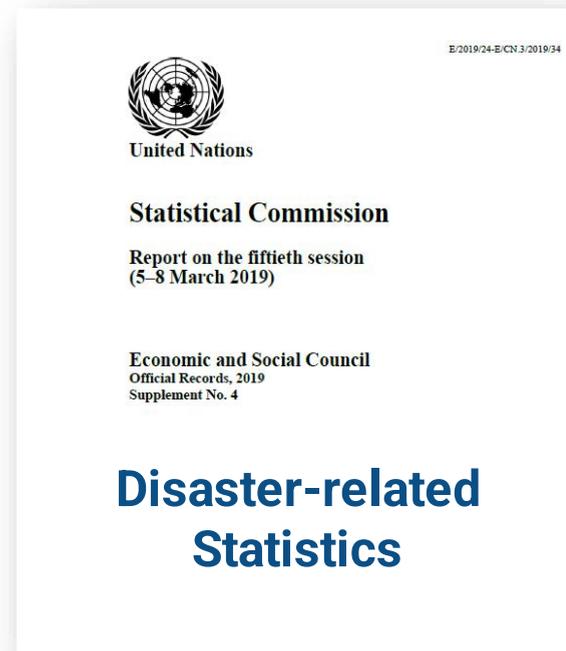
2017

2018 - date

2020

2022

Output ➤



Process ➤ Developed by UNDRR

Intergovernmental process under the Statistical Commission

Technical process coordinated by ISC & UNDRR

Technical process coordinated by UNDP and UNDRR

Way Forward

- **Enhance data availability and access:** New generation tracking system for hazardous events and losses and damages
- **Continue strengthening data standards and methods:** Inter-Agency Expert Group on Disaster-related Statistics
- **Implement recommendations of the Midterm Review of the Sendai Framework:** Greater data disaggregation and quality

Target A: Substantially reduce global mortality by 2030



Target B: Substantially reduce the number of affected people globally



Target C: Reduce direct disaster economic losses in relation to global gross domestic product (GDP)



Target D: Reduce disaster damage to critical infrastructure and basic services disruptions



Target E: Increase national and local disaster risk reduction strategies



Target F: Enhance international cooperation for disaster reduction



Target G: Increase availability and access to early warning systems and risk information



Recommendations for GGA

- Keep goals and targets qualitative, quantified by SMART indicators
 - Goals and targets – Strategic process
 - Development of indicators – Technical process
- Measure progress globally, enable implementation nationally
- Balance ambition and realism – It can take years to generate data and ensure global comparability
- Leverage lessons, practices and resources from the Sendai Framework: Metrics, data, standards and methods



www.sendaimonitor.undrr.org
www.desinventar.net

Thank you

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Key Resources

- **Sendai Framework Monitor:** <https://sendaimonitor.undrr.org>
- **Sendai Framework indicators and terminology:** <https://www.preventionweb.net/terminology/open-ended-working-group> (Also <https://www.undrr.org/terminology>)
- **Technical Guidance on Sendai Framework Monitor:** <https://www.preventionweb.net/quick/11641>
- **Sendai Framework data readiness review 2017 - Global summary report** <https://www.undrr.org/quick/11615>
- **Disaster L&D Databases:** <https://desinventar.net> (Also <https://www.undrr.org/disaster-losses-and-damages-tracking-system>)
- **Hazard definitions and classification:** <https://www.undrr.org/quick/12955> **Hazard Information Profiles:** <https://www.undrr.org/quick/66872>
- **Data and digital maturity for disaster risk reduction: Informing the next generation of disaster loss and damage databases** <https://www.undrr.org/quick/75391>
- **Secretary General's Report on Sendai Framework (2022):** <https://www.undrr.org/publication/report-secretary-general-implementation-sendai-framework-disaster-risk-reduction-2015-4>
- **Global status of multi-hazard early warning systems: Target G:** <https://www.undrr.org/quick/74257>
- **Global Assessment Reports on Disaster Risk Reduction:** <https://www.undrr.org/global-assessment-report-disaster-risk-reduction-gar>