

Measuring global progress in the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 and the 2030 Agenda for Sustainable Development

Ritsuko Yamazaki-Honda
Risk Knowledge Section
United Nations Office for Disaster Risk Reduction (UNISDR)

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In support of the Sendai Framework
for Disaster Risk Reduction 2015 - 2030

Monitoring progress under the Hyogo Framework for Action (HFA Monitor) : 2005-2015

22 Core indicators in 5 Priorities for Action:

1. Ensure that disaster risk reduction is a national and a local priority with a strong **institutional basis** for implementation.
2. Identify, **assess and monitor** disaster risks and enhance **early warning**.
3. Use **knowledge**, innovation and education to build a culture of safety and resilience at all levels.
4. Reduce the **underlying risk factors**.
5. Strengthen **disaster preparedness** for effective response at all levels.

Monitoring progress:

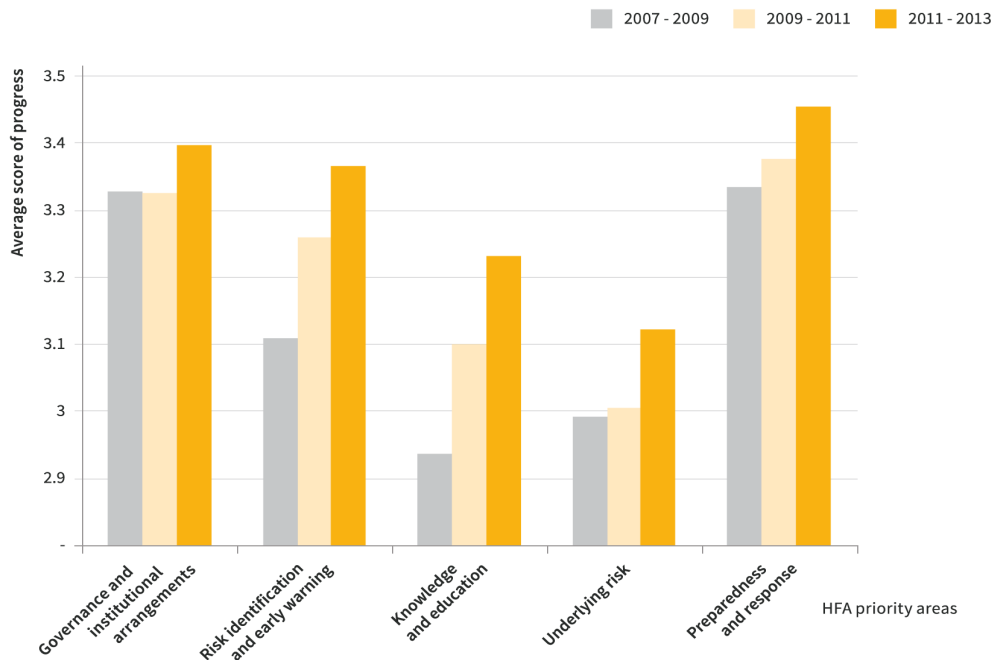
- **HFA Monitor** – on-line, self-assessment monitoring and reporting tool.
- 61 countries (2007-2009); 133 countries (2009-2011); 113 countries (2011-2013); 95 countries (2013-2015).
- Peer review process – Africa, Americas, Europe.

Global repository:

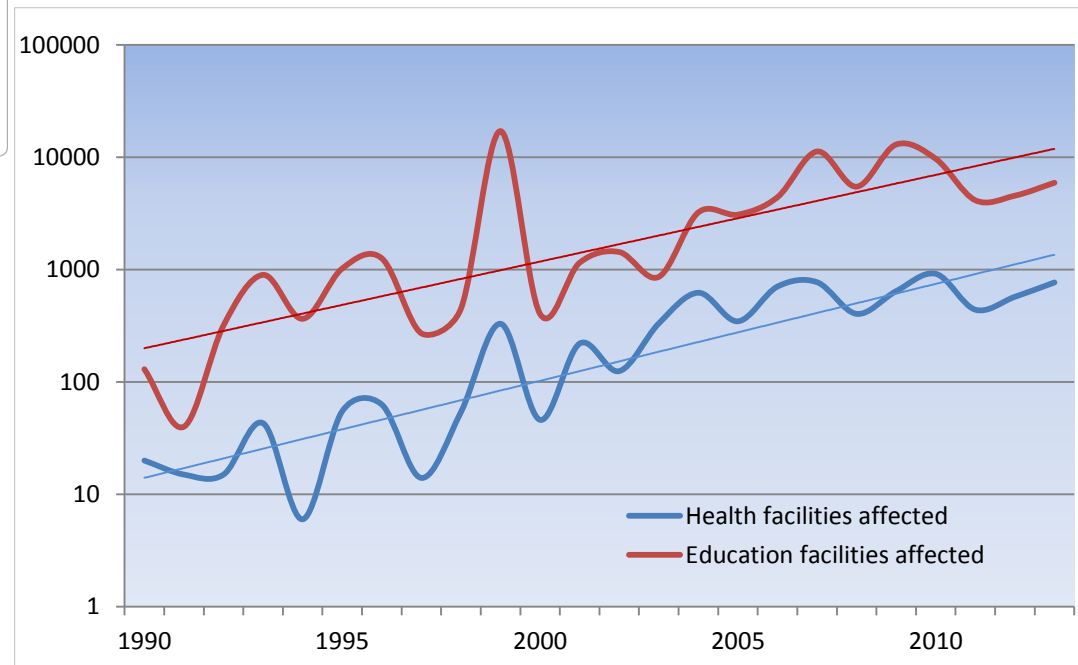
- Single largest repository of the worldwide state of play in DRR.

<http://www.preventionweb.net/english/hyogo/hfa-monitoring/?pid:223&pil:1>

Conflicting evidence on progress



Increasing physical damage and economic loss



Gradual progress across all Priorities for Action

22 Core indicators for National HFA Monitor

| Priority for Action | Recommended Indicators |
|---|---|
| <p>1: Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation</p> | <ul style="list-style-type: none"> i. National institutional and legal frameworks for disaster risk reduction exist with decentralized responsibilities and capacities at all levels. ii. Dedicated and adequate resources are available to implement disaster risk reduction plans at all administrative levels. iii. Community participation and decentralization is ensured through the delegation of authority and resources to local levels. iv. A national multi-sectoral platform for disaster risk reduction is functioning. |
| <p>2: Identify, assess and monitor disaster risks and enhance early warning.</p> | <ul style="list-style-type: none"> i. National and local risk assessments based on hazard data and vulnerability information are available and include risk assessments for key sectors. ii. Systems are in place to monitor, archive and disseminate data on key hazards and vulnerabilities. iii. Early warning systems are in place for all major hazards, with outreach to communities. iv. National and local risk assessments take account of regional/ trans-boundary risks, with a view to regional cooperation on risk reduction. |
| <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"> i. Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing system). ii. School curricula, education material and relevant trainings include risk reduction and recovery concepts and practices. iii. Research methods and tools for multi risk assessments and cost benefit analysis are developed and strengthened. iv. Country wide public awareness strategy exists to stimulate a culture of disaster resilience, with outreach to urban and rural communities. |
| <p>4: Reduce the underlying risk factors²³.</p> | <ul style="list-style-type: none"> i. Disaster risk reduction is an integral objective of environment-related policies and plans, including for land use, natural resource management and climate change adaptation. ii. Social development policies and plans are being implemented to reduce the vulnerability of populations most at risk. iii. Economic and productive sectoral policies and plans have been implemented to reduce the vulnerability of economic activities. iv. Planning and management of human settlements incorporate disaster risk reduction elements, including enforcement of building codes. v. Disaster risk reduction measures are integrated into post-disaster recovery and rehabilitation processes. vi. Procedures are in place to assess disaster risk impacts of all major development projects, especially infrastructure. |
| <p>5: Strengthen disaster preparedness for effective response at all levels.</p> | <ul style="list-style-type: none"> i. Strong policy, technical and institutional capacities and mechanisms for disaster management, with a disaster risk reduction perspective are in place. ii. Disaster preparedness plans and contingency plans are in place at all administrative levels, and regular training drills and rehearsals are held to test and develop disaster response programmes. iii. Financial reserves and contingency mechanisms are in place to enable effective response and recovery when required. iv. Procedures are in place to exchange relevant information during disasters and to undertake post-event reviews. |

Monitoring the HFA: issues encountered

- Review of the HFA Monitor and process by UNISDR 2013-2015
- HFA Thematic Review 2013-2014 – multi-disciplinary, multi-stakeholder, peer-reviewed research initiative led by UNISDR

- Core indicators were **input** rather than **output** or **outcome** focused
- Focused on **reducing existing risks** rather than on the **generation of new risks** or **resilience** .
- Progress not related to **risk levels** of country
- **Subjective**, not allowing international benchmarking
- Core indicators relate to **multiple policies** and **stakeholders**: Unclear responsibility and accountability
- No clear link to **Millennium Development Goals** and **UNFCCC**

Chart of the Sendai Framework for Disaster Risk Reduction 2015-2030

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Scope and purpose

The present framework will apply to the risk of small-scale and large-scale, frequent and infrequent, sudden and slow-onset disasters, caused by natural or manmade hazards as well as related environmental, technological and biological hazards and risks. It aims to guide the multi-hazard management of disaster risk in development at all levels as well as within and across all sectors.

Expected outcome

The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries

Goal

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

Targets

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

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

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

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

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

Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of this framework by 2030

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

Priorities for Action

There is a need for focused action within and across sectors by States at local, national, regional and global levels in the following four priority areas.

Priority 1

Understanding disaster risk

Priority 2

Strengthening disaster risk governance to manage disaster risk

Priority 3

Investing in disaster risk reduction for resilience

Priority 4

Enhancing disaster preparedness for effective response, and to «Build Back Better» in

Sendai Framework for Disaster Risk Reduction: 2015-2030 (A/RES/69/283 - June 2015)

- ❑ **Seven Global Targets**, four of which are **outcome focused**
- ❑ **Goal** focuses not only on **reducing existing risks** also on **preventing new risks** and **strengthening resilience**
- ❑ The reduction of disaster losses is assessed **relative to the size of a country's population and economy**
- ❑ Outcome Targets are objective and measurable allowing **international benchmarking of progress** relative to a quantitative baseline 2005-2015
- ❑ Input Targets include national and local DRR strategies, international cooperation, MHEWS and disaster risk assessments
- ❑ Priorities for Action refer to specific **public policies for disaster risk management**
- ❑ Explicit links to the **2030 Agenda for Sustainable Development** and to the **UNFCCC**

Open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction (OEIWG) (A/RES/69/284 - June 2015)

- Comprised of **experts nominated by States**, for the development of a set of possible **indicators and terminology to measure global progress** in the implementation of Sendai Framework in **coherence** with the work of the **Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs)**.
- The work of the working group shall be **completed by December 2016** and its report submitted to the General Assembly for consideration
- Supported by **technical papers and non-papers on indicators** from the Secretariat produced at the request of Member States – addressing computation methodology, data collection and availability, disaggregation, etc.
 - ***Expert Meeting to prepare background paper for the **OIEWG** based on UNISDR indicator proposals:*** 27-29 July, 2015
 - **First formal session** of OEIWG: 29 – 30 September, 2015
 - **Second formal session** of OEIWG: 10 – 11 February, 2016
 - ***Informal consultation of the Chair:*** 20 – 21 June, 2016
 - ***Informal consultation of the Chair:*** 10 – 11 October, 2016
 - **Third formal session** of OEIWG : 14 – 18 November, 2016

Architecture of the Sendai Framework Monitoring System at National Level

Sendai Framework Outcome

The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries

PROCESS

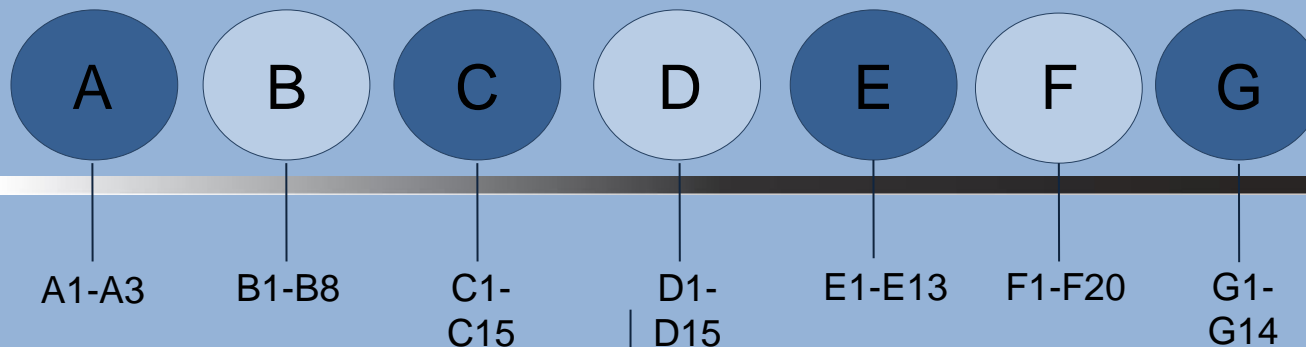
DATA

OUTCOME LEVEL

SENDAI FRAMEWORK GLOBAL TARGETS

Disaster loss data (Targets A – D)
National assessment (Targets E – G)
ODA and STI data (Target F)

Globally comparable and objective indicators defined by the OEIWG

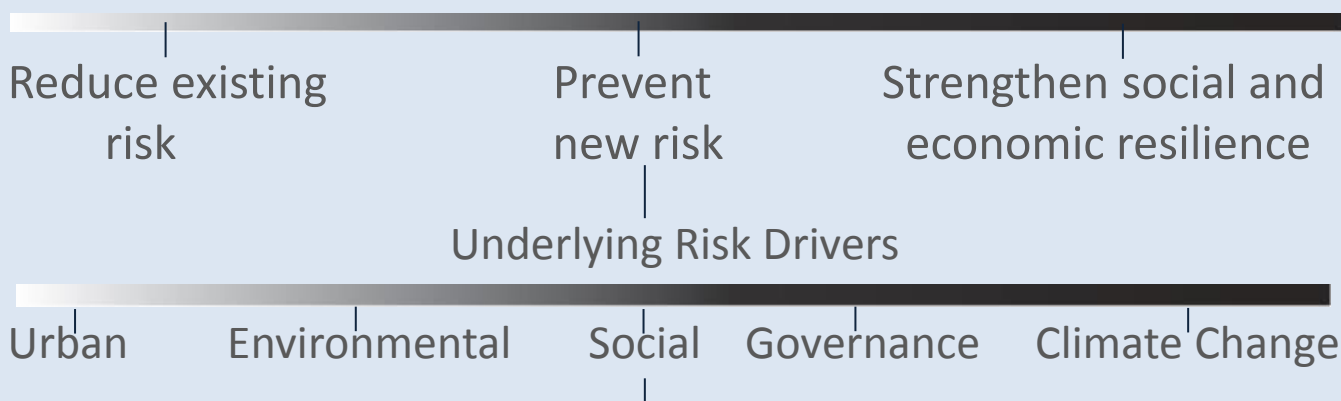


OUTPUT LEVEL

Sendai Framework Goal

SDG indicators

Nationally defined targets and indicators embedded in national strategies and plans



Paris agreement

Risk metrics



INPUT LEVEL

Sendai Framework Priorities for Action

National self-assessment

Nationally appropriate public policy indicators



Drop down menu of national targets and indicators



Categories and classification of UNISDR recommendation from proposed indicators

| | Methodology Available | Data Available | Indicator Category |
|---|-----------------------|----------------|--------------------|
| Category I (Global application) Indicators for which a methodology exists, or has been proposed, and for which data are already widely available in a significant number of countries | Y | Y | 1 |
| Category II (National application, potential migration to global level): Indicators for which a methodology exists, or has been proposed, but for which data are not easily available | Y | N | 2 |
| Category III (Require long term development) : Indicators for which a methodology has not yet been developed nor is data easily available | N | N | 3 |

| | |
|--------|--|
| orange | to be collected by Member States |
| Green | to be calculated by UNISDR (Including compound indicators) |

Global 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.

Secretariat's recommendation

| | | Methodology Available | Data Available |
|--------------------|---|-----------------------|----------------|
| A-1 (A-2 + A-3) | Number of deaths and missing persons / presumed dead due to hazardous events per 100,000. | Y | Y |
| A-2 | Number of deaths due to hazardous events. | Y | Y |
| A-3 | Number of missing persons / presumed dead due to hazardous events. | Y | Y |

Global 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.

Secretariat's recommendation

| | | Methodology Available | Data Available |
|-----------------------|---|-----------------------|----------------|
| B-1 (B2toB7) | Number of affected people by hazardous events 100,000. [Compound indicator] | Y | Y |
| B-2 or B-2. alt | Number of injured or ill people due to hazardous events Number of people suffering from physical injuries, trauma or cases of disease requiring immediate medical assistance as a direct result of a hazardous events. | Y | Y |
| B-3a | Number of evacuated people due to hazardous events | Y | Y |
| B-3b | Number of relocated people due to hazardous events. | Y | Y |
| B-4 | Number of people whose houses were damaged due to hazardous events. | Y | Y |
| B-5 | Number of people whose houses were destroyed due to hazardous events. | Y | Y |
| B-6 | Number of people who received aid including food and non-food aid due to hazardous events. | N | Y |
| B-7 | Number of people whose livelihoods were disrupted, destroyed or lost due to hazardous events. | Y | Y |

Global Target (c) - Reduce *direct disaster economic loss* in relation to global gross domestic product (GDP) by 2030.

Secretariat's recommendation

| | | Methodology Available | Data Available |
|-------------------|---|-----------------------|----------------|
| C-1 (C2 to C9) | Direct economic loss due to hazardous events in relation to global gross domestic product. | Y | Y |
| C-2 | Direct agricultural loss due to hazardous events. | Y | Y |
| C-2a | Number of hectares of crops affected | Y | Y |
| C-2b | Number of livestock lost | Y | Y |
| C-3 | Direct economic loss due to industrial facilities damaged or destroyed by hazardous events | Y | N |
| C-4 | Direct economic loss due to commercial facilities damaged or destroyed by hazardous events. | Y | N |
| C-5 | Direct economic loss due to houses damaged by hazardous events | Y | Y |
| C-5a | Number of houses damaged by hazardous events | Y | Y |
| C-5b | Damage and loss of administrative buildings. | Y | N |
| C-6 | Direct economic loss due to houses destroyed by hazardous events | Y | Y |
| C-6a | Number of houses destroyed by hazardous events | | |
| C-7 | Direct economic loss due to damage to critical infrastructure caused by hazardous events. | Y | Y |
| C-7a | Economic value of damages to health facilities (calculated from D-2) | Y | Y |
| C-7b | Economic value of damages to Educational facilities (calculated from D-3) | Y | Y |
| C-7c | Economic value of damages to road networks (calculated from D-4a) | Y | Y |
| C-8 | Direct economic loss due to cultural heritage damaged or destroyed by hazardous events. | Y | N |
| C-9 | Direct economic loss due to environment degraded by hazardous events. | Y | N |
| C-10 | Total insured direct losses due to hazardous events | Y | Y |

Global 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.

| Secretariat's recommendation | | Methodology Available | Data Available |
|-------------------------------------|--|-----------------------|----------------|
| D-1 (D2toD#) | Damage to critical infrastructure due to hazardous events. | Y | N |
| D-2 | Number of health facilities destroyed or damaged by hazardous events. | Y | Y |
| D-3 | Number of educational facilities destroyed or damaged by hazardous events. | Y | Y |
| D-4 | Number of transportation units and infrastructures destroyed or damaged by hazardous events. | Y | N |
| D-4b | Kilometres of road destroyed or damaged per hazardous event. | Y | Y |
| D-4c | Number of bridges destroyed/damaged by hazardous event. | Y | N |
| D-4d | Kilometres of railway destroyed / damaged by hazardous event. | Y | N |
| D-4k | Number of airports destroyed / damaged by hazardous event | Y | N |
| D-4l | Number of ports destroyed / damaged by hazardous event | Y | N |
| D-1 bis | Number of electricity plants / transmission lines destroyed or damaged by hazardous events. | Y | N |
| D-5 | Number of times basic services have been disrupted due to hazardous events. | Y | Y |

Global Target (e) - Substantially increase the number of countries with *national and local disaster risk reduction strategies* by 2020.

Secretariat's recommendation

| Methodology Available | Data Available |
|-----------------------|----------------|
|-----------------------|----------------|

| | | | |
|-----|---|---|---|
| E-1 | Number of countries that adopt and implement national DRR strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030 | Y | N |
| E-2 | Percentage of local governments that adopt and implement local DRR strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030 | Y | N |

Global 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.

- Member States leading parallel informal consultations in the inter-sessional period, together with the Chair, OEIWG.
- Supported by technical papers and non-papers produced by the Secretariat at the behest of the OEIWG.

Global 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.

Secretariat's recommendation

| | | Methodology Available | Data Available |
|-----|---|-----------------------|----------------|
| G-1 | Number of countries that have multi-hazard early warning system. | Y | N |
| G-2 | Number of countries that have multi-hazard monitoring and forecasting system. | Y | N |
| G-3 | Number of people who are covered by and have access to multi-hazard early warning system per 100,000 | Y | N |
| G-4 | Number of local governments having a preparedness plan (including EWS) or evacuation plan with standard operating procedures. | Y | N |
| G-5 | Number of countries that have multi-hazard national risk assessment / information, with results in an accessible, understandable and usable format for stakeholders and people. | Y | N |
| G-6 | Number of local governments that have multi-hazard risk assessment / risk information, with results in an accessible, understandable and usable format for stakeholders and people. | Y | N |

Disaster risk reduction indicators in the 2030 Agenda for Sustainable Development

- Inter-Agency and Expert Group on Sustainable Development Goal Indicators (**IAEG-SDGs**).
- **UN Statistical Commission:** Report of the Inter-Agency and Expert Group on Sustainable Development Goal Indicators, and Note by the Secretary-General E/CN.3/2016/2/Rev.1*

- 3 SDGs:
 - Goal 1. End poverty in all its forms everywhere
 - Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable.
 - Goal 13. Take urgent action to combat climate change and its impacts

- 4 Targets
- 4 indicators from the Sendai Framework = currently 9 indicators for SDGs Targets

Target

Goal / Target



Data requirements: constructing the baseline (2016 - 2019)



Global reporting to intergovernmental bodies

Global analysis and validation by UN member States and other stakeholders

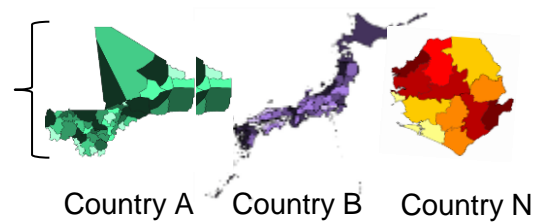
Regional analysis and validation by UN member States and other stakeholders

UNISDR
The United Nations Office for Disaster Risk Reduction

193 UN Member States

National Disaster Loss database (currently 89)

- Recording Data
- Institutionalization



Support reporting and analysis

Open data

Standards

Technical assistance

New software generation



V10.0

Public / private and international users

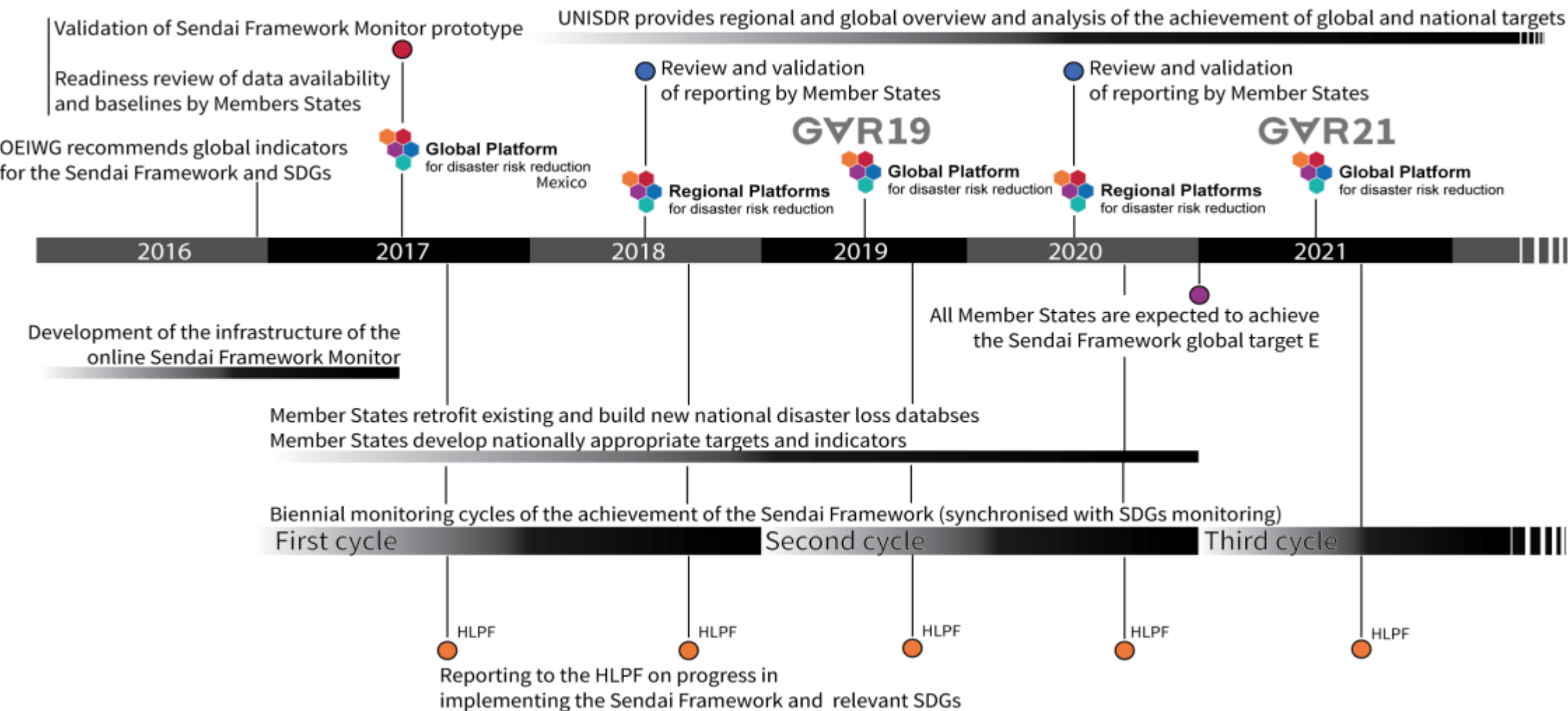


OEIWG
Global indicators
Target A
Target B
Target.....
Target G

National level targets and indicators

Determined by each country

Monitoring the Sendai Framework for Disaster Risk Reduction 2016 - 2022



Goal

- **Focus on preventing new disaster risks, reducing existing disaster risks that also strengthen resilience**
- **Calls various measures to prevent and reduce hazard exposure and vulnerability, increase preparedness and recovery**
- “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” (paragraph 17)

Thank you.

Ritsuko Yamazaki-Honda

honda@un.org

Risk Knowledge Section

United Nations Office for Disaster Risk Reduction
(UNISDR)

<http://www.preventionweb.net/drr-framework/open-ended-working-group/sessional-intersessional-documents#second-inter-sessional-between-second-third-session>