UNISDR
The United Nations Office for Disaster Risk Reduction

Scientific and Technical Advisory Group

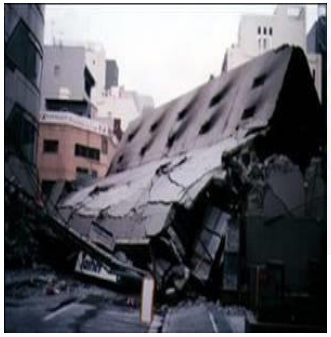
World Science Forum

ICSU - DG JRC joint thematic session

Building resilience in a changing world

Professor Virginia Murray, Vice-chair of UNISDR STAG
Public Health Consultant in Global Disaster Risk Reduction
Public Health England

Why 2015 matters so much



1989 International Decade for Natural Disaster Reduction (IDNDR)

1994 Yokohama Strategy and Plan of Action

1999 ISDR International Strategy for Disaster Reduction

2005 Hyogo Framework for Action 2005-2015

2015 UN World Conference on Disaster Risk Reduction, Sendai Japan

Sendai Framework for Disaster Risk Reduction

1992 United Nations Framework Convention on Climate Change

PARIS2015 COP21-CMP11

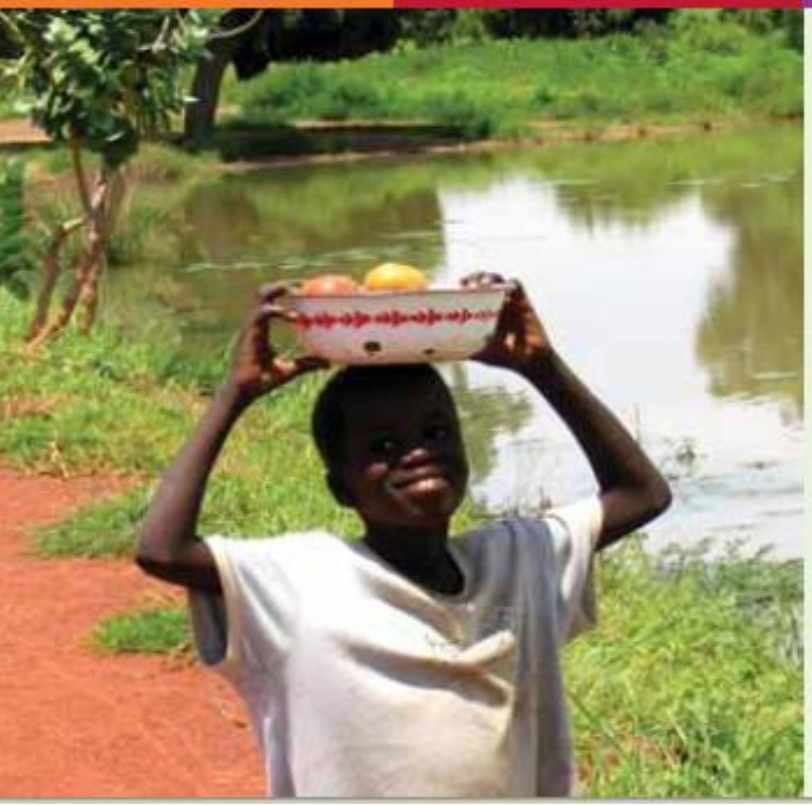
2000 WE CAN END POVERTY 2015 MILLENNIUM DEVELOPMENT GOALS

SDG's

ISDR

International Strategy for Disaster Reduction

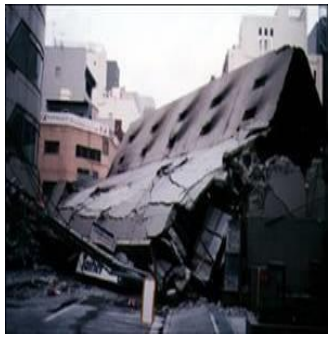
HFA



Hyogo Framework for Action 2005 - 2015:

Building the Resilience of Nations and Communities to Disasters

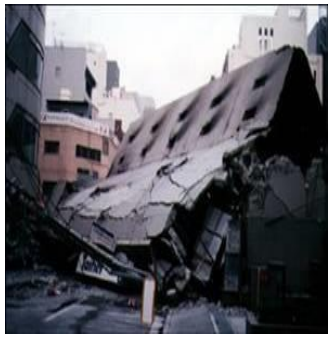
http://www.unisdr.org/eng/hfa/docs/HFA-brochure-English.pdf



United Nations

Plan of Action on Disaster Risk Reduction for Resilience

United Nations System
Chief Executives Board for Coordination



Sendai Framework for Disaster Risk Reduction 2015 - 2030

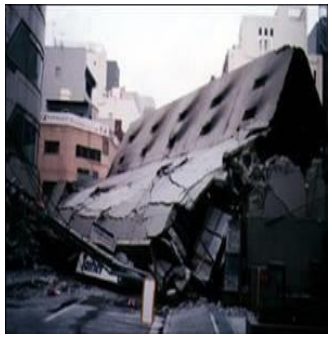
United Nations

Sendai Framework for Disaster Risk Reduction 2015-2030

Main result of the 3nd UN World Conference on DRR, Sendai, March 2015

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.



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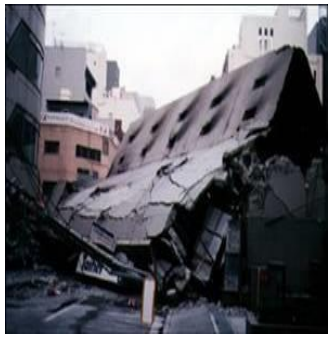
Goal of Sendai Framework

- 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.**



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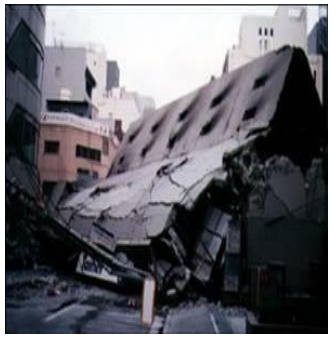
Sendai Framework for Disaster Risk Reduction 2015-2030

Seven global targets

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

2. 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



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

4. 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.

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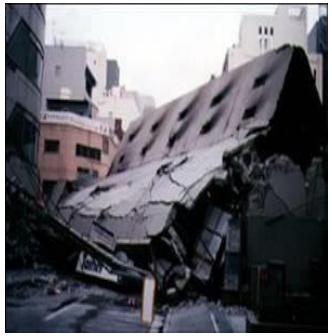
Sendai Framework for Disaster Risk Reduction 2015-2030

Seven global targets (cont)

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

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



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

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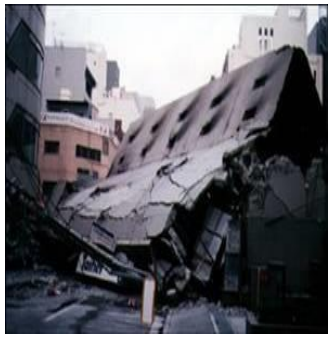
Sendai Framework for Disaster Risk Reduction 2015-2030

Four priorities for action

1. **Understanding disaster risk;**
2. Strengthening disaster risk **governance** to manage disaster risk;
3. **Investing** in disaster risk reduction for **resilience;**
4. Enhancing disaster preparedness for **effective response**, and to "Build Back Better" in recovery, rehabilitation and reconstruction.



*i) at **National and Local Levels***

*ii) at **Global and regional levels***

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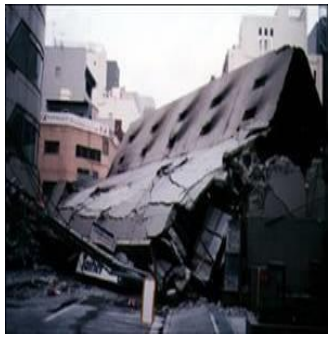
Priority 3: Investing in disaster risk reduction for resilience

(g) To promote and support the development of social safety nets as disaster risk reduction measures linked to and integrated with livelihood enhancement programmes in order to **ensure resilience** to shocks at the household and community levels;



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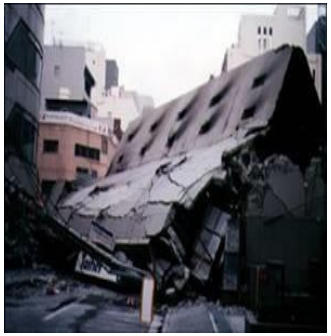
Science and technical paragraphs



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(k) In the post-disaster recovery, rehabilitation and reconstruc
the creation of and to reduce disaster risk by "Building B
education and awareness of disaster risk;

(l) An effective and meaningful global partnership and
international cooperation, including the fulfilment of res
development assistance by developed countries, are ess
management;

(m) Developing countries, in particular the least developed c
States, landlocked developing countries and African cou
and other countries facing specific disaster risk challenges
timely provision of support, including through finance, te
building from developed countries and partners tailored
identified by them.

IV. Priorities for action

20. Taking into account the experience gained through the
Framework for Action, and in pursuance of the expected outco
focused action within and across sectors by States at local, natio
the following four priority areas:

Priority 1: Understanding disaster risk.

Priority 2: Strengthening disaster risk governance to manag

Priority 3: Investing in disaster risk reduction for resilience.

Priority 4: Enhancing disaster preparedness for effective res
in recovery, rehabilitation and reconstruction.

21. In their approach to disaster risk reduction, States, regional
and other relevant stakeholders should take into consideratio
each of these four priorities and should implement them, as appro
respective capacities and capabilities, in line with national laws

22. In the context of increasing global interdependence, concert
enabling international environment and means of implementati
contribute to developing the knowledge, capacities and motivat
all levels, in particular for developing countries.

Priority 1: Understanding disaster risk

23. Policies and practices for disaster risk management should
of disaster risk in all its dimensions of vulnerability, capacity,
hazard characteristics and the environment. Such knowledge c
of pre-disaster risk assessment, for prevention and mitigation
implementation of appropriate preparedness and effective resp

National and local levels

24. To achieve this, it is important:

(a) To promote the collection, analysis, management and use
information and ensure its dissemination, taking into account
of users, as appropriate;

(b) To encourage the use of and strengthening of baselines
risks, vulnerability, capacity, exposure, hazard characteris
effects at the relevant social and spatial scale on ec
circumstances;

(c) To develop, periodically update and disseminate, as appropriate, location-ba
information, including risk maps, to decision makers, the general public a
at risk of exposure to disaster in an appropriate format by using, as appli
information technology;

(d) To systematically evaluate, record, share and publicly account for disa
understand the economic, social, health, education, environmental and
impacts, as appropriate, in the context of event-specific hazard-exposure a
information;

(e) To make non-sensitive hazard-exposure, vulnerability, risk, disaster and los
information freely available and accessible, as appropriate;

(f) To promote real time access to reliable data, make use of space and in s
including geographic information systems (GIS), and use information and
technology innovations to enhance measurement tools and the collecti
dissemination of data;

(g) To build the knowledge of government officials at all levels, civil society,
volunteers, as well as the private sector, through sharing experiences,
good practices and training and education on disaster risk reduction, incl
existing training and education mechanisms and peer learning;

(h) To promote and improve dialogue and cooperation among scientific a
communities, other relevant stakeholders and policymakers in order to fac
policy interface for effective decision-making in disaster risk management;

(i) To ensure the use of traditional, indigenous and local knowledge an
appropriate, to complement scientific knowledge in disaster risk asse
development and implementation of policies, strategies, plans and progra
sectors, with a cross-sectoral approach, which should be tailored to loca
context;

(j) To strengthen technical and scientific capacity to capitalize on and cre
knowledge and to develop and apply methodologies and models to asse
vulnerabilities and exposure to all hazards;

(k) To promote investments in innovation and technology development in i
hazard and solution-driven research in disaster risk management to address
interdependencies and social, economic, educational and environmental
disaster risks;

(l) To promote the incorporation of disaster risk knowledge, including disa
mitigation, preparedness, response, recovery and rehabilitation, in formal
education, as well as in civic education at all levels, as well as in profession
training;

(m) To promote national strategies to strengthen public education and aware
risk reduction, including disaster risk information and knowledge, thro
social media and community mobilization, taking into account specific aud
needs;

(n) To apply risk information in all its dimensions of vulnerability, capacity
persons, communities, countries and assets, as well as hazard characteri
and implement disaster risk reduction policies;

(o) To enhance collaboration among people at the local level to disemina
information through the involvement of community-based organiza
governmental organizations.

Global and regional levels

25. To achieve this, it is important:

(a) To enhance the development and dissemination of science-based methodologies and tools to record and share disaster losses and relevant disaggregated data and statistics, as well as to strengthen disaster risk modelling, assessment, mapping, monitoring and multi-hazard early warning systems;

(b) To promote the conduct of comprehensive surveys on multi-hazard disaster risks and the development of regional disaster risk assessments and maps, including climate change scenarios;

(c) To promote and enhance, through international cooperation, including technology transfer, access to and the sharing and use of non-sensitive data and information, as appropriate, communications and geospatial and space-based technologies and related services; maintain and strengthen in situ and remotely-sensed earth and climate observations; and strengthen the utilization of media, including social media, traditional media, big data and mobile phone networks, to support national measures for successful disaster risk communication, as appropriate and in accordance with national laws;

(d) To promote common efforts in partnership with the scientific and technological community, academia and the private sector to establish, disseminate and share good practices internationally;

(e) To support the development of local, national, regional and global user-friendly systems and services for the exchange of information on good practices, cost-effective and easy-to-use disaster risk reduction technologies and lessons learned on policies, plans and measures for disaster risk reduction;

(f) To develop effective global and regional campaigns as instruments for public awareness and education, building on the existing ones (for example, the "One million safe schools and hospitals" initiative; the "Making Cities Resilient: My city is getting ready" campaign; the United Nations Sasakawa Award for Disaster Risk Reduction; and the annual United Nations International Day for Disaster Reduction), to promote a culture of disaster prevention, resilience and responsible citizenship, generate understanding of disaster risk, support mutual learning and share experiences, and encourage public and private stakeholders to actively engage in such initiatives and to develop new ones at the local, national, regional and global levels;

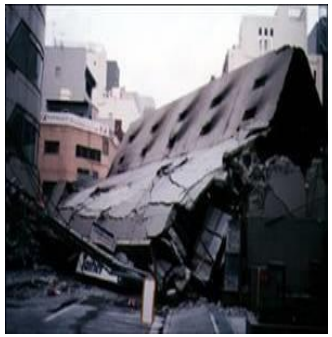
(g) To enhance the scientific and technical work on disaster risk reduction and its mobilization through the coordination of existing networks and scientific research institutions at all levels and in all regions, with the support of the United Nations Office for Disaster Risk Reduction Scientific and Technical Advisory Group, in order to strengthen the evidence-base in support of the implementation of the present Framework; promote scientific research on disaster risk patterns, causes and effects; disseminate risk information with the best use of geospatial information technology; provide guidance on methodologies and standards for risk assessments, disaster risk modelling and the use of data; identify research and technology gaps and set recommendations for research priority areas in disaster risk reduction; promote and support the availability and application of science and technology to decision-making; contribute to the update of the publication entitled "2009 UNISDR Terminology on Disaster Risk Reduction"; use post-disaster reviews as opportunities to enhance learning and public policy; and disseminate studies;

(h) To encourage the availability of copyrighted and patented materials, including through negotiated concessions, as appropriate;

(i) To enhance access to and support for innovation and technology, as well as in long-term, multi-hazard and solution-driven research and development in the field of disaster risk management.

Priority 1 Understanding Disaster Risk

25 (g) **Enhance the scientific and technical work on disaster risk reduction and its mobilization through the coordination of existing networks and scientific research institutions at all levels and all regions** with the support of the UNISDR Scientific and Technical Advisory Group in order to:



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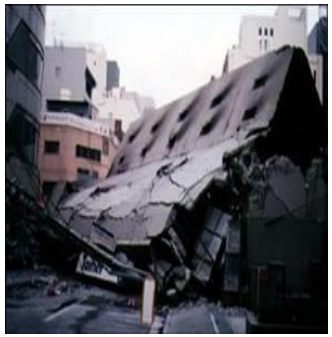
Priority 1 Understanding Disaster Risk – 25 g}

- strengthen the **evidence-base** in support of the implementation of this framework;
- promote **scientific research of disaster risk patterns, causes and effects**;
- **disseminate risk information** with the best use of geospatial information technology;
- **provide guidance on methodologies and standards** for risk assessments, disaster risk modelling and the use of data;



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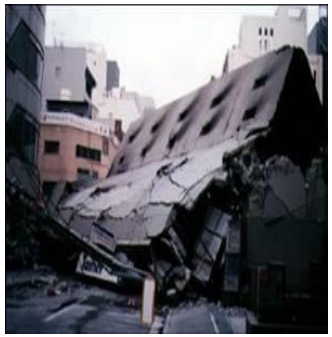
Priority 1 Understanding Disaster Risk – 25 g}



- identify **research and technology gaps** and set recommendations for research priority areas in disaster risk reduction;
- promote and support the availability and **application of science and technology to decision-making**;
- contribute to the update of the 2009 **UNISDR Terminology** on Disaster Risk Reduction;
- use **post-disaster reviews** as opportunities to enhance learning and public policy; and disseminate studies

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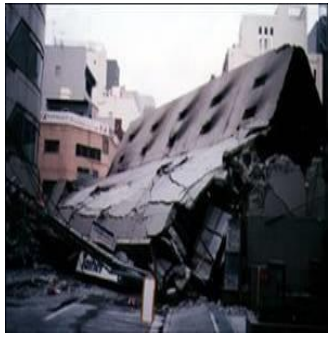
UNISDR Science and Technology Conference on the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030



To promote and support the availability and application of science and technology to decision-making in Disaster Risk Reduction

27-29 January 2016

Geneva International Conference Centre

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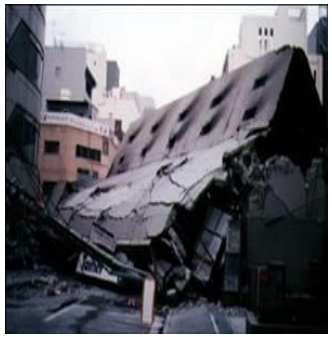
UNISDR Science and Technology Conference on the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030



- launch the **UNISDR Science and Technology Partnership** for the implementation of the Sendai Framework,
- discuss and endorse the **UNISDR Science and Technology road map to 2030** to define the expected outcomes of the science and technology work under each of the four Sendai Framework priorities for actions and the ways to monitor progress and review emerging needs

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UNISDR SCIENCE AND TECHNOLOGY CONFERENCE ON THE IMPLEMENTATION OF THE SENDAI FRAMEWORK FOR DISASTER RISK REDUCTION 2015-2030

27-29 JANUARY 2016 | GENEVA, SWITZERLAND

ABOUT THE CONFERENCE

The conference aims to bring together the full diversity of the science and technology community, policy makers, practitioners and researchers from all geographical regions, at local, national, regional and international levels to discuss how the science and technology community will best support the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030.

The UNISDR Science and Technology Conference on the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 will promote and

PRACTICAL INFORMATION

- **Registration now open**
- **Call for Abstracts**
- Practical Information
- Conference Co-Organizers
- Concept Note
- Draft Agenda
- Save the Date

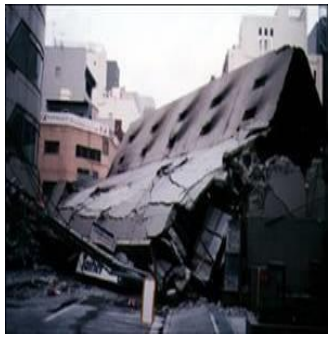
KEY DOCUMENTS

- The Sendai Framework for Disaster Risk Reduction: the challenge for science Conclusions and recommendations of a meeting at the Royal Society on 24 – 25 June 2015
- 2015 STAG report
- 2013 STAG report
- UNISDR scientific and technical advisory group (STAG) platform and network survey

CONFERENCE UPDATES

- Draft UNISDR Science and Technical Roadmap
- Terms of Reference of UNISDR Scientific and Technical Partnership

Building resilience in a changing world



- Sendai Framework is key to developing more effective disaster risk reduction and resilience globally
- increased focus on health, science and technology in disaster risk reduction and management
- identifying the research and innovation needs are essential – join us in Geneva in January 2016

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Conference Co-Organizers

European Commission Joint Research Centre (EC-JRC)

Integrated Research on Disaster Risk (IRDR)

International Council for Science (ICSU)

Global Earthquake Model Foundation (GEM)

World Health Organization (WHO)

The Global Network of Science Academies (IAP)

Global Facility for Disaster Reduction and Recovery (GFDRR)

Public Health England (PHE)

Science Council of Japan (SCJ)

United Nations Educational, Scientific and Cultural Organization (UNESCO)

United Nations University (UNU)

World Meteorological Organization (WMO)