UNISDR
The United Nations Office for Disaster Risk Reduction

Scientific and Technical Advisory Group

2016 UNDERSTANDING RISK

Young Scientists Event on Disaster Risk Reduction
18 May 2016

# The Sendai Framework and the Science and Technology Partnership and Roadmap

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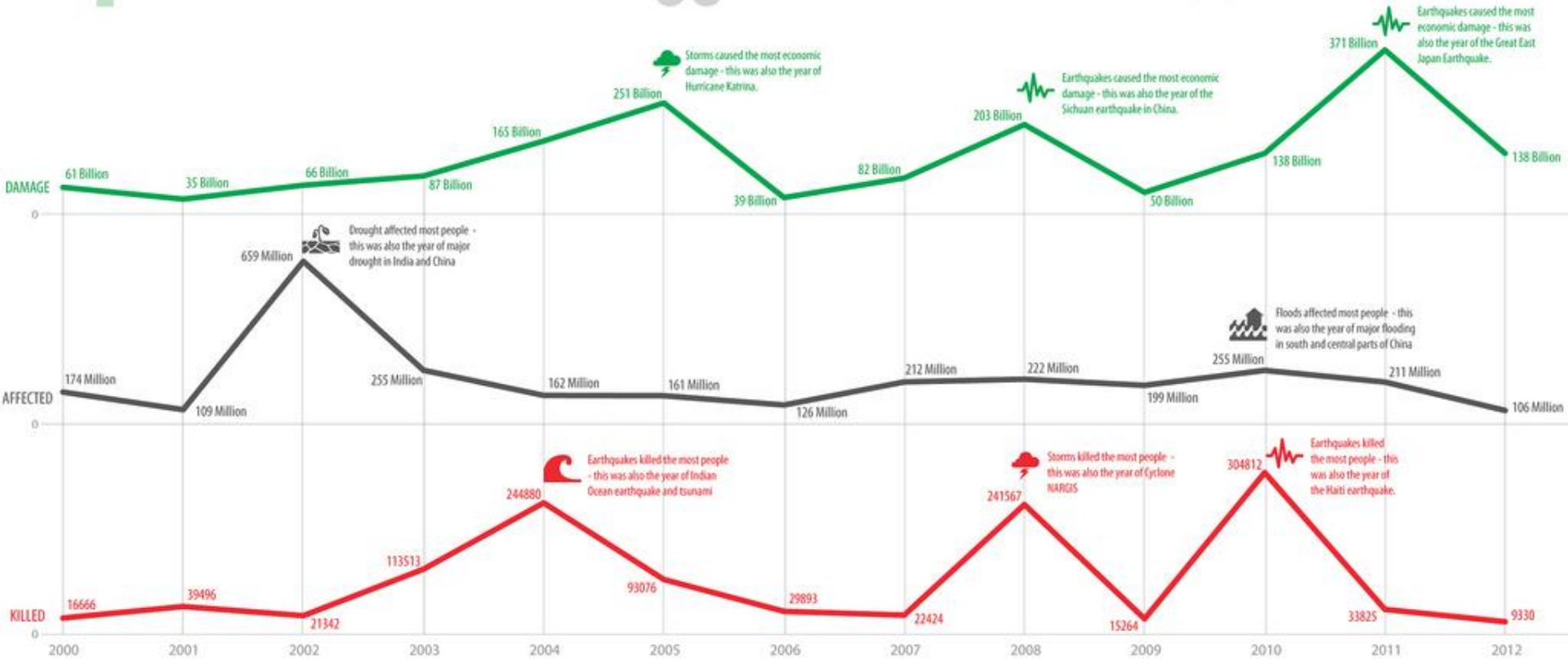
# DISASTER IMPACTS / 2000-2012

*Disasters refers to drought, earthquake (seismic activity), epidemic, extreme temperature, flood, insect infestation, mass movement (dry & wet), storm, volcano, and wildfire / Data source: EM-DAT: The OFDA/CRED International Disaster Database / Data version: 12 March 2013 - v12.07
OCHA Humanitarian Symbol (2012): http://reliefweb.int/map/world/world-humanitarian-and-country-icons-2012 / **Find out more about UNISDR: http://www.unisdr.org**

**$1.7** TRILLION DAMAGE (USD)

**2.9** BILLION AFFECTED

**1.2** MILLION KILLED



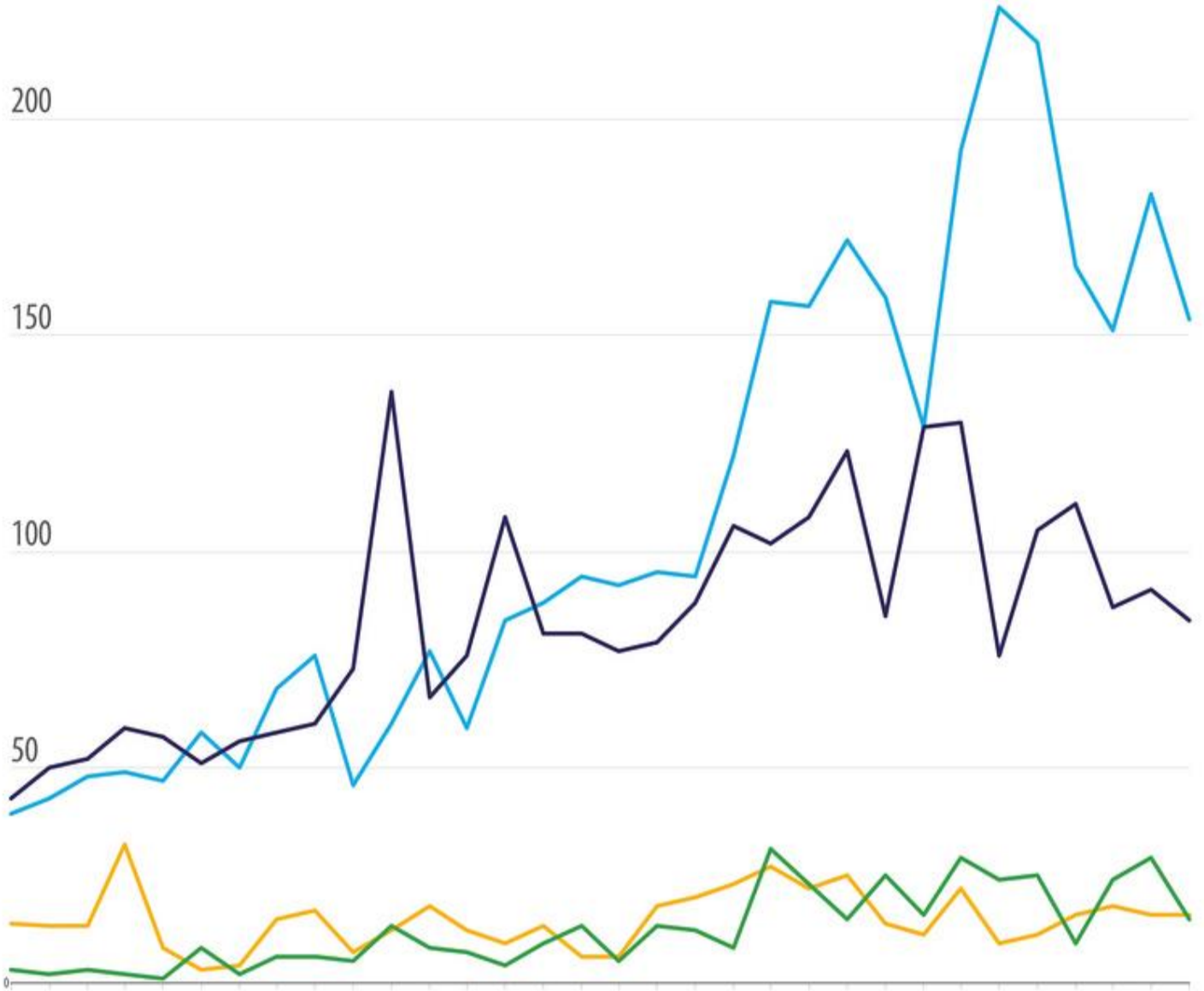
# Number of Climate-related Disasters Around the World (1980-2011)

**3455 FLOODS**

**2689 STORMS**

**470 DROUGHTS**

**395 EXTREME TEMPS**

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Version: 13 June 2012

DATA SOURCES

EM-DAT - http://www.emdat.be/ - The OFDA/CRED International Disaster Database; Data version: 13 June 2012 - v12.07

Humanitarian Symbol Set (2008): http://www.ungiwg.org/map/guideline.php

| | 1980 | 1981 | 1982 | 1983 | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FLOOD | 39 | 43 | 48 | 49 | 47 | 58 | 50 | 68 | 76 | 46 | 60 | 77 | 59 | 84 | 88 | 94 | 92 | 95 | 94 | 122 | 158 | 157 | 172 | 159 | 129 | 193 | 226 | 218 | 166 | 151 | 183 | 154 |
| STORM | 43 | 50 | 52 | 59 | 57 | 51 | 56 | 58 | 60 | 73 | 137 | 66 | 76 | 108 | 81 | 81 | 77 | 79 | 88 | 106 | 102 | 108 | 123 | 85 | 129 | 130 | 76 | 105 | 111 | 87 | 91 | 84 |
| DROUGHT | 14 | 13 | 13 | 32 | 8 | 3 | 4 | 15 | 17 | 7 | 12 | 18 | 12 | 9 | 13 | 6 | 6 | 18 | 20 | 23 | 27 | 22 | 25 | 14 | 11 | 22 | 9 | 11 | 16 | 18 | 16 | 16 |
| EXTREME TEMPERATURE | 3 | 2 | 3 | 2 | 1 | 8 | 2 | 6 | 6 | 5 | 13 | 8 | 7 | 4 | 9 | 13 | 5 | 13 | 12 | 8 | 31 | 23 | 15 | 25 | 16 | 29 | 24 | 25 | 9 | 24 | 29 | 15 |

# 25 years of international commitment to Disaster Risk Reduction


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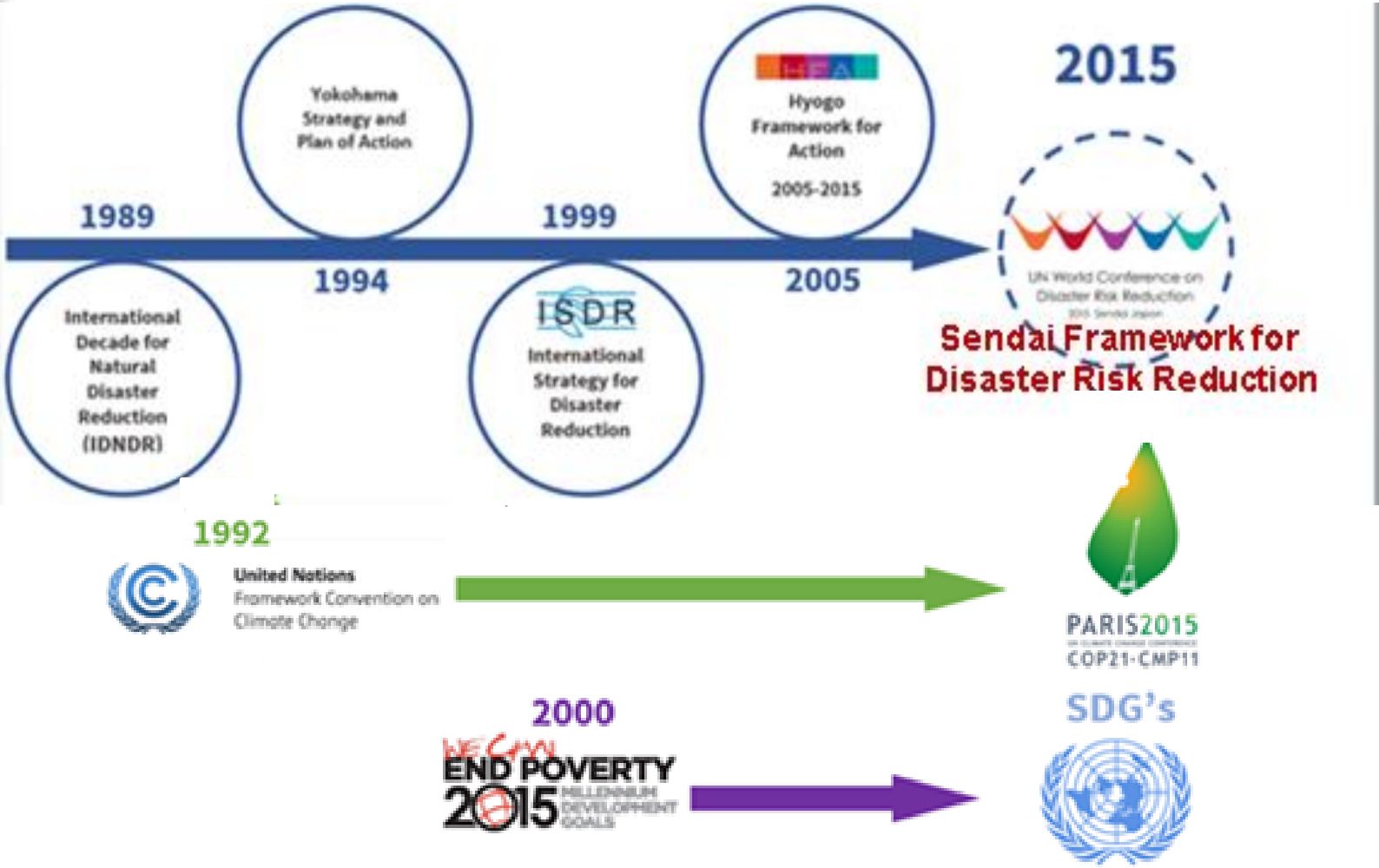
# Why 2015 mattered so much




GUINEA
GUINEA-BISSAU


# UN Major Group for Children and Youth

## the space for children and youth in the United Nations

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Day 1 - Third UN World Conference on Disaster Risk Reduction
UNISDR Photo Gallery
Sendai, Japan, 14 March 2015 Special Event: UN Secretary-General Ban Ki-moon leads discussion on...
See more
208
Photos
2,610
Views
View all albums
Photos


WCDRR
Sendai, 14–18 March 2015
Third UN World Conference
on Disaster Risk Reduction


WCDRR
Sendai, 14–18 March 2015
Third UN World Conference
on Disaster Risk Reduction
WCDRR


WCDRR


WCDRR

# Sendai Framework for Disaster Risk Reduction 2015 - 2030

United Nations

# Sendai Framework for Disaster Risk Reduction 2015-2030

## Main result of the 3rd 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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# Sendai Framework for Disaster Risk Reduction 2015-2030

## 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**

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(k) In the post-disaster recovery, rehabilitation and reconstruction p the creation of and to reduce disaster risk by "Building Back Be education and awareness of disaster risk;

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

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

## IV. Priorities for action

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

**Priority 1:** Understanding disaster risk.

**Priority 2:** Strengthening disaster risk governance to manage disa

**Priority 3:** Investing in disaster risk reduction for resilience.

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

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

**22.** In the context of increasing global interdependence, concerted int enabling international environment and means of implementation ar contribute to developing the knowledge, capacities and motivation fo all levels, in particular for developing countries.

### Priority 1: Understanding disaster risk

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

**National and local levels**

**24.** To achieve this, it is important:

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

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

(c) To develop, periodically update and disseminate, as appropriate, information, including risk maps, to decision makers, the gene at risk of exposure to disaster in an appropriate format by usi information technology;

(d) To systematically evaluate, record, share and publicly accou understand the economic, social, health, education, environm impacts, as appropriate, in the context of event-specific hazard information;

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

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

(g) To build the knowledge of government officials at all levels, civ volunteers, as well as the private sector, through sharing ex good practices and training and education on disaster risk red existing training and education mechanisms and peer learning,

(h) To promote and improve dialogue and cooperation among communities, other relevant stakeholders and policymakers in policy interface for effective decision-making in disaster risk m

(i) To ensure the use of traditional, indigenous and local kn appropriate, to complement scientific knowledge in disaste development and implementation of policies, strategies, plans sectors, with a cross-sectoral approach, which should be tail context;

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

(k) To promote investments in innovation and technology develo hazard and solution-driven research in disaster risk managemen interdependencies and social, economic, educational and en disaster risks;

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

(m) To promote national strategies to strengthen public educatio risk reduction, including disaster risk information and know social media and community mobilization, taking into account needs;

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

(o) To enhance collaboration among people at the local level t information through the involvement of community-base 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

- **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 ….**

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# UNISDR SCIENCE AND TECHNOLOGY CONFERENCE

## Mobilising science to implement the Sendai Framework

**27-29 JANUARY 2016 |** GENEVA, SWITZERLAND

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

# Launch of Young Scientists in DRR Platform

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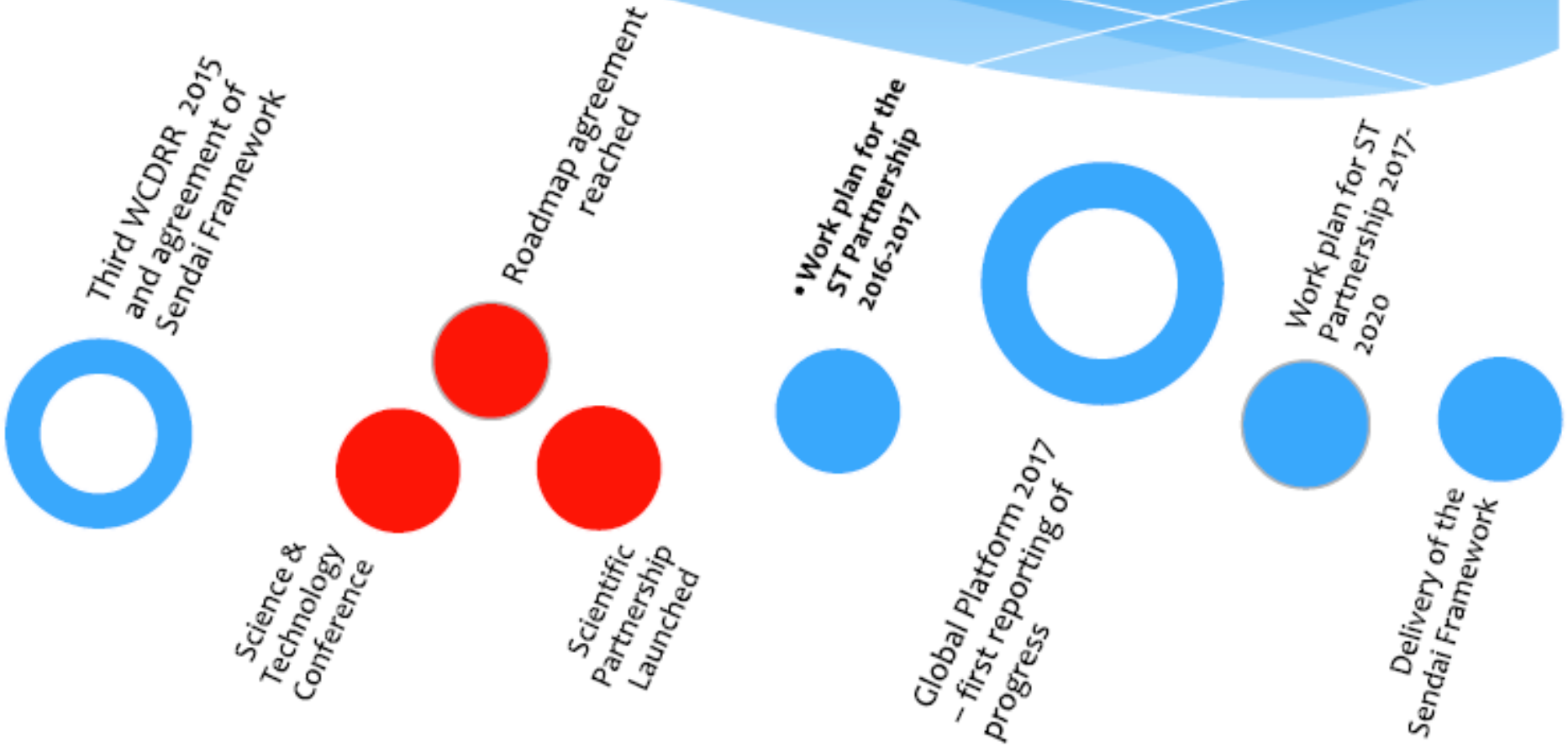
# Development of the Science and Technology Roadmap – a timeline






UNISDR
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29 February 2016

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# The Science and Technology Roadmap to Support the Implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030

The Sendai Framework for Disaster Risk Reduction 2015-2030 was agreed at the Third UN World Conference on Disaster Risk Reduction in Sendai, Japan in March 2015 and endorsed by the UN General Assembly in June 2015.

The goal of the Sendai Framework is to prevent new and reduce existing disaster risk through the implementation of integrated and inclusive economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response and recovery, and thus strengthen resilience.

The expected outcome till 2030 is to achieve substantial reduction in disaster risk and losses in lives, livelihoods and health in the economic, physical, social, cultural and environmental

http://www.preventionweb.net/files/45270_unisdrscienceandtechnologyroadmap.pdf

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Implementing the Sendai Framework

389
days to go

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# GLOBAL PLATFORM FOR DISASTER RISK REDUCTION - FIFTH SESSION

Versión en Español

**22-26 MAY, 2017** | CANCUN, MEXICO | #MEXICOGP2017 | #SWITCH2SENDAI

## ABOUT THE GLOBAL PLATFORM

The Fifth Global Platform for Disaster Risk Reduction will be held in Cancun, Mexico on 22-26 May, 2017. The Global Platform is the most important international forum dedicated to the disaster risk reduction agenda, and this will be the first time it has been staged outside Geneva.

The Global Platform will mark the first opportunity for the international community to review global progress on the implementation of the Sendai Framework for Disaster Risk Reduction, which was adopted in Japan in 2015. More than 5,000 participants are expected, including policy makers and disaster risk managers.

*"It's my pleasure to extend a cheerful welcome to you all to*

## PRACTICAL INFORMATION

Save the date

Registration will open soon

Watch: Mexico tourism

Watch: Mexico in action during Cyclone Patricia

Sign up for updates. Send your email address to: globalplatform@un.org

## DOCUMENTS & UPDATES

Global Platform 2017: Press release

# The Sendai Framework and the Science and Technology Partnership and Roadmap

## Challenges and Opportunities

- Young Scientists are delivering the Sendai Framework
- How can you be enabled to connect the Sendia call for S&T with your outcomes and impacts that are useful, usable and used?

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