Science and Technology: contributing to the implementation of the Sendai Framework

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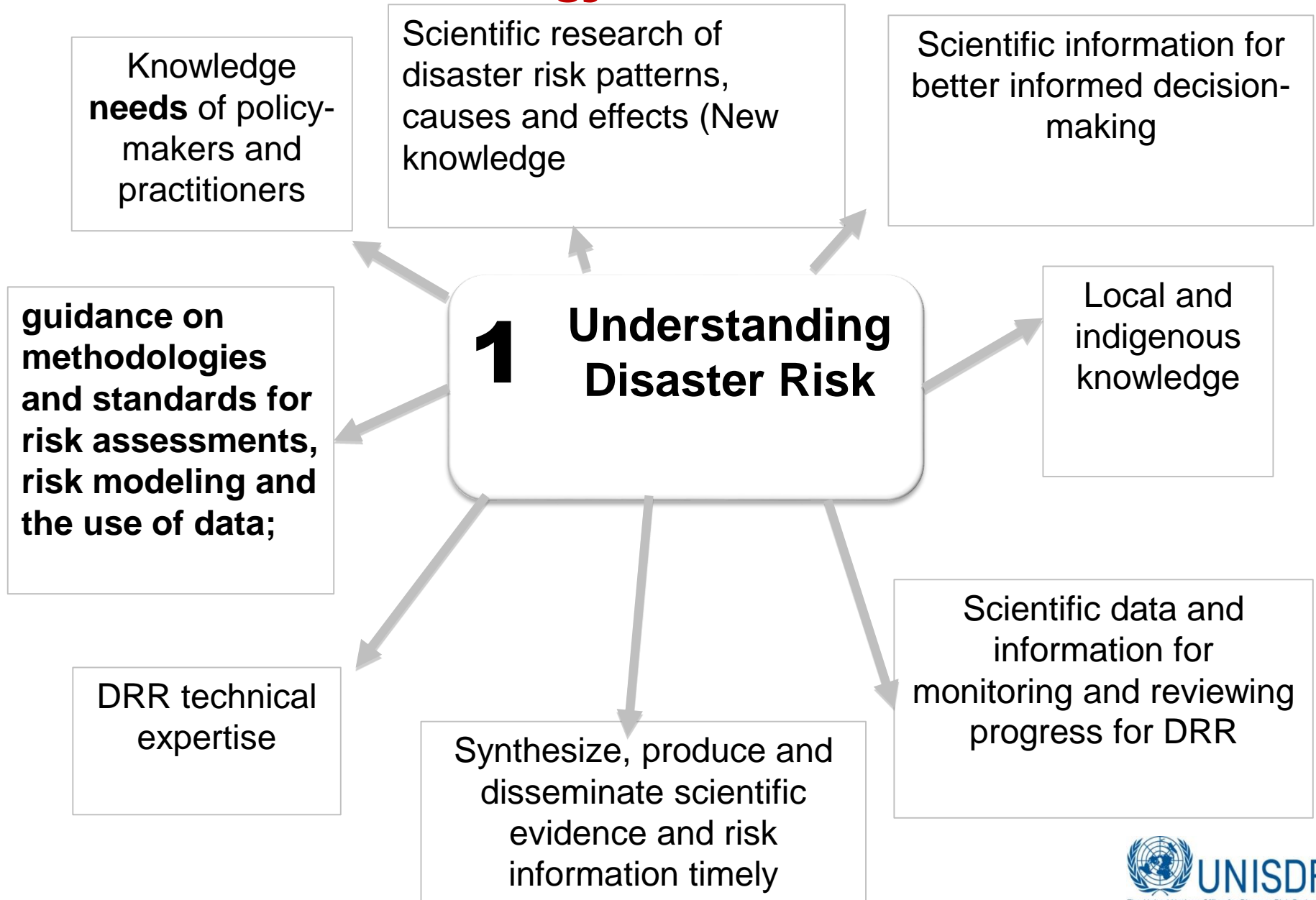
Science in the Sendai Framework

Sendai Framework,
Priority 1: Understanding Risks, Para 25 (g)

"(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 in all regions to*: **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 modeling 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 2009 UNISDR Terminology on Disaster Risk Reduction;**
- **Use post-disaster reviews as opportunities to enhance learning and public policy; and disseminate studies;"**

Science and Technology for DRR in Sendai Framework

Knowledge **needs** of policy-makers and practitioners

Scientific research of disaster risk patterns, causes and effects (New knowledge

Scientific information for better informed decision-making

guidance on methodologies and standards for risk assessments, risk modeling and the use of data;

1 Understanding Disaster Risk

Local and indigenous knowledge

DRR technical expertise

Synthesize, produce and disseminate scientific evidence and risk information timely

Scientific data and information for monitoring and reviewing progress for DRR

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Science and Technology in Sendai Framework

2 **Strengthening Disaster Risk Governance to Manage Disaster Risk** → Involvement and use of science to inform policy- and decision-making

3 **Investing in Disaster Risk Reduction for Resilience** → Scientific evidence for investment and development planning

4 **Enhancing Disaster Preparedness for Effective Response, and to "Build Back Better" in Recovery, Rehabilitation and Reconstruction** → Scientific data and information to strengthen preparedness, response and to "Build Back Better"

UNISDR Science and Technology Conference on the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 @Geneva, Jan.27-29,2016

Launch the UNISDR Science and Technology Partnership for the implementation of the Sendai Framework, and 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

Call for interest –
UNISDR Science and Technology Partnership

UNISDR invites organizations, institutions, networks and platforms working on science and technology for disaster risk reduction to join the Partnership

https://www.surveymonkey.com/r/3B6FCGG

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UNISDR Science and Technology Partnership

Status:>200 total applications

Answer Choices	Responses	
Academic & Scientific institute	49.11%	110
UN & International organization	4.46%	10
National government	4.02%	9
Local government	2.23%	5
Intergovernmental Organization	2.68%	6
NGO and civil society	18.30%	41
Private Sector	6.70%	15
Network / Platform	9.82%	22
Research consortium	2.68%	6
News & Media	0.00%	0
Total		224

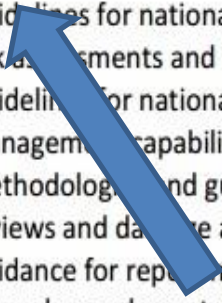Table 1 Summary of the expected outcomes of the Science and Technology Road Map

Sendai Framework Priority for Action	Science and Technology Expected Outcomes
1. Understanding Disaster Risk	1.1 Assess and update the current state of data, scientific and local and indigenous knowledge and technical expertise availability on disaster risks reduction and fill the gaps with new knowledge. 1.2 Synthesize, produce and disseminate scientific evidence in a timely and accessible manner that responds to the knowledge needs of policy-makers and practitioners. 1.3 Ensure that scientific data and information support are used in monitoring and reviewing progress towards disaster risk reduction and resilience building. 1.4 Build capacity to ensure that all sectors and countries have access to, understand and can use scientific information for better informed decision-making
2. Strengthening Disaster Risk Governance to Manage Disaster Risk	2.1 Support a stronger involvement and use of science to inform policy- and decision-making within and across all sectors at all levels
3. Investing in Disaster Risk Reduction for Resilience	3.1 Provide scientific evidence to enable decision-making of policy options for investment and development planning
4. Enhancing Disaster Preparedness for Effective Response, and to "Build Back Better" in Recovery, Rehabilitation and Reconstruction	4.1 Identify and respond to the needs of policy- and decision-makers at all levels for scientific data and information to strengthen preparedness, response and to "Build Back Better" in Recovery, Rehabilitation and Reconstruction to reduce losses and impact on the most vulnerable communities and locations.

Source: UNISDR (2016, p.3)

The Science and Technology Roadmap

The Sendai Framework **Expected Outcome** over the next 15 years is to achieve 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.

Priority for Action 1: Understanding Disaster Risk

Expected Outcomes	Key Actions	Monitoring Progress
1.1 Assess and update the current state of data, scientific and indigenous knowledge and technical availability on disaster risks reduction and fill the gaps with new knowledge.	• Establish datasets of, update periodically and disseminate risk information, including on exposure and vulnerability, to build awareness and knowledge of disaster risk • Record and share disaster losses and disaggregated impact data and statistics • Enhance access to environmentally sound technology, local knowledge and inclusive innovation • Conduct solution-driven surveys and research in disaster risk management and increase research for global, regional, national and local application; • Promote community engagement in risk data collection.	• Guidelines for recording and reporting disaster loss and disaggregated impact data • National disaster loss databases in line with UNISDR guidelines • Guidelines for national and regional, multi-hazard, risk assessments and mapping. • Guidelines for national and regional disaster risk management capability assessment • Methodologies and guidance for post-disaster reviews and damage assessments • Guidance for reporting disaster risk knowledge through people centred communication channels. • National, multi-hazard, risk profiles updated regularly • Periodic reports on state of global risk knowledge • Periodic national and regional surveys on disaster risk management capability • Periodic regional reports on disaster risks drawing on national risk assessments • Global network for sharing disaster data and statistics. • Improved and accessible data and integrated metrics on exposure and vulnerability from local to global scale

TOR of STAG

Membership: up to **20 members** representing institutions in the Partnership and reflect the makeup of the institutions, disciplines and hazards as well as the geographical balance and gender.

Scope: The STAG will provide direction and **guide the work of the S&T Partnership**

- Work in coordination and linkage to advice national and regional DRR platforms, partners or networks;
- Contribute to developing DRR policies
- Identify key scientific information and knowledge needed for policymakers and practitioners;
- Catalyze new efforts and partnership to generate new knowledge and disseminate
- Contribute to capacity building for scientists particularly in developing countries.

Scope of the Science and Technology Advisor Group

Provide direction and guide the work of the S&T Partnership

Coordinate scientific community Global Cooperation in DRR Research

Support Policy Development for ST to support DRR

Establish and Strengthen Cooperation with other policy makers, national DRR platforms and Partners

Develop Tools and Guidelines

Assistance on research studies to generate and disseminate new knowledge and capacity development for scientists particularly in developing countries

Develop risk communication for DRR for policy makers and communities

Promote Public Awareness on ST for DRR

ST working session at the Global Platform

Focus on the challenge of scientific-policy interface for DRR

(why after decades of highlighting the important role of S&T in informing DRR decision-making there are still major gaps and limited uptake)

2. Panel: Turning challenges into opportunities - practical examples of successful science contributions to local and national planning for DRR:

☐ How governments have engaged with and enabled scientists in policy making for DRR (science-policy interface at local and national levels)

☐ How scientists provided and communicated the evidence-base for the development and implementation of national and sub-national DRR strategies.

3ʳᵈ Arab Preparatory conference

We want to LEARN
    What role(s) should we expected the Arab Scientists to play for DRR and implementation of Sendai Framework 2015-2030.

We want to DISCUSS
    -What they intend to contribute for DRR (work plan),

    -What is the focus of the DRR research agenda to meet the needs of policy and community in the region

    - How we are going to do this? The role of Arab ST Partnership and Advisory Group

We look forward to working with you to make our world safer and more secure.

Thank You

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Proposed projects

> ➢ Risk Assessment Platform

> ➢ Capacity Building

To identify pioneering scientific initiatives to effectively reduce the gaps between science and practice in disaster risk reduction interventions.

To foster links between local, national, regional and international organizations and their programs through the ASTAG network.

Transdisciplinary and Region Specific Projects

Identify interventions that features transformative, scalable examples of applied science, technology or innovations that can play an essential supporting role the implemention the Sendai Framework for DRR.

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Next steps

- *Finalize the TOR of the group*

- *Survey what existing ST institutions in the region*

- *Request governments to nominate members of the ST Partnership/Network*

- *Launch the call for interest to join the Partnership*

- *Select members of the ASTAG as per the criteria agreed*

- *Develop work plan for the ASTG for first 4 years term, including focus themes/priorities for work*

- *monitor implementation and develop progress reports*