

**International
Science Council**

Science and Policy Forum for the Implementation of Sendai Framework for Disaster Risk Reduction

Date: 13-14 May 2019

Venue: Assembly Hall, Palais des Nations, Geneva

Co-organized by

UNDRR Science Technology Advisory Groups (STAG)

International Science Council (ISC)

Integrated Research on Disaster Risk (IRDR)

Background

The new paradigm of risk-sensitive and risk-informed development triggered by the Sendai Framework for Disaster Risk Reduction 2015–2030 requires sound foundations in knowledge and understanding of risk and resilience to contribute to the attainment of the Paris Climate Agreement and Sustainable Development Goals. The Sendai Framework, in adopting ‘Understanding Disaster Risk’ as its first priority for action, emphasizes the importance of science and technology in its implementation. It calls for enhanced scientific and technical work on disaster risk reduction in the context of sustainable development and climate change and highlights the need to prioritize the development and dissemination of science-based risk knowledge, technology and innovation.

But it is not just about understanding risk – it is also about building a more integrated science basis which brings together science disciplines from all aspects of the 2030 Agenda, and most importantly ensuring science is used by policy-makers in support of risk-informed decisions and investment.

The Global Platform with its focus on the resilience dividend is a key opportunity to highlight the role of science, showcase its opportunities and commitment and encourage dialogue with Governments, private sector representatives and other practitioners.

Science and policy discussions at the Global Platform will be linked and mutually benefitting from the Commission on Science and Technology for Development (CSTD) and STI Forum, both under the leadership of ECOSOC and taking place from 13-17 May 2019 in Geneva and New York respectively.

The results of the discussions will also feed into the High-Level Political Forum, High-level Dialogue on Financing for Development and UN Climate Summit under the auspices of the UN General Assembly in September, and other critical global and regional events with the aim to link the global 2030 agreements and their respective scientific basis closer together.

Objectives

Key objectives of the Global Science Policy Forum for DRR 2019 are:

- To share and review progress in global, regional, national and local implementation of science-based policy making, risk sensitive development as a basis for enhanced engagement between science and policy for risk-informed decision making across the 2030 Agenda;
- To identify the key knowledge gaps and opportunities to strengthen the contributions of a comprehensive, interdisciplinary science base to delivering the Sendai Framework including through the operationalization of the Global Science and Technology Road Map;
- To commit collectively to enhanced collaboration for an integrated science approach to DRR, CCA and sustainable development;
- To fill the current gap in knowledge and application of new technologies for disaster risk reduction and enhanced resilience.

About the Organizers:

The UNDRR Scientific and Technical Advisory Group (STAG) has been called upon by the Sendai Framework as an essential global partnership group providing technical advice and support in the formulation and implementation of disaster risk reduction activities worldwide. The global STAG¹ has been expanded through the creation of regional STAGs in Africa, Asia, the Americas, Arab States and Europe, and is supported by the global UNDRR Science and Technology Partners².

¹ <https://www.unisdr.org/2016/docs/stag/Revised%20G-STAG%20TOR%20final.pdf>

²

<https://www.unisdr.org/2016/docs/stag/Revised%20ToR%20ST%20Partnership%20Feb%202018.pdf>

The International Science Council (ISC³) has been a strong advocate of science-based development decisions and through its role as the organizing partner of the Science and Technology Major Group is the lead science organization within the global UN processes. ISC has clearly recognized the importance of a risk informed approach to sustainable development and climate change, not least through its sponsorship role for the IRDR (Integrated Research on Disaster Risk) and support for the establishment of a Risk Knowledge Action Network (KAN).

Since 2010, the Integrated Research on Disaster Risk (IRDR⁴), a programme of the ISC, has been contributing to an integrated approach to research, policy and action in building and maintaining networks and partnerships with scientists and other stakeholders across the world with focus on focus on supporting a risk-informed implementation of the 2030 Agenda.

Expected Participants

The priority audiences for the conference are:

1. Policy-makers dealing with the implementation of the Sendai Framework nationally;
2. Scientists and technology experts actively working in building the knowledge and its use in decision-making and action around the Sendai objectives;
3. Other stakeholders from civil society, business, media working on supporting evidence-based DRR.

To Participate

All those registered for the Global Platform dialogue are invited to attend.

Please fill in the form here to let us know you're coming to the Science and Policy Forum: <http://tinyurl.com/GP2019ForumRegistration>

³ <https://council.science/>

⁴ <http://www.irdrinternational.org/>

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Draft Agenda

13 May	
11:30-12:00	Opening of the Science and Policy Forum
12:00-13:00	<i>Session 1 - Presentation of the contextualized Global Science and Technology Road Map, for adoption by the participants. Followed by a short panel discussion</i>
13:00	Lunch break
14:00-15:30	<i>Session 2 - Science and Policy dialogue: The case for better data</i>
15:30	Coffee Break
16:00 – 17:30	<i>Session 3 - Science and Policy dialogue: A review of Hazard Terminology and the need for enhancing interdisciplinary collaboration</i>

14 May	
09:00 – 10:30	<i>Session 4 - Technology for Disaster Risk Reduction</i>
10:30	Break
11:00 – 12:30	<i>Session 5 - Science and Technology for Resilience: Towards Sustainable and Inclusive Societies</i>
12:30	Adjourn

Day 1: 13th May 2019

Session	Opening of the Science and Policy Forum
Schedule	11:30-12:00, Monday, 13 May 2019
Organisers	Co-Organizers (UNDRR, ISC, IRDR)
Focal Points	Irina Zodrow (zodrow@un.org) Anne-Sophie Stevance (Anne-Sophie.STEVANCE@council.science)
Background and Rationale	<p>The achievement of the first priority of the Sendai Framework - understanding risk – requires us to build a more integrated science basis which brings together science disciplines from all aspects of the 2030 Agenda, and most importantly ensuring science is used by policy-makers in support of risk-informed decisions and investment.</p> <p>The Science and Policy Forum of the Global Platform, held within the preparatory days of the Global Platform and closely linked to the ECOSOC Commission on Science and Technology for Development and STI Forum, offers an excellent opportunity to advance the dialogue towards concrete action.</p>
Session Objectives	The Opening Session of the Science and Policy Forum will outline the focus and expected outcomes of the Science and Policy Forum. It will emphasize the importance of enhanced cross-disciplinary and inter-generational science and research, better application of science-based policy making and shaping the science agenda in an increasingly cascading risk landscape.
Expected Outcomes	Setting the stage for the discussions during the Forum
Panel	<p>Moderator: Andrew Revkin, National Geographic</p> <ul style="list-style-type: none"> • Mami Mizutori, Special Representative of the Secretary-General for DRR • Flavia Schlegel, ISC Special Envoy for Science in Global Policy • Jacqueline McGlade, Chief Scientist, UNEP and Board member of the International Science Council
Commitment/Special Announcement in support of the Sendai Framework	<p>Key objectives of the Global Science Policy Forum for DRR 2019 are:</p> <ul style="list-style-type: none"> • To share and review progress in global, regional, national and local implementation of science-based policy making, risk sensitive development as a basis for enhanced engagement between science and policy for risk-informed decision making across the 2030 Agenda; • To identify the key knowledge gaps and opportunities to strengthen the contributions of a comprehensive, interdisciplinary science base to delivering the Sendai Framework including through the operationalization of the Global Science and Technology Road Map; • To commit collectively to enhanced collaboration for an integrated science approach to DRR, CCA and sustainable development; • To fill the current gap in knowledge and application of new technologies for disaster risk reduction and enhanced resilience.
Background Documents	GAR19

Session 1	Presentation of the contextualized Global Science and Technology Road Map, for adoption by the participants. Followed by a short panel discussion
Schedule	12:00-13:00, Monday, 13 May
Organisers	UNDRR STAG
Focal Points	Rajib Shaw (rajib.shaw@gmail.com)
Background and Rationale	The science and technology community, and other stakeholders, came together at the UN Office for Disaster Risk Reduction (UNDRR) Science and Technology Conference held 27- 29 January 2016 in Geneva. The Conference produced the 'Science and Technology Roadmap to Support the Implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030' and accompanying partnerships as the main outcome. A contextualization and revision of the Roadmap was undertaken by the UNDRR Global Science Technology Advisory Group (G-STAG) in collaboration with Science and Technology partners in 2018 and 2019.
Session Objectives	To present the revised 'Science and Technology Roadmap to support the Implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030' for adoption by the participants, and seek for voluntary commitments. As possible, participants will be encouraged to announce specific commitments and contributions to the implementation of the Roadmap.
Expected Outcomes	Adoption and Commitments to the contextualized S&T Roadmap
Panel	Chair: Rajib Shaw, Chair, STAG Speakers: Annisa Triyanti, G-STAG: Presentation of the road map Discussants: <ul style="list-style-type: none"> • Qunli Han, IRDR • Antonia Loyzaga, Asia STAG • Chadi Abdallah, Arab STAG • Jorgen Sparf, Europe STAG • Hirokazu Tatano, GADRI • Mark Pelling, GCRF
Commitment/Special Announcement in support of the Sendai Framework	Science partners commit to the implementation of the S-T road map
Background Documents	Contextualized S-T Road Map

The release of the E-STAG report

13:00 – 14:00: Lunch break

Session 2	Science and Policy dialogue: The case for better data
Schedule	14:00-15:30, Monday, 13th May
Organisers	UNDRR STAG
Focal Points	Andrew Collins (andrew.collins@northumbria.ac.uk)
Background and Rationale	A UNDRR G-STAG Data Working Group (DWG) is promoting the examination of how data is contributing to the expected outcomes of the Science and Technology Road Map of the Sendai Framework for Disaster Risk Reduction 2015-2030. Better data needs to steer risk-informed development and science-based decision-making at all levels. This aim is common to many shared initiatives such as in the development of the Global Risk Assessment Framework (GRAF) and in responding to a call from the International Science Council (ISC) for science as a global public good including its defragmentation, so that it is more inclusive and engaged.

	Though numeric, narrative and visual data through varied methodologies and from varied sources is already contributing, a driving DWG rationale is that progress remains very short of what is needed to drive comprehensive transitions to resilience, health and security. Meanwhile, poor and misused data is hazardous. Challenges include adequate data capture, interoperability, minimum standards and capacity for data sharing including across varying data cultures for public and private institutions and hitherto under-represented groups.
Session Objectives	To present the means by which improved data can achieve the expected outcomes of the Science and Technology Road Map of the Sendai Framework for Disaster Risk Reduction 2015-2030. This includes recognition of: <ul style="list-style-type: none"> - data that already contributes to the progress of the Sendai Framework Priorities for Action - new types of data that could contribute to the progress of the Sendai Framework Priorities for Action - cooperative actions that enable data to be used to progress the Sendai Framework Priorities for Action - data as a voice for those exposed to disaster risks, and for facilitators of the Sendai Framework Priorities for Action
Expected Outcomes	Better understanding of the role of data as a voice and data for action in the contexts of the Sendai Framework for Disaster Risk Reduction. Agreement on roles and responsibilities to enhance data collection, analysis and management.
Panel	Chair: Andrew Collins, G-STAG DWG <ul style="list-style-type: none"> • Marc Gordon, UNDRR • Lisa Robinson, BBC Media Action • Jadranka Milhajevic, E-STAG • Daniel Karlson, Deputy Director, Office of International Affairs NOAA • Shanna McClain, PhD, AAAS Science Technology & Policy Fellow, Earth Science Division NASA • Reinhard Mechler, Risk and Resilience Program, IIASA • Ailsa Holloway, Director, Research Alliance for Disaster and Risk Reduction, Faculty of Arts and Social Sciences, Stellenbosch University, South Africa
Commitment/Special Announcement in support of the Sendai Framework	Commitment to 'data for action', whereby data gathering, dissemination and uptake can be actualisation of disaster risk reduction at local level whilst transmissible and interpretable by wider groups of decision-makers at all levels.
Background Documents	Concept Note DWG Concept Note GRAF

15:30 Coffee Break

Session 3	Science and Policy dialogue: A review of Hazard Terminology and the need for enhancing interdisciplinary collaboration
Schedule	16.00-17.30, Monday, 13th May
Organisers	UNDRR/ISC
Focal Points	Virginia Murray Virginia.Murray@phe.gov.uk
Background and Rationale	The scope of the Sendai Framework encompasses a range of natural, technological, biological and environmental hazards. Therefore, there is a need to provide a set of scientific hazard definitions to enable countries and their partners to implement disaster risk management and to report against the Sendai Framework targets. A common set of definitions will also support a range of global and regional initiatives, including the Global

	<p>Risk Assessment Framework. Whilst the current Integrated Research on Disaster Risk's publication Peril Classification and Hazard Glossary (IRDR, 2014) covers a range of natural and biological hazards, it is time to review and develop a updated document to address the broadened hazard scope of the Sendai Framework.</p> <p>Aligned with Sendai Paragraph 24 j), which tasks the science and technology community '<i>To strengthen technical and scientific capacity to capitalize on and consolidate existing knowledge and to develop and apply methodologies and models to assess disaster risks, vulnerabilities and exposure to all hazards</i>', and building on the <i>Report of the open-ended intergovernmental expert working group on indicators and terminology relating to disaster risk reduction (2017)</i>, a technical working paper will be developed with the aim of providing a scientific list of definitions for hazards encompassed by the Sendai Framework. This exercise will draw upon existing scientific definitions, and if necessary, develop new definitions for specific hazards. UNDRR and UN organizations, together with representatives of the International Science Council, have initiated the process of developing the working paper. Science partners and experts including the representatives of IRDR programme, CODATA programme, the new partnership initiated with World Climate Research Programme (WCRP) and Future Earth around the Risk KAN, as well as the insurance sector will be invited to provide inputs to this process. The work on hazard definitions will feed into the deliberations of GRAF and other initiatives, such as the Integrated Prevention Platform of the UN Secretary-General, to build knowledge and understanding of risk and resilience for the attainment of the Sendai Framework, Paris Climate Agreement and Sustainable Development Goals and other related frameworks. In summary, the session and the proposed paper are aimed at an enhanced understanding of the scope of the Sendai Framework and its implications for science, policy makers and other partners.</p>
<p>Session Objectives</p>	<ul style="list-style-type: none"> - Share the process to develop a technical working paper on the hazard definitions, based on reviews of existing materials including the 2014 IRDR Peril Classification and Hazard Glossary. - Build agreement on the respective roles and responsibilities of UN agencies, different science partners and other sources of expertise in this endeavour - Encourage more collaboration for better integrated science and research across all communities
<p>Expected Outcomes</p>	<p>Increased understanding and commitment of the process for developing a UNDRR-UN-ISC Technical Working Paper on review of Hazard Definitions and Classification</p>
<p>Panel</p>	<p><i>Chair</i> Alik Ismail-Zadeh, Secretary of International Science Council Governing Board</p> <p><i>Keynote Speaker</i> Virginia Murray, Integrated Research on Disaster Risk, Committee on Data for Science and Technology, and Public Health England, Chair of technical working group for UNDRR/ISC Hazard Terminology Review Presentation the need for A review of Hazard Terminology and the need for enhancing interdisciplinary collaboration</p> <p>Discussants:</p> <ul style="list-style-type: none"> • Wenjian Zhang, Assistant Secretary-General, World Meteorological Organization

Commitment/Special Announcement in support of the Sendai Framework	Scientific research to support implementation of Sendai Framework
Background Documents	Leaflet of Progress in Disaster Science

18:30 Cocktail reception hosted by Elsevier, Hall des Pas Perdus

Day 2: 14th May 2019

Session 4	Technology for Disaster Risk Reduction
Schedule	09:00-10:30, Tuesday 14 May
Organisers	UNDRR, ISC, IRDR, STAG
Focal Points	GSDM: Katja Samuel (director@gsdm.global); IRDR: Qunli Han (qunli.han@irdrinternational.org)
Background and Rationale	Sendai Framework calls for the best use of information technology and to identify research and technology gaps in disaster risk reduction. The technological innovation forms an integral part of the DRR conversation and brings new possibilities for solutions. In parallel, emerging technology can bring new risks such as those related to cyber vulnerabilities, drone management, and autonomous transportation. The session will look at 1) the development of technologies and DRR solutions that they may offer, 2) acceleration of technology transfer into DRR applications and the policies and mechanisms required, 3) capacity building in countries and societies in need, and 4) measures needed to mitigate risks accompanying novel and emerging technologies.
Session Objectives	1) To build a better understanding on the possibilities and potentials of technology for DRR solutions, whilst better understanding technological developments as a potential source of parallel risk; 2) To identify policy gaps and actions required; and 3) To identify good practice as to how resilience may be strengthened, both through the employment of technology as well as better mitigation of risks attributable to technological developments.
Expected Outcomes	1) Policy recommendations for accelerating technological development and transfer toward DRR applications; 2) Suggestions on the development of an effective international mechanism to facilitate the use of existing and new technologies for SFDRR and to manage the potential risks associated with new technologies; and 3) Identification of good, transferable practices.
Panel	Chair: <ul style="list-style-type: none"> • Katja Samuel, Director, Global Security and Disaster Management Ltd, UK Panelists: <ul style="list-style-type: none"> • Ahmad Wani Chief Executive Officer, One Concern • Renalto Solidum, USEC, DOST, Government of Philippines • Vanessa Gray, Head, Least Developed Countries, Small Island Developing States & Emergency Telecommunications Division, International Telecommunication Union • Richard Hoad, Chief Scientist, QinetiQ, UK • Alexander Siegmund, Heidelberg University of Education & Heidelberg University, Department of Geography - Research Group

	<p>for Earth Observation; UNESCO Chair on World Heritage and Biosphere Reserve Observation and Education</p> <p>Discussants:</p> <ul style="list-style-type: none"> • Osvaldo Moraes, National Center for Disaster Monitoring and Warning CEMADEN, Brazil
Commitment/ Special Announcement in support of the Sendai Framework	None
Background Documents	<ul style="list-style-type: none"> - UNISDR, Words into Action Guidelines, Man-Made and Technological Hazards (UNISDR, 2018). - ITU, 'Disruptive technologies and their use in disaster risk reduction and management' (ITU, 2019), https://www.itu.int/en/ITU-D/Emergency-Telecommunications/Documents/2019/GET_2019/Disruptive-Technologies.pdf. - B. Tomaszewski, 'Geographic Information Systems (GIS) for Disaster Management (CRC Press, 2015). - World Economic Forum, '4 ways technology can help us respond to disasters' (WEF, 2018), https://www.weforum.org/agenda/2018/01/4-ways-technology-can-play-a-critical-role-in-disaster-response/. - Manzhu Yu, Chaowei Yang and Yun Li, 'Big Data in Natural Disaster Management: A Review' 8 <i>Geosciences</i> (2018). - Defence and Security Accelerator (DASA), Future technology trends in security (DASA, UK, 2018), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/728113/Future_trends_research_V6.pdf.

10:30 Break

Session 5	Science and Technology for Resilience: Towards Sustainable and Inclusive Societies
Schedule	11:00-12:30, Tuesday 14 May
Organisers	UN Office for Disaster Risk Reduction (UNDRR), International Science Council (ISC), Integrated Research on Disaster Risk (IRDR),
Focal Points	Qunli Han (qunli.han@irdrinternational.org)
Background and Rationale	The Sendai Framework recognises the significant linkages with the 2030 Agenda for Sustainable Development and mutual reinforcement for disaster risk reduction with the Paris Agreement on Climate Change. Notably, 'resilience' features in the four crucial post-2015 agreements on development, climate, disasters and humanitarian support. It therefore requires the Science and Technology (S&T) community to focus on resilience and advance the science-policy contribution to sustainable and inclusive societies at national and local levels. The outcome of the session will be brought as critical input to the Global Platform 2019, the High-Level Political Forum on Sustainable Development in July 2019 and the UN Climate Summit in September 2019 from the perspective of S&T community, and thus contributing to resilience towards sustainable and inclusive societies.
Session Objectives	<ul style="list-style-type: none"> - To narrow the current gap in science and policy-making for disaster risk reduction and enhanced resilience towards sustainable and inclusive societies

	- To provide recommendations and actionable suggestions to strengthen resilience at national and local levels
Expected Outcomes	Clear suggestions on way forward to enhance collaboration between scientists and policy makers at the national and local levels
Panel	Chair: Shuaib Lwasa Moderator: Andrew Revkin Speakers: <ul style="list-style-type: none"> • H.E. Mr. Mahdi Elyasi, Deputy-Vice President for Science and Technology, Iran • América Santos Riveras, Vice-Minister of Science and Technology, Cuba • Toshio Koike, Science Council of Japan • Wenjian Zhang, Assistant Secretary-General (ASG), WMO • Zuzana Harmackova, Stockholm Resilience Centre/Global Resilience Partnership
Commitment/Special Announcement in support of the Sendai Framework	Commitments/suggestions to support the implementation of the Sendai Framework with a particular focus on strengthening resilience for sustainable and inclusive societies.
Background Documents	<ul style="list-style-type: none"> - Sendai Framework for Disaster Risk Reduction 2015-2030 - Tokyo Statement 2017- Science and Technology Action for a Disaster-Resilience World - The Outcome of the UNISDR Science and Technology Conference on the Implementation of the Sendai Framework - The Science and Technology Roadmap to Support the Implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 - Global Forum on Science and Technology for Disaster Resilience 2017 - Resilience across the post-2015 frameworks: towards coherence? - Concept Note- Sixth Session of the Global Platform for Disaster Risk Reduction

12:30 Adjourn



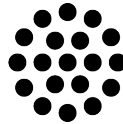
IRDR

Integrated Research on Disaster Risk



UNDRR

UN Office for Disaster Risk Reduction



**International
Science Council**

Side Event at the Twenty-second session of the United Nations Commission on Science and Technology for Development (CSTD)

Date: Wednesday 15 May 2019

Time: Lunch time side event, 14.00 – 15.00

Venue: Palais des Nations, Room XXVI

Registration (separate registration needed): <https://reg.unog.ch/event/29654/>

Title: The role of engaged science and technology to enhance disaster resilience and empower communities

Summary: The Side event will introduce the Sendai Framework and its connections to the SDGs and other agreements and the work science partners, Ministries of Science, scientific advisors and others must do to enhance understanding of risks for resilient and sustainable communities.

Organiser: UNDRR, International Science Council (ISC), Integrated Research on Disaster Risk (IRDR)

Context:

CSTD theme for 2019:

- The impact of rapid technological change on sustainable development.
- The role of science, technology and innovation (STI) in building resilient communities, including through the contribution of citizen science.

The Sendai Framework for Disaster Risk Reduction provides a major shift in focus from, managing disasters, to managing risks. Reducing disaster risk requires to address the multiple, complex and interrelated processes of risk creation, vulnerability as well as strengthening resilience through stronger engagement across sectors, and communities.

The scientific and technology community have been mobilizing to contribute to the implementation of the Sendai Framework, in particular through the development of S&T roadmap recently revised to better address the important linkages with the 2030 Agenda, the Paris Agreement and the New Urban Agenda.

This session will discuss the role of ‘engaged science’ and of technologies in helping communities to prepare and recover from the effects of a hazard but also to implement and define actions that reduce disaster risk and promote sustainable development. Engaged

science encompass transdisciplinary approaches that bring academics and non-academics together in a process of knowledge co-production, mutual learning and problem-solving, the movement of open science making data and research results more accessible, and of citizen science and promoting public participation in data collection and analysis.

Objectives of the side event:

- To discuss the role of science and technology for disaster risk reduction and its implications for sustainable development
- To exemplify the strong link of disaster risk reduction with the CSTD 2019 priority themes: inclusive and empowered communities through rapid technological changes and citizen science

Panelists:

- H.E. América Santos Riveras, Vice-Minister for Science and technology, Cuba
- H.E. Prof. Professor Nkandu Luo, Minister of Higher Education of Zambia
- Prof. Jacqueline McGlade, Chief Scientist, UNEP; Institute for Global Prosperity and Faculty of Engineering at University College London
- Prof. David Johnston, International Center of Excellence on Community Resilience, New Zealand
- Anaïs Couasnon, PhD researcher, the Department of Water and Climate Risk of the Institute for Environmental Studies (IVM), Vrije Universiteit, Netherlands

Chair: John Handmer, ISC