



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

**Launching UNISDR Science and Technology Partnership and the Science and Technology
Road Map to 2030**

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

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Short concept note

Side Event on Bioethics and Ethics of Science and Technology in DRR

1) Overview

The Sendai Framework for Disaster Risk Reduction 2015-2030 pursues a moral aim to substantially reduce the disaster losses of lives and assets from both natural and human-made disasters worldwide. Its seven targets and four priorities for action are founded on a number of universal ethical principles, which are in line with human rights and human dignity.

Bioethics and ethics of science and technology address a wide range of ethical issues relevant to decision-making in disaster risk reduction. Ethics seeks to ensure that the right decisions are made that best promote the well-being of people, communities and the environment and also reduce the risk of harm. While reflections in bioethics have focused on the practice of life sciences, ethical reflection is important at all stages of disaster risk reduction, including planning, deployment and in research. Ethical reflections extend beyond risk assessments on issues of safety and public health, and ask questions such as “What is life about?”, “What are our values?”, and “Where do we want to go as a community/as humanity?” In essence, these reflections address a much wider framework of risk assessments that include the impact of policies and interventions on human dignity, justice, social responsibility, benefit sharing, human vulnerability, and many other areas. The outcomes of these reflections are important to provide a sound ethical basis for sustainable policies and for the development of science and technology related to disasters.

The comprehensive nature of reflections in ethics of science and technology and bioethics points to their relevance for disaster risk reduction as a whole, and with almost all aspects of mobilizing science and technology for human and environmental benefit. Such reflections need to be incorporated into the design of scientific research and the deployment of scientific and technological solutions/policies related to disaster risk reduction. Ethics reflections call for interdisciplinary discussions, as well as community participation, in order to ensure that the outcomes of such research and their applications (or resulting policies) do not jeopardize the values of the communities affected. The incorporation of such reflections at an early stage and throughout the development of policies for disaster risk reduction and related research is especially critical. Particular consideration is needed regarding the special vulnerability of impacted populations which may reduce their capacity to refuse or influence interventions once a disaster has struck (as illustrated during all stages of the response to the Ebola virus epidemic in West Africa). Furthermore, there is sometimes a need to conduct research during disasters in order to seek better solutions in the future, and in this case, ethical evaluation of such research is vital.

While science and technology could provide valuable data and solutions for disaster risk reduction (as outlined in the roadmap), it is important to recognize that scientific and technological applications could also lead to uncertain adverse effects or have unintended negative consequences. Such harms could be physical, but could also impact on rights, dignity, relationships, communities or vulnerable groups. Therefore, a comprehensive approach to disaster risk reduction must include policies for risk assessments and ethical evaluation of scientific and technological applications that could have widespread and diverse impacts. This widens the scope of consideration from using science and technology to respond to disasters, to considering how to reduce the risk of such applications themselves causing harms of a holistic nature.

The adverse effects of the global climate change with the increase in extreme weather events and in the vulnerability of communities to natural hazards, raises disaster risks. Article 8 of the Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC) adopted at the twenty-first session of its Conference of Parties (COP21) - Paris Climate Conference - on 12 December 2015 is devoted to the cooperation and actions needed to be strengthened and developed to avert, minimize and address loss and damaged caused by climate change. The areas of action include early warning systems, emergency preparedness, slow onset event, events that may involve irreversible and permanent loss and damage, comprehensive risk assessment and management, risk insurance facilities, climate risk pooling and other insurance solutions, non-economic losses, as well as resilience of communities, livelihoods and ecosystems. The important role in meeting the challenges of climate change is attributed to climate science, development of socially and environmentally sound technologies and their transfer, as well as to the enhancement of endogenous capacities. At the same time, as it was clearly proved at the 2015 Paris Climate Conference, the path towards a comprehensive agreement on addressing climate change must extend beyond purely economic, social and political considerations. This complex problem which impacts all of humanity is at its core an ethical issue.

2) Stock taking

There are currently numerous publications and reflections on bioethical issues in disaster response and prevention, as well as in research conducted during disaster situations (by the International Bioethics Committee of UNESCO (IBC), WHO and CIOMS, to name a few). There are also currently a number of reflections on the ethical principles for climate change mitigation and adaptation, such as the reports of UNESCO's World Commission on the Ethics of Scientific Knowledge and Technology (COMEST).

Taking into account that the various effects of climate change raise also many ethical questions, UNESCO's World Commission on the Ethics of Scientific Knowledge and Technology (COMEST) has developed reflection about the moral basis of our responses to climate change, both on the policy level, as well as in the domain of action. This work has been carried out since 2010 and several reports have been produced (please see links in the references below).

COMEST identified several ethical principles relevant for climate change which "provide the ethical basis on which responsibilities in respect of climate change adaptation and mitigation may be established". COMEST has underlined the need to address "the cultural and lifestyle practices that affect the way human beings deal with the environment and their fellow human beings during the course of their everyday life. Such practices are ethical in nature since they involve ways of understanding and transforming the natural world and the manner in which human beings relate to one another." Furthermore, COMEST has underscored the urgent need for ethical action that will bring about change necessary to create "a more considerate and caring human community that responds to the vulnerabilities of nature and their fellow human beings".

The 38th session of the General Conference of UNESCO, held at its Headquarters in Paris from 3 to 18 November 2015, requested UNESCO to start preparing, in close cooperation with the World Commission on the Ethics of Scientific Knowledge and Technology (COMEST), and in consultation with the Member States, a preliminary text of a non-binding declaration on ethical principles in relation to climate change, to complement existing reference instruments, and taking into consideration the outcome of negotiation processes within the framework of the twenty-first and twenty-second sessions of the Conference of Parties to the United Nations Framework Convention on Climate Change (UNFCCC). This preliminary text is to be submitted to the 39th Session of the General Conference in 2017. The work of UNESCO and COMEST on the ethical framework in relation to climate change is of direct relevance to the ethical reflection on issues of science and technology and disaster risks reduction.

It is also important to take note of the extensive work that has been carried out by the UN International Law Commission on the protection of persons in the event of disasters.

As to the international legal aspects, attention should be focused on the work carried out by the United Nations International Law Commission on the topic '[Protection of Persons in the event of Disasters](#)'. On the basis of seven successive annual reports submitted by the Commission's Special Rapporteur between 2008 and 2014, the Commission was able to adopt by consensus, in July 2014, its complete first reading draft of twenty one articles. That draft has been transcribed to the UN General Assembly and the Governments and international organisations for their comments. The draft is intended to become an international instrument and is currently described as a [work in process](#)

The draft articles apply to the protection of persons in the event of disasters (art. 1) in order to meet their essential needs with full respect of their rights (art. 2). The draft articles emphasise the primary role of the affected state in the direction, control, coordination and supervision in matters related to disasters (art. 12(2)) and enshrine the principle of cooperation (arts. 8 and 9). They also expressly recognise the duty of respect and protect the inherent dignity of the human person (art. 5) and that the persons affected by disasters are entitled to respect for their human rights (art 6). The two articles dealing with Disaster Risk Reduction highlight the duty to cooperate in disaster risk reduction (art. 10) and the duty of states to reduce the risk of disasters (art. 11).

There is also a large body of literature produced by WHO, CoE, and the EC, among others. Both UNESCO and WHO have also been working on building institutional capacity in countries to work on bioethics (by the former) and research ethics (by the latter).

The EU-funded COST Action on Disaster Bioethics has been examining various ethical issues in disaster responses and disaster research and disseminating its findings. It should also be noted that the EC-funded SATORI Project is currently working on providing a comprehensive overview of how ethics assessment takes place within the context of research and innovation, and possible methodologies of assessment (such as ethical technology assessment, ethical impact assessment, and others). Furthermore, the EC-funded TRUST Project will be working to catalyze a global collaborative effort to improve

adherence to high ethical standards in research around the world, with outcomes such as a global code of conduct for ethical research in low and middle income countries; an online tool for vulnerable populations involved in research with no access to legal advice; and a compliance and follow-up tool for research funders.

3) The way forward?

- This side event will highlight some of the ethical challenges mentioned in the overview, and how to tailor existing methodologies in ethics of science and technology and bioethics to address the specific issues related to leveraging science and technology for disaster risk reduction. Through this discussion, the panel will attempt to demonstrate that there is a vital need to incorporate ethical reflection and assessment components into the roadmap.
- The panel will deliberate on whether to call for the empirical evaluation of ethics policies, procedures and guidelines proposed for disaster risk reduction and management activities.
- **The panel will also propose a mechanism to address ethics in DRR science and technology for the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 and to consider recommending the setting up a UNISDR Bioethics and Ethics of Science and Technology in DRR Platform to work in collaboration with UNISDR, UNISDR Science and Technology Partners, UNISDR STAG, the wider DRR science community, the UN system and UN member states in particular.**
- **The panel will also propose that UNISDR Science and Technology Advisory Group call for, review and publish a series of ethics case studies to complement the scientific case studies developed by STAG (<http://www.unisdr.org/partners/academia-research/case-studies>).**

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Annex: Key statements in the Sendai Framework for Disaster Risk Reduction

7. There has to be a broader and a more people-centred preventive approach to disaster risk. Disaster risk reduction practices need to be multi-hazard and multisectoral, inclusive and accessible in order to be efficient and effective. While recognizing their leading, regulatory and coordination role, Governments should engage with relevant stakeholders, including women, children and youth, persons with disabilities, poor people, migrants, indigenous peoples, volunteers, the community of practitioners and older persons in the design and implementation of policies, plans and standards...

14. [T]here is a need to address existing challenges and prepare for future ones by ...; investing in the economic, social, health, cultural and educational resilience of persons, communities and countries and the environment, as well as through technology and research; ...

19. Drawing from the principles contained in the Yokohama Strategy for a Safer World: Guidelines for Natural Disaster Prevention, Preparedness and Mitigation and its Plan of Action¹⁰ and the Hyogo Framework for Action, the implementation of the present Framework will be guided by the following principles, while taking into account national circumstances, and consistent with domestic laws as well as international obligations and commitments:

- (a) Each State has the primary responsibility to prevent and reduce disaster risk, including through international, regional, subregional, transboundary and bilateral cooperation. The reduction of disaster risk is a common concern for all States and the extent to which developing countries are able to effectively enhance and implement national disaster risk reduction policies and measures in the context of their respective circumstances and capabilities can be further enhanced through the provision of sustainable international cooperation;
- (b) Disaster risk reduction requires that responsibilities be shared by central Governments and relevant national authorities, sectors and stakeholders, as appropriate to their national circumstances and systems of governance;
- (c) Managing the risk of disasters is aimed at protecting persons and their property, health, livelihoods and productive assets, as well as cultural and environmental assets,