

UNISDR contribution to the ECOSOC Integration Segment

The year 2015 marked the beginning of a new era with the adoption of the Sendai Framework, the Addis Ababa Action Agenda, 2030 Agenda for Sustainable Development and Sustainable Development Goals (SDGs) and Paris Climate Agreement. Together with the New Urban Agenda and outcomes of the World Humanitarian Summit in 2016, these agreements have set a clear imperative for change, including the call for collective action at unprecedented scale.

However, the global goals to eradicate poverty and build long-lasting peace and security for all will not be achieved if we do not address the rising climate and disaster risks. Disasters, further exacerbated by climate change, continue to destroy the years of development gains and cause thousands of deaths and billions of economic losses every year. While the death toll in recent years has decreased, disasters affect millions of people each year. Sudden-onset disasters alone displace an average of 25 million people a year¹. Recurrent setbacks to development caused by disasters thereby affect particularly the poor and most vulnerable populations and people living in fragile and conflict-affected countries. By 2030, there could be 325 million people trapped in poverty and exposed to the full range of natural hazards and climate extremes, particularly in sub-Saharan Africa and South Asia. And these predictions do not even include the impact of man-made and cascading disasters.

Economic losses cause further stress on marginalized and most vulnerable. Annual economic losses from earthquakes, tsunamis, cyclones and flooding soared to an estimated at USD300 billion globally. For 2017 this figure will be far surpassed, as hurricanes Harvey, Maria and Irma caused more than USD 300 billion in damages in the US alone. In the Caribbean region, climate change is estimated to contribute an additional USD1.4 billion to the expected average annual losses (AAL) from cyclone wind damage. For Small Island Developing States, AAL from disasters are equivalent to almost 20 per cent of their total social expenditure, whereas heavily indebted middle-income countries and Least Developed Countries witness low commodity prices and financial shocks restrain growth rates below the 7 per cent needed to achieve the SDGs.

Reducing the systemic risk of disasters is therefore an imperative for the achievement of risk-informed, sustainable development leaving no-one behind.

The Sendai Framework for Disaster Risk Reduction 2015-2030² provides a comprehensive approach to disaster risk reduction that covers risks of small- and large-scale disasters triggered by natural or man-made hazards. It guides the multi-hazard management of disaster risk in development at all levels, within and across sectors. Closely linked with the SDGs, Addis Ababa Action Agenda and Paris Climate Agreement³, the Sendai Framework is a pledge to take a proactive shift

¹ Source: Norwegian Refugee Council's Internal Displacement Monitoring Centre (IDMC),

² Adopted by the UN Member States at the Third World Conference for Disaster Risk Reduction in Sendai, Japan on 18 March 2015, and endorsed by the UN GA with Resolution A/RES/69/283,

³ The call for risk-informed development has been mirrored in all following post-2015 development agreements, which include measures to reduce disaster risk as well as clear cross-

from managing disasters to managing risk. Such a shift requires a better understanding of all types risks, exposures and vulnerability, including the collection of comprehensive data sets for the development and implementation of integrated strategies leveraged by technology to reduce vulnerabilities and increase resilience across economic, physical, social, cultural and environmental areas. The use new and emerging technologies like Internet of Things, drones, Information and Communication Technology, artificial intelligence, social media as well as appropriate governance systems and capacity enhancement will be critical components for success.

The Sendai Framework calls to prioritize the development and dissemination of science-based risk knowledge, technology and innovation and strengthen the interface between science and policy, including through the UNISDR Science and Technology Advisory Group, which is working together with members of the Science and Technology Partnership to implement the 'Science and Technology Roadmap to support the implementation of Sendai Framework' agreed at the first global Conference on Science and Technology for Disaster Risk Reduction in January 2016.

Aligned with this, the following recommendations are suggested to promote science, technology and innovation in reducing disaster risks and enhancing sustainable and resilient society.

1. *Ensure science and technology based decision making:* It is of utmost importance to ensure that risk reduction decisions at all levels are based on appropriate science and technology. This is especially relevant for infrastructure development, revising standards and guidelines, developing early warning systems etc. Existing National Platforms for Disaster Risk Reduction can be valid entry points for the engagement of science and technology stakeholders and to create multi-stakeholder partnerships at the national and local level.
2. In this regard, it is also important *to link science, technology, innovation to people*, to ensure a) that research is demand driven and b) that the results of science, technology and innovation reach the last mile and serve the people, e.g., availability of science based hazard maps to communities, participation of science and technology groups in community discussion, dissemination of technology based early warning system etc.
3. *Invest in science, technology, innovation as well as capacity building:* It is important to promote increased investment in science and technology,

references to the Sendai Framework. Their implementation will be enhanced, and their commitments fulfilled, if they are aligned to the Sendai Framework. For example, the SDGs include 25 targets associated with disaster risk reduction in 10 of the 17 SDGs related to poverty, ending hunger, ensuring healthy lives, education, sustainable management of water, building resilient infrastructure, resilient cities, climate change and marine and terrestrial ecosystems. SDGs 1 (Poverty), 11 (Urban Resilience), and 13 (Climate Change) also share common indicators and data sets with indicators for the Sendai Framework targets. Strong references to disaster risk reduction are present in the Addis Ababa Action Agenda, the New Urban Agenda and the Paris Climate Agreement.

both from governments as well private investments. Research institutions and universities should be encouraged to undertake innovative research by establishing appropriate grant system and partnership with private sectors and other stakeholders.

4. *Focus on NATECH disasters:* With the complex nature of disasters, the importance to risk reduction of NATECH (natural hazards triggering technological disasters) is increasing felt. It is important to develop an analytical framework to incorporate NATECH risks into consideration, which, in turn, will form the base of guidelines for NATECH DRR.
5. *Link indigenous knowledge with new technologies:* Indigenous and local/traditional knowledge have been used effectively in case of disasters, especially focusing on early warning like tsunami, volcanic eruptions etc. Some of these knowledge bases have also been used for building practices, and for agriculture and other livelihoods. It is important to validate the indigenous knowledge and use them systematically along with modern innovations and technologies.