UNISDR

The United Nations Office for Disaster Risk Reduction

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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: Work Stream 4, Working Group 2

Capacity Development

1) Overview

The Sendai Framework for Disaster Risk Reduction advocates for the prevention of new risk and reduction of existing ones through an all-hazard approach that integrates exposure and vulnerability/capacity as essential dimensions of risk and relies on multisectoral and cross-disciplinary collaboration to create knowledge that is useful, usable and used. The call for more sophisticated, cutting edge DRR places science and technology at the centre of local, national, regional and global efforts to do so. It requires the extensive use of science to improve the understanding of risk, inform people and policies and guide action. Technology transfer is another pillar upon which risk prevention and mitigation are to rely on.

The framework calls on a number of actors and stakeholders to cooperate in order to facilitate capacity development, suggesting a variety of paths that could lead to the desired goal. In particular, the framework advocates for building the knowledge *"… of government officials at all levels, civil society, communities and volunteers, as well as the private sector, through sharing experiences, lessons learned, good practices and training and education on disaster risk reduction, including the use of existing training and education mechanisms and peer learning*".

It further promotes the *"… incorporation of disaster risk knowledge, including disaster prevention, mitigation, preparedness, response, recovery and rehabilitation, in formal and non-formal education, as well as in civic education at all levels, as well as in professional education and training*" and *"… national strategies to strengthen public education and awareness in disaster risk reduction, including disaster risk information and knowledge, through campaigns, social media and community mobilization, taking into account specific audiences and their needs*".

Without purposeful investment in capacity development, there will be insufficient capability to achieve progress in core areas of the Sendai Framework. This especially applies to less developed countries, already exposed to multiple natural hazards and other threats, with high levels of socio-economic vulnerability. In such countries, both foundational science and development capacities may be extremely low, compounded by low strategic human capital including poor levels of tertiary education and limited access to technology.

In addition to highly constrained science capability in many developing countries, policy makers and practitioners may have a limited understanding of the potential role played by science in informing development and disaster risk decision making. This gap is heightened by vastly differing perspectives and professional/technical vocabularies for decision makers and academics, as well as infrequent contact between these groups.

In both developed and developing countries, the devolution of authority within political systems to smaller geographical regions or administrative units may not always coincide with existence or transfer of critical capacity for either disaster risk research or for effective risk management practice. Furthermore, even in developed countries, an historic bias in favour of natural hazards science has constrained advances in integrated disaster risk research (Ismail-Zadeh, & Cutter, 2014; Cutter *et al.*, 2015) that should

ideally incorporate social vulnerability, communication science, the psychology of risk, health, economics and other crucial disciplines that study risk.

An important additional policy consideration for capacity building relates to the very character of disaster risk science for risk and resilience planning at local, subnational, national and regional scales. It is necessarily cross-disciplinary and applied, stepping well-beyond disciplinary silos (van der Walt, 2013). However, incubating and growing capacity for robust disaster risk research that both overcomes the field's disciplinary fragmentation and speaks meaningfully to local risk reduction policy and practice imperatives is not achieved easily, especially in resource-constrained contexts.

In many developing countries, an important capacity development consideration relates to the pressure of multiple, competing science and technology demands, ranging from health sciences to engineering technology and Information and Communications Technology (ICT). Here, the disaster risk science capacity development policy implication is to enable the best synergies across multiple sectors and fields, rather than silo-ing the disaster risk domain as a competing science priority. Advancing disaster risk-related science should be viewed as catalytic and enabling, rather than competitive.

Participants in this works stream are invited to discuss how to capacity development can help to promote cooperation and knowledge transfer in order to align the research agenda with the need to address emerging disaster risks including technological and biological hazards, and to help to shape the role and work plan of the Scientific and Technical Partnership to support the implementation of the Sendai Framework.

2) Stock taking

It has been observed that there are substantial disparities in capacity development for science in the disaster risk management field globally. There is a heavy dependence on international organisations and associated experts in developing countries and limited South – South cooperation. Furthermore, there has been a historic focus of extractive research (especially in Africa) by institutions in the global north, with disaster/humanitarian data repositories remaining located in international agencies (not national institutions). Low education baselines in many countries also deter progress in implementing cross-disciplinary tertiary level learning processes in the emerging risk and resilience domains.

Crucial to implementing the Sendai Framework through the judicious application of science and technology, is the need to purposefully advance cross-disciplinary disaster risk research in line with disaster risk capacity building for both decision-makers and professionals/practitioners. Such formal capacity-building processes can leverage off existing global experience in disaster risk-related training and education, especially successful capacity building efforts that are culturally coherent and contextually nuanced. The Sendai Framework makes extensive reference to the delivery of culturally sensitive DRR related activities. The cultural context needs to be integrated in capacity development initiatives and inclusiveness should be an important guiding principle.

Additional opportunities for strengthening capacity relates to increasing collaboration with the private sector and prospects for technology transfer. Similarly, the emergence of transnational knowledge consortia and academic networks allows for a wider scope of disaster risk knowledge transfer and capacity building that can transcend disciplinary and geographic boundaries.

What is needed: opportunities for capacity building for DRR

A focus on cross-disciplinarity (including interdisciplinary and transdisciplinary research)

To-date, the majority of the capacity development efforts have followed a highly specialised natural sciences pattern (e.g. geo-sciences). While there is an encouraging growth in social vulnerability research, disaster risk research capacity building should explicitly advance the cross-disciplinary investigation of risks, and go beyond fragmented approaches to disaster risk research (Cutter et al., 2015; Holloway, 2009).

A focus on science capacity building for DRM practitioners and policy makers

Globally, there is an uneven application of minimum qualifications criteria for government officials working in disaster risk-related fields. This has led to government officials being appointed with highly varied backgrounds, many with limited formal science training or education - effectively constraining governmental demand for robust risk research and associated capacity building. It has limited governmental capacity for the uptake of risk knowledge that could be transferred, with implications for disaster risk management application as well as service delivery.

Training

Many training programs have focused on support to national and local government officials in the development of appropriate action plans and strategies for the integration of disaster risk reduction and climate change adaptation into investment decisions (as required for the implementation of the Sendai Framework for disaster risk reduction). However, numerous gaps have emerged in recent years.

With rapidly growing global demand for disaster risk information, the scientific community is challenged to consider how the dissemination of training modules and other capacity building tools can be achieved through existing technologies and pipeline technologies 'that reach the last mile'. These challenges include methods for harmonising internet, satellite communication and other technologies as well as making them accessible in remote locations.

Similarly, despite a plethora of available training materials, standardized, peer-reviewed training resources are lacking. These include training modules and tools that should optimally be reviewed by the scientific community for their accuracy and reliability, in accordance with recognised quality assurance mechanisms.

Past experience in disaster risk management capacity building underlines the importance of training the trainers at national and local levels. It also foregrounds the

importance of accessible training that is culturally appropriate and communicated in local languages and dialects. With risk communication often constrained by language barriers, there is scope for exploring the role of technology in better enabling the translation and interpretation of training materials into different languages and in culturally appropriate ways. Specific content areas for training include instruction on national disaster loss databases, national (and local) risk profiles, city resilience benchmarking including scorecards, national (and local) targets and indicators, elements of pre-disaster recovery planning to build back better, development of national (and local) strategies and plans, forecasting, modelling and manipulating the data to inform policy **(See the concept notes for Work Stream 3 and Work Stream 2 Working Group 3 on Risk Assessment and Management for complementary discussions).**

Focus on education for strengthened disaster risk research

Education in DRR is at the heart of a sustainable capacity development system. It reflects a growing recognition that a well-educated population is essential for a "productive, prosperous and resilient country" (Group of Eight, 2013). Work on mainstreaming DRR in (primary) school curricula has already been mapped and guidelines developed and published. However, further work is needed for greater quality assurance.

While progress in higher education capacity building efforts for integrated disaster risk research has advanced encouragingly in recent years (especially in Africa), these have been neither supported financially by educational foundations, nor the science and development communities. Progress in disaster risk reduction practice is significantly strengthened by informed, cross-disciplinary, applied risk education at tertiary levels. Yet the societal imperative for skilled capacity in practice often conflicts with academic promotional requirements for research performance. The advancement of disaster risk-related capacity building in higher education in the course of the Sendai Framework affords a valuable opportunity to revisit this inherent tension between education and research imperatives within institutions of higher learning **(see the concept note for Work Stream 4 Working Group 1 on Leveraging Science for a complementary discussion)**.

Focus on appropriate technology transfer and private sector engagement

Frequently, technologies are offered to developing countries that lack the capacity to absorb them and further develop and adapt them in their own context. Following existing practices of innovation in science and technology and passing the technologies to be transferred via a Technology Transfer Office (often located in HEIs) could provide new options on doing so in a sustainable manner. In the meantime, the idea of Best Available Technique could be explored.

Similarly, the private sector, especially through business associations, chambers etc. should receive training on their role as creators of risk as well as of providers of critical services and products, which can enhance the resilience of communities. This is a business and science interface, business being a key user of science, as well as a sponsor and creator of scientific discovery and invention.

Focus on new financing models:

While there have been substantial and enabling investments in climate science, neither science funding bodies nor educational foundations have made resources available for 'risk and resilience science'. Moreover, there have been no observed patterns in funding for students or for higher education institutions in developing countries to pursue this field. Evidence from Periperi U's 2015 summary evaluation report underlines that this represents one of the most substantial obstacles to advancing the field (Ofir, & Mentz, 2015).

Work Stream 2 will attempt to identify capacity development gaps that should be addressed in order to support the implementation of the Sendai Framework. The Work Stream will further suggest ways for the science and the education community of practice to address these gaps through a number of activities including building capacities in countries with high or with limited capacities.

3) The way forward

This working group will seek to discuss and identify specific mechanisms and actions and initiatives that exist or could be developed for effective capacity building that promotes the use of science and the creation of knowledge that is useful, usable and used for DRR. The outcome of the discussion will be to inform the draft S&T Road Map for S&T in implementing the Sendai Framework. Relevant proposals from the Road Map are shown below.

Priority for Action 1: Understanding Disaster Risk		
Expected Outcomes	**Key Actions**	**Review Progress and Needs**
1.1 Assess the current state of data, scientific knowledge and technical availability on disaster risks reduction and fill the gaps with new knowledge.	• Develop, update periodically and disseminate risk information to build awareness and knowledge of disaster risk • Enhance access to environmentally sound technology, local knowledge and inclusive innovation • Promote community engagement in risk data collection.	• Guidelines for national and regional disaster risk management capability assessment

1.2 Synthesize, produce and disseminate scientific evidence in a timely and accessible manner that responds to the knowledge needs from policy-makers and practitioners;	• Ensure the synthesis and use of traditional, indigenous and local knowledge and practices • Promote partnership between scientists, policy makers, private sectors and community leaders to establish, disseminate and share good practices and lessons learned. • Engage scientific focus on disaster risk factors and scenarios, including emerging disaster risks; • Using formal education system and media for disseminating and promoting awareness about disaster risk	• National and regional knowledge centres for disaster risk management. • Good practises on use of indigenous and local knowledge • Education guidance on DRR • Case studies on DRR through science and traditional, indigenous and local knowledge and practises
1.3 Ensure that scientific data and information can support and be used in monitoring and reviewing progress towards disaster risk reduction and resilience building.	• Develop and monitor a set of core indices and indicators to measure progress • Promote the development of quality standards, such as certifications particularly at national and regional levels.	• Standards and best practises for DRR • National and regional peer reviews • National peer reviews to follow-up, assess and report on progress on implementation of Sendai Framework

Priority For Action 2: Strengthening Disaster Risk Governance to Manage Disaster Risk

Expected outcomes	Key Actions	Review Progress and Needs
2.1 Ensure a stronger involvement of science in policy- and decision-making at all levels	• Enhance cross-sectoral decision making	• National and regional knowledge centres for disaster risk management

Priority For Action 3: Investing in Disaster Risk Reduction for Resilience

Expected Outcomes	Key Actions	Review Progress and Needs
3.1 Provide scientific evidence to enable decision-making of policy options for investment and development planning	• Promote cooperation between academic, scientific and research entities and networks and the private sector to develop new products and services to help reduce	• Periodic reports on State of Science in DRR at national, regional and global levels. • Guidance on disaster risk and impact assessments • National and regional knowledge centres for disaster risk management • National and regional Communities of Users and Practitioners • Evidence-informed legislation and policies ensuring DRR is integrated in planning and multi-sectoral policies

Priority for Action 4: Enhancing Disaster Preparedness For Effective Response, and to "Build Back Better" In Recovery, Rehabilitation and Reconstruction

Expected outcomes	Key Actions	Review Progress and Needs
4.1 Identify and respond to the scientific needs of policy- and decision-makers at all levels to strengthen preparedness and resilience	• Develop, maintain and innovate technology for people-centred, low cost early warning systems and emergency communication mechanisms. • Support the development of resilient systems and services • Provide knowledge and guidance for the development of national and local strategies and plans for DRR	• Periodic national and regional reporting on early warning systems and emergency communication mechanisms; in place and planned • Local and national DRR strategies and plans in line with Sendai framework • Local and national resilience actions plans
4.2 Build capacity to ensure that all sectors and countries understand, have access to, and can use scientific information for better informed decision-making	• Incorporate disaster risk knowledge in formal and non-formal education • Promote transdisciplinary work in disaster risk reduction research. • Strengthen public education and awareness in DRR • Develop the workforce capacity in all sectors in understanding disaster risk and implementing DRR approaches • Enhance knowledge and	• National public education and awareness strategy in DRR • National DRR campaigns • 'Making Cities Resilient' global campaign extended to cities of all sizes including mega cities

| | technology transfer and promote the use of global technology pools to share know-how, innovation and research
• Promote research innovations in insurance sector particularly in developing regions | |

Can these proposals be strengthened further? Are there specific next steps to strengthen capacity building, for example to strengthen the science-policy-practice nexus at local, national, regional and global levels in DRR? What are priority areas of investment? Participants are also invited to consider the following areas of focus and challenges to make further proposals to inform the Road Map activities over the next 15 years:

a) Scaling-up existing efforts to incorporate disaster risk knowledge in formal and non-formal education. Formal Education: How do we link with the Global Action Programme on Education for Sustainable Development and the commitments made in Nagoya? How do we ensure that countries are knowledgeable on the guidelines produced by UNESCO and UNICEF on mainstreaming DRR in school curricula and how do we ensure the quality assurance of such efforts? How do we utilize MOOCs (Massive Open Online Courses)? How do we motivate the tertiary education sector to rethink their ISI-centred approach to allow for more transdisciplinary work and education to take place? How do we mainstream DRR/M in the curricula of schools of journalism? Informal Education: How do we raise awareness on the existing work on messages developed by IFRC or other efforts to raise awareness? How do we ensure the quality element? What is the role of mass and of social media?

b) *Developing the workforce capacity in all sectors in understanding disaster risk and implementing DRR approaches:* Can we identify International, Regional and National centres and their role in enabling the workforce and elements of the training content. Are there existing MOOC programmes on DRR and what is their role in training? How can they be scaled up?

c) *Promoting transdisciplinary work in disaster risk reduction research:* What are the existing programmes and ways of scaling them as well as multiplying them. Initiatives such as IRDR, the role of twinning programmes will be discussed as well as other opportunities.

d) *Capturing indigenous knowledge in capacity building:* How can indigenous knowledge be captured and integrated in educational and awareness raising activities?

e) *Enhancing knowledge and technology transfer*: How can we promote the use of global technology pools to share know-how, innovation and research?

f) *Funding:* Increasing climate variability and change foreground the need to improve preparedness for future hazards over a wide range of applications and actors. A first

approach would be the evaluation of the baseline level of resilience for society, detecting crucial thresholds - for specific sectors and society as a whole - beyond which environmental, social or economic stability would be endangered today. Disaster Risk Reduction can be seen as a first element of a seamless adaptation approach to be considered in all funding initiatives for climate change and adaptation.

The session aims to discuss the how, when and by whom should a campaign to raise awareness on the linkage be done. Moreover, other financing mechanisms will be identified and discussed along with the way(s) to access them. The role of the private sector will be part and parcel of the latter discussions. Furthermore, making the case for accessing governmental funds will be discussed. What is needed, how can the case be made and by whom?

The session will also examine the interaction between research and educational, training and raising awareness efforts, and how these synergies can be mutually reinforcing.

The priority areas of investment needed in this area to deliver on the Road Map are many. The session will identify at least three of them through consensus. It will further draw up the immediate steps to be taken, identifying responsible entities for each step and introducing a suggested timetable.

As mentioned in the Sendai Framework, particular consideration will be given to Small Island Developing States, landlocked developing and least developed countries, as well as to vulnerable groups.

In order to achieve this a number of existing networks and / or Institutions should become partners and make their own valuable contribution to the Road Map's implementation. Examples of such initiatives, networks collaborative platforms are:

1. *In training:* UN Specialised centres (both sectoral and focusing on Disaster Risk Reduction), Regional and National Disaster Management training Institutes, Universities who have established programmes on DRR and/or DRM, MOOCS.

2. *In Education:* UN Specialised centres (both sectoral and focusing on Disaster Risk Reduction), Universities who have established programmes on DRR and/or DRM and collaborative platforms / networks such as Peri Peri U, MOOCS.

3. *In raising awareness:*

4. *In Technology transfer:* National Technology Transfer Offices, UN Agencies and their centres,

5. *On the role of the private sector:* Insurance and re-insurance companies, IT and Technology companies

Are there others? Who are they and how can they engage in the process?

Finally, it is hoped that this session will lead to voluntary commitments by the various representatives on capacity development

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24(g) To build the knowledge of government officials at all levels, civil society, communities and volunteers, as well as the private sector, through sharing experiences, lessons learned, good practices and training and education on disaster risk reduction, including the use of existing training and education mechanisms and peer learning;

24 (l) To promote the incorporation of disaster risk knowledge, including disaster prevention, mitigation, preparedness, response, recovery and rehabilitation, in formal and non-formal education, as well as in civic education at all levels, as well as in professional education and training;

24 (m) To promote national strategies to strengthen public education and awareness in disaster risk reduction, including disaster risk information and knowledge, through campaigns, social media and community mobilization, taking into account specific audiences and their needs;

9 - International, regional, sub-regional and transboundary cooperation remains pivotal in supporting the efforts of States, their national and local authorities, as well as communities and businesses, to reduce disaster risk. Existing mechanisms may require strengthening in order to provide effective support and achieve better implementation. Developing countries, in particular the least developed countries, small island developing States, landlocked developing countries and African countries, as well as middle-income countries facing specific challenges, need special attention and support to augment domestic resources and capabilities through bilateral and multilateral channels in order to ensure adequate, sustainable, and timely means of implementation in capacity-building, financial and technical assistance and technology transfer, in accordance with international commitments.

14 - Against this background, and in order to reduce disaster risk, there is a need to address existing challenges and prepare for future ones by focusing on monitoring, assessing and understanding disaster risk and sharing such information and on how it is created; strengthening disaster risk governance and coordination across relevant institutions and sectors and the full and meaningful participation of relevant stakeholders at appropriate levels; 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; and enhancing multi-hazard early warning systems, preparedness, response, recovery, rehabilitation and reconstruction. To complement national action and capacity, there is a need to enhance international cooperation between developed and developing countries and between States and international organizations.

17 - To attain the expected outcome, the following goal must be pursued:

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 pursuance of this goal requires the enhancement of the implementation capacity and capability of developing countries, in particular the least developed countries, small island developing States, landlocked developing countries and African countries, as well as middle-income countries facing specific challenges, including the mobilization of support through international cooperation for the provision of means of implementation in accordance with their national priorities.

19m - Developing countries, in particular the least developed countries, small island developing States, landlocked developing countries and African countries, as well as middle-income and other countries facing specific disaster risk challenges, need adequate, sustainable and timely provision of support, including through finance, technology transfer and capacity-building from developed countries and partners tailored to their needs and priorities, as identified by them.

23. Policies and practices for disaster risk management should be based on an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment. Such knowledge can be leveraged for the purpose of pre-disaster risk assessment, for prevention and mitigation and for the development and implementation of appropriate preparedness and effective response to disasters.

24b - To encourage the use of and strengthening of baselines and periodically assess disaster risks, vulnerability, capacity, exposure, hazard characteristics and their possible sequential effects at the relevant social and spatial scale on ecosystems, in line with national circumstances;

24j - 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;

24n - To apply risk information in all its dimensions of vulnerability, capacity and exposure of persons, communities, countries and assets, as well as hazard characteristics, to develop and implement disaster risk reduction policies;

27c - To carry out an assessment of the technical, financial and administrative disaster risk management capacity to deal with the identified risks at the local and national levels;

28a - To guide action at the regional level through agreed regional and sub-regional strategies and mechanisms for cooperation for disaster risk reduction, as appropriate, in the light of the present Framework, in order to foster more efficient planning, create common information systems and exchange good practices and programmes for cooperation and capacity development, in particular to address common and transboundary disaster risks;

30h - To encourage the revision of existing or the development of new building codes and standards and rehabilitation and reconstruction practices at the national or local levels, as appropriate, with the aim of making them more applicable within the local context, particularly in informal and marginal human settlements, and reinforce the capacity to implement, survey and enforce such codes through an appropriate approach, with a view to fostering disaster-resistant structures;

30i - To enhance the resilience of national health systems, including by integrating disaster risk management into primary, secondary and tertiary health care, especially at the local level; developing the capacity of health workers in understanding disaster risk and applying and implementing disaster risk reduction approaches in health work; promoting and enhancing the training capacities in the field of disaster medicine; and supporting and training community health groups in disaster risk reduction approaches in health programmes, in collaboration with other sectors, as well as in the implementation of the International Health Regulations (2005) of the World Health Organization;

31e - To enhance cooperation between health authorities and other relevant stakeholders to strengthen country capacity for disaster risk management for health, the implementation of the International Health Regulations (2005) and the building of resilient health systems;

31f - To strengthen and promote collaboration and capacity-building for the protection of productive assets, including livestock, working animals, tools and seeds

33m - To strengthen the capacity of local authorities to evacuate persons living in disaster-prone areas;

36a(i) - Women and their participation are critical to effectively managing disaster risk and designing, resourcing and implementing gender-sensitive disaster risk reduction policies, plans and programmes; and adequate capacity building measures need to be taken to empower women for preparedness as well as to build their capacity to secure alternate means of livelihood in post-disaster situations;

40 - In addressing economic disparity and disparity in technological innovation and research capacity among countries, it is crucial to enhance technology transfer, involving a process of enabling and facilitating flows of skill, knowledge, ideas, know-how and technology from developed to developing countries in the implementation of the present Framework

41. Disaster-prone developing countries, in particular the least developed countries, small island developing States, landlocked developing countries and African countries, as well as middle-income countries facing specific challenges, warrant particular attention in view of their higher vulnerability and risk levels, which often greatly exceed their capacity to respond to and recover from disasters. Such vulnerability requires the urgent strengthening of international cooperation and ensuring genuine and durable partnerships at the regional and international levels in order to support developing countries to implement the present Framework, in accordance with their national priorities and needs. Similar attention and appropriate assistance should also be extended to other disaster-prone countries with

specific characteristics, such as archipelagic countries, as well as countries with extensive coastlines.

46 - Financing from a variety of international sources, public and private transfer of reliable, affordable, appropriate and modern environmentally sound technology, on concessional and preferential terms, as mutually agreed, capacity-building assistance for developing countries and enabling institutional and policy environments at all levels are critically important means of reducing disaster risk.

48g – The overall capacity of the United Nations system to assist developing countries in disaster risk reduction should be strengthened by providing adequate resources through various funding mechanisms, including increased, timely, stable and predictable contributions to the United Nations Trust Fund for Disaster Reduction and by enhancing the role of the Trust Fund in relation to the implementation of the present Framework;

Curricula (Children & Youth)
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. There is a need for the public and private sectors and civil society organizations, as well as academia and scientific and research institutions, to work more closely together and to create opportunities for collaboration, and for businesses to integrate disaster risk into their management practices.

36a(ii) - Children and youth are agents of change and should be given the space and modalities to contribute to disaster risk reduction, in accordance with legislation, national practice and educational curricula;