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With the International Decade for Natural Disaster Reduction (IDNDR, 1990-1999) and the launching of the International Strategy for Disaster Reduction (ISDR), twenty years have been dedicated to continuous discussion and study of disasters. Two major conferences, Yokohama and Kobe, have provided strategies and action plans to address this thorny issue that has become a serious obstacle to sustainable development in the world.

The Hyogo Framework for Action (HFA)<sup>1</sup>, adopted by governments at Kobe, is gradually being utilized to guide national and local policies and measures to reduce risk and vulnerability to natural events. The world has become more knowledgeable and capable of responding to the impact of natural hazards affecting their territories and communities, in some cases even reducing mortality in important numbers.

Poor developing nations like Bangladesh, Chile, Cuba, Jamaica, Mozambique, Vietnam and several other have become more effective in reducing deaths and losses following cyclones, hurricanes, floods or earthquakes., while other poor and even rich nations continue to suffer from not having implemented the right risk reduction approaches and policies; Haiti, Myanmar, Indonesia, Pakistan but also Russia, Japan, New Zealand and the USA, have seen disasters affecting them in an increasing manner recently.

At the Integrated Research on Disaster Risk initiative of ICSU/ISSC/ISDR<sup>2</sup> two key questions have been proposed to the academic community to be urgently addressed and to guide their work in this field:

(1) Why, despite advances in the natural and social science of hazards and disasters, do losses continue to increase?

(2) To what extent is the worldwide growth in disaster losses a symptom and indicator of unsustainable development?

These are the questions that as expert scholars we need to be prepared to respond. Knowledge available needs to be urgently oriented and utilized for advising policy and raising awareness. The scientific community cannot remain detached of these key challenges of our modern societies.

For example, “there are important differences in the way natural hazards such as floods, droughts, tropical cyclones or earthquakes are approached and socially constructed from the way in which technological hazards such as oil spills, structural failures, industrial, nuclear and transport accidents are investigated. The latter events are routinely subjected to probing investigations and post facto risk analyses, with the results of these enquiries fed back into revised laws, regulations and practices in the public and private sectors. Further, compliance is then stipulated and ideally closely monitored.”<sup>3</sup>

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<sup>1</sup> The Hyogo Framework for Action (2005-2015): Building the Resilience of Nations and Communities to Disasters. 2<sup>nd</sup> WCDR, Kobe, Hyogo, 18-22 January 2005.

<sup>2</sup> ICSU is the International Council for Science; ISSC is the International Social Sciences Council and ISDR the International Strategy for Disaster Reduction.

<sup>3</sup> Forensic investigations of disasters: The FORIN Project. Integrated Research on Disaster Risk (IRDR) of ICSU/ISSC/ISDR. 2011.

And instead, when disasters triggered by natural events happen, apart from some basic questions, most responsibility is blamed on nature, knowing very well that main disaster causes relate to decisions in urban or land use management, construction materials and design or lack of preparation.

Another issue to be questioned is the huge difference that exists between resources dedicated to respond to disasters, which provide great visibility; and resources dedicated to risk reduction activities, which have less visibility. Could risk reduction investments not be advertised more and better as being key in avoiding deaths and losses, hence raising awareness and thus triggering contributions to the scale of those provided for traditional humanitarian action, i.e., for the response and recovery to disasters?

“Answering questions about responsibility and governance requires a paradigm shift or a transformational change in ways in which disasters are conceived and understood. This goes beyond only technical research and its publication and wider dissemination of results.” It requires that research be used as a step in motivating and facilitating changes in values, attitudes and behavior through better understanding of disaster causes.

In order to address the full extent and causes of disasters, academic and scientific institutions need to give priority to trans-disciplinary research and education that go beyond the traditional narrow focus on natural hazards or emergency management. It is important to involve a wide range of professional areas with greater focus on social and human vulnerability, as the only items of risk that can be actually changed.

In addition to a trans-disciplinary approach, it is also important to facilitate involvement and develop team efforts with other stakeholders from public and private sector, and civil society. Their knowledge and experience is extremely valuable not to use it for research and education purposes, in a systematic manner and not just through occasional surveys or interviews.

Policy and advocacy oriented research is essential in this field. Both purposes should be clearly identified as outcomes or products of research and education efforts. The simple publication of results can no longer be the only or main outcome of research. Knowledge has to serve to implement change in society for improving the quality of life. Academic institutions need not only contribute occasionally to policy and decision-making, they must become actively engaged in community development, together with government, business and NGOs, continually developing and enhancing policies, plans, programmes and projects addressing the root and underlying causes of disasters. Same for advocacy and awareness-raising purposes in close team effort with the media.

It is only when a society addresses issues of such caliber with equal high caliber efforts that such disasters can be overcome or at least reduced to a minimum. In other words, it is only by focusing resources on managing and reducing risk that natural events will have lesser impact, and response and recovery will require less and less costly efforts by communities and nations, hence liberating resources for more sustainable development.

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