

*Keynote Speech*

**Science and Technology in the Post-Hyogo Framework for Action-**

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Your Imperial Highness Crown Prince Naruhito of Japan

Professor Takashi Onishi, President of the Science Council of Japan

Ms. Margareta Wahlström, Special Representative of the Secretary-General  
for Disaster Risk Reduction

Professor David Johnston, Chair of IRDR Scientific Committee

Professor Junichi Hamada, President of the University of Tokyo

Your Excellency Mr. Kenichi Suganuma, Ambassador in charge of the 3rd  
World Conference on Disaster Risk Reduction

Professor Gordon McBean, President of the International Council for Science

Excellencies

Distinguished Delegates

Ladies and Gentlemen

I am very pleased to deliver a key-note speech here at the Tokyo Conference on International Study for Disaster Risk Reduction and Resilience at the University of Tokyo. I would like to begin by thanking the organizers, the Science Council of Japan (SCJ), United Nations Office for Disaster Risk Reduction (UNISDR), Integrated Research on Disaster Risk (IRDR), and especially the University of Tokyo for hosting this event.

I would also like to convey my appreciation to world leaders and top scientists present here to participate in this prestigious Tokyo conference prior to the Third UN World Conference on Disaster Risk Reduction to

discuss and formulate how the science and technology could help in disaster risk reduction –hence fostering sustainable development.

Excellencies,

Ladies and Gentlemen,

Never in mankind's history has there been more pressing need for action on disaster risk reduction.

According to a recent IPCC Report<sup>1</sup>, despite a growing number of climate change mitigation policies, annual GHG emissions grew on average more during the decade from 2000 to 2010 compared to the entire three decades from 1970 to 2000. This was mainly due to economic growth that was not sustainable, especially for developing countries, and this pattern is expected to continue unless we take decisive action. Without additional efforts to reduce GHG emissions beyond those in place today, the global mean surface temperature is expected to increase in 2100 from 3.7°C to 4.8°C compared to pre-industrial levels. This falls way short of the 2°C goal, around which the climate policy discussions are centered. As a matter of fact, even the adequacy of the 2°C goal is being debated increasingly among scientific circles.

Further, according to the Sendai Report of 2012 produced by the Japanese Government and the World Bank, disasters hurt poor and vulnerable people the most. Since 1980, low income countries have accounted for only 9% of the actual disasters but 48% of the fatalities. Disasters affect the poor and

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<sup>1</sup> Summary for Policymakers (SPM) of the Working Group III (WGIII) contribution to the Fifth Assessment Report (AR5), approved by Member governments of the IPCC in Berlin, Germany

vulnerable disproportionately, especially women, children, the elderly, and those recovering from the impact of conflicts.

Disasters also cause major adverse economic impacts. The economic losses from disasters over the past 30 years are estimated at \$3.5 trillion. 2011 was the costliest on record, seeing estimated losses of around \$380 billion. The recent floods in Thailand cost the equivalent of 5% of the country's Gross Domestic Product (GDP), while the economic losses from Japan's earthquake and tsunami were estimated as equivalent to 4% of its GDP. In least developed countries (LDCs) and Small Island Developing States (SIDS), the impact can well exceed an equivalent of 100% of GDP. For instance, the economic impact of the Haiti earthquake in 2010 was estimated to be equivalent to 120% of its GDP, while the 2004 Grenada hurricane caused losses equivalent to more than 200% of GDP.

Having said that, climate change is exacerbating the extremes in disasters, including hydro-meteorological events. Together with other major global drivers of change, such as population growth, rapid urbanization, volatile asset values, this may result in increased frequency and even higher negative impacts of disasters. It is high time for a more effective and efficient approach to disaster risk reduction.

Excellencies,

Ladies and Gentlemen,

2015 is a crucial juncture for the international community: Not only will the United Nations celebrate its 70<sup>th</sup> anniversary and look retrospectively on its successes and failure for the past seven decades for lessons learnt, it will also

be the year where all the Member States will unite behind a universal and transformative development agenda for the next decade and a half. 2015 is also the deadline for Millennium Development Goals (MDGs) implementation. Besides the 3<sup>rd</sup> World Conference on Disaster Risk Reduction in Sendai this March, 2015 will have many more milestones including the Financing for Development Conference in Addis Ababa in July, the launch of the post-2015 development agenda and Sustainable Development Goals (SDGs) in September in New York and a globally binding climate deal in the COP 21 in Paris in December. Much preparation is needed.

This year is further noteworthy for the international community in the context of the Hyogo Framework for Action 2005-2015 coming to its completion. To recapitulate the history of the Hyogo Framework:

- In 1990, UN Member States declared the International Decade for Natural Disaster Reduction.
- In 1994, the Yokohama Strategy and Plan of Action for a Safer World was adopted at the First World Conference on Natural Disasters.
- In 1999, the United Nations General Assembly adopted the International Strategy for Disaster Reduction (ISDR) and created the secretariat of the ISDR (UNISDR) with the purpose to ensure its implementation.
- In 2003 and 2004, the UNISDR secretariat carried out a review of the Yokohama Strategy and Plan of Action for a Safer World. The Yokohama Review formed the basis of the HFA and was submitted at

the World Conference on Disaster Reduction in Kobe, Japan, in January 2005.

- In 2010 and 2011 UNISDR conducted a Mid-Term review of the HFA through a participatory approach involving disaster risk reduction stakeholders.

There is no doubt Hyogo Framework was a great success in view of the statements made by Armenian Minister Armen Yeritsyan and Mongolian Deputy Prime Minister Terbishdagva. And I quote:

*“We have seen significant gains in our country as a result of implementing the Hyogo Framework for Action, which Armenia adopted in 2005. We have strengthened our policies in risk reduction; integrated disaster risk reduction in government policies and plans; and recognized this issue as a country priority for our development and increasing security.”* (Armenian Minister Armen Yeritsyan, 16 July 2014)

- *“Since implementing the Hyogo Framework for Action there has been some success in reducing the mortality rate from disasters but a new approach has to be considered because of the increasing economic and ecological losses we are experiencing,”* (Mongolian Deputy Prime Minister Terbishdagva, 8 May 2014)

There are too many other examples of success stories of the Hyogo Framework to cite here. Suffice it to mention in passing the examples of China, Netherlands, Bangladesh, and the Caribbean islands.

However, there is also space for improvement as indicated in the Mid-Term Review. The Mid-Term Review found that there was unmet demand at the country-level for science and technology inputs. For instance, it is worth mentioning the gaps, especially for risk assessment, practical tools to address specific risks, ways to implement multi-hazard approaches, methods tailored to adaptation needs, economic evidence for advocacy purposes, and greater standardization of methods.

The Hyogo Framework put significant emphasis on political and social factors in disaster risk reduction. This requires enhanced integration of the socio-political aspects with the scientific and technical aspects. Needless to say, this should not come at the cost of downplaying the role of science and technology in terms of the implementation of the framework.

The Third UN World Conference on Disaster Risk Reduction (3rd WCDRR) will be held 14-18 March 2015 in Sendai City, Miyagi Prefecture, Japan. The United Nations General Assembly Resolution for 2013 on International Strategy for Disaster Reduction (ISDR) states that the World Conference will result in a concise, focused, forward-looking, and action-oriented outcome document and will have the following objectives:

1. To complete assessment and review of the implementation of the Hyogo Framework for Action;
2. To consider the experience gained through the regional and national

strategies/institutions and plans for disaster risk reduction and their recommendations as well as relevant regional agreements within the implementation of the Hyogo Framework of Action;

3. To adopt a post-2015 framework for disaster risk reduction;
4. To identify modalities of cooperation based on commitments to implement a post-2015 framework for disaster risk reduction;
5. To determine modalities to periodically review the implementation of a post-2015 framework for disaster risk reduction.

The new framework should strengthen existing scientific and technical organizations such as the Integrated Research on Disaster Risk (IRDR).

As identified by the UNISDR, three core areas should be highlighted in the course of establishment of the post-Hyogo Framework for Action: 1) practical risk reduction; 2) scientific and technological capacity; and 3) advocacy.

First, on **practical risk reduction**, the international community should work together to mainstream practical methods and tools to reduce disaster risk in all sectors.

Second, on **scientific and technological capacity**, the international community should work together to support education, research, innovation, and problem-solving, and develop the necessary supporting institutions and scientific experts



Third, on **advocacy**, the international community should work together to establish the evidence base for informing and persuading leaders and the general public on the wisdom and cost-effectiveness of disaster risk reduction.

Here, I would emphasize, as an integrating factor, the importance of creating national platforms where ministries, agencies and private and civil organizations engaged in disaster reduction activities coordinate and share information before, during and after disasters. This is crucial since coordination makes all the difference between life and death for hundreds and thousands. Science community will play a pivotal role in the platform by bridging knowledge gaps among divergent actors: For instance, it could provide useful tools on collection and maintenance of data and statistics, on risk monitoring and assessment for planners, and on facilitating timely decisions by leaders. In addition, networks of national platforms will help share experiences globally and mainstream disaster risk reduction in the agenda of the international community.

Excellencies,

Ladies and Gentlemen,

Having been a policy maker myself, I fully recognize that most policy makers can accept scientific and technical information only when it is easily understandable, relevant to the interests of those involved and affordable. There are also numerous barriers to overcome, including a lack of political interest, conflicting views on priorities, inadequate institutional mechanisms, and a lack of knowledge, technical capacity and funding. However, this

should not stop us from moving towards, accepting and leveraging science and technology.

I recognize that more emphasis should be placed on continuous commitments of the international community for supporting science and technology for Disaster Risk Reduction. In this context, the UN Secretary-General's Advisory Board on Water and Sanitation (UNSGAB) has already established the Hashimoto Action Plan, and the High-Level Experts and Leaders Panel on Water and Disaster (HELP) Action Plan on SDGs has been prepared.

Recently high-level Water Advisory Group for providing guidance to the Water Community of Practice of the Asian Development Bank (ADB) was established. In 2013, ADB's Water Financing Program has increased investments and supported reforms in cities, rural communities, and river basins with an annual investment target of about \$2.21 billion. In particular, it will help the Water CoP to improve disaster related science and technology and expand the nature of their operations from solely knowledge-sharing to influencing the strategic direction of ADB's operations.

Regarding water related disasters, UNESCO's International Hydrological Program (IHP) has proposed a target to reduce water related disasters for the SDGs. Accordingly, by 2030, the international community should reduce the loss of human life and property from water related disasters by 50% through improving the resilience of nations.

I also wish to share HELP's Action Plan on Post-2015 Development Goals (SDGs). Following the discussion by the Open Working Group (OWG)

members, it was agreed that HELP would channel its comments on the SDGs proposal through the Chair to the Secretary-General to ensure that its contribution can be reflected in the synthesis report by the Secretary-General, which has been published in December last year. Furthermore, a proposal was made by the Chair that HELP should propose to the UN to organize an UN General Assembly thematic session on Water and Disasters this year.

Action for Disaster Risk Reduction is an investment for the future and climate change adaptation. In order to proceed for the next phase of the Hyogo Framework for Action, the role of science and technology is of great importance. The key to the success of Disaster Risk Reduction requires an international agreement on the development of Disaster Risk Reduction monitoring and assessment technology, as well as knowledge and technology sharing and transfer between developed and developing countries. Such agendas should be thoroughly discussed on the occasion of the 3rd World Conference on Disaster Risk Reduction in Sendai in March 2015.

Science and technology can accelerate progress in human development in the following ways:

- Science and technology facilitates the creation of new insights and methods, resolution of old challenges, and establishment of higher standards and improved evidence-based policies.
- Social and natural sciences contribute to educating people for evidence-based decision-making and cost-effective implementation.
- However, there are prerequisites to the development of science and technology, which are active leadership, support and coordination, at

both national and international levels.

The shift towards more emphasis on science and technology is not a lone move. The Science and Technology process has been newly introduced to the 7th World Water Forum in order to propose and develop a new framework devoted to introducing applicable technology and providing a place to share the right partner and solutions for water throughout the globe.

Leaders around the world have also been emphasizing the need for science and technology in disaster risk reduction. In her speech on 16 December last year, Her Excellency Madam President Park Geun-hye of the Republic of Korea emphasized the importance of the role of science and technology in all four pillars of disaster risk reduction and further urged local industries, universities and research organizations to work together in developing and implementing technology centered on disaster risk reduction.

Excellencies,

Ladies and Gentlemen,

With this backdrop, I would like to re-iterate the aim of the discussion today: To make proposals for establishing close coordination between sustainable development and disaster risk reduction at all aspects of policy-making, planning and programming of infrastructure and social systems, human resource mobilization, and for creation of structures and mechanisms to implement disaster risk reduction at all levels of society, and for incubating

innovative science and technology that would guide us in all phases of disaster management cycle.

It is my hope that the discussions today will result in a productive, informative and constructive move towards this direction.

Thank you very much.

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