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**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION**  
(of UNESCO)

**INFORMATION DOCUMENT**

**IOC CONTRIBUTION TO THE SENDAI FRAMEWORK  
FOR DISASTER RISK REDUCTION 2015–2030**

Summary

This document has been developed at the request of the IOC Officers to facilitate a discussion on the IOC's contribution to the Sendai Framework for Disaster Risk reduction 2015–2030. The Sendai Framework is one of the major global agreements established in 2014–2015 and the principal outcome of the 3<sup>rd</sup> UN World Conference on Disaster Risk Reduction (14–18 March 2015, Sendai, Japan).

The present document provides an overview of IOC contributions both to the Hyogo Framework of Action from the 2<sup>nd</sup> UN World Conference on Disaster Risk Reduction (18–22 January 2005, Kobe, Japan) and the Sendai Framework.

Two areas of contributions towards the Sendai Framework are suggested: (i) coordination of end-to-end coastal hazards early warning systems; and (ii) development of Member States capacities for mitigation and resilience towards coastal hazards. Initial actions call primarily on the regional Intergovernmental Coordination Groups (ICG) for the four regional Tsunami Early Warning Systems for integrating other coastal hazards in the development of each regional warning system and mobilize the support of existing IOC programmes and partnerships.

## Background

The Third UN United Nations World Conference on Disaster Risk Reduction (UN-WCDRR) was held in Sendai, Japan from 14 to 18 March 2015. The conference adopted the Sendai Framework for Disaster Risk Reduction 2015–2030.

The Sendai Framework is a 15-year non-binding agreement which recognizes that States have the primary role to reduce disaster risk but that responsibility should be shared with other stakeholders including local governments and the private sector. It aims for the following outcome:

*"The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries."*

The Sendai Framework sets four specific priorities for action:

Priority 1: Understanding disaster risk;

Priority 2: Strengthening disaster risk governance to manage disaster risk;

Priority 3: Investing in disaster risk reduction for resilience;

Priority 4: Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation and reconstruction.

To support the assessment of global progress in achieving the outcome and goals of the Sendai Framework, seven global targets have been agreed:

- (1) Substantially reduce global disaster mortality by 2030, aiming to lower average per 100,000 global mortality between 2020–2030 compared to 2005–2015;
- (2) Substantially reduce the number of affected people globally by 2030, aiming to lower the average global figure per 100,000 between 2020–2030 compared to 2005–2015;
- (3) Reduce direct disaster economic loss in relation to global gross domestic product by 2030;
- (4) Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030;
- (5) Substantially increase the number of countries with national and local disaster risk reduction strategies by 2020;
- (6) Substantially enhance international cooperation to developing countries through adequate and sustainable support to complement their national actions for implementation of the framework by 2030;
- (7) Substantially increase the availability of and access to multi-hazard early warning systems and disaster risk information and assessments to the people by 2030.

## **What has IOC contributed to the Hyogo Framework for Action (2<sup>nd</sup> UN-WCDRR, Kobe, Japan, January 2005)**

Prior to the 2<sup>nd</sup> UN-WCDRR conference the Tsunami risk had limited recognition although the International Coordination Group for the Tsunami Warning System in the Pacific had been established since 1965. It was the 26 December 2004 Tsunami in the Indian Ocean that brought the issue on the agenda of the 2<sup>nd</sup> UN-WCDRR. IOC contributed significantly to the 2<sup>nd</sup> UNWCDRR by building up three other regional tsunami warning systems (in the Indian Ocean; the North-Eastern Atlantic, the Mediterranean and Connected Seas; and the Caribbean and Adjacent Regions). IOC provided for each regional system governance and intergovernmental coordination, technology

transfer and training activities in accordance with the mandate given by its Member States at the 23<sup>rd</sup> Assembly (June 2005).

This contributed to all five priorities of the Kobe Framework of Action 2005:

- (i) Ensure that disaster risk reduction is a national and a local priority with a strong institutional basis for implementation;
- (ii) Identify, assess and monitor disaster risks and enhance early warning;
- (iii) Use knowledge, innovation and education to build a culture of safety and resilience at all levels;
- (iv) Reduce the underlying risk factors;
- (v) Strengthen disaster preparedness for effective response at all levels.

Specifically, IOC lead the coordination toward globally harmonized, workable, effective and sustainable tsunami warning systems in close cooperation with partner organizations such as WMO, IHO, ISDR and ESCAP to ensure the robust, efficient and effective performance, and global coverage of interoperable tsunami warning systems and to enhance the network of stakeholders, including operators, scientists, policy-makers and mass-media. The [IOC Oceanographic Data Exchange Policy](#) that was adopted in 2003 was an important facilitator at national and regional levels as well as in the building of an international framework.

### **What has been done to date by IOC in the context of the 3rd UN-WCDRR (Sendai, Japan 2015)**

IOC participated actively in the 3<sup>rd</sup> UN-WCDRR. IOC and UNESCO co-organised with the Japan Meteorological Agency four sessions: Lessons from Mega-Disasters; Risk Identification and Assessment; Communities Addressing Local Risks; Early Warning. IOC contributed an exhibit and a public forum on the theme “Tsunami Early Warning and Public Awareness – making communities around the globe resilient”. Chairs and representatives from the four Intergovernmental Coordination Groups as well as the IOC Executive Secretary participated as panel members in the sessions.

The IOC Assembly at its 28<sup>th</sup> session in 2016 noted the outcomes Sendai Conference and the resulting government commitments to the Sendai Framework for Disaster Risk Reduction 2015–2030 (A/CONF.224/L.2). It was also decided that in the future all Intergovernmental Coordination Groups for Tsunami Early Warning and Mitigation include in their reports to the IOC Governing Bodies a section with their performance against targets of the Sendai Framework for Disaster Risk Reduction 2015–2030.

UNISDR is presently leading a process for the development of a set of possible indicators to measure global progress in the implementation of the present Framework in conjunction with the work of the Inter-Agency and Expert Group On Sustainable Development Goal Indicators. This work is expected to be completed at the end of 2016.

In that context, the Working Group on Tsunamis and Other Hazards related to Sea-Level Warning and Mitigation Systems (IOC TOWS-WG) at its 9<sup>th</sup> meeting (Paris, 25–26 February 2016) recommended its Task Team on Disaster Management and Preparedness to consider development of Key Performance Indicators in line with the Sendai Framework and to facilitate reporting by ICGs to the IOC Governing Bodies in line with decision IOC-XXVIII/8.2.

Multi hazard early warning systems feature throughout the Sendai Framework agreement and are addressed as target #7. Two initiatives are under development and lead by UNISDR and WMO: (i) establishment of an International Network for Multi-Hazard Early Warning Systems (IN-MHEWS) and (ii) convening of an International Conference on Multi-Hazard Early Warning Systems Conference (to be convened in 2017)). IOC and UNESCO IOC participate in the planning process

and is a core network partner to the IN-MHEWS. More information on this effort is available at: <http://www.wmo.int/pages/prog/drr/events/2016-EAG-MHEWS/index.html>

In the context of the governance of the regional tsunami warning systems some consideration was given to the concept of multi-hazard early warning systems. As a pioneer the ICG for the Caribbean and Adjacent Regions (CARIBE-EWS) embraced a multi-hazard approach from its early beginning in 2005 and links have been established with the WMO Caribbean Hurricane Committee and regional storm surge project. In the Pacific (PTWS) links have been established with the Tropical Cyclone Committee. The ICG for the North-Eastern Atlantic, the Mediterranean and Connected Seas (NEAMTWS) is exploring the multi-hazard concept but has not come to a final conclusion yet.

### **What can IOC contribute towards the Sendai Framework**

The IOC Tsunami programme can contribute to the four Sendai Framework priorities based on the developed expertise. IOC has a track record in the area of coordination and capacity development by: (i) supporting the four regional intergovernmental coordination groups and harmonizing the development of Tsunami warning systems; (ii) developing educational and preparedness materials through regional Tsunami Information Centres, in close coordination with field offices and the Education Sector of UNESCO; (iii) targeting capacity development and technical assistance to enhance Member States' own ability to develop preparedness and awareness; (iv) organizing of large scale tsunami exercises; and (v) supporting research and policy development to improve early warning systems.

In the Sendai Framework it is acknowledged that “the scope of disaster risk reduction has been broadened significantly to focus on both natural and man-made hazards and related environmental, technological and biological hazards and risks.”

In light of this and the efforts to increase access and strengthen multi-hazard early warning systems, there is new scope for other IOC programmes to contribute notably to priorities 1 and 2 of the Sendai Framework. IOC contributions to preparedness and awareness are found in the areas of bathymetry (GEBCO), sustained observations (GOOS, JCOMM), climate adaptation/coastal erosion/coastal planning/marine spatial planning (ICAM), data exchange (IODE), marine biological hazards (HAB). There are also elements of ocean science that are relevant for mitigation of coastal hazards and building resilience.

Integration, partnership and synergy will be an asset that can enhance potential contributions further. These are also relevant to other areas of UNESCO work as highlighted in the brochure “Disaster Risk Reduction UNESCO’s contribution to a global challenge” published in 2015 (<http://unesdoc.unesco.org/images/0023/002333/233348e.pdf>).

Finally, the Sendai Framework of Action is also recognized in the 2030 Agenda for Sustainable Development as an international instrument that will contribute to SDGs.

Funding is not the focus for this discussion paper. It suffices to note that there are opportunities from several sources as demonstrated from IOC’s track record. The donor community associated with DRR, climate hazards and adaptation is growing both nationally and internationally (e.g. World Bank and Global Facility for Disaster Reduction and Recovery (GFDRR)). At COP-21 the Climate Risks and Early Warning Systems (CREWS) initiative was also launched (100M \$ fund). See <http://www.cop21.gouv.fr/en/launch-of-crews-climate-risk-early-warning-systems/>

### **References**

Sendai Framework for Disaster Risk Reduction 2015-2030  
(<http://www.unisdr.org/we/coordinate/sendai-framework> )

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