



**INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION**  
(of UNESCO)

**EIGHTH SESSION**  
**OF THE INTERGOVERNMENTAL COORDINATION GROUP FOR THE TSUNAMI EARLY**  
**WARNING AND MITIGATION SYSTEM IN THE NORTH EASTERN ATLANTIC,**  
**THE MEDITERRANEAN AND CONNECTED SEAS (ICG/NEAMTWS-VIII)**

Santander, Spain  
22–24 November 2011

**EXECUTIVE SUMMARY**

In accordance with Rule of Procedure 48.3, ICG/NEAMTWS, as a primary Subsidiary Body of IOC, is required to report to a Governing Body on its sessions.

The IOC Executive Council at its 45th Session will be invited to consider this Executive Summary.

1. The Eighth Session of the Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North-eastern Atlantic, the Mediterranean and connected seas (ICG/NEAMTWS) was hosted by Spain in Santander, Spain, on 22–24 November 2011 at the Institute of Hydraulics of the University of Cantabria. It was attended by 70 participants from 20 Member States, three observers and one cooperating organization, the highest number ever since ICG/NEAMTWS was established. Several emergency response agencies were also represented in the national delegations for the first time. The percentage of women attending ICG/NEAMTWS-VIII (26%) was also the highest since the establishment of the ICG in 2005.
2. **The ICG acknowledged** the steady progress made towards the provision of tsunami watch services for the region. France, Greece, Italy, Portugal and Turkey confirmed that they will be operating national tsunami warning centres in the short-term, of which some already in 2012. In 2012 some of the national tsunami warning centres will also offer interim operational tsunami watch provisions upon request to the other Member States of the NEAM region.
3. **The ICG decided** that, following the success of the communication test exercise of 10 August 2011 involving 31 National Tsunami Warning Focal Points from the region, a full-scale exercise named NEAMWave12 would be conducted in the fourth quarter of 2012 to test the readiness of the system and of the Member States.
4. **The ICG confirmed** the continuation of the Working Groups, as follows: Working Group 1—Hazard Assessment and Modelling; Working Group 2—Seismic and Geophysical Measurements; Working Group 3—Sea Level Data Collection and Exchange, Including

Offshore Tsunami Detection and Instruments; and Working Group 4—Public Awareness, Preparedness and Mitigation.

5. **The ICG extended** the mandate of the Task Team on Communication Test and Tsunami Exercises for the next intersessional period.
6. **The ICG established** a Steering Committee composed by the Officers and the Co-chairs of the Working Groups and the Task Teams.
7. **The ICG terminated** the Task Team on the Regional Tsunami Warning System Architecture, which has fulfilled its mandate and the Task Team on the Multi-hazard Approach to Coastal Inundation and incorporates its mandate into the Steering Committee's mandate.
8. **The ICG expressed deep appreciation** to Prof. Maria Ana Baptista for having served as Vice-chairperson for two terms and **congratulated** Dr François Schindelé for confirmation as Chair, Prof. Ahmet Cevdet Yalciner for re-election as Vice-Chair and Prof. Trevor Guymer for his election as Vice-Chair for the term 2011–2012.
9. **The ICG recognized** the important role of the Tsunami Information Centre (NEAMTIC) formally established at the IOC Secretariat on 1st January 2011 with the financial support of the European Commission's Humanitarian Aid & Civil Protection (ECHO). The NEAMTIC is tasked to produce multilingual awareness and educational materials on tsunami preparedness for the general public, schools, and emergency response agencies.
10. **The ICG reiterated** that there are still gaps in the seismic and sea level networks in North Africa. A more sustained effort by IOC with technical missions and technical assistance, workshops for seismic and sea level communities, and awareness and preparedness raising could likely lead to more engagement with those Member States.
11. An increased number of countries are now participating in NEAMTWS and 71% of them have reported having established official national tsunami warning focal points where tsunami watches will be sent to.
12. The ninth session of ICG/NEAMTWS will take place on 11–14 September 2012 in Southampton, United Kingdom.
13. **The ICG adopted** Recommendation ICG/NEAMTWS-VIII.1 as in Annex II.

ANNEX I

**AGENDA**

**1. OPENING**

**2. ORGANIZATION OF THE SESSION**

2.1 ADOPTION OF THE AGENDA

2.2 DESIGNATION OF THE RAPPORTEUR

2.3 CONDUCT OF THE SESSION, TIMETABLE AND DOCUMENTATION

2.4 ESTABLISHMENT OF SESSIONAL COMMITTEES AND WORKING GROUPS

**3. REPORTS ON ICG/NEAMTWS INTERSESSIONAL ACTIVITIES**

3.1 REPORT BY THE CHAIRPERSON

3.2 REPORT BY IOC SECRETARIAT

3.3 REPORT BY TOWS-WG

3.4 REPORT BY THE WORKING GROUPS AND TASK TEAMS

3.5 REPORTS BY OTHER INTERGOVERNMENTAL ORGANIZATIONS

**4. IMPLEMENTATION**

4.1 ESTABLISHMENT OF RTWCs and NTWCs

4.2 TSUNAMI INFORMATION CENTER (NEAMTIC)

4.3 UPDATE OF NEAMTWS GUIDING DOCUMENTS

**5. ELECTIONS OF THE ICG/NEAMTWS OFFICERS FOR 2012–2013**

**6. PROGRAMME FOR 2012**

6.1 ACTIVITIES SCHEDULED FOR 2012

6.2 ESTABLISHMENT OF INTERSESSIONAL WORKING GROUPS AND TASK TEAMS

**7. DATE AND PLACE FOR ICG/NEAMTWS-IX**

**8. ANY OTHER BUSINESS**

**9. ADOPTION OF DECISIONS AND RECOMMENDATIONS**

**10. CLOSING**

## ANNEX II

### DECISIONS AND RECOMMENDATIONS

#### ICG/NEAMTWS-VIII-1

The Intergovernmental Coordination Group for the Tsunami Early Warning and Mitigation System in the North Eastern Atlantic, the Mediterranean and Connected Seas (ICG/NEAMTWS),

**Having met** for its eighth Session in Santander, Spain, 22—24 November 2011,

**Having reviewed** the progress made in the implementation of the NEAMTWS,

**Taking into account** the recommendations of the fourth meeting of the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG-IV) (Paris, France, 21–22 March 2011), adopted by the IOC Assembly at its twenty-sixth session (Paris, France, 22 June – 6 July 2011),

**Having considered** also IOC Resolution XXVI-7 on Global Coordination of Early Warning and Mitigation Systems for Tsunamis and Other Sea-level-related Hazards,

**Noting** the reports on the intersessional activities of the Working Groups and the Task Teams as well as the updates to the Interim Operational Users Guide and draft Development Plan,

**Concerned** by the recent loss of life, destruction, and extensive social and economic impact of the recent earthquake and tsunami disasters in Japan, New Zealand, Spain, and Turkey,

**Noting** the need for all the Members of the ICG to nominate their Tsunami National Contacts (TNCs) and Tsunami Warning Focal Points (TWFPs) and to provide tsunami forecast points,

**Noting also with concern** the critical need to improve access to relevant real-time data for tsunami watch and warning purposes,

**Noting** furthermore the positive results of the enlarged communication tests conducted in 2011,

**Noting** also the progress made by some Member States in setting up National Tsunami Warning Centres (NTWCs),

**Endorses** the revised architecture for NEAMTWS as recommended by the Task Team on the Regional Tsunami Warning System Architecture, namely that the concept of Regional Tsunami Watch Centres (RTWCs) be replaced by a Tsunami Watch Provider (TWP) / Tsunami Watch Recipient (TWRs) approach, in which TWPs disseminate information without geographical constraint and Tsunami Watch Recipients are able to receive information from one or more TWPs of their choice;

**Re-emphasizes** the urgency of having as soon as possible the NEAMTWS operating in an interim phase, in which candidate TWPs provide the level of service specified in the Interim Operational Users Guide;

**Recognizing** that France, Greece, Italy, Portugal and Turkey continue to offer candidate TWP services for NEAMTWS and **noting** that some of them will be operating in 2012,

**Invites** Member States to subscribe through the IOC to the services of candidate TWPs;

**Underlines** the benefit of linking tsunami warning and preparedness with other types of coastal inundation within a multi-hazard approach;

**Confirms** the continuation of the Working Groups, as follows:

- Working Group 1 - Hazard Assessment and Modelling
- Working Group 2 - Seismic and Geophysical Measurements
- Working Group 3 - Sea Level Data Collection and Exchange, Including Offshore Tsunami Detection and Instruments
- Working Group 4 - Public Awareness, Preparedness and Mitigation

**Requests** Working Groups 3 and 1 to carry out a study on the locations where it would be most useful to have deep ocean measurements;

**Requests** Working Groups 1, 2 and 3 to provide advice on the benefit of using continuous GPS stations and to keep under review developments in satellite and other technologies relevant to tsunami warnings;

**Requests** Working Group 4 to provide guidance on messaging between NTWCs/TWFPs and Emergency Response Managers;

**Extends** the mandate of the Task Team on Communication Test and Tsunami Exercises for the next intersessional period with the Terms of Reference detailed in Annex II.A;

**Establishes** a Steering Committee composed by the Officers and the Co-chairs of the Working Groups and the Task Teams, with the Terms of Reference detailed in Annex II.B;

**Terminates** the Task Team on the Regional Tsunami Warning System Architecture, which has fulfilled its mandate;

**Terminates** the Task Team on the Multi-hazard Approach to Coastal Inundation and incorporates its mandate into the Steering Committee's mandate;

**Adopts** the Development Plan and **entrusts** the Steering Committee to ensure that its contents are consistent with ICG/NEAMTWS-VIII decisions and present it to the ICG at its next session for further review;

**Adopts** the operational and organizational function and requirements for TWPs, detailed in Annex II.C, to provide tsunami watches to the established NTWCs and TWFPs;

**Adopts** the modifications to the Interim Operations Users Guide recommended by the Task Team on the Regional Tsunami Warning System Architecture;

**Decides** to conduct during 2012 a Communication Test Exercise (CTE) and the NEAMWave12 Exercise;

**Recommends** the preparation of CTE press releases by the IOC Secretariat in advance and in coordination with ICG/NEAMTWS Chairperson and Co-chairs of the Task Team on Communication Test and Tsunami Exercises;

**Requests** Member States to:

- urgently nominate or verify both TWFPs and TNCs, if they have not done so,
- provide the tsunami forecast points, if they have not done so,
- ensure active participation in the Communication Test and the NEAMWave12 exercises,
- nominate, via the appropriate channels, experts to the Working Groups and the Task Teams,
- provide timely, free and unrestricted access to all tsunami relevant real-time observational data, for the purposes of NEAMTWS, in line with the IOC Data Exchange Policy,
- define, based on the guidance of Working Group 4, procedures and terminology for messaging between NTWCs/TWFPs and their respective Emergency Response Managers;

**Requests** the Co-chairs of the Working Groups and the Task Teams to prepare, in consultation with the Members of their respective Working Groups or Task Teams, a plan of action for the intersessional period and submit it to the IOC Secretariat, if they have not done so, no later than the end of January 2012;

**Noting** with strong concern the issues concerning the resources available to IOC;

**Encourages** Member States to provide voluntary contributions and/or secondments to maintain the high quality of the support received from the IOC Secretariat;

**Invites** the IOC Executive Secretary to give priority in terms of secretariat support for conducting NEAMWave12;

**Acknowledges** the role of the NEAMTIC web portal as a support for NEAMTWS activities and as a complementary repository of documents relevant for NEAMTWS;

**Welcomes** the collaboration between NEAMTWS and the PPRD South Programme, open to all ICG Members;

**Thanks** EC/JRC for hosting “Tsunami Hazard in the NEAM Region – A Challenge for Science and Civil Protection” Workshop during 15–16 June 2011 in Ispra, Italy;

**Thanks** Spain for hosting the eighth session;

**Accepts** the invitation of the United Kingdom to host the next session of the ICG on 11–14 September 2012 and **decides** to organize ICG/NEAMTWS-IX in Southampton at that time.

### Annex II.A

#### **Terms of Reference of the Task Team on the Communication Test and Tsunami Exercises**

##### **Mandate**

As part of the preparations phase for the NEAMTWS, the Task Team on Communication Test and Tsunami Exercises will:

1. Refine procedures for testing the communication of tsunami alert messages between NTWCs and TWFPs, including speed and availability within NEAMTWS region,
2. Contribute to reviewing and proposing amendments to the relevant parts of the Interim Operational Users Guide in the light of experience with the tests,
3. Prepare and conduct a Communication Test,
4. Plan and prepare NEAMWave12,
5. Report progress to ICG/NEAMTWS-IX.

##### **Modus operandi**

The Task Team will mainly work by correspondence, but hold a first meeting at the beginning of 2012 and a final one, in preparation for the next ICG meeting. Other meetings will be held as needed.

##### **Membership**

- The ICG officers
- Chairs or co-chairs of existing NEAMTWS Task Teams and Working Groups
- Representatives of candidate TWPs
- Experts designated by Member States having interest in participating in the system (NTWCs, TWFPs, TNCs, Civil Protection authorities)
- Representatives of relevant organizations working in the NEAMTWS region
- The Task Team Co-chairs will be appointed by the Chair of the ICG/NEAMTWS in consultation with the Vice-chairs.

### Annex II.B

#### **Terms of Reference of the ICG/NEAMTWS Steering Committee**

##### **Mandate**

The Steering Committee shall coordinate and integrate the work of ICG/NEAMTWS in the intersessional periods, as implemented through the various working groups and task teams, including but not limited to:

- Monitor performance of the NEAMTWS
- Monitor implementation of decisions and recommendations of the ICG and provide strategic advice on the implementation of the NEAMTWS
- Identify relevant funding sources taking account of the resource implications of approved activities

- Facilitate implementation at the level of the ICG of relevant resolutions, decisions and recommendations of the IOC Governing Bodies and the Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG)
- Develop and maintain the NEAMTWS Implementation Plan, Interim Operations Users Guide, and Development Plan
- Examine continuing compliance of TWPs with the adopted operational and organizational function and requirements
- Develop procedures for the accreditation of TWPs based on the operational and organizational functions and requirements
- Continue the tasks initiated by the Task Team on the Multi-hazard Approach to Coastal Inundation, that is, identifying relevant national and international activities and the scope for linkage with NEAMTWS
- Liaise with the Steering Committees or equivalent structures of other ICGs.

### **Modus operandi**

The Steering Committee will mainly work by correspondence, but hold a coordination meeting prior to each ICG session. Other meetings will be held as needed.

### **Membership**

- The ICG/NEAMTWS Officers (Chair and two Vice-Chairs)
- The Co-chairs of ICG/NEAMTWS Working Groups and Task Teams

## Annex II.C

### **Operational and Organizational Functions and Requirements for Tsunami Watch Providers (TWPs)**

#### **Watch Function**

- Reception and interpretation of real-time seismic and sea-level measurements
- Determination of seismic parameters
- Forecasting of tsunami arrival times and level of alert at forecasting point specified by Member States
- Exchange seismic and sea level parameters and information with other TWPs and NTWCs
- Disseminate watch and cancellation messages based on the alert-level decision matrix to NTWCs and the TWFPs
- Monitoring of tsunami propagation and disseminate updated information in priority tsunami amplitude measurements
- Function as a NTWC

#### **Function above and beyond watch time**

- Monthly internal tests of the watch system
- Actively participate in communication and tsunami exercises
- Contribute to training courses in coordination with IOC
- Participate actively in, and report to, the ICG and working groups and task teams

#### **Requirements**

- Seismic as well as tsunami/oceanographic expertise
- Direct access to a local database of tsunami and large earthquakes

- Real-time transmission systems for reception of data
- Real-time alert reception and transmission systems including GTS, internet, fax
- Operational manual describing procedures and documentation for TWRs
- Backup and redundant system
- 24/7 watch staff
- Tsunami modelling capacity for travel time computation