Intergovernmental Oceanographic Commission
Technical Series

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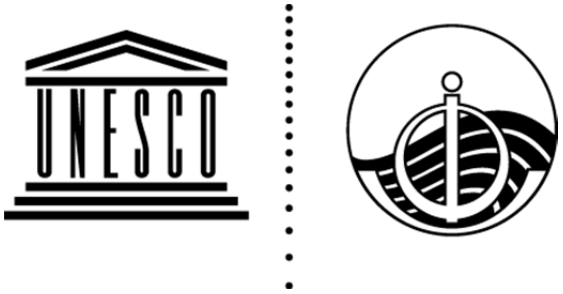

EXERCISE INDIAN OCEAN WAVE 14
An Indian Ocean-wide Tsunami Warning and Communications Exercise

9-10 September 2014

Volume 1 Exercise Manual

UNESCO

Intergovernmental Oceanographic Commission
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IOC Technical Series, 113 Vol.1
Paris, August 2014
English only

For bibliographic purposes, this document should be cited as follows:

Intergovernmental Oceanographic Commission.2014. *Exercise Indian Ocean Wave 2014: An Indian Ocean-wide Tsunami Warning and Communication Exercise*, 9-10 September 2014. Volume 1: Exercise Manual and Supplement. IOC Technical Series No. 113. UNESCO.

The bulletins issued by the Regional Tsunami Service Providers are published in a supplement to this publication.

Prepared by the IOWave14 Task Team for the Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System.

(IOC/2014/TS/113Vol.1)

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1. BACKGROUND

The devastating impact of the 26 December 2004 Indonesia earthquake and Indian Ocean Tsunami tragically demonstrated what can happen without an effective tsunami warning system. Tsunamis may not occur often, but when they do they can affect coasts, sometimes across an entire ocean. The 2004 tsunami caused damage and casualties across the entire Indian Ocean basin – even as far away as South Africa. Following this event, UNESCO's Intergovernmental Oceanographic Commission (IOC) was requested to establish an Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWS), to promote the exchange of seismic and sea level data for rapid tsunami detection and analysis, to provide warnings for such events, and to coordinate mitigation efforts among its Member States. An efficient and effective end to end warning system was needed, ready to react 24 hours a day to any potential tsunami threat, alert those at risk along coasts, and motivate them take immediate and appropriate steps to save their lives.

Under the guidance of the ICG/IOTWS, Member States collaborated in the development of the IOTWS, which was initially tested in the Indian Ocean-wide tsunami warning and response exercise IOWave09 (October 2009), and which then came into operation immediately following the subsequent IOWave11 (October 2011) exercise. Since then, the three Regional Tsunami Service Providers (RTSPs) of Australia, India and Indonesia have provided real-time tsunami products to the National Tsunami Warning Centres (NTWCs) of the IOTWS Member States. A performance assessment of the RTSPs conducted during the 9th Session of the ICG/IOTWS in Jakarta, Indonesia (27-30 November 2012) found the RTSP services to be satisfactory. The 9th Session of the ICG/IOTWS established a Task Team to organise the next Indian Ocean-wide tsunami exercise (IOWave14) in the second half of 2014.

Indian Ocean-wide tsunami exercises are effective tools for evaluating the readiness of the IOTWS and for identifying changes that can improve its effectiveness. There have been few major Indian Ocean tsunamis in the last few years, but the IOTWS must be prepared for the next major event.

1.1 Previous IOWave Exercises

18 Indian Ocean Member States, out of an active 24, participated in IOWave09, and 22 participated in IOWave11. Four countries executed IOWave11 down to the community level.

1.2 Exercise Dates

Exercise IOWAVE14 contains, for the first time in Indian Ocean exercises, two earthquake scenarios on successive days, 9 and 10 September, with each scenario run in real time. The scenario details are:

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Scenario 1 – Java		**Scenario 2 – Makran Trench**	
Date:	Tuesday 9 September 2014	**Date:**	Wednesday 10 September 2014
Time:	0000 UTC	**Time:**	0600 UTC
Magnitude:	9.1 Mw	**Magnitude:**	9.0 Mw
Depth:	10 km	**Depth:**	10 km
Latitude:	10.4 S	**Latitude:**	24.8 N
Longitude:	112.8 E	**Longitude:**	62.2 E
Location:	South of Java, Indonesia	**Location:**	Off Coast of Pakistan

1.3 Exercise Involvement

The following organisations should be involved:

- Regional Tsunami Service Providers (RTSPs)
- National Tsunami Warning Centres (NTWCs)
- National Disaster Management Organisations (NDMOs)
- Media Organisations
- Local communities, to the extent decided by each Member State

1.4 Further Information

Further information will be posted to the website www.ioc-tsunami.org/iowave14 as it becomes available.

2. CONCEPT OF EXERCISE IOWave14

2.1 Purpose

The purpose of exercise IOWave14 is to evaluate and improve the effectiveness of the IOTWS, through its operational Regional Tsunami Service Providers, National Tsunami Warning Centres and National Disaster Management Organisations, in responding to a potentially destructive tsunami. The exercise will provide an opportunity for Indian Ocean countries to test their operational lines of communications, review their tsunami warning and emergency response Standard Operating Procedures, and to promote emergency preparedness. Regular exercises are important for maintaining staff readiness for real events. This is especially true for tsunamis, which are infrequent but require rapid response when they occur. The pre-exercise planning and post-exercise evaluation process is as important as the actual exercise, because it brings together all stakeholders to closely coordinate their actions. Every Indian Ocean country is encouraged to participate.

2.2 Objectives

The following are the specific objectives for IOWave14:

1. Validate the dissemination by RTSPs of Tsunami Bulletin Notification Messages to NTWCs via the designated Tsunami Watch Focal Points (TWFPs) of Indian Ocean countries.
2. Validate the reception by NTWCs of Tsunami Bulletin Notification Messages and access by NTWCs to the tsunami bulletins and other products on the RTSP websites.
3. Validate the reporting by NTWCs to the RTSPs of their National Tsunami Warning Status.
4. Validate the Standard Operating Procedures within countries for disseminating tsunami warnings and other threat information to their relevant disaster response agencies.
5. Validate the organisational decision-making processes within countries for the issuing of public warnings and ordering evacuations.
6. Identify the methods used to notify and instruct the public.
7. Assess the elapsed time for public notification and instruction.

Within the above framework, each country should develop its own specific objectives for the exercise.

2.3 Types of Exercise

Exercises stimulate the development, training, testing and evaluation of Disaster Plans and

Standard Operating Procedures (SOP). Exercise participants may use their own past multi-hazard drills (e.g. flood, typhoon, earthquake, etc.) as a framework to conduct Exercise IOWave14.

Exercise IOWave14 should be conducted to a level of readiness that involves communication and decision making at Government level, without disrupting or alarming the general public. Individual countries may at their discretion elect to extend the exercise down to the level of public notification and community evacuation.

Exercises can be conducted at various scales of magnitude and sophistication. The following list provides an overview of the different types of exercises that can be conducted:

1. **An Orientation Exercise** lays the groundwork for a comprehensive exercise programme. It is a planned event, developed to bring together individuals and officials with a role or interest in multi-hazard response planning, problem solving, development of standard operational procedures (SOPs), and resource integration and coordination. An Orientation Exercise will have a specific goal and written objectives and result in an agreed upon Plan of Action.
2. **A Drill** is a planned activity that tests, develops, and/or maintains skills in a single or limited emergency response procedure. Drills generally involve operational response of single departments or agencies, organizations, or facilities, but may be a subset of full-scale exercises. Drills can involve internal notifications and/or field activities. Limited evacuation may or may not be conducted, such as within a school, pilot hotel, or village.
3. **A Tabletop Exercise** is a planned activity in which local officials, key staff, and organizations with disaster management responsibilities are presented with simulated emergency situations. It is usually informal, in a conference room environment, and is designed to elicit constructive discussion from the participants to assess plans, policies, and procedures. Individuals are encouraged to discuss decisions based on their organization's Standard Operating Procedures (SOPs) with emphasis on slow-paced problem solving, rather than rapid, real time decision-making. A Tabletop Exercise should have specific goals, objectives, and a scenario narrative. See Appendix IV for a more detailed description of Tabletop Exercises.
4. **A Functional Exercise** is a planned activity designed to test and evaluate individual functions, multiple activities within a function, or interdependent groups of functions among various agencies. It is based on a simulation of a realistic emergency situation. The Functional Exercise gives the decision-makers a fully simulated experience of being in a major disaster event. It should take place at the appropriate coordination locations (e.g. warning centres and emergency operations centres) and activate all the appropriate members designated by the plan. Organisations should test their SOPs using real time simulation tsunami bulletins. Public evacuations may or may not be included. A Functional Exercise should have specific goals, objectives, and a scenario narrative.

5. **A Full-scale Exercise** is the culmination of a progressive exercise programme that has grown with the capacity of the community to conduct exercises. A Full-Scale exercise is a planned activity in a "challenging" environment that encompasses a majority of the tsunami warning and emergency management functions, and involves multiple layers of government (national, provincial, local). This type of exercise involves the actual mobilization and deployment of the appropriate personnel and resources needed to demonstrate operational capabilities. DMOs (Disaster Management Office) and other local command centres are required to be activated. It tests all aspects of emergency response, and should demonstrate inter-agency cooperation. A Full-scale exercise is the largest, costliest and most complex exercise type. It may or may not include public evacuations.

For Exercise IOWave14, individual Member States should decide what type of exercise they are going to undertake, and whether they will participate in one or both scenarios. Participation in both scenarios, at least at the NTWC and NDMO level, has the advantage of allowing SOP issues identified on the first day to be corrected and exercised again on the second day, and testing different elements of the SOPs because the tsunami arrival times will vary for each scenario.

It recommended that a tabletop exercise should be conducted as a minimum. Many Member States will choose to conduct a functional exercise and some may decide to undertake a full-scale exercise. Each of these requires an increasing level of planning and preparation, particularly if any form of community evacuation is planned, and Member States are advised to conduct their exercises only to the level for which they are fully prepared. Due care should be taken not to inadvertently alarm the public.

3. SPECIFICS OF CONDUCTING EXERCISE IOWAVE14

3.1 Overview

The exercise will comprise two scenarios on successive days, one in the eastern Indian Ocean and the other in the north-western Indian Ocean. The first scenario simulates a magnitude 9.1 earthquake south of Java, Indonesia and the second scenario simulates a magnitude 9.0 earthquake in the Makran Trench south of Iran and Pakistan.

Both scenarios will generate simulated tsunami waves travelling across the whole Indian Ocean basin. The South of Java scenario will commence at 0000 hours UTC on 9th September and the Makran Trench scenario will commence at 0600 hours UTC on 10th September.

Member States are invited to participate in either or both events, which will run in real time. The scenario start times have been chosen to be more convenient for the "near field" (i.e. local) countries for each scenario. RTSPs India, Indonesia and Australia will make exercise bulletins and detailed tsunami threat advice available on their password-protected websites during the events, and will send Notification Messages to NTWCs as the data is updated during the events.

The timelines for issuance of RTSP bulletins for both events are given in Tables 1a and 1b below.

Participant countries may follow the exercise timelines precisely or elect to exercise on their own timeline in order to achieve their particular objectives. For example, a particular country's exercise controller may choose to inject the bulletins into the exercise at times of their own choosing, or alternatively put them in envelopes with the time they must be opened written on each, with each key participant agency having their own set of envelopes.

Coverage: All Member States are encouraged to participate. Estimated tsunami arrival times and wave heights to all threatened IOTWS countries are included in the bulletins.

Messages: The RTSPs will issue an initial Exercise Announcement Message to start the exercise on each day. Thereafter, NTWCs will receive Notification Messages from the RTSPs according to the timelines shown in Table 1a and 1b, which will direct NTWCs to the RTSP password-protected websites to view the detailed exercise bulletins and detailed threat information. Examples of the RTSP Notification Messages are given in Appendix 1.

RTSP bulletins for both scenarios are provided in Annex 1 and Annex 2 as a supplement to this manual for reference purposes and to facilitate the conduct of tabletop exercises on timelines other than real time. However, countries are encouraged to conduct the exercise

in real time and to make use of the RTSP websites to access the bulletins and other threat information available there. The annexes are available on the exercise website and can be downloaded from: www.ioc-unesco.org/iowave14.

3.2 Exercise Specifics

Scenario 1, Java: Starting at 0000 UTC on Tuesday 9 September 2014:
Magnitude 9.1 earthquake South of Java, Indonesia. The simulated tsunami will take approximately 10 hours to travel from its source to the coasts of Iran and Pakistan, and 12 hours to travel to the southern coast of South Africa.

Scenario 2, Makran Trench: Starting at 0600 UTC on Wednesday 10 September 2014:
Magnitude 9.0 earthquake in the Makran Trench south of Iran and Pakistan. The simulated tsunami will take approximately 11 hours to travel from its source to the western coast of Australia.

Table 1a: Bulletin Timelines for Scenario 1, Java

Magnitude 9.1 Earthquake, South of Java, 0000UTC Tuesday 9 September

RTSP AUSTRALIA			RTSP INDONESIA			RTSP INDIA		
Time (UTC)	**Bulletin Number**	**Bulletin Type**	**Time (UTC)**	**Bulletin Number**	**Bulletin Type**	**Time (UTC)**	**Bulletin Number**	**Bulletin Type**
0000		*Announcement Message*	*0000*		*Announcement Message*	*0000*		*Announcement Message*
0008	1	Earthquake Bulletin (M8.1)	0006	1	Earthquake Bulletin (M8.7)	0005	1	Earthquake Bulletin (M8.2)
0010	2	Potential Threat (M8.1)	0012	2	Potential Threat (M8.7)	0010	2	Potential Threat (M8.5)
0035	3	Confirmed Threat (M8.8)	0040	3	Confirmed Threat (M8.8)	0045	3	Confirmed Threat (M9.1)
0050	4	Confirmed Threat (M9.1)	0120	4	Confirmed Threat (M8.8)	0100	4	Confirmed Threat (M9.1)
0150	5	Confirmed Threat (M9.1)	0220	5	Confirmed Threat (M8.8)	0200	5	Confirmed Threat (M9.1)
0250	6	Confirmed Threat (M9.1)	0420	6	Confirmed Threat (M8.8)	0300	6	Confirmed Threat (M9.1)
0350	7	Confirmed Threat (M9.1)	0520	7	Confirmed Threat (M8.8)	0400	7	Confirmed Threat (M9.1)
0450	8	Confirmed Threat (M9.1)	0620	8	Confirmed Threat (M8.8)	0500	8	Confirmed Threat (M9.1)
0550	9	Confirmed Threat (M9.1)	1020	9	Confirmed Threat (M8.8)	0600	9	Confirmed Threat (M9.1)
0650	10	Confirmed Threat (M9.1)	1150	10	Confirmed Threat (M8.8)	0700	10	Confirmed Threat (M9.1)
0750	11	Confirmed Threat (M9.1)	1400	11	Final Bulletin	0800	11	Confirmed Threat (M9.1)
0850	12	Confirmed Threat (M9.1)				0900	12	Confirmed Threat (M9.1)
0950	13	Confirmed Threat (M9.1)				1000	13	Confirmed Threat (M9.1)
1050	14	Confirmed Threat (M9.1)				1100	14	Confirmed Threat (M9.1)
1150	15	Final Bulletin				1200	15	Final Bulletin

Table 1b: Bulletin Timelines for Scenario 2, Makran Trench

Magnitude 9.0 Earthquake, Off Coast of Pakistan, 0600UTC Wednesday 10 September

RTSP AUSTRALIA			RTSP INDONESIA			RTSP INDIA		
Time (UTC)	**Bulletin Number**	**Bulletin Type**	**Time (UTC)**	**Bulletin Number**	**Bulletin Type**	**Time (UTC)**	**Bulletin Number**	**Bulletin Type**
0600		*Announcement Message*	*0600*		*Announcement Message*	*0600*		*Announcement Message*
0608	1	Earthquake Bulletin (M8.3)	0605	1	Earthquake Bulletin (M8.8)	0605	1	Earthquake Bulletin (M8.2)
0610	2	Potential Threat (M8.3)	0610	2	Potential Threat (M8.8)	0610	2	Potential Threat (M8.5)
0615	3	Confirmed Threat (M8.3)	0640	3	Confirmed Threat (M8.9)	0645	3	Confirmed Threat (M9.0)
0650	4	Confirmed Threat (M9.0)	0715	4	Confirmed Threat (M9.0)	0700	4	Confirmed Threat (M9.0)
0750	5	Confirmed Threat (M9.0)	0815	5	Confirmed Threat (M9.0)	0800	5	Confirmed Threat (M9.0)
0850	6	Confirmed Threat (M9.0)	0915	6	Confirmed Threat (M9.0)	0900	6	Confirmed Threat (M9.0)
0950	7	Confirmed Threat (M9.0)	1115	7	Confirmed Threat (M9.0)	1000	7	Confirmed Threat (M9.0)
1050	8	Confirmed Threat (M9.0)	1315	8	Confirmed Threat (M9.0)	1100	8	Confirmed Threat (M9.0)
1150	9	Confirmed Threat (M9.0)	1615	9	Confirmed Threat (M9.0)	1200	9	Confirmed Threat (M9.0)
1250	10	Confirmed Threat (M9.0)	1815	10	Confirmed Threat (M9.0)	1300	10	Confirmed Threat (M9.0)
1350	11	Confirmed Threat (M9.0)	2000	11	Final Bulletin	1400	11	Confirmed Threat (M9.0)
1450	12	Confirmed Threat (M9.0)				1500	12	Confirmed Threat (M9.0)
1550	13	Confirmed Threat (M9.0)				1600	13	Confirmed Threat (M9.0)
1650	14	Confirmed Threat (M9.0)				1700	14	Confirmed Threat (M9.0)
1750	15	Final Bulletin				1800	15	Final Bulletin

3.3 Logging and Status Reporting Procedure

During the exercise NTWCs are requested to log the times of reception of RTSP Bulletin Notification Messages and of accessing RTSP websites, and to report their National Warning Status via the RTSP websites. The logging can be done either via the online evaluation form or via log forms – see Appendix III Post Exercise Evaluation for details.

Detailed logging and reporting procedure:

1. Following the reception of each RTSP Bulletin Notification Message, NTWCs should:

    - Log the time of reception of the RTSP Notification Message, and how it was received (GTS, email, fax, SMS).

    - Use a web browser to access the password-protected website for the RTSP given in the Notification Message, and log the success or otherwise of this access.

2. Following the times at which simulated National Warnings would be issued by the NTWC or NDMO in each country, the issuing agency should:

    - Report the National Tsunami Warning Status for their country via the web-based “NTWC Warning Status” form available on each RTSP website.

    - Log the time of the report and which RTSP's website was used for the report. NOTE: **Only one status report is required after issuing each National Warning**, using the form on **any** of the RTSP websites.

3.4 Website Passwords

The user names and passwords for accessing each of the RTSP password-protected websites are known by NTWCs and are not included here (the websites are not intended to be viewed by the general public). If any country is unsure of the passwords, please consult the RTSP User Manuals, or the Technical Manual for the last IOTWS Communications Test in June 2014, or contact the IOTWS Secretariat at: iotws@unesco.org.

3.5 Actions in Case of a Real Event

All documentation and correspondence relating to this exercise is to be clearly identified as **IOWave14 Exercise** and **For Exercise Purposes Only**. In the case of a real event occurring during the exercise, RTSPs and NTWCs will issue their normal message products for the event. Such messages will be given full priority and a decision will be made by each centre whether to continue or cease their participation in the exercise.

3.6 Resourcing

Although participating countries will have advance notice of the exercise and may elect to stand up a special dedicated shift to allow normal core business to continue uninterrupted, it is suggested that realistic resource levels be deployed in order to reflect some of the issues that are likely to be faced in a real event.

3.7 Media Arrangements

The UNESCO External Relations and Information department (ERI) will issue an international Media Advisory to alert the press of the IOWave14 exercise about one week

before the exercise. Appendix II contains a sample press release that can be customized by Member States.

ICG/IOTWS Member States should consider issuing one or two exercise press releases to their respective country's media in conjunction with UNESCO releases. Member States press releases will give adequate alert to their country's population and give their local media time to conduct interviews and documentaries with participating exercise organizations in advance of the exercise.

A second Member State press release, one week before the exercise, would provide a more detailed description of exercise activities to take place within that country.

4. POST EVALUATION

4.1 Evaluation and Debriefing

Following the exercies, participating countries are requested to complete the online Exercise Evaluation Survey. This feedback will greatly assist in the evaluation of the IOWave14 Exercise and assist in the development of subsequent exercises.

The goal of exercise evaluation is to validate strengths and to identify opportunities for improvement within the participating organisations. This is to be accomplished by collating supporting data; analysing the data to compare effectiveness against requirements; and determining what changes need to be made by participating organizations as well as the IOTWS as a collective to support effective tsunami warning and decision making.

Evaluation of this exercise will focus on the adequacy of plans, policies, procedures, assessment capabilities, communication, resources and inter-agency/inter-jurisdictional relationships that support effective tsunami warning and decision-making at all levels of government. Participants that choose to include additional objectives, for example by exercising public warning and/or response plans, can expand the evaluation accordingly. The evaluation of such additional objectives will be for the use of the particular participant only and is not required for the integrated IOTWS report.

The evaluation aims to inform and facilitate individual participant country evaluations as well as the integrated IOWave14 Report. The Exercise Evaluation Survey questionnaire addressing the respective focus areas and objectives is included in Appendix III for information and guidance. Please note that all participant countries are requested to complete the Exercise Evaluation Survey **online** by **30th September 2014**. The URL of the Exercise Evaluation Survey website will be provided to the IOWave 14 National Contacts before the exercise.

A formal exercise debrief inclusive of all participants in the respective countries will facilitate a collective and official evaluation. The method applied to collect the data required for consideration in the debrief is to be decided upon by the individual participant countries. It is recommended that independent and objective exercise evaluators/observers be appointed at all exercise points to support the collection of such data. Evaluators/observers are to be guided by the exercise objectives and the information required in the online Exercise Evaluation Survey.

In completing the online Exercise Evaluation Survey, participating organizations must have the ability to note areas for improvement and actions that they plan to take without concern that the information carries political or operational risks. Thus, all official Exercise Evaluation Survey responses are designated as "For Official Use Only" and will be restricted for use by the exercise Task Team for the purpose of compilation of the integrated IOWave14 Report. Some countries may however decide to share their individual evaluation outcomes with the public. While the IOWave14 Report will be submitted to the IOC, the decision to share the information contained in it with the public will be made by the ICG/IOTWS.

APPENDIX I. EXAMPLES OF RTSP BULLETIN NOTIFICATION MESSAGES

1. Full Notification Message – GTS, Fax, Email

The following is an example of an RTSP Australia Notification Message that will be sent via GTS, fax and email. Notification Messages from RTSP Indonesia and RTSP India will be similar in format.

```
WEIO24 AMMC 110605
########################################################################
#
#  TEST TEST TEST – EXERCISE IOWAVE14 - NOT A REAL TSUNAMI EVENT
#
########################################################################
------------------------------------------------------------------------
TEST TSUNAMI BULLETIN NOTIFICATION MESSAGE NUMBER 1
REGIONAL TSUNAMI SERVICE PROVIDER - RTSP AUSTRALIA [JATWC]
ISSUED AT 0008 UTC TUESDAY 9 SEPTEMBER 2014
------------------------------------------------------------------------
TO:   INDIAN OCEAN NATIONAL TSUNAMI WARNING CENTRES [NTWCs]
FROM: RTSP AUSTRALIA

NOTIFICATION:
RTSP AUSTRALIA HAS JUST ISSUED TSUNAMI BULLETIN NUMBER 1 FOR THE
INDIAN OCEAN, BASED ON THE FOLLOWING EARTHQUAKE EVENT:

MAGNITUDE:   8.1 MWP
DEPTH:       10KM
DATE:        09 SEP 2014
ORIGIN TIME: 0000 UTC
LATITUDE:    10.40S
LONGITUDE:   112.80E
LOCATION:    SOUTH OF JAVA, INDONESIA

TO VIEW THE BULLETIN GO TO THE RTSP AUSTRALIA WEBSITE AT:

http://reg.bom.gov.au/tsunami/rtsp/index.shtml

NOTE: THIS IS A RESTRICTED-ACCESS WEBSITE CONTAINING TECHNICAL DATA
FOR NATIONAL TSUNAMI WARNING CENTRES ONLY. IT IS NOT FOR GENERAL
PUBLIC ACCESS.

GENERAL PUBLIC INFORMATION FOR THIS EVENT IS AVAILABLE FROM:

JOINT AUSTRALIAN TSUNAMI WARNING CENTRE [JATWC]
BUREAU OF METEOROLOGY
MELBOURNE, AUSTRALIA
http://www.bom.gov.au/tsunami

END OF NOTIFICATION MESSAGE
------------------------------------------------------------------------
########################################################################
#
#   TEST TEST TEST – EXERCISE IOWAVE14 - NOT A REAL TSUNAMI EVENT
#
########################################################################
```

Notes:

1. The words highlighted in red have been added to the normal notification message format for the purposes of the IOWave14 Exercise.

2. For GTS dissemination of the notification messages, the GTS headers used by each RTSP will be of the form:

    a. RTSP India: **WEIO20 DEMS 090008**
    b. RTSP Indonesia: **WEIO22 WIIX 090008**
    c. RTSP Australia: **WEIO24 AMMC 090008**

2. Abbreviated Notification Message - SMS

The following is an example of an abbreviated RTSP Australia Notification Message that will be sent via mobile-phone SMS. SMS messages will be kept to a maximum length of 160 characters to enable them to be transmitted in a single SMS text message.

```
TEST RTSP AUSTRALIA BULLETIN 1 ISSUED See http://reg.bom.gov.au/tsunami/rtsp
EQ 00:00 09/09/2014 UTC MAG 8.1 10.40S 112.80E SOUTH OF JAVA, INDONESIA
```

SMS Notification Messages from RTSP Indonesia and RTSP India will be similar in format.

APPENDIX II. SAMPLE PRESS RELEASE

TEMPLATE FOR NEWS RELEASE - USE AGENCY LETTERHEAD

Contact: *(insert name)* **FOR IMMEDIATE RELEASE** *(insert phone number) (insert date) (insert email address)*

INDIAN OCEAN-WIDE TSUNAMI EXERCISE SET FOR SEPTEMBER

(insert country name) will join over 20 other countries around the Indian Ocean Rim as a participant in mock tsunami scenarios on 9th and 10th September 2014. The purpose of this Indian Ocean-wide exercise is to increase preparedness, evaluate response capabilities in each country and improve coordination throughout the region.

"The 2004 Indian Ocean tsunami and subsequent events in the Indian and Pacific Oceans have brought to the attention of the world the urgent need to be more prepared for such events," said *(insert name of appropriate official)*. "This important exercise will test the current procedures of the Indian Ocean Tsunami Warning and Mitigation System and help identify operational strengths and weaknesses in each country."

The exercise, titled Exercise Indian Ocean Wave 2014 (IOWave14), will simulate Indian Ocean countries being put into a Tsunami Warning situation requiring government decision-making. It builds on previous Indian Ocean exercise conducted in 2009 (IOWave09) and 2011 (IOWave11) *and on prior national tsunami warning drills carried out on (dates) (delete if not applicable)*.

The exercise can be divided into two stages. In the first stage, a destructive tsunami crossing the Indian Ocean from an earthquake source near *Java and/or the Makran Trench (select scenario(s) being exercised)* will be simulated by international notifications from the Regional Tsunami Service Providers (RTSPs) of Australia, India and Indonesia to designated Tsunami Warning Focal Points in each country.

In the second stage, conducted simultaneously in response to receipt of the RTSP notification messages and any national tsunami detection, analysis, and forecasting capabilities, government officials will simulate decision-making and alerting procedures down to the last step before public notification. *Notification of emergency management and response authorities for a single coastal community will be used as a measure of the end-to-end process for purposes of this exercise. Due care will be taken to ensure the public is not inadvertently alarmed. (delete if not applicable)*

Insert paragraph tailored for specific country. Could identify participating agencies and specific plans. Could describe current early warning programme, past evacuation drills (if any), ongoing mitigation and public education programmes, etc. Could describe tsunami threat, history of tsunami hazards, if any.

Should any actual tsunami threat occur during the time period of the exercise, 9th and 10th September 2014, the excercise will be terminated.

Following the exercise, a review and evaluation will be conducted by all participating countries and agencies.

"We see this exercise as an essential element in the routine maintenance of the Indian Ocean Tsunami Warning and Mitigation System," said *(insert name of appropriate official)*.

“Our goal is to ensure the timely and effective notification of tsunamis, to educate communities at risk about safety preparedness, and to improve our overall coordination. We will evaluate what works well, where improvements are needed, make necessary changes, and continue to practice.”

The exercise is in the Work Plan of the Intergovernmental Coordination Group of the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWS). ICG/IOTWS is a body of UNESCO’s Intergovernmental Oceanographic Commission.

IOWave14 Information: http://www.ioc-unesco.org/iowave14.

APPENDIX III. POST EXERCISE EVALUATION

EXERCISE OBJECTIVES

There are seven core objectives of the exercise:

1. Validate the dissemination by RTSPs of Tsunami Bulletin Notification Messages to NTWCs via the designated Tsunami Watch Focal Points (TWFPs) of Indian Ocean countries.
2. Validate the reception by NTWCs of Tsunami Bulletin Notification Messages and access by NTWCs to the tsunami bulletins and other products on the RTSP websites.
3. Validate the reporting by NTWCs to the RTSPs of their National Tsunami Warning Status.
4. Validate the Standard Operating Procedures within countries for disseminating tsunami warnings and other threat information to their relevant disaster response agencies.
5. Validate the organisational decision-making processes within countries for the issuing of public warnings and ordering evacuations.
6. Identify the methods used to notify and instruct the public.
7. Assess the elapsed time for public notification and instruction.

EXERCISE SUCCESS CRITERIA

The exercise will be a success when:

- The core objectives above were exercised, performance evaluated and reported upon.
- The communication between the National Tsunami Warning Centres, Tsunami Warning Focal Points and information dissemination points within countries at the onset of a tsunami event are tested and understood.
- Areas where aspects of warnings for a tsunami event can be improved are identified, both for Regional Tsunami Service Providers and individual countries.
- It supports the establishment or review of planning for response to tsunamis at national and regional/local levels.

EVALUATING PARTICIPANT PERFORMANCE

Evaluation is based on:

(a) Reporting on each of the core objectives described above.

(b) Specific measurable sub-objectives for some of the core objectives.

ONLINE EVALUATION SURVEY

THE POST-EXERCISE EVALUATION WILL BE CONDUCTED AS AN ONLINE SURVEY. THE URL FOR THE ONLINE SURVEY WILL BE EMAILED TO THE IOWAVE14 NATIONAL CONTACTS.

The online survey will take approximately 60-90 minutes to complete. It is possible to save a partially completed survey for completion at a later time.

The online survey has been structured to evaluate the seven exercise objectives. The questions associated with Objectives 1, 2, and 3 are designed specifically for National Tsunami Warning Centres. The questions associated with Objective 4, 5, 6 and 7 are designed for Disaster Management Organisations and/or National Tsunami Warning Centres depending on how tsunami response roles are structured within a particular country. The general questions at the end of the survey are designed to capture the country's overall assessment of the exercise.

Following the exercise, please complete the online evaluation by **30 September 2014**. Any questions can be directed to the ICG/IOTWS Secretariat (email: iotws@unesco.org).

IOWave14 – POST EXERCISE EVALUATION

THE FOLLOWING QUESTIONS WILL BE ASKED IN THE ONLINE SURVEY. THEY ARE PROVIDED BELOW FOR INFORMATION ONLY.

Country: _____

Details of person completing survey

Name:_____

Position:_____

Agency:_____

Email:_____

Phone:_____

Scenario(s) exercised

___ South of Java (9 September 2014) *ONLY*

___ Makran Trench (10 September 2014) *ONLY*

___ *BOTH* South of Java and Makran Trench

I would like to complete the survey questions for

___ National Tsunami Warning Centres (NTWCs)

→*Go to Objective 1*

___ Disaster Management Organisations (DMOs)

→*Go to Objective 4*

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 1: ***Validate the dissemination by RTSPs of Tsunami Bulletin Notification Messages to NTWCs via the designated Tsunami Watch Focal Points (TWFPs) of Indian Ocean countries.***

*To be completed by **NTWCs** only*

Name of NTWC: _____

1(a) Judged against the nature of this event, information issued by the Regional Tsunami Service Provider(s) was timely:

RTSP Australia **Yes / No**

RTSP India **Yes / No**

RTSP Indonesia **Yes / No**

Comments: _____

1(b) The method(s) used by the Regional Tsunami Service Providers to send bulletins to us were appropriate.

RTSP Australia **Yes / No**

RTSP India **Yes / No**

RTSP Indonesia **Yes / No**

Comments: _____

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 2: ***Validate the reception by NTWCs of Tsunami Bulletin Notification Messages and access by NTWCs to the tsunami bulletins and other products on the RTSP websites.***

*To be completed by **NTWCs** only*

Exercise Scenario 1: **Java** (0000UTC, 9 September 2014)

2(a) Complete the following table with the RTSP Australia notification message receipt times.

RTSP Australia **Message (UTC Time)**	**GTS** **Time Received (UTC)**	**Fax** **Time Received (UTC)**	**Email** **Time Received (UTC)**	**SMS** **Time Received (UTC)**
00:00 Announcement Message				
00:08 Notification Message 1				
00:10 Notification Message 2				
00:35 Notification Message 3				
00:50 Notification Message 4				
01:50 Notification Message 5				
02:50 Notification Message 6				
03:50 Notification Message 7				
04:50 Notification Message 8				
05:50 Notification Message 9				
06:50 Notification Message 10				
07:50 Notification Message 11				
08:50 Notification Message 12				
09:50 Notification Message 13				
10:50 Notification Message 14				
11:50 Notification Message 15				

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 2 (cont.): ***Validate the reception by NTWCs of Tsunami Bulletin Notification Messages and access by NTWCs to the tsunami bulletins and other products on the RTSP websites.***

Exercise Scenario 1: **Java** (0000UTC, 9 September 2014)

2(b) Complete the following table with the RTSP Indonesia notification message receipt times.

RTSP Indonesia **Message** **(UTC Time)**	**GTS** **Time Received** **(UTC)**	**Fax** **Time Received** **(UTC)**	**Email** **Time Received** **(UTC)**	**SMS** **Time Received** **(UTC)**
00:00 Announcement Message				
00:06 Notification Message 1				
00:12 Notification Message 2				
00:40 Notification Message 3				
01:20 Notification Message 4				
02:20 Notification Message 5				
04:20 Notification Message 6				
05:20 Notification Message 7				
06:20 Notification Message 8				
10:20 Notification Message 9				
11:50 Notification Message 10				
14:00 Notification Message 11				

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 2 (cont.): ***Validate the reception by NTWCs of Tsunami Bulletin Notification Messages and access by NTWCs to the tsunami bulletins and other products on the RTSP websites.***

Exercise Scenario 1: **Java** (0000UTC, 9 September 2014)

2(c) Complete the following table with the RTSP India notification message receipt times.

RTSP India **Message (UTC Time)**	**GTS** **Time Received (UTC)**	**Fax** **Time Received (UTC)**	**Email** **Time Received (UTC)**	**SMS** **Time Received (UTC)**
00:00 Announcement Message				
00:05 Notification Message 1				
00:10 Notification Message 2				
00:45 Notification Message 3				
01:00 Notification Message 4				
02:00 Notification Message 5				
03:00 Notification Message 6				
04:00 Notification Message 7				
05:00 Notification Message 8				
06:00 Notification Message 9				
07:00 Notification Message 10				
08:00 Notification Message 11				
09:00 Notification Message 12				
10:00 Notification Message 13				
11:00 Notification Message 14				
12:00 Notification Message 15				

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 2 (cont.): ***Validate the reception by NTWCs of Tsunami Bulletin Notification Messages and access by NTWCs to the tsunami bulletins and other products on the RTSP websites.***

Exercise Scenario 1: **Java** (0000UTC, 9 September 2014)

2(d) Was the tsunami threat information available on the RTSP websites?

RTSP Australia	**Yes / No / Did not try to access**
RTSP India	**Yes / No / Did not try to access**
RTSP Indonesia	**Yes / No / Did not try to access**

Comments: _____

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 2 (cont.): ***Validate the reception by NTWCs of Tsunami Bulletin Notification Messages and access by NTWCs to the tsunami bulletins and other products on the RTSP websites.***

Exercise Scenario 2: **Makran Trench** (0600UTC, 10 September 2014)

2(e) Complete the following table with the RTSP Australia notification message receipt times.

RTSP Australia **Message** **(UTC Time)**	**GTS** **Time Received** **(UTC)**	**Fax** **Time Received** **(UTC)**	**Email** **Time Received** **(UTC)**	**SMS** **Time Received** **(UTC)**
06:00 Announcement Message				
06:08 Notification Message 1				
06:10 Notification Message 2				
06:15 Notification Message 3				
06:50 Notification Message 4				
07:50 Notification Message 5				
08:50 Notification Message 6				
09:50 Notification Message 7				
10:50 Notification Message 8				
11:50 Notification Message 9				
12:50 Notification Message 10				
13:50 Notification Message 11				
14:50 Notification Message 12				
15:50 Notification Message 13				
16:50 Notification Message 14				
17:50 Notification Message 15				

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 2 (cont.): ***Validate the reception by NTWCs of Tsunami Bulletin Notification Messages and access by NTWCs to the tsunami bulletins and other products on the RTSP websites.***

Exercise Scenario 2: **Makran Trench** (0600UTC, 10 September 2014)

2(f) Complete the following table with the RTSP India notification message receipt times (UTC).

RTSP India **Message** **(UTC Time)**	**GTS** **Time Received** **(UTC)**	**Fax** **Time Received** **(UTC)**	**Email** **Time Received** **(UTC)**	**SMS** **Time Received** **(UTC)**
06:00 Announcement Message				
06:05 Notification Message 1				
06:10 Notification Message 2				
06:45 Notification Message 3				
07:00 Notification Message 4				
08:00 Notification Message 5				
09:00 Notification Message 6				
10:00 Notification Message 7				
11:00 Notification Message 8				
12:00 Notification Message 9				
13:00 Notification Message 10				
14:00 Notification Message 11				
15:00 Notification Message 12				
16:00 Notification Message 13				
17:00 Notification Message 14				
18:00 Notification Message 15				

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 2 (cont.): ***Validate the reception by NTWCs of Tsunami Bulletin Notification Messages and access by NTWCs to the tsunami bulletins and other products on the RTSP websites.***

Exercise Scenario 2: **Makran Trench** (0600UTC, 10 September 2014)

2(g) Complete the following table with the RTSP Indonesia notification message receipt times.

RTSP Indonesia **Message** **(UTC Time)**	**GTS** **Time Received** **(UTC)**	**Fax** **Time Received** **(UTC)**	**Email** **Time Received** **(UTC)**	**SMS** **Time Received** **(UTC)**
06:00 Announcement Message				
06:05 Notification Message 1				
06:10 Notification Message 2				
06:40 Notification Message 3				
07:15 Notification Message 4				
08:15 Notification Message 5				
09:15 Notification Message 6				
11:15 Notification Message 7				
13:15 Notification Message 8				
16:15 Notification Message 9				
18:15 Notification Message 10				
20:00 Notification Message 11				

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 2 (cont.): ***Validate the reception by NTWCs of Tsunami Bulletin Notification Messages and access by NTWCs to the tsunami bulletins and other products on the RTSP websites.***

Exercise Scenario 2: **Makran Trench** (0600UTC, 10 September 2014)

2(h) Was the tsunami threat information available on the RTSP websites?

RTSP Australia **Yes / No / Did not try to access**

RTSP India **Yes / No / Did not try to access**

RTSP Indonesia **Yes /No / Did not try to access**

Comments: _____

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 3: ***Validate the reporting by NTWCs to the RTSPs of their National Tsunami Warning Status.***

*To be completed by **NTWCs** only*

3(a) What RTSP website did the NTWC report its status on?

___ RTSP Australia

___ RTSP India

___ RTSP Indonesia

3(b) At what time (UTC) did the NTWC first report its status? _____

3(c) How many status reports did the NTWC send to the RTSPs? _____

3(d) Summarise the key information provided in the NTWC status reports (e.g. National Tsunami Warning issued, Cancellation issued)

_____
_____
_____
_____
_____
_____

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 4: ***Validate the Standard Operating Procedures within countries for disseminating tsunami warnings and other threat information to their relevant disaster response agencies.***

To be completed by **DMOs** and/or **NTWCs** as appropriate

The following section is designed to assess warning message dissemination and confirmation among five types of responders:

4.1 Emergency Services
4.2 Other National Agencies
4.3 Science Agencies / Universities
4.4 Local Government: Provincial / Regional
4.5 Local Government: City / District Level

In questions 4.1 – 4.5 please indicate who is responsible for the dissemination of warning messages to each type of responder, and if exercised, the details of the dissemination messages and confirmation receipts.

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 4 (cont.): ***Validate the Standard Operating Procedures within countries for disseminating tsunami warnings and other threat information to their relevant disaster response agencies.***

4.1 Emergency Services

4.1(a) Who is responsible for the dissemination of warning messages to the Emergency Services?

___ DMO ___ NTWC ___ Other

Name of responsible Agency/Authority:

_____

4.1(b) Were warning messages sent to the emergency services during the Exercise? **Yes / No**

*If **yes**, complete the following tables:*

4.1(c) Dissemination of warning messages to emergency services

Number of messages sent	
Time warnings sent (UTC)	
Time cancellation sent (UTC)	
Method of delivery	
Number of failed deliveries	
Reasons for failed deliveries	
Action Taken	

Comments: _____

4.1(d) Confirmation of warning messages from emergency services

Method of confirming receipt	
Time confirmation received (UTC)	
Number of non-confirmations	
Reasons for non-confirmations	
Alternative action taken	

Comments: _____

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 4 (cont.): ***Validate the Standard Operating Procedures within countries for disseminating tsunami warnings and other threat information to their relevant disaster response agencies.***

4.2 Other National Govermental Agencies

4.2(a) Who is responsible for the dissemination of warning messages to the other national governmental agencies?
___ DMO ___ NTWC ___ Other

Name of responsible Agency/Authority: _____

4.2(b) Were warning messages sent to other national governmental agencies during the Exercise? **Yes / No**

*If **yes**, complete the following tables:*

4.2(c) Dissemination of warning to other national governmental agencies

Number of messages sent	
Time warnings sent (UTC)	
Time cancellation sent (UTC)	
Method of delivery	
Number of failed deliveries	
Reasons for failed deliveries	
Action Taken	

Comments: _____

4.2(d) Confirmation of warning messages from other national governmental agencies

Method of confirming receipt	
Time confirmation received (UTC)	
Number of non-confirmations	
Reasons for non-confirmations	
Alternative action taken	

Comments: _____

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 4 (cont.): ***Validate the Standard Operating Procedures within countries for disseminating tsunami warnings and other threat information to their relevant disaster response agencies.***

4.3 Science Agencies / Universities

4.3(a) Who is responsible for the dissemination of warning messages to science agencies / universities for assessment?
___ DMO ___ NTWC ___ Other

Name of responsible Agency/Authority: _____

4.3(b) Were warning messages sent to science agencies / universities for assessment during the Exercise? **Yes/No**

*If **yes**, complete the following tables:*

4.3(c) Dissemination of warning to science agencies / universities

Number of messages sent	
Time warnings sent (UTC)	
Time cancellation sent (UTC)	
Method of delivery	
Number of failed deliveries	
Reasons for failed deliveries	
Action Taken	

Comments: _____

4.3(d) Confirmation of warning messages science agencies / universities

Method of confirming receipt	
Time confirmation received (UTC)	
Number of non-confirmations	
Reasons for non-confirmations	
Alternative action taken	

Comments: _____

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 4 (cont.): ***Validate the Standard Operating Procedures within countries for disseminating tsunami warnings and other threat information to their relevant disaster response agencies.***

4.4 Local Government: Provincial / Regional Level

4.4(a) Who is responsible for the dissemination of warning messages to the provincial / regional level of local government?
___ DMO ___ NTWC ___ Other

Name of responsible Agency/Authority: _____

4.4(b) Were warning messages sent to the provincial / regional level of local government during the Exercise? **Yes/No**

*If **yes**, complete the following tables:*

4.4(c) Dissemination of warning to local government: provincial / regional level

Number of messages sent	
Time warnings sent (UTC)	
Time cancellation sent (UTC)	
Method of delivery	
Number of failed deliveries	
Reasons for failed deliveries	
Action Taken	

Comments: _____

4.4(d) Confirmation of warning messages from local government: provincial / regional level

Method of confirming receipt	
Time confirmation received (UTC)	
Number of non-confirmations	
Reasons for non-confirmations	
Alternative action taken	

Comments: _____

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 4 (cont.): ***Validate the Standard Operating Procedures within countries for disseminating tsunami warnings and other threat information to their relevant disaster response agencies.***

4.5 Local Government: City / District Level

4.5(a) Who is responsible for the dissemination of warning messages to the city / district level of local government?

___ DMO ___ NTWC ___ Other

Name of responsible Agency/Authority: _____

4.5(b) Were warning messages sent to the city / district level of local government during the Exercise? **Yes / No**

*If **yes**, complete the following tables:*

4.5(c) Dissemination of warning to local government: city / district level

Number of messages sent	
Time warnings sent (UTC)	
Time cancellation sent (UTC)	
Method of delivery	
Number of failed deliveries	
Reasons for failed deliveries	
Action Taken	

Comments: _____

4.5(d) Confirmation of warning messages from local government: city / district level

Method of confirming receipt	
Time confirmation received (UTC)	
Number of non-confirmations	
Reasons for non-confirmations	
Alternative action taken	

Comments: _____

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 4 (cont.): ***Validate the Standard Operating Procedures within countries for disseminating tsunami warnings and other threat information to their relevant disaster response agencies.***

4.6(a) Judged against the nature of this event, information issued by our national decision-making and dissemination point was timely.
Yes / No / Not Applicable

4.6(b) The methods of communication from our national decision-making and dissemination point to us were appropriate to support decision-making.
Yes / No / Not Applicable

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 5: ***Validate the organisational decision-making processes within countries for the issuing of public warnings and ordering evacuations.***

To be completed by **DMOs** and/or **NTWCs** as appropriate

5(a) Decision making for the issuing of public warnings and ordering evacuations is the responsibility of (select all that apply)

___ National Tsunami Warning Centre

___ National Disaster Management Organisation

___ Regional Disaster Management Organisations

___ Local Authorities

Name of responsible Agency(ies)/Authority(ies):

_____

_____

5(b) Our agency(ies) / authority(ies) responsible for making decisions on public warnings and evacuations participated in the Exercise.
Yes / No

If **yes**, please answer the following questions.

5(c) National level Standard Operating Procedures are in place and were used for this exercise.
Yes / No

Comments:_____

5(d) Local level Standard Operating Procedures are in place and were used for this exercise.
Yes / No

Comments:_____

5(e) Arrangements to assemble our management group relevant to decision-making on tsunami warning and response were in place before the exercise.
Yes / No / Not Applicable

Comments:_____

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 5 (cont.): ***Validate the organizational decision making process about public warnings and evacuations.***

5(f) Our management group relevant to decision-making on tsunami warning and response assembled during the exercise.
Yes / No / Not Applicable

If **yes**, please answer the following questions:

Time taken to assemble (in minutes): _____
This was timely to facilitate good decision-making. **Yes / No**

Comments:_____

5(g) The quality of the event information issued by our national decision-making and dissemination point (e.g. tsunami threat levels and arrival times, evacuation advice) was sufficient to support local level decision-making.
Yes / No

Comments:_____

5(h) The quality of the pre-existing local information available (e.g. local hazard assessments, inundation maps, evacuation plans etc.) was sufficient to support local level decision-making.
Yes / No

Comments:_____

5(i) The quality of the information received back from our response agencies and local level government (e.g. situation reports) was sufficient to support national level decision-making.
Yes / No

Comments:_____

5(j) The exercise contributed to the improvement or the development of planning related to public warnings and other response activities required for an event of this nature.
Yes / No

Comments:_____

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 6: ***Identify the methods used to notify and instruct the public.***

To be completed by **DMOs** and/or **NTWCs** as appropriate

6(a) Public notifications are the responsibility of (select all that apply)

___ National Tsunami Warning Centre

___ National Disaster Management Organisation

___ Regional Disaster Management Organisations

___ Local Authorities

Name of responsible Agency(ies)/Authority(ies):

_____

_____

6(b) The following means of public notification were used in this exercise or would have been used during a real event of this kind.

Method	Used in the Exercise (Yes / No)	Would be used in a Real Event (Yes / No)	Procedures Exist (Yes / No)
Cell / mobile phone broadcast			
SMS / Text			
Landline Telephone			
Email			
Facebook			
Twitter			
Websites			
RSS			
Police			
Public announcement system			
Door-to-door announcements			
Public call centre			
Public radio			
Public TV			

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

OBJECTIVE 7: ***Assess the elapsed time for public notification and instruction.***

To be completed by **DMOs** and/or **NTWCs** as appropriate

7(a) Time for public notification:

Activity	Elapsed Time (e.g. 1hr 15mins)
Making decision to notify the public (from time of receipt of tsunami threat advice)	
Formulating/compilating public notification (from time of decision)	
Issuing public notification (from time notification formulated)	
Total Time	

7(b) Were any areas evacuated? **Yes / No**

*If **yes**, please answer the following questions.*

7(c) What areas evacuated (name of the town or community)?

_____
_____
_____

7(d) What time did the evacuations occur in each area (specify UTC or local time)?

_____
_____
_____

7(e) What is the estimated number of people that evacuated in each area?

_____
_____
_____

IOWAVE14 EXERCISE EVALUATION FORM - TO BE COMPLETED ONLINE

General Questions

8(a) The exercise planning, conduct, format, and style were satisfactory.

___Strongly Disagree ___Disagree ___Neutral ___Agree ___Strongly Agree

Comments:

_____
_____
_____

8(b) Our country benefited from the exercise by:

1. _____
2. _____
3. _____

8(c) Future exercises could be improved by:

1. _____
2. _____
3. _____

End of Survey