2024 UNESCO-IOC ICG/IOTWMS National Report on Capacity Assessment of Tsunami Preparedness

Overview

Before commencing this reporting exercise, please:
1. **Read the background information provided below**
2. **Confirm your willingness to participate in this reporting exercise by clicking the checkbox**
3. **Select your country from the drop-down list**

Any questions about this survey can be directed to the UNESCO-IOC ICG/IOTWMS Secretariat (email: iotwms@unesco.org).

Background to National Report on Capacity Assessment of Tsunami Preparedness

Following the tragic tsunami of 26 December 2004, in which over 230,000 people lost their lives, UNESCO-IOC with the mandate of the United Nations General Assembly (UNGA) coordinated the establishment of the Indian Ocean Tsunami Warning and Mitigation System (IOTWMS). As one of the initial steps soon after the 2004 Indian Ocean Tsunami, UNESCO-IOC facilitated an assessment of capacity building requirements for an effective and durable tsunami warning and mitigation system in the Indian Ocean by facilitating Expert Missions to 16 Member States affected by the tsunami. This assessment (IOC/INF-1219), along with other subsequent assessments conducted at the request of Member States, provided a regional overview of capacity in tsunami preparedness, as well as identified requirements of Member States to build regional capacity in tsunami warning and mitigation.

The UNESCO-IOC Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System (ICG/IOTWMS; established by UNESCO-IOC in 2005) at its 10th Session (Muscat, August 2015) identified the need to conduct a reassessment of the state of tsunami preparedness of the Indian Ocean Member States in order to evaluate progress since the 2004 Indian Ocean Tsunami, as well as identify specific gaps and prioritise capacity development requirements at both the regional and national level for strengthening the end-to-end tsunami warning and mitigation system. At its 11th Session (Putrajaya, April 2017) the ICG/IOTWMS established the inter-sessional "Task Team on Capacity Assessment of Tsunami Preparedness" (TT-CATP) to oversee the capacity assessment of tsunami preparedness of the IOTWMS. The Task Team was chaired by Dr. Harkunti Rahayu (Indonesia) with representatives from Australia, India, Indonesia, Oman, Malaysia, Indian Ocean Tsunami Information Centre (IOTIC), the ICG/IOTWMS Working Groups, and invited experts from the Global Disaster Resilience Centre of the University of Huddersfield, U.K. The Task Team designed an extensive online survey covering all aspects of the end-to-end tsunami warning and mitigation system. The online questionnaire was built upon the ICG/IOTWMS National Report Template, Post-IOWave Exercise Surveys, and UNESCO-IOC Post-Event Assessment Surveys.

In 2018, a total of 20 ICG/IOTWMS Member States responded to the reassessment survey. The results (IOC/2020/TS/143) provided a new baseline of the status of tsunami preparedness capacity in the region. It also identified specific gaps and prioritised capacity development requirements at both regional and national levels. The results clearly indicated that there had been considerable improvement across all components of the IOTWMS since the previous assessment in 2005.

2024 Reassessment of the State of Tsunami Preparedness in the Indian Ocean Member States

Nevertheless, the IOTWMS is not a static system and must further improve, evolve, and adapt to better serve the needs of the Member States of the ICG. As we approach the 20th anniversary of the 2004 Indian Ocean Tsunami, the ICG/IOTWMS as its 13th Session (Bali, 2022) decided it was timely to conduct the next reassessment of the state of tsunami preparedness in ICG/IOTWMS Member States, reflect on progress made, identify remaining gaps, and prioritise capacity development requirements. The results will be presented to the 14th Session of the ICG/IOTWMS (Indonesia, 2024). The assessment is being undertaken by the UNESCO-IOC through the ICG/IOTWMS Working Group 3 Tsunami Ready Implementation, with oversight and contributions by the ICG/IOTWMS Steering Group, and support from the UNESCO-IOC ICG/IOTWMS Secretariat. Further support is being provided by the UN Economic and Social Commission for Asia and the Pacific (UNESCAP) and the Global Disaster Resilience Centre of the University of Huddersfield. Funding is being provided by the Asian Development Bank (ADB) and the Government of Switzerland.

The Tsunami National Contacts (TNCs) are requested to coordinate the completion of the online survey, in consultation with other national stakeholders involved in end-to-end tsunami early warning and mitigation within the country. Considering the importance of this survey and a number of important timelines in the second half of 2024, all Member States are requested to complete the survey before **14 June 2024**.

Who should complete this report?

Responses to this survey need to be coordinated, compiled, and submitted by Tsunami National Contact (TNC) of each Member State. The survey has six (6) distinct parts. Each part may need inputs from different stakeholders based on their national responsibility in the end-to-end tsunami warning and mitigation system.

Part	Topic of the Survey	Stakeholder Inputs
I	**Basic Information:** TNC/NTWC/TWFP contact details	**Tsunami National Contact** Secretariat will follow up separately formally incorporate any updates on Member State nominations of the TNC through official channels
II	**Risk Assessment & Reduction:** Hazard Assessment, Risk Assessment, Policies, Plans, Guidelines	Inputs to be obtained from the **Disaster Management Agency** and/or other agency responsible for Hazard / Risk Assessment in the Country
III	**Detection, Warning & Dissemination**	Inputs to be obtained from the **National Tsunami Warning Centre** and/or other agency responsible for generation and dissemination of tsunami early warnings within the country
IV	**Public Awareness, Preparedness & Response:** SOPs, Evacuation Infrastructure, Tsunami Exercises, Public Awareness	Inputs to be obtained from the **Disaster Management Agency** and/or other agencies responsible for public awareness, preparedness, and response in the country
V	**Tsunami Ready Recognition Programme (TRRP)**	Inputs to be obtained from the **Tsunami Ready Focal Point** (TRFP) and/or other agency responsible for the TRRP or other recognised similar initiative in the country
VI	**Narrative:** Important developments since the last report and summary of future plans	**Tsunami National Contact**

The TNC can share the survey link with responsible stakeholder(s) and request them to complete a particular part. Then the TNC should review and compile the responses provided by the stakeholders and submit the final online survey once all sections are completed. In the case where inputs for a particular part need to come from multiple stakeholders, it is recommended that such inputs be obtained "offline" using the provided pdf version of the survey. The TNC can then compile the individual inputs and provide a consolidated online response.

How will this report be used?

A preliminary analysis of the results will be presented at the forthcoming UNESCO-IOC 2nd Tsunami Global Symposium, to be held in Banda Aceh, Indonesia, in November 2024 as a commemoration to the 2004 Indian Ocean Tsunami. A consolidated IOTWMS status report will be presented to the 14th Session of the ICG/IOTWMS and published as an IOC technical series document to help guide the work programmes of the ICG/IOTWMS. Results will also be presented to potential donors and regional forums, such as the Association of Southeast Asian Nations (ASEAN) and South Asian Association for Regional Cooperations (SAARC), on the capacity development needs of the IOTWMS. In addition, aggregate results from this reporting exercise may be published in research and scientific publications about early warning systems. Information will be duly anonymised and grouped together to generate statistics for such research and scientific publications. Additional summary reports will be prepared and tailored for policy-makers and potential donors, containing recommendations on filling gaps and priorities for capacity development support.

Sharing supporting documents

If you would like to attach copies of any additional documents (Standard Operating Procedures, Guidelines, Plans, etc.), it is possible to do so at the end of the survey.

* **Consent**

I have read the above information and wish to proceed.

☐ Confirm by clicking the checkbox

* **Please select your country from the list below:**

[   ]

PART I: Basic Information

Stakeholder inputs required: Tsunami National Contact (TNC)
Secretariat will follow up separately with the TNC to formally incorporate any updates through official channels.

1) ICG/IOTWMS Tsunami National Contact (TNC):

The TNC is the person who is designated by a Member State to the Intergovernmental Coordination Group (ICG) to represent his/her country in the coordination of international tsunami warning and mitigation activities. This person is part of the main stakeholders of the national tsunami warning and mitigation system. This person may be from the national tsunami warning centre, the national disaster management organization, from a technical or scientific institution, or from another agency with tsunami warning and mitigation responsibilities.

Please provide the person's details below:

TNC Name:

[   ]

Position:

[   ]

Organisation:

[   ]

Telephone Number:

[   ]

E-mail Address:

[   ]

Fax Number:

[   ]

Postal Address:

[   ]

2) National Tsunami Warning Centre (NTWC):

The NTWC is the centre that is officially designated by the government to monitor and issue tsunami warnings and other related statements within your country according to established National Standard Operating Procedures.

NTWC Agency Name:

[ ]

NTWC URL (web link) for tsunami warnings:

[ ]

NTWC Agency Contact or Officer in Charge (person):

[ ]

Position:

[ ]

Telephone Number:

[ ]

E-mail Address:

[ ]

Postal Address:

[ ]

3a) Is your Tsunami Warning Focal Point (TWFP) the same as your National Tsunami Warning Centre (NTWC) agency?
The TWFP is the 24 x 7 point of contact (office, operational unit or position, not a person) officially designated by the NTWC or the government to receive and disseminate tsunami information from an ICG Tsunami Service Provider according to established national Standard Operating Procedures. The TWFP may or not be the NTWC.

○ Yes

○ No

3b) Tsunami Warning Focal Point (TWFP) Agency:

The TWFP is the 24 x 7 point of contact (office, operational unit or position, not a person) officially designated by the NTWC or the government to receive and disseminate tsunami information from an ICG Tsunami Service Provider according to established National Standard Operating Procedures. The TWFP may or not be the NTWC.

TWFP Agency Name (if different from the NTWC Agency):

[   ]

TWFP Agency Contact or Officer in Charge (if different from the NTWC Agency):

Name:

[   ]

Position:

[   ]

Telephone Number:

[   ]

E-mail Address:

[   ]

Postal Address:

[   ]

3c) ICG/IOTWMS Tsunami Warning Focal Point (TWFP):

The TWFP is the 24 x 7 point of contact (office, operational unit or position, not a person) officially designated by the NTWC or the government to receive and disseminate tsunami information from an ICG Tsunami Service Provider according to established National Standard Operating Procedures. The TWFP may or not be the NTWC.

TWFP 24x7 point of contact (office, operational unit or position, not a person):

[   ]

E-mail Address:

[   ]

Telephone Number:

[   ]

Cellular Telephone Number:

[   ]

Fax:

[   ]

3d) Has your country appointed a Tsunami Ready Focal Point (TRFP)?

The TRFP is a person from the Disaster Management (DMO) or similar institution that:
- Acts as a national advocate for national implementation of the Tsunami Ready Recognition Programme (TRRP) or a recognised similar initiative to help make at-risk communities prepared and resilient to any tsunami threat within their Member State.
- Actively contributes to the national implementation of TRRP or a recognised similar initiative.
- Routinely update UNESCO-IOC ICG/IOTWMS on the status of the national implementation of the TRRP or a recognised similar initiative.
- Informs relevant national authorities and orgaisations involved in the implementation of TRRP or a recongised similar initiative on any information and/or updates provided by UNESCO-IOC on activities related to making at risk communities Tsunami Ready.

◯ Yes

◯ No

If yes, please provide their details below:

Name of the TRFP:

[   ]

Position:

[   ]

Agency:

[   ]

Telephone Number:

[   ]

E-mail Address:

[   ]

Postal Address:

Stakeholder inputs required: Hazard Assessment, Risk Assessment, Policies, Plans, Guidelines inputs to be obtained from the Disaster Management Agency and/or other agency responsible for Hazard / Risk Assessment in the Country

4a) Has your country undertaken a hazard assessment?

◯ No

◯ Yes

4b) What type of hazard assessment has been carried out?

◯ Single hazard assessment only on tsunami

◯ Multi-hazard assessment including tsunami

◯ Single hazard assessment on tsunami AND multi-hazard assessment including tsunami

4c) What type of multi-hazard assessment has been carried out? (select all that apply)

☐ Tsunami   ☐ Epidemics

☐ Cyclone   ☐ Flooding

☐ Drought   ☐ Landslide

☐ Earthquakes   ☐ Volcanic eruptions

☐ Other (please specify)

4d) Who did the tsunami hazard assessment in your country? (select all that apply)

☐ National Agency ☐ National / International Consultant

☐ International Agency ☐ Other (please specify below)

☐ National / Local University

Please specify the name(s) of the agencies

_____

4e) At what level was the tsunami hazard assessment carried out? (select all that apply)

☐ National Level ☐ City Level

☐ Regional Level ☐ Village Level

☐ Other (please specify)

_____

4f) Which coastal areas have been mapped for tsunami hazard?
Please include the names of the Region / City and an approximation of the percentage mapped.

_____

4g) For each of the data types listed below (in rows), answer the two questions (in columns).
Select Yes / No / Don't know from the drop-down menu.

	Was this data used for tsunami hazard assessment?	Is this data publicly available?
Bathymetry		
Seismo-tectonic model		
Topography		
Land Cover		
Infrastructure details		

Other data used (please specify)

_____

4h) What products do you have from the tsunami hazard assessment? (select all that apply)

☐ Probabilistic Tsunami Hazard Assessment (PTHA)

☐ Deterministic Tsunami Hazard Analysis

☐ Field Studies on Tsunami Impacts

☐ Hazard map

☐ Other (please specify)

☐ Inundation map

☐ Evacuation map

☐ Guidelines (please specify below)

2024 UNESCO-IOC ICG/IOTWMS National Report on Capacity Assessment of Tsunami Preparedness

PART II: Hazard Assessment

4i) On a scale of 1 (Very poor) to 5 (Very good), please rate your country's capability to undertake tsunami hazard assessment

	Very poor	Poor	Fair	Good	Very good
Capacity to undertake tsunami hazard assessment	○	○	○	○	○

4j) On a scale of 1 (Not a priority) to 5 (Essential), what is the priority level in your country to improve capacity in the following areas of tsunami hazard assessment?

	Not a priority	Low priority	Medium priority	High priority	Essential
Probabilistic Tsunami Hazard Assessment (PTHA)	○	○	○	○	○
Deterministic Tsunami Hazard Analysis	○	○	○	○	○
Field Studies on Tsunami Impacts	○	○	○	○	○
Hazard map	○	○	○	○	○
Inundation map	○	○	○	○	○
Evacuation map	○	○	○	○	○

What other areas of capacity in tsunami hazard assessment require improvement?

4k) On a scale of 1 (No capacity) to 5 (Very good), what capacity does your country have to give training and/or consultancy on tsunami hazard assessment to other countries?

	No capacity	Poor	Moderate	Good	Very good
Probabilistic Tsunami Hazard Assessment (PTHA)	○	○	○	○	○
Deterministic Tsunami Hazard Analysis	○	○	○	○	○
Field Studies on Tsunami Impacts	○	○	○	○	○
Hazard map	○	○	○	○	○
Inundation map	○	○	○	○	○
Evacuation map	○	○	○	○	○

Please provide the name(s) and contact detail(s) of any individuals / institutions in your country that could provide this training / consultancy

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2024 UNESCO-IOC ICG/IOTWMS National Report on Capacity Assessment of Tsunami Preparedness

PART II: Risk Assessment

5a) Has your country undertaken a tsunami risk assessment?

○ No

○ Yes

2024 UNESCO-IOC ICG/IOTWMS National Report on Capacity Assessment of Tsunami Preparedness

PART II: Risk Assessment

5b) What type of risk assessment?

○ Single risk assessment only on tsunami

○ Multi-hazard risk assessment including tsunami

○ Single risk assessment on tsunami AND multi-hazard risk assessment including tsunami

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2024 UNESCO-IOC ICG/IOTWMS National Report on Capacity Assessment of Tsunami Preparedness

PART II: Risk Assessment

5c) What hazards have been considered in your multi-hazard risk assessment? (select all that apply)

- ☐ Tsunami
- ☐ Cyclone
- ☐ Drought
- ☐ Earthquakes
- ☐ Other (please specify)

- ☐ Epidemics
- ☐ Flooding
- ☐ Landslide
- ☐ Volcanic eruptions

<div style="border:1px solid #000;"> </div>

5d) Who did the tsunami risk assessment in your country? (select all that apply)

- ☐ National Agency
- ☐ International Agency
- ☐ National/local University

- ☐ National/International Consultant
- ☐ Other (please specify below)

Please specify the name(s) of the agency(ies)

<div style="border:1px solid #000;"> </div>

5e) At what level was the tsunami risk assessment carried out? (select all that apply)

- ☐ National Level
- ☐ Regional Level
- ☐ City Level
- ☐ Other (please specify)

- ☐ Village Level
- ☐ Community / Neighbourhood Level

<div style="border:1px solid #000;"> </div>

5f) Which coastal areas have been tsunami risk mapped?

Please include the names of the Region / City and an approximation of the overall national percentage of risk prone areas mapped.

<div style="border:1px solid #000;"> </div>

5g) How many Cities / Municipalities / Regencies are at risk from tsunami?

5h) What products do you have from the tsunami risk assessment? *(select all that apply)*

☐ Risk map

☐ Evacuation map

☐ Guidelines (please specify below)

☐ Action Plan (please specify below)

☐ Others (please specify below)

Other (please specify)

PART II: Risk Assessment

5i) On a scale of 1 (Very poor) to 5 (Very good), please rate your country's capability to undertake tsunami risk assessment

	Very poor	Poor	Fair	Good	Very good
Capability to undertake tsunami risk assessment	○	○	○	○	○

5j) On a scale of 1 (Not a priority) to 5 (Essential), what is the priority level of your country to improve capacity in the following areas of tsunami risk assessment?

	Not a priority	Low priority	Medium priority	High priority	Essential
Tsunami risk assessment at national level	○	○	○	○	○
Tsunami risk assessment at regional level	○	○	○	○	○
Tsunami risk assessment at city level	○	○	○	○	○
Tsunami risk assessment at village level	○	○	○	○	○
Tsunami risk assessment at community / neighbourhood level	○	○	○	○	○

What other areas of capacity in tsunami hazard assessment require improvement?

[ ]

5k) On a scale of 1 (No capacity) to 5 (Very good) what capacity does your country have to give training and/or consultancy on tsunami risk assessment to other countries?

	No capacity	Poor	Moderate	Good	Very good
Tsunami risk assessment at national level	○	○	○	○	○
Tsunami risk assessment at regional level	○	○	○	○	○
Tsunami risk assessment at city level	○	○	○	○	○
Tsunami risk assessment at village level	○	○	○	○	○
Tsunami risk assessment at community / neighbourhood level	○	○	○	○	○
Other (specify below)	○	○	○	○	○

Please gives the names of any individuals / institutions in your country that could provide this training / consultancy

[ ]

PART II: Policies

6a) Does your country have a national tsunami policy?

For each of the four disaster management phases listed below, select standalone policy / multi hazard policy / policy not available. Use the comments box to detail the specific name of the policy (if available).

In what form is the policy?

Prevention and mitigation	
Preparedness	
Emergency response	
Rehabilitation and reconstruction	

What is the name of policy? (if available)

6b) Does your country have local tsunami policies?

For each of the disaster management phases listed below, select standalone policy / multi hazard policy / policy not available. Use the comments box to detail the specific name(s) of the policy (if available).

In what form is the policy?

Prevention and mitigation	
Preparedness	
Emergency response	
Rehabilitation and reconstruction	

What is the name of policy? (if available)

2024 UNESCO-IOC ICG/IOTWMS National Report on Capacity Assessment of Tsunami Preparedness

PART II: Plans

7a) Does your country have national, local and community level tsunami disaster risk reduction plans?

For each of the four disaster management phases listed below, select standalone plan / multi hazard plan / plan not available. Use the comments box to detail the specific name(s) of the plan(s) (if available). Please use the scroll bar to view the entire table.

	National level	Local level	Community level
Prevention and mitigation			
Preparedness			
Emergency response			
Rehabilitation and reconstruction			

What is the name of the plan(s) (if available)

[ ]

7b) Are your country's tsunami disaster risk reduction plans based on hazards and risk assessments?

◯ Yes

◯ No

2024 UNESCO-IOC ICG/IOTWMS National Report on Capacity Assessment of Tsunami Preparedness

PART II: Guidelines

8a) Does your country have national tsunami DRR guidelines?

For each of the four lifecycle phases, select standalone guidelines / multi hazard guidelines / guidelines not available. Use the comments box to detail the specific name of the guidelines (if available).

	In what form are the guidelines?
Prevention and mitigation	
Preparedness	
Emergency response	
Rehabilitation and reconstruction	

What is the name of guidelines? (if available)

[ ]

8b) Does your country have local tsunami DRR guidelines?
For each of the four lifecycle phases, select standalone guidelines / multi-hazard guidelines / guidelines not available. Use the comments box to detail the specific name of the guidelines (if available).

In what form are the guidelines?

Prevention and mitigation	
Preparedness	
Emergency response	
Rehabilitation and reconstruction	

What is the name of guidelines? (if available)

2024 UNESCO-IOC ICG/IOTWMS National Report on Capacity Assessment of Tsunami Preparedness

PART III: Detection and Warning

Stakeholder inputs required: Inputs to be obtained from the National Tsunami Warning Centre and/or other agency responsible for generation and dissemination of tsunami early warnings within the country.

9a) Does your country have a national capability to assess and/or receive potential tsunami threat information and advise/warn its coastal communities?

○ Yes
○ No

9b) Does your country utilise the data provided by the IOTWMS Tsunami Service Providers (TSPs) for the Coastal Forecast Zones (CFZ) of your country's coastline to determine national threats or does it undertake its own threat assessments?
(select all that apply)

☐ Use TSP data
☐ Use own threat assessments
☐ None of the above

9c) Which organisation in your country has the responsibility for assessing and/or receiving potential tsunami threat information?
Please provide the name and contact details.

[ ]

9d) Does the organisation responsible for assessing and/or receiving potential tsunami threat information operate 24x7?

○ Yes

○ No
Please specify below the hours of operation and reason(s) why 24x7 operations are not done

[ ]

9e) What / which infrastructure is available to enable 24x7 operations? *(select all that apply)*

☐ Computers   ☐ Fax

☐ Internet   ☐ GTS (WMO Global Telecommunication System)

☐ Landline Phone   ☐ UPS (Uninterruptable Power Supply)

☐ Mobile Phone or Cell Phone   ☐ VSAT

☐ Satellite Phone

☐ Please specify any other infrastructure

[ ]

9f) Which level of tsunami threat forecast information is produced by the responsible organisation? *(select all that apply)*

☐ Ocean-wide   ☐ Local

☐ National

9g) Does the organisation have access to national and/or international seismic networks? (please select one from the following options)

○ Yes, national only   ○ Yes, national and international

○ Yes, international only   ○ No

9h) Is national seismic data shared in real time?

○ All national seismic data is shared in real time   ○ No national seismic data is shared in real time

○ Some national seismic data is shared in real
time

Please specify which seismic data is shared in real time

PART III: Detection and Warning

9i) Does your organisation have access to GNSS data?

○ Yes   ○ No

9j) Is the list of broadband seismometers operated by your country listed accurately in the IOTWMS seismic database http://www.ioc-tsunami.org/index.php?option=com_oe&task=viewDocumentRecord&docID=20796)?

○ Yes

○ No

9k) When compared to the IOTWMS seismic database (http://www.ioc-tsunami.org/index.php?option=com_oe&task=viewDocumentRecord&docID=20796), have you decommissioned or added broadband seismometers operated by your country (Check all that apply and include details in the comments section below)

☐ Some stations have been decommissioned

☐ Some stations have been added

☐ There are no changes

Please indicate which stations have been decommissioned or added, including the Station Name/Location, email Contact of the Station Operator (IOTWMS Secretariat will contact for more information).

2024 UNESCO-IOC ICG/IOTWMS National Report on Capacity Assessment of Tsunami Preparedness

PART III: Detection and Warning

9l) Does the organisation have access to national and/or international sea level networks? (please select one answer from the following options)

○ Yes, national only   ○ Yes, national and international

○ Yes, international only   ○ No

If yes, please list/describe sources of information (e.g. national data through national communication infrastructure, WMO Global Telecommunications System (GTS), IOC Sea Level Facility)

2024 UNESCO-IOC ICG/IOTWMS National Report on Capacity Assessment of Tsunami Preparedness

PART III: Detection and Warning

9m) Is national sea level data shared in real time?

○ All national sea level data is shared in real time   ○ No national sea level data is shared in real time

○ Some national sea level data is shared in real time

Please specify which sea level data is shared in real time

[   ]

9n) Is the list of sea level stations operated by your country listed accurately in the IOTWMS sea level database (http://www.ioc-tsunami.org/index.php?option=com_oe&task=viewDocumentRecord&docID=20833)?

○ Yes

○ No

9o) When compared to the IOTWMS sea level database (http://www.ioc-tsunami.org/index.php?option=com_oe&task=viewDocumentRecord&docID=20833), have you decommissioned or added sea level stations operated by your country (Check all that apply and include details in the comments section below)

☐ Some stations have been decommissioned

☐ Some stations have been added

☐ There are no changes

Please indicate which stations have been decommissioned or added, including the Station Name/Location, email Contact of the Station Operator (IOTWMS Secretariat will contact for more information).

[   ]

9p) What other observing networks are operated by your country and used for tsunami early warning?

☐ No other observing networks are operated by the country

☐ GNSS/GPS (please specify below)

☐ Coastal radars (please specify below)

☐ Other (please specify below)

Please provide the type of observing network, the station name/location, email contact of any other observing network operator (IOTWMS Secretariat will contact for more information).

9q) Does the organisation have the capability of analysing real-time seismic and sea-level data for potential tsunami threat?

○ No

○ Yes
   Please specify the software tools used

9r) Does the organisation have capability for tsunami modelling to support generation of threat forecasts?

○ No

○ Yes
   Please specify the modelling tools and data used

9s) Does the organisation responsible for identifying a potential tsunami threat also issue national tsunami no threat, watches, advisories, alerts and/or warnings?

○ Yes

○ No
   Which organisation provides the tsunami products?

9t) What are the threshold or criteria (for example sea levels, magnitude) for declaring a potential national tsunami emergency, watch, alert, advisory or warning?

9u) What actions were taken by your country's National Tsunami Warning Centre (NTWC) and/or Tsunami Warning Focal Point (TWFP) in response to earthquake events and messages issued by the IOTWMS TSPs during the inter-sessional period?

9v) Did your country's NTWC and/or TWFP participate in the 6-monthly communications tests conducted by the IOTWMS TSPs?

  ◯ Yes (please name the organisation(s) that participated in the additional comments)

  ◯ No (please explain why not in the additional comments)

Additional comments

9w) Did your country's NTWC and/or TWFP participate in national and/or international Tsunami Exercises (eg. IOWave) conducted in the inter-sessional period between ICG meetings?

  ◯ Yes (please name the exercise(s) and organisation(s) that participated in the additional comments)

  ◯ No

Additional comments

9x) After the December 26 2004 tsunami and until now, was your country impacted by any damaging tsunami? If Yes, what was your national response to each event (please comment if warnings were issued by your NTWC in a timely manner to enable communities to respond, if public were evacuated, etc.)

○ No

○ Yes (please indicate your national response to each event)

[ ]

9y) Since 2018, have there been any enhancements in your national warning SOPs and alerting?

○ No

○ Yes (please specify the enhancements)

[ ]

2024 UNESCO-IOC ICG/IOTWMS National Report on Capacity Assessment of Tsunami Preparedness

PART III: Dissemination

10a) How is the tsunami information (warning, public safety action, etc) disseminated within country? (select all that apply)

☐ Email   ☐ Sirens

☐ SMS   ☐ Television

☐ Telephone   ☐ Warning towers

☐ Fax   ☐ Megaphone

☐ Webpage   ☐ Police/military

☐ Radio   ☐ Public alert system

☐ WhatsApp / Facebook / Other social media   ☐ VHF radio

☐ Door-to-door   ☐ VPN

☐ Other

[ ]

10b) For each emergency response organisation listed below, which communication methods for emergency response are available? (select all that apply)

	Telephone	Fax	Email	SMS	Siren	Other (please specify below)
National DMOs	☐	☐	☐	☐	☐	☐
Local DMOs	☐	☐	☐	☐	☐	☐
General Public	☐	☐	☐	☐	☐	☐
Coastal Communities	☐	☐	☐	☐	☐	☐
Media	☐	☐	☐	☐	☐	☐

Other communication methods (please specify)

[ ]

10c) How is the warning situation terminated?

[ ]

10d) What website is used for display of national threat status during events? Please provide the URL.

[ ]

10e) Does your country's national tsunami warning system utilise the Common Alert Protocol (CAP) for the dissemination of warnings? If yes, please describe how the CAP is integrated into your warning dissemination processes, including any platforms or communication channels that are specifically utilised to broadcast CAP-formatted alerts to the public and relevant stakeholders.

○ No

○ Yes (please describe how CAP is integrated)

[ ]

10f) Who is primarily responsible for the direct dissemination of tsunami alerts to the public in your country, and what is the timeframe for these alerts to achieve effective last-mile responses? Please provide details.

[ ]

Stakeholder inputs required: Inputs to be obtained from the Disaster Management Agency and/or other agency responsible for public awareness, preparedness and response in the Country

11a) For each of the (upstream) emergency response issues listed below (in rows), consider the four questions (in columns). Select a yes/no response using the drop-down menus.

	Does your SOP address this aspect of tsunami emergency response?	Is support required to develop/improve this aspect of tsunami emergency response in your SOP?	Is support required to develop Human Resources in this aspect of tsunami emergency response?	Is support required to develop infrastructure for this aspect of tsunami emergency response?
24/7 Emergency Operation Centre (EOC)				
Receiving information from the NTWC				
Response Criteria / decision making				

11b) For each of the (downstream) emergency response issues listed below (in rows), consider the four questions (in columns). Select a yes/no response using the drop-down menus.

	Does your SOP address this aspect of tsunami emergency response?	Is support required to develop/improve this aspect of tsunami emergency response in your SOP?	Is support required to develop Human Resources in this aspect of tsunami emergency response?	Is support required to develop infrastructure for this aspect of tsunami emergency response?
Warning dissemination				
Evacuation call procedures				
Community evacuation procedures				
Communication with NTWC				
Communication with Local Government				
Media arrangements				
Communication with other stakeholder i.e. Red Cross, Fire Brigade, Search and Rescue, Police, Army, Navy etc.				

11c) Would your country be willing to share your SOPs with the IOTIC and other countries?

◯ Yes

◯ No

12a) Does your country have the following evacuation infrastructure? (select all that apply and detail specific areas). Please use the scroll bar below to view the entire table.

	No	Yes
Evacuation shelter	◯	◯

(if yes, specify which regions, cities and an approximate percentage of risk prone areas covered)

	No	Yes
Vertical evacuation structure	◯	◯

(if yes, specify which regions, cities and an approximate percentage of risk prone areas covered)

	No	Yes
Natural or artificial hill for vertical evacuation	◯	◯

(if yes, specify which regions, cities and an approximate percentage of risk prone areas covered)

	No	Yes
Evacuation signage	◯	◯

(if yes, specify which regions, cities and an approximate percentage of risk prone areas covered)

	No	Yes
Other (please specify)	◯	◯

(if yes, specify which regions, cities and an approximate percentage of risk prone areas covered)

12b) Is your evacuation infrastructure integrated in the evacuation plan?

◯ Yes   ◯ No

2024 UNESCO-IOC ICG/IOTWMS National Report on Capacity Assessment of Tsunami Preparedness

PART IV: Tsunami Exercises

12c) Are tsunami exercises incorporated within national policies and guidelines? (select all that apply)

☐ National policy

☐ National guidelines

12d) At what levels were the exercises conducted during the inter-sessional (between ICG meetings) period? (select all that apply)

☐ National level   ☐ Village level

☐ Regional level   ☐ Community/Neighbourhood level

☐ City level   ☐ School level

☐ Other (please specify)

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[                                                                ]
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12e) What kind of tsunami exercise activities have been undertaken in your country and how many times during the inter-sessional (between ICG Meetings) period?

	No	Yes
Organisation table top exercise	○	○
If yes, how many times?		
Inter-organisation table top exercise	○	○
If yes, how many times?		
National tsunami drill/exercise	○	○
If yes, how many times?		
Indian Ocean Wave exercise	○	○
If yes, how many times?		
Local tsunami drill/exercise	○	○
If yes, how many times?		
Other (please specify)	○	○
If yes, how many times?		

PART IV: Public Awareness

13a) Who is responsible for tsunami public awareness programmes in your country?

◯ National Disaster Management Office   ◯ Provincial Disaster Management Office

◯ National Tsunami Warning Centre   ◯ Local Disaster Management Office

◯ Other (please specify)

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[                                                              ]
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13b) What tsunami related education and awareness materials do you have? (select all that apply)

☐ Leaflets or flyers   ☐ Video, or other visual or oral media

☐ Posters   ☐ Indigenous knowledge, folklore, or oral history accounts or compilations

☐ Booklets

☐ Information boards   ☐ Teaching kits on tsunamis

☐ Tsunami Signage   ☐ School curricula

                                        ☐ Public Evacuation Map

☐ Other (please specify)

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[                                                              ]
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13c) Would your country be willing to share these education and awareness materials with the Indian Ocean Tsunami Information Centre (IOTIC) and other countries?

◯ Yes   ◯ No

13d) Do you undertake the following tsunami awareness activities?

	No	Yes
World Tsunami Awareness Day	○	○
If yes, how many times? [ ]		
Global Disaster Risk Reduction day	○	○
If yes, how many times? [ ]		
Public tsunami preparedness outreach	○	○
If yes, how many times? [ ]		
School and/or children awareness	○	○
If yes, how many times? [ ]		
Exhibitions	○	○
If yes, how many times? [ ]		
Competitions or other ways of highlighting tsunami safety	○	○
If yes, how many times? [ ]		
Tsunami Exercise	○	○
If yes, how many times? [ ]		
Other (Please specify)	○	○
If yes, how many times? [ ]		

13e) Use the boxes below to indicate any areas in which you require support from the IOTIC to develop or enhance public awareness in your country. If you do not require support, please leave blank.

☐ Provision of general tsunami awareness materials

☐ Development of tsunami awareness programmes, activities or campaigns

☐ Customisation of general materials to country or community

☐ Participation/support by international agencies or experts to your country's activities

☐ Other (please specify)

[   ]

13f) Can your country offer support to other Member States to develop or enhance public awareness in their country?

( ) No

( ) Yes (please specify what type of support)

[   ]

PART V: UNESCO-IOC Tsunami Ready Recognition Programme (TRRP)

14a) Does your country have an interest to participate in the UNESCO-IOC TRRP?

( ) Yes, we are already participating

( ) No, but there are plans to do so in the near future (please elaborate in the additional comments)

( ) No, and there are no plans to do so in the near future (please elaborate in the additional comments)

Additional comments

[   ]

14b) Aside from UNESCO-IOC TRRP, is your country currently implementing any other tsunami resilience and preparedness related initiatives or programmes?

( ) No

( ) Yes (please describe the initiatives or programmes below)

Other tsunami resilience and preparedness related initiatives or programmes being implemented in your country

[   ]

14c) What number of villages, cities/districts and provinces/state levels in your country are at risk to tsunami?

Village   [   ]

City / District   [   ]

Province / State   [   ]

14d) Does your country have a National Tsunami Ready Board (NTRB)

The National Tsunami Ready Board (NTRB) is responsible for guiding the community on the steps for Tsunami Ready recognition and for the review and approval of the community's Tsunami Ready application. It consists of designated representatives of the National Emergency Management Agency or Disaster Mangement Office, NTWC, TNC, the scientific community, and other invited guests.

○ Yes

○ No (if no, is there another existing coordination mechanism that can fulfil this role of NTRB? please specify below)

Please specify any existing coordination mechanisms that can fulfil this role of NTRB

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14e) Which institution(s) should be involved in the implementation of TRRP or similar national initiative? (please use a comma between the name of the institutions)

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14f) Are any communities (for example, villages, cities, districts, provinces or states) in your country currently working towards implementing or interested in implementing the UNESCO-IOC TRRP or similar national initiative?

○ No

○ Yes (please list the names of the communities below)

Names of the communities working towards or interested in working towards TRRP

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14g) Have any communities in your country achieved recognition through UNESCO-IOC TRRP or similar national initiative?

○ No

○ Yes (please list the names of the communities below)

Names of the communities that have achieved TRRP

[text box]

15a) Is there national capacity to develop tsunami hazard maps?

○ Yes, it can be easily done through mobilising national experts and funding

○ Yes, it can be partially done through mobilising national experts and funding, but also needs some international technical expertise

○ No, there is a strong need for technical support organised through IOTIC and/or ICG/IOTWMS activities

15b) Is there national capacity to train the community on identifying and estimating the number of people that live in the tsunami hazard zone?

○ Yes, it can be easily done through mobilising national experts and funding

○ Yes, it can be partially done through mobilising national experts and funding, but also needs some international technical expertise

○ No, there is a strong need for technical support organised through IOTIC and/or ICG/IOTWMS activities

15c) Is there national capacity to train the community on the inventory of available economic, instrastructural, political, and social resources to reduce tsunami risk at the community level?

○ Yes, it can be easily done through mobilising national experts and funding

○ Yes, it can be partially done through mobilising national experts and funding, but also needs some international technical expertise

○ No, there is a strong need for technical support organised through IOTIC and/or ICG/IOTWMS activities

15d) Is there national capacity to work with the community to develop tsunami evacuation maps, plans and procedures at the community level?

○ Yes, it can be easily done through mobilising national experts and funding

○ Yes, it can be partially done through mobilising national experts and funding, but also needs some international technical expertise

○ No, there is a strong need for technical support organised through IOTIC and/or ICG/IOTWMS activities

15e) Is there national capacity to work with the community to develop a public display of tsunami information?

○ Yes, it can be easily done through mobilising national experts and funding

○ Yes, it can be partially done through mobilising national experts and funding, but also needs some international technical expertise

○ No, there is a strong need for technical support organised through IOTIC and/or ICG/IOTWMS activities

15f) Is there national capacity to work with the community to develop local context outreach and public education materials?

○ Yes, it can be easily done through mobilising national experts and funding

○ Yes, it can be partially done through mobilising national experts and funding, but also needs some international technical expertise

○ No, there is a strong need for technical support organised through IOTIC and/or ICG/IOTWMS activities

15g) Is there national capacity to train and build capacity of community to be able to organise and implement outreach and education activity?

○ Yes, it can be easily done through mobilising national experts and funding

○ Yes, it can be partially done through mobilising national experts and funding, but also needs some international technical expertise

○ No, there is a strong need for technical support organised through IOTIC and/or ICG/IOTWMS activities

15h) Is there national capacity to train and build capacity of community to be able to organise and implement tsunami exercises?

○ Yes, it can be easily done through mobilising national experts and funding

○ Yes, it can be partially done through mobilising national experts and funding, but also needs some international technical expertise

○ No, there is a strong need for technical support organised through IOTIC and/or ICG/IOTWMS activities

15i) Is there national capacity to train and build capacity of communities to be able to develop their community Emergency Operation Plan?

○ Yes, it can be easily done through mobilising national experts and funding

○ Yes, it can be partially done through mobilising national experts and funding, but also needs some international technical expertise

○ No, there is a strong need for technical support organised through IOTIC and/or ICG/IOTWMS activities

15j) Is there national capacity to train and build capacity of communities to manage 24/7 tsunami emergency response operation?

○ Yes, it can be easily done through mobilising national experts and funding

○ Yes, it can be partially done through mobilising national experts and funding, but also needs some international technical expertise

○ No, there is a strong need for technical support organised through IOTIC and/or ICG/IOTWMS activities

15k) Is there national capacity to train and work with the communities to develop mechanisms (means and procedures) to receive 24/7 warning?

○ Yes, it can be easily done through mobilising national experts and funding

○ Yes, it can be partially done through mobilising national experts and funding, but also needs some international technical expertise

○ No, there is a strong need for technical support organised through IOTIC and/or ICG/IOTWMS activities

15l) Is there national capacity to train and work with the communities to develop mechanisms (means and procedures) to disseminate 24/7 warning to the community?

○ Yes, it can be easily done through mobilising national experts and funding

○ Yes, it can be partially done through mobilising national experts and funding, but also needs some international technical expertise

○ No, there is a strong need for technical support organised through IOTIC and/or ICG/IOTWMS activities

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2024 UNESCO-IOC ICG/IOTWMS National Report on Capacity Assessment of Tsunami Preparedness

PART V: UNESCO-IOC Tsunami Ready Recognition Programme (TRRP)

15m) Which of the following challenges inhibit the implementation of TRRP or similar national initiatives in your country? (select all that apply)

☐ Tsunami is not a high priority hazard in country

☐ Limited resources (for example, champions, leadership, scientific support, social support)

☐ Limited support of government (for example, policy, financial)

☐ Limited awareness

☐ Limited activity

☐ Lack of community interest

☐ No community group or engagement in disaster risk reduction

☐ Other (please specify)

[   ]

☐ None of the above

2024 UNESCO-IOC ICG/IOTWMS National Report on Capacity Assessment of Tsunami Preparedness
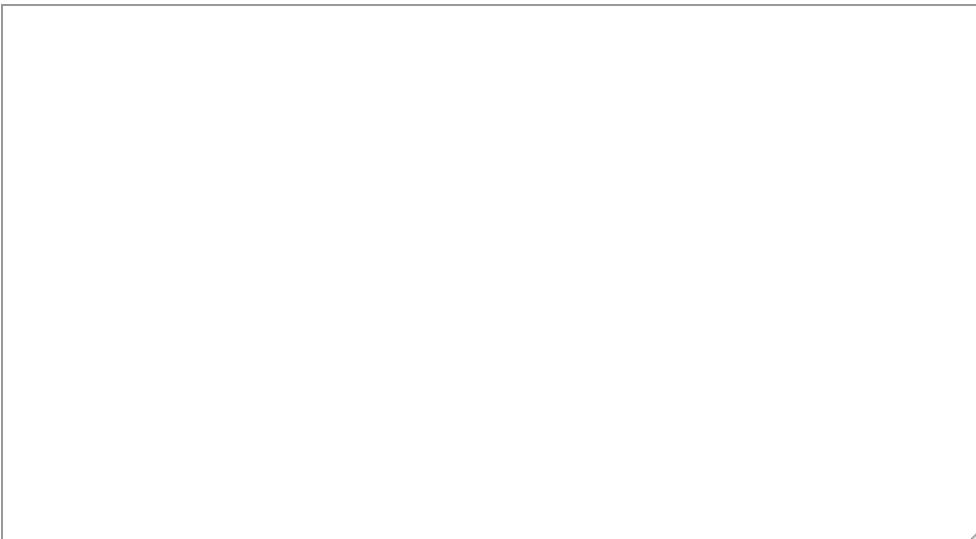
PART VI: Narrative

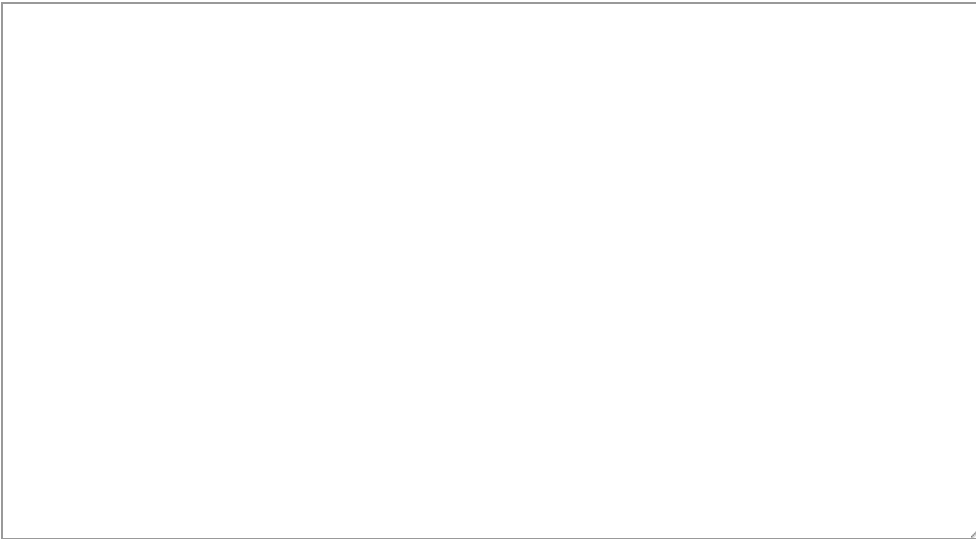**Stakeholder inputs required: Tsunami National Contact**

16) Please briefly describe any innovations or modifications to national tsunami warning and mitigation procedures or operations since the last reassessment. For example, this might include tsunami related research projects, implementation of new seismic and/or sea level monitoring technologies, tsunami mitigation activities and best practices (especially in preparedness and emergency management), as well as public education programmes or other measures taken to heighten awareness of the tsunami hazard and risk.

17) Please provide a brief summary of plans for future tsunami warning and mitigation system improvements

18) Please list areas where your country would like support for targeted capacity development.

[text area   ]

Upload Documents

If you would like to upload any documents to support your National Report (Standard Operating Procedures, Guidelines, Plans, etc.), please use the link below to navigate to the desired folder and select the file.

[Choose File]   [Choose File]   No file chosen