

**INTERGOVERNMENTAL OCEANOGRAPHIC
COMMISSION of UNESCO**

**MEETING OF THE INTER-ICG TASK TEAM ON DISASTER MANAGEMENT AND
PREPAREDNESS**

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**WORKING DOCUMENT ON THE
UNESCO/IOC Tsunami Ready Recognition Programme (UNESCO Tsunami Ready)**

**Agenda Item 5. TSUNAMI READY PROGRAMME – PROPOSAL FOR ENDORSEMENT
BY IOC**

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The Tsunami Ready Recognition Programme is an international community-based recognition programme developed by UNESCO/IOC. It aims to build resilient communities through awareness and preparedness strategies that will protect life, livelihoods and property from tsunamis in different regions.

In June 2021, the IOC Assembly through [IOC Decision A-31/3.4.1 - Warning Mitigation Systems for Ocean Hazards](#) approved the establishment of the IOC Ocean Decade Tsunami Programme, with the aim of making 100% of communities at risk of tsunami prepared for and resilient to tsunamis by 2030 through the implementation of the UNESCO/IOC Tsunami Ready Recognition Programme and other initiatives. The implementation of the Tsunami Ready Recognition Programme will be a key contribution to achieving the societal outcome 'A Safe Ocean' of the Ocean Decade.

This document presents the main features of a UNESCO/IOC Tsunami Ready Programme. It is presented to the TT DMP for discussion and approval for recommendation to the TOWS-WG-XV, for the establishment of the programme. A draft recommendation is available under page 8

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UNESCO/IOC Tsunami Ready Recognition Programme (UNESCO Tsunami Ready)

1. Aim

The Tsunami Ready Recognition Programme is a voluntary international community-based recognition programme developed by UNESCO/IOC. It aims to build resilient communities through awareness and preparedness strategies that will protect life, livelihoods and property from tsunamis in different regions.

In June 2021, the IOC Assembly approved the establishment of the IOC Ocean Decade Tsunami Programme, with the aim of making 100% of communities at risk of tsunami prepared for and resilient to tsunamis by 2030 through the implementation of the UNESCO/IOC Tsunami Ready Recognition Programme and other initiatives. The implementation of the Tsunami Ready Recognition Programme will be a key contribution to achieving the societal outcome ‘A Safe Ocean’ of the Ocean Decade.

2. Planning and resources

The Tsunami Ready Recognition Programme is implemented as a voluntary, performance-based community recognition programme. It promotes the concept of readiness through actions to meet 12 key indicators that serve as the standard for reducing tsunami risk at the community level. For a community to be recognized by UNESCO IOC as Tsunami Ready, all 12 indicators must be met.

The UNESCO IOC Tsunami Programme, which coordinates the global tsunami warning and mitigation system, oversees the administration of the Tsunami Ready Recognition Programme, through the IOC’s four Intergovernmental Coordination Groups (ICGs), corresponding to the regions Pacific, Caribbean and Adjacent Regions, Indian Ocean, and North-eastern Atlantic the Mediterranean and connected seas, with its Tsunami Information Centres (TICs) serving as the focal point for each ICG region.

The ICGs provide mechanisms for the sharing of experience and expertise, and for ensuring the Tsunami Ready implementation consistency across the ICG region. The ICGs, comprised of Member States with coastlines vulnerable to tsunamis to varying degrees, meet regularly to coordinate activities, and among other objectives, to promote implementation of relevant capacity-building, resilience building and emergency management, including high levels of public awareness.

The IOC Tsunami Unit will be the official holder of the documentation supporting the Tsunami Ready recognition.

The Tsunami Ready Recognition Programme web site (www.tsunamiready.org) serves as the public information site providing information on the Programme and recognized Tsunami Ready communities.

The Tsunami Ready Recognition Programme web viewer (<https://tsunamireadyviewer.ioc-tsunami.org/>) provides up-to-date metadata information on recognized communities, and those seeking recognition.

The Tsunami Ready Recognition Programme is implemented by Member States. Each Member State is responsible for administering its national programme. Its National Tsunami Ready Board (NTRB) and Tsunami Ready Local Committee (TRLIC) provide guidance to the community during the recognition process. The NTRB is responsible for reviewing and approving the Tsunami Ready Application. In the case of small countries and territories, the recognition may be made at the National/Territorial level, in this case, a Regional Tsunami Ready Board (RTRB) would be responsible for reviewing and approving recognition

IOC Manual and Guides 74 (2022) *Standard Guidelines for the Tsunami Ready Recognition Programme (in press)* serves as the primary implementing reference. The publication also includes information on the resources needed, tools, references, and videos, as well as training materials. The users of the Tsunami Ready Guidelines are local authorities of coastal communities at risk of tsunami impact, as well as representatives of Emergency Management Agencies or Disaster Management Offices and Disaster Risk Management experts working with coastal communities facing risk of tsunami impact.

The Guidelines list strategies that must be implemented for a community to be recognized as Tsunami Ready. The strategies are defined by 12 key indicators that serve as the standard for reducing tsunami risk at the community level. For a community to be recognized by UNESCO IOC as Tsunami Ready, all 12 indicators must be met.

The 12 indicators can be grouped into three categories of essential actions: Assessment, Preparedness and Response (Table 1).

TSUNAMI READY INDICATORS	
I	ASSESSMENT (ASSESS)
1	ASSESS-1. Tsunami hazard zones are mapped and designated.
2	ASSESS-2. The number of people at risk in the tsunami hazard zone is estimated.
3	ASSESS-3. Economic, infrastructural, political, and social resources are identified.
II	PREPAREDNESS (PREP)
4	PREP-1. Easily understood tsunami evacuation maps are approved.
5	PREP-2. Tsunami information including signage is publicly displayed.
6	PREP-3. Outreach and public awareness and education resources are available and distributed.
7	PREP-4. Outreach or educational activities are held at least 3 times a year.
8	PREP-5: A community tsunami exercise is conducted at least every two years.
III	RESPONSE (RESP)
9	RESP-1. A community tsunami emergency response plan is approved.

10	RESP-2. The capacity to manage emergency response operations during a tsunami is in place.
11	RESP-3. Redundant and reliable means to timely receive 24-hour official tsunami alerts are in place.
12	RESP-4. Redundant and reliable means to timely disseminate 24-hour official tsunami alerts to the public are in place.

Table 1. List of Tsunami Ready Indicators organized within the categories of Assessment, Preparedness and Response.

As a community performance-based programme, the Tsunami Ready Recognition Programme promotes the active participation of local actors, in coordination with local and national authorities, in order to strengthen local capacities to cope with the tsunami risk. As a result of the work done to meet the 12 indicators, communities will see their coping mechanisms strengthened to deal with tsunami events and to enable an initial response prior to any external assistance.

Those capacities involve both institutional strengthening as well as community organization, to collectively address the tsunami risk by implementing Assessment, Preparedness and Response activities.

Tsunami Ready recognition is not a one-time achievement; it requires ongoing efforts in preparedness measures such as drills and exercises as well as public awareness. The Tsunami Ready recognition should be renewed every four years.

It is important to consider that Tsunami Ready recognition does not imply approval or confirmation that a community can or will perform at a certain level in case of a tsunami. Tsunami Ready recognition does not mean that a community is tsunami proof; it is rather an acknowledgment and recognition of the measures adopted by the community to cope with their tsunami risk.

3. Promotion

The IOC Decision A-31/3.4.1 - Warning Mitigation Systems for Ocean Hazards also approved the establishment of a Coalition for Tsunami Ready in collaboration with other critical stakeholders across the UN structure as well as national civil protection agencies.

The goal of the Coalition is to “Contribute to increasing the number of Tsunami Ready communities as part of the Ocean Decade” through the following objectives:

1. Raising the profile of UNESCO Tsunami Ready in collaboration with critical stakeholders across the UN system, interested regional organizations, national disaster management agencies and the public
2. Increasing funding resources for the implementation of Tsunami Ready
3. Advising the IOC TOWS-WG, TT-DMP, and TT-TWO on the implementation of UNESCO Tsunami Ready, including on

- Flexibility with regards to accomplishing the indicators to allow for circumstances where formal bureaucratic frameworks/requirements may pose barriers
- Consideration of unique regional and/or local circumstances
- Recognition of similar standards already in place in some countries

4. Coordination

At the international level, coordination is enabled through the IOC ICGs, each headed by a IOC ICG Technical Secretary, with active Member States, and the ICG's TICs.

For each community, relevant local authorities, representatives of Emergency Management Agencies or Disaster Management Offices, first responders, other government agencies, as well as voluntary and/or community organizations, NGOs, universities, schools, private business and tourism sector if applicable, will be working together to meet the Tsunami Ready Recognition Programme indicators. At the national level, the primary agencies would be the National Emergency Management Agency or Disaster Management Office, National Tsunami Warning Centre (NTWC), National Tsunami Warning Focal Point (TWFP) Tsunami National Contact (TNC), and the scientific community.

The NTRB, RTRB and TRLC provide the leadership for the implementations and serve as the governance structure for recognizing communities. Activities, actions, and products that are intended to meet the Programme goals are coordinated and championed through the TRLC and NTRB..

5. Scientific and technical advice and guidance

IOC Manual and Guides are available to support the implementation.

Topics include inundation modelling and mapping, evacuation mapping, response and evacuation planning, and the conduct of tsunami exercises, which are also supported by online through the OTGA and/or in-person training through the ITIC.

- **[IOC Manuals and Guides 74](#): Standard Guidelines for the Tsunami Ready Recognition Programme (in press)**. This guide provides: (i) the framework and the background information of the Tsunami Ready programme, (ii) key issues concerning the Tsunami Ready recognition programme and its methodological references, (iii) guidelines and their respective actions to achieve the Tsunami Ready recognition, as well as the templates for requesting recognition, and finally (iv) the glossary of terms and a list of available tools and references to facilitate its implementation.
- **[IOC Manuals and Guides 49](#): Tsunami preparedness: information guide for disaster planners (UNESCO, 2008)**. This guide provides a general plan of action and basic framework for dealing with the unique hazards resulting from tsunamis.

This guide outlines the construction and maintenance of defensive structures and discusses how current disaster prevention and emergency response planning can be improved by using research on past tsunamis.

- **[IOC Manuals and Guides 58](#): How to plan, conduct and evaluate UNESCO/IOC tsunami wave exercises (UNESCO, 2012).** The purpose of this Guideline is to provide a set of generic and consistent advice on exercise development, management and evaluation to both exercise coordinators and exercise players (tsunami service providers and warning centres), as well as disaster management agencies, that can be used by all Intergovernmental Coordination Groups (ICGs). This Guideline provides a step-by-step approach for conducting national to local tsunami exercises in the context of the UNESCO/IOC-coordinated Tsunami Wave exercises..
- **[IOC Manuals and Guides 76](#): Plans and procedures for tsunami warning and emergency management (UNESCO, 2017).** This manual seeks to assist countries participating in the IOC-coordinated regional Tsunami Warning and Mitigation Systems in strengthening their existing tsunami warning and emergency responses through the development of Tsunami Warning and Emergency Response Plans and Standard Operating Procedures (SOPs). It relates to tsunami warning authorities (referred to as National Tsunami Warning Centres -NTWCs) and to tsunami emergency management authorities (referred to as Emergency Management Agencies-EMAs), promoting alignment, interoperability and consistency among all stakeholders in the end-to-end tsunami warning system.
- **[IOC Manuals and Guides 82](#): Preparing for Community Tsunami Evacuations: from inundation to evacuation maps, response plans and exercises (UNESCO, 2020),** describes the steps required to produce reliable and practical community-level tsunami evacuation maps, and covers all of the Tsunami Ready Recognition Programme indicators.
- **[IOC Manuals and Guides 86](#): Multi-Annual Community Tsunami Exercise Programme Guidelines for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (UNESCO, 2022).** This guide provides guidance on how to plan, conduct, and evaluate a multiannual local tsunami exercise programme. It has been designed by Member States of the Intergovernmental Oceanographic Commission for the use of their coastal communities who should participate in multiannual exercises. The guide is divided into four sections which provide a range of practical advice and templates for community stakeholders and in-country exercise developers. It highlights that a progressive and long-term approach is needed for tsunami exercises.

Training is available to support the implementation.

- OceanTeacher Global Academy (Online and Hybrid Training)

[OceanTeacher Global Academy](#) (OTGA) provides a comprehensive web-based training platform that supports classroom training (face-to-face), blended training (combining

classroom and distance learning), and online (distance) learning. For the Tsunami Ready Recognition Programme, the OTGA provides a standard set of training courses to assist countries and communities in implementing Tsunami Ready.

- **ITIC Training Programme (In-person Training)**

The ITIC with the Caribbean Tsunami Information Centre (CTIC), Indian Ocean Tsunami Information Centre (IOTIC), Northeastern and Mediterranean Seas Tsunami Information Centre (NEAMTIC), assists countries in establishing tsunami warning systems and improving tsunami preparedness and, for decades, has annually conducted a training programme.

6. Standard setting and nomenclature

The Tsunami Ready Recognition Programme is fully consistent with international disaster risk reduction strategies, frameworks, and initiatives, which include:

- Disaster Risk Management Approach
- Sendai Framework for Disaster Risk Reduction (SFDRR) 2015–2030, including **Priority 1: Understanding disaster risk and Priority 4: Enhancing disaster preparedness for effective response** and to “Build Back Better” in recovery, rehabilitation and reconstruction, as well as to the seven assessment targets of the SFDRR
- Sustainable Development Goals, **Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable**. In particular Target 11.b: By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015– 2030, holistic disaster risk management at all levels
- UN Decade of Ocean Science for Sustainable Development (2021-2030)
- World Tsunami Awareness Day (November 5)

IOC Manual and Guides 74 (2022) *Standard Guidelines for the Tsunami Ready Recognition Programme (in press)* provides the standards consisting of 12 indicators in Assessment, Preparedness, and Response, that serves as a global strategy and measure of community readiness for the next tsunami.

The UNDRR provides the global platform for disaster risk reduction. Other UN agencies that directly work with the IOC Tsunami Programme for services and projects include the WMO, CTBTO, ITU, IHO, UNDP, UNESCAP and the UNESCO International Geoscience Programme (IGCP). The ICSU World Data Service Marine Geophysics provides marine databases such as digital elevation models, tsunami marigrams, and historical hazard databases, while the IUGG Joint Tsunami Commission provides expertise on tsunami analysis methods, terminology, tsunami risk assessment, and science-based tsunami warning. Regional

organizations in disaster management, ocean policy and sciences, such as ASEAN (IO, Africa), CDEMA, CEPREDENAC, CPPS, SPC, SPREP, EMIZA support Member States in building capacity in tsunami warning and tsunami disaster management.

7. Cooperation

The IOC Tsunami Programme cooperates and coordinates with other IOC bodies, including through the TOWS-WG and its TT-DMP on their advisory role to IOC Governing Bodies for global guidance, the ICGs for regional tsunami coordination and advocacy, GOOS and Group of Experts for sea level monitoring, IOC Sub-Commission for the Western Pacific (WESTPAC), IOC Sub-Commission for Africa and Adjacent Island States (IOCAFRICA), IOC Sub-Commission for the Caribbean and Adjacent Regions (IOCARIBE), Group of Experts for Capacity Development, among others.

Additional organizations are listed above under **Standard Setting and Nomenclature**.

8. Evaluation

The Tsunami Ready Recognition Programme shall be evaluated for its impact and effectiveness every 4 years.

9. Reporting

The Tsunami Ready Recognition Programme shall report annually on its implementation progress, as part of the remit of the IOC Tsunami Unit, through regular reporting mechanisms of the ICGs and TOWS-WG.

10. RECOMMENDATION

Recalling the first initiative for the Caribbean and the international community through the NWS and UNESCO/IOC TsunamiReady® pilot which recognized Anguilla as ‘TsunamiReady®’ in 2011; recalling further the approval of Tsunami Ready Guidelines by the ICG/CARIBE-EWS in 2015 at its 10th Session,

Recalling TOWS Recommendations (TOWS-WG-IX, 2016; TOWS-WG-X, 2017) calling on the ICGs and Member States to consider piloting the Caribbean guidelines with a view toward developing a harmonized consistent global guideline,

Having taken into account the feedback provided from piloting Tsunami Ready communities in the Caribbean, Indian, and Pacific Oceans to publish IOC Manual and Guides 74 (2022) Standard Guidelines for the Tsunami Ready Recognition Programme (in press),

Appreciating the creation of TsunamiReady Viewer, Tsunami Ready web site, Tsunami Ready Board Game and Information / Communication tools, development of online training through the Ocean Teacher Global Academy, as well as IOC Manual and Guides (49, 58, 74, 76, 82, 86) and technical documents to support tsunami inundation modeling and mapping, evacuation mapping, emergency response and evacuation planning, exercising, and available

of awareness-raising materials developed and distributed through the IOC Tsunami Information Centres (TICs),

Appreciating the collaborative efforts with the UNDRR to promote awareness through World Tsunami Awareness Day every November 5, and the creation of many short videos showing communities and countries joining the Tsunami Ready global community in 2020 and 2021,

Recommends the establishment of a UNESCO/IOC Tsunami Ready Recognition Programme, as described by IOC TOWS-WG Task Team DMP/5 Working document on the Tsunami Ready Recognition Programme of the UNESCO/IOC.

Recommends further the addition of the task to facilitate the UNESCO/IOC Tsunami Ready Recognition Programme to the Terms of Reference of each ICG Tsunami Information Centre (TIC)

Annex 1:

List of acronyms

ASEAN	Association of Southeast Asian Nations
CDEMA	Caribbean Disaster Emergency Management Agency
CEPREDENAC	Coordination Center for the Prevention of Natural Disasters in Central America
CPPS	Permanent Commission of the South East Pacific
CTBTO	Comprehensive Nuclear-Test-Ban Treaty Organization
CTIC	Caribbean Tsunami Information Centre
EMIZA	État-major Interministériel de la Zone Antilles
GOOS	UNESCO/IOC Global Ocean Observing System
ICG	Intergovernmental Coordination Group
ICG/CARIBE-EWS	Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions
ICSU	International Council of Science
IGCP	UNESCO International Geoscience Programme
IHO	International Hydrographic Organization
IOC	Intergovernmental Oceanographic Commission
IOCAFRICA	Intergovernmental Oceanographic Sub-Commission for Africa and Adjacent Island States
IOCARIBE	IOC Sub-Commission for the Caribbean and Adjacent Regions
IOTIC	Indian Ocean Tsunami Information Centre
ITIC	International Tsunami Information Center
ITU	International Telecommunication Union
IUGG	International Union of Geodesy and Geophysics
NEAMTIC	Tsunami Information Centre for the North-eastern Atlantic, the Mediterranean and Connected Seas
NGO	non-governmental organisation
NTWC	National Tsunami Warning Centre
NTRB	National Tsunami Ready Board
OTGA	Ocean Teacher Global Academy
RTRB	Regional Tsunami Ready Board
SFDRR	Sendai Framework for Disaster Risk Reduction
SPC	Secretariat of the Pacific Community

SPREP	Secretariat of the Pacific Regional Environment Programme
TIC	Tsunami Information Centres
TNC	Tsunami National Contact
TOWS-WG	Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems
TRLC	Tsunami Ready Local Committee
TT DMP	Task Team on Disaster Management and Preparedness
TT TWO	Task Team on Tsunami Watch Operations
TWFP	Tsunami Warning Focal Point
UN	United Nations
UNDP	United Nations Development Programme
UNDRR	United Nations Office for Disaster Risk Reduction
UNESCAP	UN Economic and Social Commission for Asia and the Pacific
UNESCO	United Nations Educational, Scientific and Cultural Organization
WESTPAC	IOC Sub-Commission for the Western Pacific
WMO	World Meteorological Organization