



Intergovernmental  
Oceanographic  
Commission



# ICG/PTWS Tsunami Ready Recognition Pilot Programme

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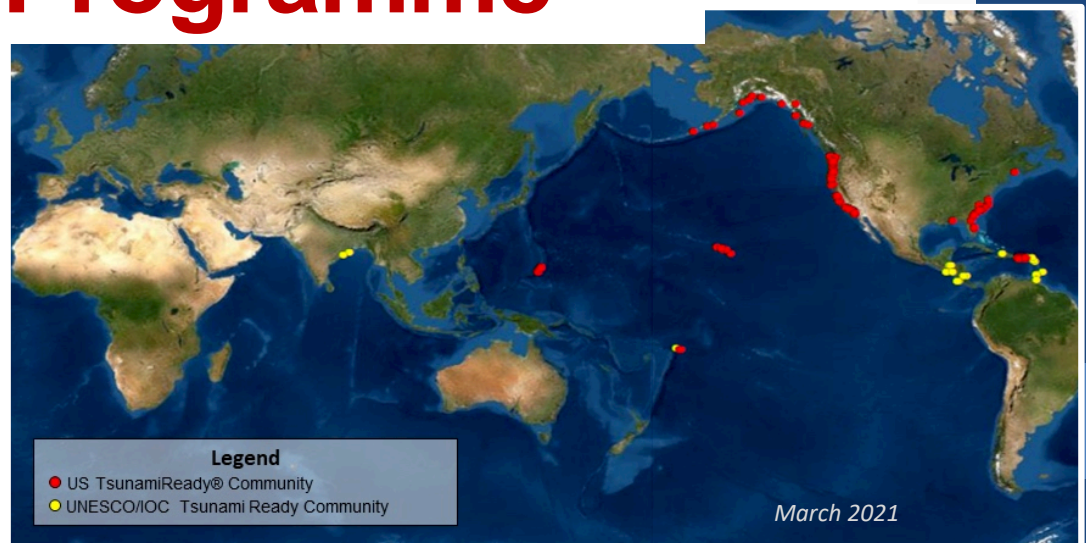
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Sendai Framework  
for Disaster Risk Reduction  
2015 - 2030

## Goals

*Adopt and implement national and local disaster risk reduction strategies and plans...aimed at preventing... [reducing] existing risk...strengthening... resilience*

- Prevent new and **reduce existing disaster risk through the implementation of integrated and inclusive** economic, structural, legal, social, health, cultural, educational, environmental, technological, political and institutional **measures that prevent and reduce hazard exposure and vulnerability to disaster, increase preparedness for response** and recovery, and thus strengthen resilience
- The pursuance of this goal requires the **enhancement of the implementation capacity and capability** of developing countries, in particular the least developed countries, small island developing States, landlocked developing countries and African countries, as well as middle-income countries facing specific challenges, including the mobilization of support through international cooperation for the provision of means of implementation in accordance with their national priorities.

# TsunamiReady<sup>®</sup>, Tsunami Ready

## □ **US TsunamiReady<sup>®</sup>** (2001, US NWS, NTHMP)



- Guidelines for standard level of capability to mitigate, prepare for, and respond to tsunamis.
- Promote community preparedness – minimize risk through better risk assessment, planning, education, warning communications
- 16 states, territories, 195 recognized Communities, 14 Supporters (1 Aug 2019). Local, tribal govt, or facility with authority to implement

## □ **UNESCO IOC Tsunami Ready** (2016, UNESCO IOC TOWS-IX)



- Modelled after US TsunamiReady<sup>®</sup>
- Tsunami Ready Programme Guidelines (community performance-based recognition, not certification) available for use / adaption by ICG regions (e.g., Pacific) (*adopted by ICG/CARIBE-EWS-X, May 2015*)
- Global priority to increase focus on awareness in communities and among authorities through communication, exercises, training, information, preparedness and recognition programmes

# Tsunami Ready – History, Progress



- ❑ **2001** - US TsunamiReady (guidelines update 2016)
- ❑ **2011, 2014** - ICG/CARIBE-EWS Pilot US TsunamiReady in Anguilla, BVI
- ❑ **2015** - ICG/CARIBE-EWS approve Caribbean TR guidelines
- ❑ **2016** - IOC TOWS WG noted CARIBE approval, ICG/PTWS Steering Comm asks WG 3 Disaster Mgmt & Preparedness to pilot
- ❑ **2017** - TOWS WG: IOC Assembly instructs ICGs pilot - harmonized global guidelines; TICs facilitate (ITIC, IOTIC, CTIC, NEAMTIC)
- ❑ **2015 - 2017** - Development of Tsunami Evacuation Maps, Plans, and Procedures (TEMPP, IOC MG 82, 2019) training to support TR
- ❑ **2017+** - TEMPP & TR training: IOTWMS (3 2-wk regl, 2017, 2018), PTWS Pac Isl (2019)
- ❑ **2020+ - Piloted:** 11 Carib / Pac / IO countries (Anguilla, Saint Kitts and Nevis, BVI, Grenada, Haiti, Honduras, Costa Rica, Samoa, El Salvador, Nicaragua, India).  
**In progress:** 19 Carib / Pac / IO / NEAM (Antigua and Barbuda, Barbados, Belize, Dominican Republic, SVG, Trinidad & Tobago, Guatemala, Mexico, Panama, Chile, Fiji, Samoa, Solomons, Tonga, Vanuatu, Oman, France, Italy, Spain). **Planned:** 25+ globally

# UNESCO IOC Tsunami Ready

UNESCO IOC TSUNAMI READY GUIDELINES	DONE
<b>MITIGATION (MIT)</b>	
MIT-1. Have designated & mapped tsunami hazard zones	X
MIT-2. Have a public display of tsunami information	X
<b>PREPAREDNESS (PREP)</b>	
PREP-1. Have a tsunami evacuation map developed in collaboration with communities and local authorities	X
PREP-2. Develop and distribute outreach and public education materials	X
PREP-3. Hold at least three outreach or educational activities annually	X
PREP-4: Conduct an annual tsunami community exercise	X
<b>RESPONSE (RESP)</b>	
RESP-1. Address tsunami hazards in the community's emergency operations / response plan	X
RESP-2. Have the capacity to manage emergency response operations during a tsunami	X
RESP-3. Have redundant and reliable means to receive official tsunami warnings 24x7	X
RESP-4. Have redundant and reliable means to disseminate official tsunami warnings and information to the public 24x7	X

- **STRATEGY:**  
Be Aware,  
Be Prepared



- **FRAMEWORK:**  
Develop harmonized global guidelines UNESCO IOC Tsunami Ready (2017)

Performance-based  
Community Recognition

- **ACTION:**  
National programs  
empower Communities
- **GLOBAL MEASURE**



# Piloting UNESCO IOC Tsunami Ready - Online Resources

- ❑ [www.tsunamiready.org](http://www.tsunamiready.org)
- ❑ Caribbean, Indian Ocean, Pacific pilot summaries
- ❑ Background  
UNESCO IOC Tsunami Ready  
US TsunamiReady®
- ❑ UNESCO IOC TR Piloting
  - Flyers
  - Guidelines
  - Application
  - Flow Chart and Steps
  - Stakeholders
  - Roles and Responsibilities
  - FAQ





# Tsunami Ready Flyer - PTWS

Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System (ICG/PTWS)

**Tsunami Ready Pilot** [www.tsunamiready.org](http://www.tsunamiready.org)

Community Performance-based Tsunami Recognition Programme

Coastal communities can be better prepared for tsunamis through planning, education and awareness, and the strengthening of their local emergency actions. Recent tsunamis in Japan (2011) and Indonesia (2018) attest to the importance of readiness - when a tsunami arrives and communities are ready, lives are saved and fewer die.

Under the UNESCO Intergovernmental Oceanographic Commission (IOC), and facilitated by its Tsunami Information Centres, Tsunami Ready is an international performance-based community recognition pilot. In 2015, the Intergovernmental Coordination Group for Tsunamis and other Coastal Hazards for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS) approved 10 guidelines for Tsunami Ready recognition. In 2017, the IOC, on the recommendation of its Working Group on Tsunamis and Other Hazards Related to Sea-Level Warning and Mitigation Systems (TOWS-WG-X), instructed Member States to consider piloting the Tsunami Ready guidelines and provide feedback on their applicability with a view toward developing a set of harmonized consistent global guidelines.



To date, Tsunami Ready pilots have been conducted in 4 Pacific countries (Honduras, Costa Rica, and Samoa) and four Caribbean countries. Altogether, 25 more countries around the world are planning pilots in the next 2 years.

## Tsunami Ready Guidelines

### Mitigation

**Mit-1. Have designated and mapped tsunami hazard zones.** The primary source for mapping potential tsunami hazard zones is inundation modeling, which illustrates expected areas to be flooded by the tsunami. The modeling and mapping efforts should follow standards as applicable.





**Mit-2. Have a public display of tsunami information.** For example, useful are signage that identify (1) tsunami danger areas and/or hazard zones (entering and leaving signs), evacuation routes, and assembly areas; and (2) provide tsunami response education (go to high ground).

### Preparedness

**Prep-1. Have a tsunami evacuation map developed in collaboration with communities and local authorities.** Maps should be based on tsunami hazard zone mapping and in accordance with the community's emergency operations plan.

**Prep-2. Develop and distribute outreach and public education materials.** Information should cover, where appropriate, tsunami evacuation maps, evacuation routes, safety tips, and information about when and how to respond to warnings (including natural warnings for regions with a local tsunami threat).

**Prep 3. Hold at least three outreach or education activities annually.** These educate community residents, businesses, and visitors, with an emphasis on those in the tsunami hazard zone, on tsunami hazards, evacuation routes, how warning information will be received (including natural warnings for regions with a local tsunami threat), safety, and response.

**Prep 4. Conduct an annual tsunami community exercise.** The exercise can focus solely on the tsunami hazard or can be a multi-hazard exercise that also addresses the tsunami hazard. The exercise could be a tabletop, functional, or full-scale. The exercise should include a communications test.





Long - Strong - GET GONE



## Response

**Resp-1. Address tsunami hazards in the community's emergency operations or response plan.** This should consider local, regional and/or distant hazards. If a community-level plan does not exist, other acceptable plans include a county-wide, or a state or local comprehensive emergency management plan.

**Resp-2. Have the capacity to manage emergency response operations during a tsunami.** Ensure the capability of executing tsunami warning functions (public notifications) based on predetermined guidelines related to tsunami information and/or tsunami incidents.

**Resp-3. Have redundant and reliable means to receive official tsunami warnings 24x7.** Official threat information may be received from IOC Tsunami Service Providers, National Tsunami Warning Centers/Tsunami Warning Focal Points, or other officially-recognized agencies such as local emergency management agencies. Alerts must be able to reach the 24-hour warning point by at least three different systems.

**Resp-4. Have redundant and reliable means to disseminate official tsunami warnings and information to the public 24x7.** Alerts must be able to be disseminated through at least three different systems.






Coastal communities seeking Tsunami Ready recognition should meet all guidelines. In each ocean, the IOC Tsunami Information Centres (CTIC, IOTIC, ITIC, NEAMTIC) will assist countries interested in piloting Tsunami Ready. The specific actions required to meet each guideline will vary by community and depend on their tsunami hazard and related vulnerability, and be approved by the National or Regional Tsunami Ready Board. Determination of the range of plausible local, regional, and distant tsunami threats in a particular community rests with the designated Board, who will consult tsunami experts, TICs, IOC Tsunami Service Providers, National Tsunami Warning Centres and emergency managers, universities, and/or consultants. For recognition, a community must complete and submit the Tsunami Ready application form to the corresponding Tsunami Ready Board. Once approved, the UNESCO IOC will grant the recognition to the community.

For more information on the Pacific, visit <http://itic.ioc-unesco.org>  
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TR Flyer - Paid IC, vers Feb 2021

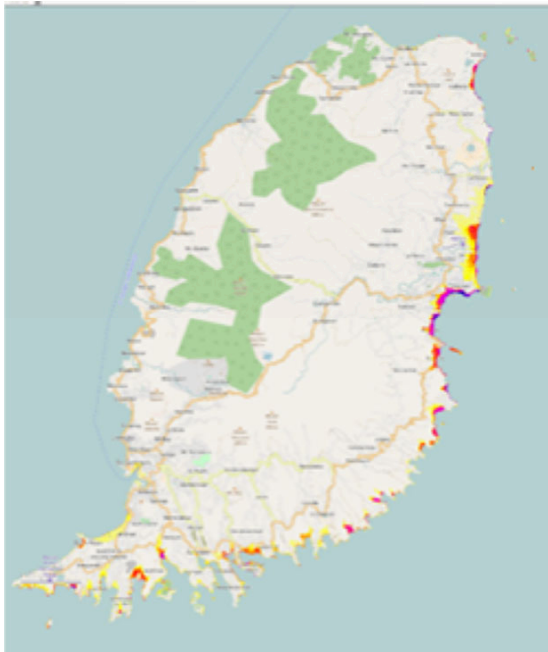


Feb 2021

# UNESCO IOC Tsunami Ready - Recognition Guidelines



**MIT-1. Designated & mapped tsunami hazard zones - Inundation Maps**



*Grenada Inundation Map, 2019*

**MIT-2. Public display of tsunami information**

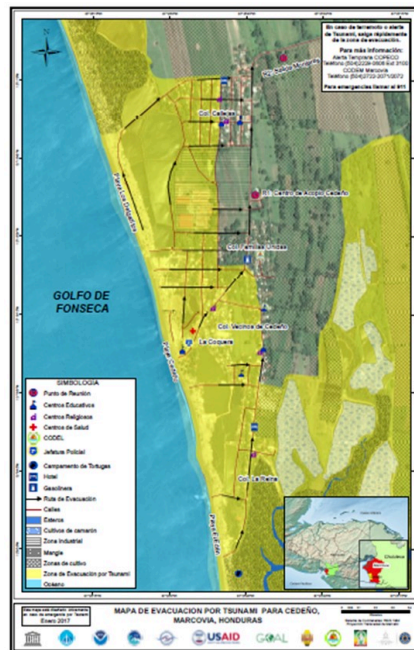




# UNESCO IOC Tsunami Ready - Recognition Guidelines



**PREP-1. tsunami evacuation map  
developed in collaboration with  
communities and local authorities**



*Cedeno, Honduras Evacuation Map, 2017*

**PREP-2. Outreach and  
Public Education Materials**



# UNESCO IOC Tsunami Ready - Recognition Guidelines



**PREP-3. at least three outreach  
or educational activities annually**



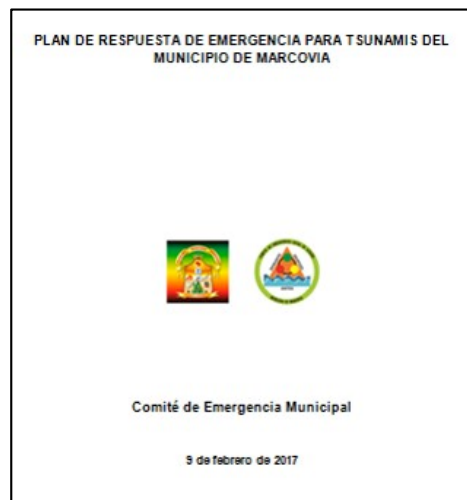
**PREP-4. Annual Community  
Tsunami Exercise**



# UNESCO IOC Tsunami Ready - Recognition Guidelines



**RESP-1. Address tsunami hazards  
in the community's emergency  
operations / response plan**



*Cedeno, Honduras  
Emergency Response Plan, 2017*

**RESP-2. Capacity to manage  
emergency response  
operations during a tsunami**

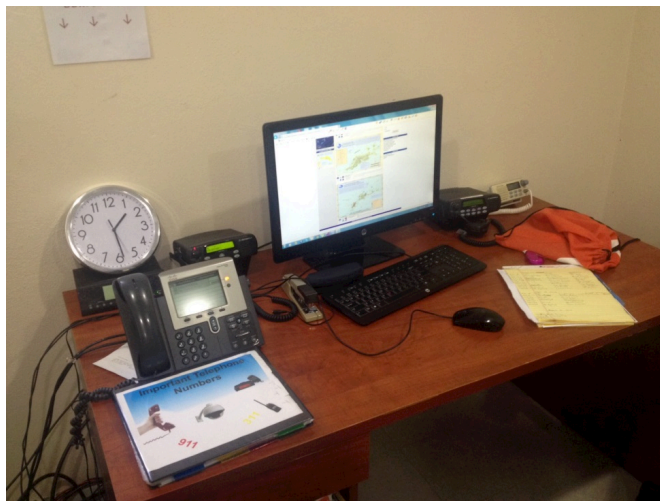


*St. Kitts Emergency Operations Center*

# UNESCO IOC Tsunami Ready - Recognition Guidelines



**RESP-3. Redundant and reliable means to receive official tsunami warnings 24x7**



**RESP-4. redundant and reliable means to disseminate official tsunami warnings and information to the public 24x7**



# Community Selection



- ❑ Recognition level is community that has capacity and authority (not too big or too small)
- ❑ Voluntary – need to have interest
- ❑ Ability to receive and disseminate warnings
- ❑ Government Authority to apply for recognition
- ❑ Champions
- ❑ EOC or location to manage tsunami emergency





# Verification, Recognition, Renewal Processes

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- ❑ **Verification Process – site visit by IOC Tsunami Information Centre representative (ITIC for Pacific) to confirm community has met requirements**
- ❑ **Recognition Ceremony**
- ❑ **Recognition for 4 years, after which it needs to be renewed**
- ❑ **Over the 4 years, there should be maintenance, advancement and improvements. Include in**
  - National Reports to ICG/PTWS
  - PTWS Regional Working Group (PICT) reports
  - PTWS WG 3 (Disaster Risk Reduction and Preparedness) report
  - EXERCISE PACIFIC WAVE (PacWave) post-exercise surveys



# Cedeño, Honduras (Feb 2017)



*ITIC Essential Community Preparedness  
Capacity Building, Honduras, Central America, 2015-16*





# Ostional, Costa Rica (May 2017)



**Tsunamis**

**1 Antes**  
Esté siempre preparado(a), un tsunami puede ocurrir en cualquier momento

- a) Prepare un plan familiar de emergencia
- b) Tenga a mano un maletín de seguridad
- c) Conozca las zonas de evacuación y los lugares de Asamblea
- d) Identifique las rutas de evacuación

**2 Señales**  
Esté atento(a) a cualquiera de estas señales

- a) Terremoto muy fuerte (se hace difícil caminar, se caen objetos)
- b) Terremoto de larga duración
- c) Mensaje oficial de la CNE
- d) Cambio repentino en el nivel del mar
- e) Ruido fuerte del mar

**3 Terremoto**  
Protéjase en caso de terremoto

- a) Agáchese
- b) Cubra
- c) Agárrase

**4 Evacuación**  
Salga de la zona de evacuación (En orden de preferencia:)

- a) Vaya a un lugar alto y alejado de la costa
- b) Subase a un segundo piso o más alto
- c) Subase a un árbol
- d) Vaya a un lugar de reunión (refugio)
- e) Si hay tiempo, lleve las embarcaciones costa afuera a 100m de profundidad

**5 Regreso**  
Quédese fuera de la zona de evacuación hasta que las autoridades le indiquen que ha pasado el peligro. Esto puede llevar varias horas

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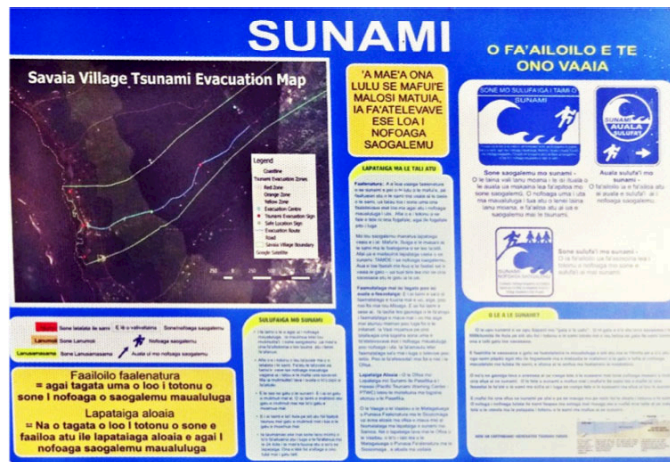
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# Savaia, Lefaga, Samoa (June 2017)



# Recognition

## 6 Central America communities, Sept 2019







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# Thank You. Questions?

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