## **REPORT**

## **Commemoration in the Caribbean region**

20 October 2016 Headquarters of the ACS Secretariat, Port-of-Spain, Trinidad and Tobago



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# **WORLD TSUNAMI AWARENESS**

5 NOVEMBER 2016



**COMMEMORATION IN THE CARIBBEAN** 

20 OCTOBER 2016, PORT-OF-SPAIN, TRINIDAD AND TOBAGO

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#### 5) Introduction

In 2016, the World Tsunami Awareness Day (WTAD) was observed for the first time. The United Nations General Assembly Resolution designated the 5th of November as World Tsunami Awareness Day (GA A/70/472/Add.3) and stipulated that UNISDR, in collaboration with relevant organizations of the United Nations system, will assist with its observance.

The World Tsunami Awareness Day supports the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030 as well as the Comprehensive Disaster Management Strategy 2014-2024 contributing among others to the following areas: greater risk understanding, management, investment in resilience, enhancing preparedness, reduced mortality, increased early warning, deployment of traditional knowledge and practices.

The WTAD will also provide an opportunity to reaffirm the inherent interlinkage between disaster risk reduction and sustainable development. Achieving the Sustainable Development Goals can only be possible if all aspects of social and economic development consider the impact of disasters, while the success of the Sendai Framework relies on addressing the underlying causes of people's vulnerability to disasters, including poverty and inequality.

The first ever WTAD was also commemorated in the Caribbean by organizing a regional awareness raising event on October 20, 2016 in Trinidad and Tobago, with the objective to share experiences and tools for promoting tsunami risk reduction and identifying activities for future WTAD.



The commemoration in the Caribbean region was attended by more than 40 participants from nine member states of the Association of Caribbean States (ACS), the Government of Japan as well as intergovernmental, regional and United Nations organizations and was organized by UNISDR in





conjunction with UNESCO/IOC, the ACS, CDEMA as well as CEPREDENAC. The Government of Japan provided financial support for this event and other activities around the world.

This meeting was organized prior to the Special Committee for Disaster Risk Reduction of the Association of Caribbean States (ACS) on October 21, 2017.

All information related to the Commemoration is available on PreventionWeb (Photos, videos, presentations, concept note, agenda): <a href="http://www.preventionweb.net/events/view/50685">http://www.preventionweb.net/events/view/50685</a>

#### 2) Tsunami Preparedness in the Caribbean

Although tsunamis do not occur very frequently, they can cause considerable damages. The 2004 Indian Ocean Tsunami affected 14 different countries and caused more than 227.000 casualties in the region, while the 2011 Tohoku Earthquake and Tsunami, in Japan, killed more than 13.000 people.

Storms, floods and hurricanes are common natural hazards in the Caribbean. The region is further is vulnerable to earthquakes and tsunamis. The most likely tsunamis to affect the region are those which can be triggered by shallow earthquakes (less than 50km in depth, greater than magnitude 6.5). Based on historical evidence, the Caribbean is expected to experience approximately one destructive tsunami every fifty years<sup>1</sup> generated by earthquakes occurring within the region.

Tsunamis have impacted the Caribbean in the past and are, therefore, expected to occur in the future. In the past 500 years there have been 75 tsunamis, at least ten destructive, confirmed earthquake-generated tsunamis in the Caribbean basin with four causing fatalities. An estimated number of more than 3000 people are thought to have been killed by these events<sup>2</sup>.

The following initiatives aim to strengthen tsunami resilience and build on previous efforts such as the Caribbean Hazard Mitigation Capacity Building Programme (CHAMP)<sup>3</sup>:

The Intergovernmental Coordination Group for the Tsunami and other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE EWS) was established in 2005 as a subsidiary body of the IOC-UNESCO with the purpose of providing efficient assistance on tsunami risk reduction to Member States in the Caribbean region after the lessons learnt from the 2004 Indian Ocean tsunami. The Pacific Tsunami Warning Center (PTWC) is the official Tsunami Service Provider (TSP) for the Caribbean and adjacent regions as from June 2016. Scientists and disaster management agencies are in the process

<sup>&</sup>lt;sup>3</sup> CDEMA coordinated the CHAMPS initiative from 2002 to 2006. The objective of the initiative was to enhance regional capacity to reduce vulnerability to the affects of natural hazards. It included the development of national hazard mitigation policies and programmes, the promotion of the wider use of hazard information in development decisions, and the strengthening of safe building practices, training and certification.





<sup>&</sup>lt;sup>1</sup> <u>Summer Edition of Portside</u> (June 2016), <u>NOAA NGDC/WDS Global Historical Tsunami Database</u>, doi:10.7289/V5PN93H7

<sup>&</sup>lt;sup>2</sup> http://www.uwiseismic.com/Downloads/Tsunami%20Smart\_Pamphlet\_Tsunami.pdf

of developing a fully-fledged end-to-end tsunami warning system. The guidelines for the ICG/CARIBE EWS activities are compiled in the <u>CARIBE EWS Implementation Plan</u>.

- The Caribbean Tsunami Information Centre (CTIC) was established in 2013 and is an organ of the Intergovernmental Coordinating Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE EWS).
- The Caribbean Tsunami Warning Programme coordinates efforts with the Caribbean Tsunami Information Center (Barbados) as well as working closely with the seismic, sea level and GPS operators and the designated National Tsunami Warning Focal Points and Tsunami National Contacts.
- Caribe Wave is an annual Caribbean and Adjacent Regions Tsunami Exercise<sup>4</sup>. The purpose of the exercise is to evaluate and improve the effectiveness of the Tsunami Warning Systems, its operational Tsunami Warning Centers, and its Member States in responding to a destructive tsunami. The exercise provides an opportunity for countries to exercise their operational lines of communications, review their tsunami warning and emergency response procedures, and to promote emergency preparedness.
- Since 2001, the US National Weather Service (NWS) of the National Ocean and Atmospheric Administration (NOAA) has been implementing the recognition programme, TsunamiReady<sup>®5</sup>. Over the past 12 years 51 coastal communities in the Caribbean have been recognized as TsunamiReady® by the NWS in the case of Puerto Rico and the US Virgin Islands and jointly by UNESCO and NWS in the case of the non US jurisdictions of Anguilla and the British Virgin Islands.

In response to the positive feedback of the implementation of *Tsunami*Ready®, the ICG CARIBE EWS recommended the approval of the guidelines for a Community Performance Based Recognition program<sup>6</sup> in 2015. It also recommended the adoption of the name "Tsunami Ready", which has been positively consulted with the NWS. Ten requirements were established for recognition and are divided among Preparedness, Mitigation and Response elements which were adapted from the proposed new US TsunamiReady® guidelines and align well with emergency management functions. Both a regional ICG CARIBE EWS and national/territorial "Tsunami Ready" boards will administer the recognition programme.

During the WTAD workshop in 2016, Saint Kitts and Nevis was recognized as TsunamiReady<sup>®</sup>. The country is the first community to receive this recognition as part of the CARIBE EWS *Tsunami*Ready® pilot project. The *Tsunami*Ready® recognition is valid for three

<sup>&</sup>lt;sup>6</sup> ICG CARIBE EWS TsunamiReady<sup>®</sup> guidelines: http://itic.ioc-unesco.org/images/stories/TsunamiReady/CARIBE-EWS TR English Tsunami%20Ready%20Programme.doc





<sup>&</sup>lt;sup>4</sup>The exercise aims at simulation of a tsunami event and involves communication and decision making at Government levels, without disrupting or alarming the general public. Individual countries, however, may at their discretion elect to extend the exercise down to the level of actually notifying the public. Regular Exercises are important for maintaining staff readiness for the real event.

http://itic.ioc-unesco.org/index.php?option=com\_content&view=category&layout=blog&id=2234&Itemid=2758

years. Several other Member States have indicated their interest in implementing the Tsunami Ready recognition programme in their vulnerable communities.

Assistance is being rendered to Grenada, Honduras and Haiti as they seek recognition. In Vincent and the Grenadines & Barbados one of their communities is currently undergoing the process to become TsunamiReady<sup>®</sup>. No community is tsunami proof, but projects such as TsunamiReady® can help communities save lives.

In 2010, CDEMA, in conjunction with the UWI Seismic Research Centre, launched a regional campaign called TSUNAMI SMART<sup>7</sup> to raise awareness and encourage preparedness. The campaign was tailored for three distinct audiences: the general public, teachers and children.

#### National case studies on tsunami preparedness

During the workshop different case studies were presented. Two case studies are described below and two others can be accessed online: Haiti and Barbados.

#### Case study Anguilla

Anguilla is a flat 35square mile island with its highest point at Crocus Hill with 210 feet/64m, located in the north of the island. TsunamiReady® recognition was received in 2011 and 2014.

The guidelines to attain that status require the following:

An established warning point and emergency operations center.

The Tsunami Warning Focal Point (Police Dispatch) were trained in procedures used to receive, analyse and retransmit tsunami alert messages from the Pacific Tsunami Warning Center. Officers are also trained as per the warning protocol within Anguilla's Tsunami Plan to activate the Anguilla Warning System if necessary.

Possess multiple methods of receiving tsunami alert warning information exist.

Multiple means of receiving tsunami alert information are present in the TWFP (EMWIN; Email; Fax; Telephone).

Multiple methods of disseminating a tsunami alerts to the populations

The Anguilla Warning System (AWS) is a Common Alert Protocol (CAP) based public alert system. Methods of disseminating information to the public include: FM Radio Broadcast Interruption, Weather radio, Email notification RDS Alert Receivers & Android and IOS app.

<sup>&</sup>lt;sup>7</sup> http://weready.org/tsunami/





Designated tsunami hazard zones.

Anguilla's Tsunami Inundation map was prepared with the help of NOAA and in the absence of bathymetry data it was prepared with the international rule of thumb of a 100ft wave height and one mile inland inundation.

Evacuation and response plans.

Anguilla prepared Primary School Tsunami Evacuation Plans, undertakes Annual Drills (schools, communities, NEOC) and developed a National Tsunami Plan. Tsunami warning signs erected on key locations.

Community tsunami awareness programme

Sensitisations to public and private institutions such as schools, hotels, Banks, elder care facilities is undertaking regularly. In addition, community meetings are organized, presentations at relevant Ministries, and discussions on Business Continuity held. Another Awareness raising method is the organization of an Annual All Hazard, Risk Reduction and Safety Fair. In addition, outreach material disseminated, public service announcement developed.

In parallel, Anguilla is working on reducing seismic risk.

Challenges remain such as community participation, perception that in the occurrence of a tsunami death is inevitable or that a tsunami will never happen, Limited resources (mainly financial), Change in procedure/personnel, Vandalism and nature.

#### Case study Saint Kitts and Nevis

Saint Kitts and Nevis was recognized *Tsunami*Ready® in 2016. In order to obtain this certificate the country had to undertake several steps which included the development of Standard Operating Procedures, the revision of the National Disaster Plan, stakeholder consultations and the development of an inundation map. The country further highlights the following



strengths: strong collaboration between National Disaster Management Office and Physical Planning; promoting PSA through local media; good building codes and monitoring.

Challenge remain such as the lack of funding, a nation-wide alerting system, dwellings located along the coastline, extended waiting period for Government approvals on maps, etc.

Next steps will be to broaden public awareness efforts, establish a nationwide altering system, train stakeholders and install more tsunami warning signs. In order to enhance tsunami preparedness in the country, it is required that the government invests in Early Warning Systems and DRR in general.





### 3) Proposed awareness raising activities for upcoming WTADs

Participants made the following suggestions for upcoming WTAD activities in the Caribbean which can be implemented at regional, national or local level:

- Collect, prior to the WTAD, impacting tsunami videos and material to promote it through social media.
- Organize community simulation exercises, organized by the local CBDR team in conjunction with the national office.
- Organize radio media tour with experts and authorities.
- Youth Panel reflecting on tsunami preparedness and their engagement.
- Tsunami preparedness plan and offering prices for tsunami preparedness plan
- Making art, music, sport, poetry competitions.
- National earthquake and tsunami's research day:

  Share information & data for earthquake and tsunami that is available for particular country. This could be supported by the University of the West Indies (MONA), the Seismic Research Centre or others.
- Prepare tsunami preparedness plan at community level.
- Organize art, music, sport activities and competitions.
- Engage churches to have a message regarding tsunami preparedness included as part of the worship service.
- Organizing panel discussion with different stakeholders, talk shows, radio interviews.
- Prepare testimonials, for example hearing from people who were physically challenged, how they feel about their own safety when a tsunami impacts.

#### Use different means of communication:

- Social media (facebook, twitter, Instagram, etc)
- Radio
- Television
- Print material such as banner, flyer, t-shirts, etc.

#### Engage different stakeholders:

- Tsunami preparedness and seismic risk experts, search personal, scientists
- Disaster risk management professionals
- Policy makers
- Community representatives
- Vulnerable groups
- · Children and Youth
- Private Sector
- Media



#### 4) Promoting the WTAD in the Americas and Media coverage

The UNISDR Regional Office for the Americas promoted the WTAD through its communication platforms such as the website (see image below) and social media channels.



Press release on the Caribbean commemoration were published by  $\underline{\sf ACS}$  /  $\underline{\sf UNISDR}$  /  $\underline{\sf CDEMA}$  /  $\underline{\sf UNESCO}$ 

#### Videos produced related to the Caribbean Commemoration of the WTAD8

Interviews conducted by the Caribbean Media Cooperation:

- Christa von Hillebrandt-Andrade, Chair of the UNESCO-IOC/ICG 19 views
- Ronald Jackson, CDEMA 
   18 views
- Barbara Carby, Disaster Risk Reduction Center, UWI 

  19 views
- Joan L. Latchman, Seismic Research Center, University of the West Indies
- Houlda Peters, NEMO Saint Vincent and the Grenadines 
   39 views
- Claricia Langley Stevens, NEMA Saint Kitts and Nevis 
   8 views
- Philmore Mullin, NODS Antigua and Barbuda 10 views

<sup>8</sup> https://www.youtube.com/playlist?list=PL5OyxVUQm0\_i-nZzgilVf6tE1y-9K1R9Y



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#### **Social Media Impact**

The United Nations Office for Disaster Risk Reduction – Regional Office for the Americas utilized its social media channels to generate an online presence surrounding the World Tsunami Awareness Day (WTAD) and thus create an awareness campaign for the event and the topics surrounding the theme of the event.

The social media campaign for the WTAD in the region reached to **58,753 people** and produced **798 reactions (comments, shares, and clicks)** as well as **220 multimedia views** in the different UNISDR-The Americas social media platforms alone.

#### Coverage by Facebook

UNISDR-The Americas publicized news for The World Tsunami Awareness Day (WTAD) as well as posts related to tsunami awareness from their growing Facebook account of 14,619 followers (state end of November 2016).

The communication efforts resulted in spreading awareness of the WTAD to **50,270 people** and receiving **614 reactions (comments, shares, and clicks) on the content** shared on UNISDR-The Americas Facebook. Below some example of Facebook posts.



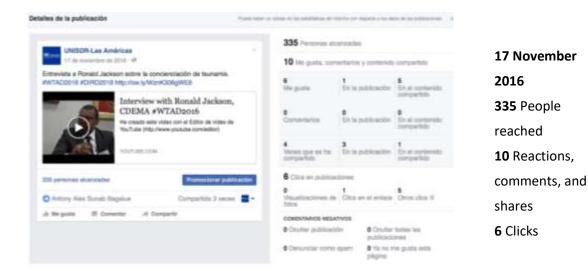
11 October 2016 4848 People reached 43 Reactions, comments, and shares 80 Clicks

20 October 2016 9716 People reached 8 Reactions, comments, and shares 23 Clicks



20 October 2016 4532 People reached 39 Reactions, comments, and shares 60 Clicks

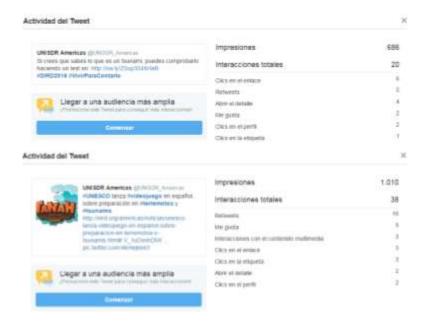
1 November
2016
3360 People
reached
8 Reactions,
comments, and
shares
12 Clicks



#### Coverage in Twitter

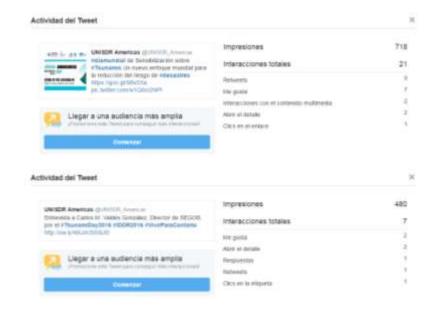
UNISDR-The Americas created content for The World Tsunami Awareness Day (WTAD) as well as posts related to tsunami awareness from their Twitter account which reached to their growing audience of over 1,000 followers (state end of November 2016).

The communication efforts resulted in spreading awareness of the WTAD to **8,483 people** and thus receiving **184 reactions, shares and clicks on the content** shared on UNISDR-The Americas Twitter alone. Below some examples:



8 October 2016686 Impressions20 Total interactions

**11 October 2016 1,010** Impressions **38** Total interactions



20 October 2016718 Impressions21 Total interactions

28 October 2016 480 Impressions 6 Total interactions

#### Media coverage WTAD

TV Report on Tsunami Preparedness in the Caribbean broadcasted by the Caribbean Media Cooperation: <a href="mailto:short">short</a> / <a href="mailto:special">special</a> / <a href="mailto:full">full</a> version (3:50min / 6:50min / 23:30min)

This reports were broadcasted by the Caribbean Media Cooperation (CMC) on and around November 5. It is also available on the <u>CaribVision website</u> (CMC).

The **Caribbean Media Corporation (CMC)** is the Caribbean region's leading multimedia organization dedicated to excellence in communication services, which include: *Radio, Television, Print, Satellite Uplink Distribution, & New Media* across the Caribbean, the USA, and around the world.

#### Department of Emergency Management (DEM) in Barbados

- Tsunami hazard information sheet includes WTAD information
- DEM organized a Tsunami Evacuation Drill on November 5, 2016
- Ministry News
- NationNews press release

#### Office of Disaster Management (ODM) in Dominica

Dominica News Press release on WTAD

#### National Disaster Management Agency (NaMA) in Grenada

Grenada now press release and Real FM on WTAD

National Emergency Management Organization (NEMO) in Saint Lucia



• Loop News – Saint Lucia tsunami evacuation exercise

#### **UNESCO-IOC**

http://www.unesco.org/new/en/tsunami-day

<u>US National Weather Service – Caribbean Tsunami Warning Programme</u>

Facebook announcement

Press release: <a href="http://eird.org/americas/news/world-tsunami-awareness-day-new-worldwide-approach-to-disaster-risk-reduction.html#.WA-3T-XhBQL">http://eird.org/americas/news/world-tsunami-awareness-day-new-worldwide-approach-to-disaster-risk-reduction.html#.WA-3T-XhBQL</a>

Web story: <a href="http://eird.org/americas/news/world-tsunami-awareness-day-strengthening-the-global-commitment-to-disasters-risk-reduction.html#.WCCVjdLhBQK">http://eird.org/americas/news/world-tsunami-awareness-day-strengthening-the-global-commitment-to-disasters-risk-reduction.html#.WCCVjdLhBQK</a>

Pictures: https://www.flickr.com/photos/isdr/30416991836/in/album-72157671851320014/

Social media: <a href="https://twitter.com/unisdr americas">https://twitter.com/unisdr americas</a>
y <a href="https://www.facebook.com/UnisdrLasAmericas">https://www.facebook.com/UnisdrLasAmericas</a>

Videos and special News produced by Caribbean Media Corporation:

https://www.youtube.com/user/UNISDRAmericas

