



INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION  
COMMISSION OCÉANOGRAPHIQUE INTERGOUVERNEMENTALE  
COMISIÓN OCEANOGRÁFICA INTERGUBERNAMENTAL  
МЕЖПРАВИТЕЛЬСТВЕННАЯ ОКЕАНОГРАФИЧЕСКАЯ КОМИССИЯ  
اللجنة الدولية الحكومية لعلوم المحيطات  
政府间海洋学委员会

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**IOC Circular Letter No 2689**  
(Available in English only)

IOC/IOC/BA/AB/ss  
1<sup>st</sup> September 2017

- To :** ICG/CARIBE-EWS Tsunami National Contacts (TNC) and Tsunami Warning Focal Points (TWFP) for Aruba, Belize, Brazil, Colombia, Costa Rica, Cuba, Curacao, Dominican Republic, Guatemala, Honduras, Jamaica, Mexico, Netherlands: (Bonaire, Saba, Sint Eustatius), Nicaragua, Panama, Sint Maarten, Suriname, United Kingdom (Bermuda, Montserrat), United States (US Virgin Islands), and Venezuela
- cc. :** Official National Coordinating Bodies for liaison with the IOC, Permanent Delegates/Observer Missions to UNESCO and National Commission for UNESCO for Aruba, Belize, Brazil, Colombia, Costa Rica, Cuba, Curacao, Dominican Republic, Guatemala, Honduras, Jamaica, Mexico, Netherlands: (Bonaire, Saba, Sint Eustatius), Nicaragua, Panama, Sint Maarten, Suriname, United Kingdom (Bermuda, Montserrat), United States (US Virgin Islands) and Venezuela  
UNESCO Offices in Guatemala, Kingston, Mexico, La Habana and San José  
Caribbean Tsunami Warning Program (CTWP)  
Caribbean Institute for Meteorology and Hydrology (CIMH)  
Permanent Observers to ICG/CARIBE-EWS  
ICG/CARIBE-EWS Officers

**Subject : Invitation to Pacific Tsunami Warning Centre (PTWC) New Enhanced Tsunami Products for ICG/CARIBE EWS Regional Training Workshop, Colombia, 31 October–2 November 2017**

The Caribbean and its adjacent seas, including the Atlantic, have been the source region for 11% of the world's fatal tsunamis over history, with almost 100 tsunamis observed that have impacted 23 countries of this region. Member States of the Intergovernmental Coordination Group for the Tsunami and Other Coastal Hazards Warning System for the Caribbean and Adjacent Regions (ICG/CARIBE-EWS) must be prepared to face the dangers of tsunamis from distant, regional and local sources. While many Caribbean Member countries continue to depend primarily on the Pacific Tsunami Warning Center (PTWC) for the warning advice to their National Tsunami Warning Centres, the reality of the dangers posed by local and regional sources does require Member States to be able to receive and accurately interpret messages in order to respond to a tsunami in a timely and responsible manner to save lives.

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In this context, we are pleased to invite Tsunami National Contacts (TNC) to nominate up to two (2) candidates to participate in the PTWC New Enhanced Tsunami Products for ICG/CARIBE-EWS Regional Training Workshop in Colombia, from 31<sup>st</sup> October to 2<sup>nd</sup> November 2017.

Significant scientific and technological advances have been made to better forecast tsunami impacts in real time and to present forecast information graphically since the formation of the original PTWC products for the CARIBE-EWS. Based on these advances and TOWS working Group recommendations for more globally consistent and useful Tsunami Service Provider products, the ICG/CARIBE-EWS has implemented the PTWC New Enhanced Products since 1<sup>st</sup> March 2016.

The workshop will be conducted in English through lecture-discussion, multimedia presentations and simulations with the aim of training participants in the interpretation and implementation of the new suite of enhanced operational tsunami forecast products. It is recommended that at least one (1) candidate should be from the National Tsunami Warning Centre or the Tsunami Warning Focal Point agency (NTWC, TWFP) and one from the National Disaster Management Office (NDMO) or another tsunami emergency response (TER) agency. To maximize the benefits of the training, it is further recommended that candidates who have participated in the previous Standard Operation Procedures (SOPs) trainings (2013–2014) be nominated. The preliminary draft agenda is enclosed for reference.

The workshop is being organized by the Caribbean Tsunami Information Centre (CTIC), the Intergovernmental Oceanographic Commission of UNESCO (UNESCO/IOC), the International Tsunami Information Center (ITIC), the Pacific Tsunami Warning Center (PTWC), The US NWS Caribbean Tsunami Warning Program (CTWP) and the Coastal Zone Management Unit (CZMU), Barbados. Financial support is being provided by the Kingdom of the Netherlands.

Limited funding is available to support participants from invited ICG/CARIBE-EWS Member States and self-funding is encouraged to secure participation. Selected candidates receiving support from the organizers will be provided with round trip air ticket through the most economical route, lodging and meals. The selection criteria of the candidates who receive funding are: a) members of the country's NTWC or TWFP agencies; and b) responsible for and involved in tsunami warning and emergency response operations. Available funding for suitable candidates will be allocated based on the chronological submission of applications.

**Application forms should be endorsed by and submitted through the country's Tsunami National Contact (TNC).** Please forward the attached form duly completed by each nominee and a CV, by email to Alison Brome ([a.brome@unesco.org](mailto:a.brome@unesco.org)) CTIC Director (a.i.), Laura Kong ([laura.kong@noaa.gov](mailto:laura.kong@noaa.gov)) ITIC Director and Bernardo Aliaga ([b.aliaga@unesco.org](mailto:b.aliaga@unesco.org)), Technical Secretary, ICG/CARIBE EWS, by **15<sup>th</sup> September 2017**. Selected candidates will be notified by 25<sup>th</sup> September 2017.

Yours sincerely,

*[signed]*

Vladimir Ryabinin  
Executive Secretary

Enclosures: Preliminary Agenda  
Application Form



**PTWC Enhanced Products Regional Training Workshop**  
**31 October – 02 November 2017**  
**Colombia**

**PRELIMINARY AGENDA**

Session	Topic
<b>DAY 1</b>	
1	ICG/CARIBE EWS-XII Outcomes, specifically re: PTWC New Enhanced Products for the CARIBE EWS
2	Responding Rapidly and Effectively: Tsunami Warning and Emergency Response Requirements and Timeline-driven SOPs
3	What will PTWC provide to NTWCS and TWFPs? TWC Operations Challenges and Limitations in real-time Monitoring, Detection, and Forecasting
4	What does TER want from TWCs? TER Operations Challenges and Limitations in Alerting, Evacuation, and Safe-to-Return (All-Clear)
5	Pacific Tsunami Warning Center (PTWC) SOPs
<b>DAY 2</b>	
1	TWC Operations - Advanced Topics
2	Real-time Earthquake Detection and Fast Source Characterization, W-Phase Centroid Moment Tensors – Techniques, Use, and Limitations
3	Travel Time and Wave Forecasting - Techniques, Use and Limitations
4	PTWC New Enhanced Products, Warning Guidance, Scenarios
5	CARIBE EWS PTWC Enhanced Products: Overview - Why, What, When and How to Use, Limitations
6	PTWC New Enhanced Products - Explanation of Each Product: Text, Graphical Deep-Ocean Energy, Coastal Forecast, Forecast Tables, KMZ file, Forecast Polygon Map - Distant Tsunami example
7	Guidance on how to use PTWC New Enhanced Products for National Warnings and Evacuation – Land and Marine Threats and Public Safety
8	Use of PTWC New Enhanced Products - Regional and Local Tsunami Hazard Scenarios
<b>DAY 3</b>	
1	Tsunami Table Top Exercise Re: PTWC New Enhanced Products
2	Summary Discussion: Country Readiness for PTWC New Enhanced Products
1	



**UNESCO/IOC – NOAA International Tsunami Information Center  
ITIC TRAINING PROGRAMME (ITP) – INTERNATIONAL**

Hosted by the Caribbean Tsunami Information Center (CTIC)  
Facilitated by Intergovernmental Oceanographic Commission of UNESCO (UNESCO/IOC),  
UNESCO/IOC – NOAA International Tsunami Information Center (ITIC), NOAA Pacific Tsunami  
Warning Center (PTWC) and the NOAA Caribbean Tsunami Warning Program (CTWP)

**PTWC Enhanced Products Regional Training Workshop  
31 October – 02 November 2017**

**Colombia**

**APPLICATION FORM**

**Please type or write in BLOCK letters in English**

**Please return by 15 September 2017 to**

**E-MAIL: copy [a.brome@unesco.org](mailto:a.brome@unesco.org), [laura.kong@noaa.gov](mailto:laura.kong@noaa.gov), and [b.aliaga@unesco.org](mailto:b.aliaga@unesco.org)**

**1. PERSONAL INFORMATION**

NAME	
TITLE	
SEX	
NATIONALITY	
HOME ADDRESS	
TELEPHONE NUMBER	
FAX NUMBER	
EMAIL ADDRESS	

**2. PROFESSIONAL BACKGROUND**

OFFICE/ ORGANIZATION	
POSITION (Permanent, Temporary, Contractor)	
ADDRESS	
TELEPHONE NUMBER	
FAX NUMBER	

EMAIL ADDRESS	
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**3. EDUCATIONAL BACKGROUND**

LEVEL	SCHOOL	DEGREE	YEAR GRADUATED
COLLEGE			
MASTER			
DOCTORAL			
POST DOCTORAL			

**4. TSUNAMI-RELATED TRAININGS ATTENDED**

TITLE OR SUBJECT	CONDUCTED BY	DATES

**5. OTHER RELATED TSUNAMI-RELATED JOB EXPERIENCE**

OFFICE / ORGANIZATION JOB DESCRIPTION	POSITION	DATES

**6. TRAVEL INFORMATION**

NAME ON PASSPORT		
PASSPORT COUNTRY		
PASSPORT NUMBER	To be requested upon acceptance	
BIRTHDAY (DD-MM-YYYY)	To be requested upon acceptance	
DATE OF ISSUE		
PLACE OF ISSUE		
EXPIRY DATE		
COUNTRY OF BIRTH		
COUNTRY OF CITIZENSHIP		

NAME OF NEAREST INTERNATIONAL AIRPORT		
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**7. OTHER**

ENGLISH LANGUAGE PROFICIENCY	
DO YOU REQUIRE TRAVEL FUNDING	Full Funding Partial Funding, Amount USD _____. Self-funded

**Statement of Interest:**

**Why are you interested in attending this Training?**

**After the Training, where and how will the experience gained in the Training will be used?**

**Please also submit separately your Curriculum Vitae (CV).**

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**PRINTED NAME OR SIGNATURE**

**DATE:**

**ENDORSED BY TSUNAMI NATIONAL CONTACT:**

**Printed Name**

**Signature**

**Organization**

**DATE**