



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 2518
(English Only)

IOC/WWW/BA/ss
4 April 2014

- To:** ICG/PTWS Tsunami Warning Focal Points (TWFP) and ICG/PTWS Tsunami National Contacts (TNC) of Cook Islands, Fiji, French Polynesia, Kiribati, New Caledonia, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu, and appropriate authorities of Federated States of Micronesia, Nauru, Marshall Islands and Tokelau
ICG/PTWS Chair and Vice-Chairs
- Cc:** Official National Coordinating Body for liaison with IOC in IOC Member States
Permanent Delegates/Observer Missions to UNESCO of IOC Member States
National Commissions for UNESCO in IOC Member States
Directors of UNESCO and IOC Regional Offices in the Asia/Pacific Region
Regional Organizations cooperating with UNESCO/IOC
Director, Pacific Tsunami Warning Center
Director, International Tsunami Information Center

Subject: Invitation to Regional Training Workshop on the PTWC Enhanced Products for the Pacific Tsunami Warning System, Nadi, Fiji, 22–24 May 2014

The Pacific Ocean and its adjacent seas is the largest, most diverse and most prone to tsunamis of all the Earth's oceans. Pacific nations must be prepared at all times to face the dangers of tsunami from distant, regional and local sources. In the past, Pacific Island Member States depended primarily on the Pacific Tsunami Warning Center (PTWC) for the warning decisions. Over the last 10+ years, with improvements in data quality, quantity, and real-time availability, PTWC's response time has dropped significantly from an hour to < 10 minutes for distant events. At the same time, with each great earthquake and tsunami since 26 December 2004 helping to increase scientific understanding, better techniques have been developed to quickly characterize the earthquake and numerically model the tsunami. This in turn has led to significant improvements in a warning centre's ability to accurately forecast coastal wave height and impact, and an ability to provide timely advice to support local tsunami warning decision-making. At its 25th Session, Member States of the Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System (ICG/PTWSXXV, September 2013) approved the start of the PTWC Enhanced Products on October 1, 2014. These products, the first large-scale modifications in decades, fundamentally change the way in which countries assess their national tsunami threats. The PTWC will cease

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providing Warnings and Watches, and instead issue tsunami wave forecasts. Public text products will continue to be issued, but the additional graphical and statistical products will only be sent to the designated PTWS Tsunami Warning Focal Points.

To assist in preparing countries for the changeover to the PTWC Enhanced Products, we are pleased to invite Pacific Island countries to nominate up to two candidates to participate in a Regional Tsunami Training Workshop on the PTWC New Enhanced Tsunami Products for PTWS, to be held at the Tanoa International Hotel in Nadi, Fiji from 22 to 24 May 2014. The training will immediately follow the AusAID funded COSPPac meeting organized at the same venue. It is essential that one of the nominated candidates be from the tsunami warning authority while the other one can be either from the National Disaster Management Office or Seismology/Geo-hazards section involved with tsunami monitoring and warning.

The 3-day training workshop will cover use of the PTWC New Enhanced Tsunami Forecast Products by National Tsunami Warning Centres and Emergency Response Agencies. Topics will include the end-to-end warning process, warning centre and emergency response standard operating procedures and their challenges, advanced topics in warning operations, and the methodologies, limitations, and interpretation of the PTWC Enhanced Products. Attached is a provisional agenda for the training, which will be conducted in English.

The training is being organized by the International Tsunami Information Center (ITIC) and Pacific Tsunami Warning Center (PTWC) in collaboration with the IOC.

The organizers have limited funding available for supporting attendance at the workshop, and therefore, welcome full or partial self-funding by countries. The selection criteria of the candidates who receive funding are: a) members of the country's National Tsunami Warning Centre (NTWC), seismology/geo-hazards agency, or national disaster management office; b) responsible for and involved in tsunami warning and emergency response operations, and/or responsible for their country's Standard Operating Procedures (SOPs).

Nominations should be endorsed by and submitted through the country's Tsunami Warning Focal Point (TWFP) or Tsunami National Contact (TNC). Highest priority will be given to participants from NTWCs who will have to interpret the incoming international information and decide whether to place their country in a Tsunami Warning alert status,

Since the IOC training will be held immediately following the COSPPac meeting in Nadi, Fiji, it is generally expected that delegates from National Meteorological Services (NMSs) which have tsunami warning responsibility will stay on in Nadi for the IOC training, and that delegates and/or donors will cover the cost of the extra days of stay in Nadi, where necessary and as per selection criteria. The organizers of the COSPPac meeting have kindly agreed to pay air fares for those who intend to travel onwards for the World Meteorological Organization (WMO) Regional Association V Tropical Cyclone Committee session to be held in Port Vila, Vanuatu from 26 to 30 May 2014, and the WMO will take care of the return flight to their home countries afterward. Also, the Government of Japan has kindly agreed to provide limited assistance by meeting air fares and/or subsistence allowance for participants from a number of countries. Those intending to benefit from this support offer are encouraged to contact their Japan International Cooperation Agency (JICA) country offices, where available, to request support. Otherwise the accepted nomination list, based on the above-mentioned criteria, will be forwarded to JICA Fiji Office for its consideration.

On Day 1 of the training, each country is expected to provide a 10-minute summary on their new SOPs, or their plans for new SOPs, which will be used when the PTWC Enhanced Products formally commence on 1st October 2014. More information and documents will be made available through the website <http://www.ioc-tsunami.org/ITP-PIC-14>.

Please forward the attached form duly completed by each nominee, along with a CV, by email to Bernardo Aliaga (b.aliaga@unesco.org), ICG/PTWS Technical Secretary, with copy to Laura Kong (laura.kong@noaa.gov), Director, International Tsunami Information Center, and Rajendra Prasad (r.prasad@unesco.org) UNESCO/IOC Programme Officer, by Friday 18 April 2014. Successful candidates will be notified by 25 April 2014.

Yours sincerely,



Wendy Watson Wright
Executive Secretary, IOC
Assistant Director-General, UNESCO

Enclosures (2):

- Application Form
- Draft Workshop Agenda

**UNESCO – IOC / NOAA INTERNATIONAL TSUNAMI INFORMATION CENTER (ITIC)
ITIC TRAINING PROGRAMME INTERNATIONAL**

**Regional Training: Pacific Island Countries (ITP-PIC-14)
Pacific Tsunami Warning Center (PTWC) Enhanced Tsunami Products for the
ICG/PTWS
22-24 May 2014, Nadi, Fiji**

APPLICATION FORM

Please type or write in BLOCK letters in English

Please return by Friday 18 April 2014 to

E-MAIL: b.aliaga@unesco.org; r.prasad@unesco.org; laura.kong@noaa.gov

1. PERSONAL INFORMATION

NAME	
TITLE	<input type="checkbox"/> DR. <input type="checkbox"/> PROF. <input type="checkbox"/> MR. <input type="checkbox"/> MS. <input type="checkbox"/> others _____
SEX	<input type="checkbox"/> MALE <input type="checkbox"/> FEMALE
NATIONALITY	
HOME ADDRESS	
TELEPHONE NUMBER	
FAX NUMBER	
EMAIL ADDRESS	

2. PROFESSIONAL BACKGROUND

OFFICE/ ORGANIZATION	
POSITION	
ADDRESS	
TELEPHONE NUMBER	
FAX NUMBER	
EMAIL ADDRESS	

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	
BIRTHDAY (DD-MM-YYYY)	
DATE OF ISSUE	
PLACE OF ISSUE	
EXPIRY DATE	
COUNTRY OF BIRTH	
COUNTRY OF CITIZENSHIP	
NAME OF NEAREST INTERNATIONAL AIRPORT	

7. OTHER

ENGLISH LANGUAGE PROFICIENCY	<input type="checkbox"/> Excellent <input type="checkbox"/> Fair <input type="checkbox"/> Good <input type="checkbox"/> Poor
DO YOU REQUIRE TRAVEL FUNDING	<input type="checkbox"/> Yes, Full Funding <input type="checkbox"/> Yes, Partial Funding, Amount USD _____. <input type="checkbox"/> No, 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).

PRINTED NAME OR SIGNATURE

DATE: _____

**ENDORSED BY TSUNAMI WARNING FOCAL POINT OR TUNAMI NATIONAL
CONTACT:**

Printed Name

Signature

Organization

DATE

**UNESCO – IOC / NOAA INTERNATIONAL TSUNAMI INFORMATION CENTER (ITIC)
ITIC TRAINING PROGRAMME INTERNATIONAL**

**Regional Training: Pacific Island Countries (ITP-PIC-14)
Pacific Tsunami Warning Center (PTWC) Enhanced Tsunami Products for the ICG/PTWS
22-24 May 2014, Nadi, Fiji**

Trainers

Dr Ken Gledhill, GeoNet Project Director, Dept Head, Geohazards Monitoring, Inst of Geological and Nuclear Sciences, New Zealand
Dr Laura Kong, Director, ITIC, Hawaii, USA
Mr Rajendra Prasad, IOC Tsunami Unit, Fiji
Dr Stuart Weinstein, Deputy Director, PTWC, Hawaii, USA

Training Overview

The 3-day training will cover the explanation and use of the PTWC New Enhanced Tsunami Forecast Products by National Tsunami Warning Centers and Emergency Response Agencies. Topics will cover the end-to-end warning process, warning center and emergency response standard operating procedures and their challenges, advanced topics in warning operations, and the methodologies, limitations, and interpretation of the PTWC Enhanced Products. Over the last 10+ years, with improvements in data quality, quantity, and real-time availability, PTWC's response time has dropped significantly from an hour to < 10 minutes for distant events. At the same time, with each great earthquake and tsunami since 26 December 2004 helping to increase scientific understanding, better techniques have been developed to quickly characterize the earthquake and numerically model the tsunami. This in turn has led to significant improvements in a warning center's ability to accurately forecast coastal wave height and impact, and an ability to provide timely advice to support local tsunami warning decision-making. At the ICG/PTWS-XXV (September 2013), Member States approved the start of the PTWC Enhanced Products on October 1, 2014. These products, the first large-scale modifications in decades, fundamentally change the way in which countries assess their national tsunami threats. The PTWC will cease providing Warnings and Watches, and instead issue tsunami wave forecasts. Public text products will continue to be issued, but the additional graphical and statistical products will only be sent to designated PTWS Tsunami Warning Focal Points.

PROVISIONAL AGENDA

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