



UNESCO – IOC / NOAA INTERNATIONAL TSUNAMI INFORMATION CENTER (ITIC) ITIC TRAINING PROGRAMME INTERNATIONAL (ITP-INTL)

ITP-Solomon Islands: Tsunami Warning and Emergency Response Using the PTWC Enhanced Products for National Tsunami Threat Decision-Making Honiara, Solomon Islands 22-25 September 2015

Trainers

Dr. Laura Kong, Director, ITIC, Hawaii, USA
Shohei Matsuura, JICA DRR Advisor, Disaster Reduction Programme (DRP), Fiji
Rajendra Prasad, Programme Officer, IOC Tsunami Unit, Fiji
Masahiro Yamamoto, Senior Advisor (retired), IOC Tsunami Unit, Japan

Training Overview

The training workshop will cover tsunami warning operations and the use of the PTWC Enhanced Products for tsunami threat decision-making, with specific attention on the warning and emergency response plan and standard operating procedures (SOPs) of the Solomon Islands. Topics will include warning and response SOPs and challenges, warning decision support tools, warning messages and alerting, evacuation concepts and planning, and awareness strategies. 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 5-10 minutes for tsunami 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. In 2014, the PTWC implemented Enhanced Products for the PTWS that now include wave amplitude forecasts in both text and graphical formats, and that require each country to explicitly assign Warning / Watch status in their own messages to their coasts. In July 2015, the First Pacific Ministerial Meeting on Meteorology adopted the Nuku'alofa Declaration, calling for support to ensure that National Meteorological and Hydrological Services (NMHS) have the necessary capacity to support sustainable development, and specifically for the need to strengthen their tsunami early warning systems. Accordingly, the goal of this training is to increase the capacity of first responder operational staff to efficiently and effectively respond to tsunamis.

PROVISIONAL AGENDA

Sess ion	Start Time	End Time	Topic	Speaker
1-3			Tuesday, September 22, 2015	
			MORNING	
			Opening, ICG/PTWS-XXVI, Tsunami Early Warning Systems	
	8:30	9:00	Registration	Solomon Islands (SI)
1.1	9:00	9:30	Opening Ceremonies	ITIC, IOC, JICA, Solomon Islands
1.2	9:30	9:45	Logistics and Administrative Items, Introductions Course Overview	Laura Kong, ITIC
2.1	9:45	10:00	ICG/PTWS-XXVI Outcomes, specifically for the Southwest Pacific	Rajendra Prasad, IOC
	10:00	10:30	GROUP PHOTO, COFFEE / TEA BREAK	
2.2	10:30	11:15	Responding Rapidly and Effectively: Tsunami Warning and Emergency Response Requirements and Timeline-driven SOPs	Kong
2.3	11:15	12:00	Tsunami Warning Center SOPs: What do Tsunami Warning Centers (TWCs) provide to Tsunami Emergency Response (TER) agencies?	Masahiro Yamamoto
	12:00	13:15	LUNCH	
			AFTERNOON	
			PTWC Enhanced Products, Solomon Islands SOPs	
3.1	13:15	13:45	Pacific Tsunami Warning Center (PTWC) New Enhanced Products - What, Why, SOPs (Criteria, Formats, Staging)	Kong
3.2	13:45	14:00	Northwest Pacific Tsunami Advisory Center (NWPTAC) – Present SOPs and Planned Enhanced Products	Yamamoto
3.3	14:00	14:45	Solomon Islands TWC SOPs using PTWC Enhanced Products	David Hiriassia, SI Meteorological Service
	14:45	15:00	COFFEE / TEA BREAK	
3.4	15:00	15:45	Solomon Islands TER SOPs – National, Provincial, Local	Loti Yates, SI NDMO
3.5	15:45	16:30	Discussion: SI SOPs – status, gaps, needs	Prasad, Shohei Matsuura, All
3-4			Wednesday, September 23, 2015	
			MORNING: PTWC Enhanced Products, TWC Operations - Earthquakes	
3.6	9:00	9:45	PTWC Enhanced Products - Staging and Explanation of Each Product: Text, Forecast Polygon Map, Graphical Deep-Ocean Energy, Coastal Forecast, Forecast Tables, KMZ file	Kong
4.1	9:45	10:30	Science of Earthquakes, Regional Tectonics and Seismicity, and Earthquake Hazard	Yamamoto
	10:30	11:00	COFFEE / TEA BREAK	
4.2	11:00	11:45	TWC Operations: Real-time Earthquake Detection and Fast Source Characterization	Yamamoto
4.3	11:45	12:15	Oceania Regional Seismic Network (ORSNET)	Sylvain Todman, Vanuatu Meteorological and Geohazards Dept (VMGD)
	12:15	13:15	LUNCH	
			AFTERNOON	
			TWC Operations - Earthquakes, Tsunamis; Tsunami Warning Decision Support Tools	
4.4	13:15	14:00	TWC Operations: Real-time Earthquake Detection and Fast Source Characterization - Sparse networks, Magnitudes, W-Phase Centroid Moment Tensors – Techniques, Use, Limitations, Challenges	Kong
4.5	14:00	14:30	Science of Tsunamis	Yamamoto

4.6	14:30	14:45	Historical Tsunamis Affecting the Region, and Tsunami Hazard	Solomon Islands
	14:45	15:00	COFFEE / TEA BREAK	
4.7	15:00	15:30	TWC Operations: Sea Level Monitoring - Use, Instruments, Limitations, Challenges	Yamamoto
4.8	15:30	16:30	Demonstration: Decision Support Tools for Monitoring, Detection, Assessment – Earthquakes: Real-time Earthquake Display (CISN), USGS web site (CMT, ShakeMap, PAGER), Sea Level Monitoring (IOC web site, TideTool with Tsunami Travel Times)	Kong
4-6			Thursday, September 24, 2015	
			MORNING	
			Tsunami Forecasting, NTC and NDMO SOPs for PTWC Enhanced Products, Tsunami Messages	
4.9	9:00	9:45	TWC Operations: Travel Time and Wave Amplitude Forecasting - Techniques, Use, Limitations, Uncertainty, Sensitivity Studies (Location, Depth, Magnitude)	Kong
5.1	9:45	10:30	TER SOPs: Overview of Stakeholder Roles and Coordination, Event Operations, Timelines, Checklists, Examples	Prasad, Matsuura, SI NDMO
	10:30	11:00	COFFEE / TEA BREAK	
5.2	11:00	11:30	TWC and TER SOPs for PTWC Enhanced Products: Guidance, Flow Charts, Criteria Tables, Timeline-driven SOP, Message Templates. Warning (EQ Magnitude and Forecast thresholds), Evacuation (Land and Marine Threats and Public Safety)	Kong
5.3	11:30	12:15	Discussion: SI Tsunami Warning and Evacuation Messages	Jen Richardson, SI NDMO, All
	12:15	13:15	LUNCH	
			AFTERNOON	
			Alerting and Evacuation, Awareness and Preparedness	
5.4	13:15	14:00	What do TERs do with TWC information? Challenges in Alerting, Evacuation, and Safe-to-Return (All-Clear)	Kong
5.5	14:00	14:45	Discussion: SI Alerting and Evacuation – status, gaps, needs	Prasad, All
	14:45	15:00	COFFEE / TEA BREAK	
5.6	14:45	15:30	Activity: Improving Response – What Happens When? Reliable and Unreliable Information	Kong
5.7	15:00	15:45	Building Awareness & Community Preparedness - strategies and examples	Matsuura
5.8	15:45	16:30	Discussion: SI Awareness and Preparedness – status, gaps, needs	Prasad, All
6-7			Friday, September 25, 2015	
			MORNING	
			Tsunami Hazard Scenarios, Tsunami Exercise	
6.1	9:00	9:45	Tsunami Hazard Scenarios around the Pacific - Understanding PTWC Enhanced Products	Kong
6.2	9:45	10:30	Tsunami Table Top Exercise - Decision-making using PTWC Enhanced Products - Local or Regional Scenario	Prasad, SI, All
	10:30	11:00	COFFEE / TEA BREAK	
6.3	11:00	12:15	Tsunami Table Top Exercise - Decision-making using PTWC Enhanced Products - Local or Regional Scenario	Prasad, SI, All
	12:15	13:15	LUNCH	
			AFTERNOON	
			Tsunami Exercise, Closing	
6.4	13:15	14:15	Tsunami Table Top Exercise - Decision-making using PTWC Enhanced Products - Distant Scenario	Prasad, SI, All
6.5	14:15	14:45	Final Discussion: SI Readiness - Questions, Answers, Next Steps	Prasad, All
	14:45	15:00	COFFEE / TEA BREAK	
7	15:00	15:30	Closing Ceremonies	SI, IOC, ITIC