



INTERNATIONAL TSUNAMI INFORMATION CENTER (ITIC)

ITIC TRAINING PROGRAMME HAWAII (ITP-HAWAII) TSUNAMI EARLY WARNING AND MITIGATION SYSTEMS

22 August – 2 September 2011
Honolulu, Hawaii USA

FINAL AGENDA

Session	Start Time	End Time	Topic	Speaker
1			MONDAY, 22 AUGUST, DAY 1: SESSION 1	
			Welcome and Programme Overview	
1.1	9:00	9:30	Welcome and Introductions	NWS Pacific Region, ITIC
1.2	9:30	10:00	Programme Logistics: General, transportation, meals/refreshments, IT (computer, internet, printing), library, travel and other administrative items	Yanagi, Fukuji, Sonen
1.3	10:00	10:30	Course Overview, Manual, and Materials, including Awareness Materials	Kong
	10:30	10:45	COFFEE / TEA BREAK, Group Photo, ITIC	
			Country Presentations, IOC Tsunami Systems, End-to-End Tsunami Warning, Tsunami Warning Decision Support Tools	
1.4	10:45	12:00	Country Presentations (15-20 min each, 3-4/day) – Chile, Fiji, Hong Kong, Fiji	Countries
	12:00	13:15	LUNCH	
1.5	13:15	13:45	International and National Tsunami Warning and Mitigation Systems - Requirements and Implementation Pacific Tsunami Warning and Mitigation System (PTWS) - organizations and operations	Kong
1.6	13:45	14:45	End-to-End Tsunami Warning and Emergency Response – Overview	Kong
	14:45	15:00	COFFEE / TEA BREAK	
1.7	15:00	15:30	Tsunami Warning Decision Support Tools – Overview: Message Alerts, Real-Time Earthquake Display (CISN); Sea level monitoring (Tide Tool, IOC Sea Level Monitoring web site); Tsunami Databases (WDC/NGDC web tools, TsuDig), Tsunami Travel Time (TTT) calculation – demonstration and/or installation	Kong
1.8	15:30	16:00	End-to-end Tsunami Warning – Stakeholder and their needs, Roles and Responsibilities, Standard Operating Procedures, and their linkages	Yanagi
1.9	16:00	16:30	Hawaii example: Hawaii Tsunami Warning and Mitigation System	Yanagi

2			TUESDAY, 23 AUGUST, DAY 2: SESSION 2	
			Earthquake and Tsunami Science, Risk, and Hazards; Tsunami Modelling, Hawaii Tsunami Inundation Mapping	
2.1	9:00	10:00	Earthquake and Tsunami Science	Kong
2.2	10:00	11:15	Tsunami modeling science; Hawaii tsunami inundation mapping	Cheung
	11:15	11:30	COFFEE / TEA BREAK	
2.3	11:30	12:15	Global and Pacific Tsunami Hazard and Risk Assessment	Butler
	12:15	13:30	LUNCH	
			Decision Support Tools, Lessons Learned 2009-2011, Tsunami Warning Center Standard Operating Procedures (TWC SOPs)	
2.4	13:30	14:15	Tsunami Warning Decision Support Tools – Message Alerts, Real-Time Earthquake Display (CISN) - demonstration and installation	Kong
2.5	14:15	14:45	Lessons Learned: South Pacific (29 Sep 2009), Chile (27 Feb 2010), Japan (11 March 2011)	Kong, McCreery
	14:45	15:00	COFFEE / TEA BREAK	
	15:00	15:45	Lessons Learned (contd)	Kong, McCreery
2.6	15:45	16:30	TWC Concept of Operation and Standard Operating Procedures (SOP) for Distant, Regional, and Local Tsunamis: Monitoring, Detection and Evaluation, Instrumentation and Methodologies (seismic, sea level, forecasts (travel time, wave height, etc), Data communications, Messages and Message Dissemination	McCreery
3			WEDNESDAY, 24 AUGUST, DAY 3: SESSION 3	
			Country Presentations, TWC SOPs, PTWC SOPs	
3.1	9:00	10:00	Country Presentations (15-20 min each, 3-4/day) - Haiti, Kiribati, Tonga	Countries
3.2	10:00	10:45	TWC Concept of Operation and Standard Operating Procedures (SOP) for Distant, Regional, and Local Tsunamis (contd)	Weinstein
	10:45	11:00	COFFEE / TEA BREAK	
3.3	11:00	11:45	PTWC SOPs	Weinstein
3.4	11:45	12:15	Development of TWC SOPs: Guidance, best practices, templates for creating timeline-driven SOPs, checklists and messages. National Tsunami Warning Centres – Overview on Standard Operating Procedures - Daily Operations, Flow Charts, Timelines. ASSIGNMENT: Review existing country SOPs (refine as needed) and present on 1-2 September as part of PacWave11 Plan.	Kong
	12:15	13:00	Drive to Ewa Beach	
	13:00	14:15	LUNCH - Prince Golf Course, Ewa Beach	
			PACIFIC TSUNAMI WARNING CENTER (PTWC), EWA BEACH, OAHU	
			Pacific Tsunami Warning Center - Operations	
			Group Photo - PTWC	
3.5	14:15	16:45	PTWC Operations (2 groups) - Topics covered 1. PTWC SOPs: Flow Charts, Message Templates, Checklists, and Cheat Sheets for Distant and Local Tsunamis 2. Operations Methods and Techniques: Seismic and Sea Level Monitoring, including Tide Tool; Earthquake Source Characterization (Local, Distant, Magnitude, Rupture); Tsunami Wave Forecasting, including SIFT and RIFT 3. Seismic instrumentation and HON vault 4. Sea Level Instrumentation / DCP system	Weinstein, PTWC Staff
	16:45	17:45	Return to hotel	

4			THURSDAY, 25 AUGUST, DAY 4: SESSION 4	
			Country Presentations, TWC Operations, Decision Support Tools	
4.1	9:00	10:00	Country Presentations (15-20 min each, 3-4/day) - Niue, Peru, Ecuador	Countries
4.2	10:00	10:45	TWC Operations - Limitations and Challenges: Real-Time Earthquake Source Characterization, e.g., double events, deep/shallow/teleseismic/local, magnitudes, finite fault rupture, etc	McCreery
	10:45	11:00	COFFEE / TEA BREAK	
4.3	11:00	11:45	TWC Operations: Guidance and Samples for Routine (non-crisis) operations, including procedures for operational readiness, data collection, and network maintenance	McCreery
4.4	11:45	12:15	Tsunami Warning Decision Support Tools – TsuDig - demonstration	Kong
	12:15	13:30	LUNCH	
			TWC Operations, Global Ocean Observing System (GLOSS) / Univ of Hawaii Sea Level Center, Exercises and Drills	
4.5	13:30	14:15	Global Ocean Observing System (GLOSS) and its use in tsunami warning, University of Hawaii Sea Level Center	Merrifield/ Kilonsky
4.6	14:15	14:45	Tsunami Warning Decision Support Tools – Sea level monitoring (Tide Tool, IOC Sea Level Monitoring web site) - demonstration and/or installation	Kong
	14:45	15:00	COFFEE / TEA BREAK	
4.7	15:00	15:45	TWC Operations - Limitations and Challenges: Real-Time Tsunami Forecasting	Wang
4.8	15:45	16:30	Building Tsunami Preparedness: Drills and Exercises, including Communications exercises	Yanagi
5			FRIDAY, 26 AUGUST, DAY 5: SESSION 5	
			Country Presentations Exercise Pacific Wave 2011	
5.1	9:00	10:00	Country Presentations (15-20 min each, 3-4/day) - Malaysia, Antigua and Barbuda	Countries
5.2	10:00	10:30	Exercise Pacific Wave 2011 - overview	Kong
	10:30	10:45	COFFEE / TEA BREAK	
5.3	10:45	12:15	PTWC Experimental Products: Threat Levels and Criteria, Text and Graphical Products, Forecasts	McCreery
	12:15	13:30	LUNCH	
			Exercise Pacific Wave 2011	
5.4	13:30	14:00	PacWave11: Exercise Format and Conduct	McCreery
5.5	14:00	14:45	PacWave11: Scenarios	McCreery
	14:45	15:00	COFFEE / TEA BREAK	
5.6	15:00	15:45	How to Plan, Conduct, and Evaluate Tsunami Exercise guideline	Kong
5.7	15:45	16:30	ASSIGNMENT: PacWave11 National Exercise Plan. Using the Guideline, participants should develop and improve their PacWave11 design. identify exercise timeline and milestones objectives, stakeholders, performance indicators, MSEL, conduct, and evaluation process. Each Country will present their PacWave11 plan on 2 September	Kong
			SATURDAY-SUNDAY, 27-28 AUGUST - FREE DAYS	
			SUNDAY, 28 AUGUST – PICNIC, KAPIOLANI PARK, 4 PM - SUNSET	

6			MONDAY, 29 AUGUST, DAY 6: SESSION 6	
			Communications Technologies and Warning Dissemination, Tsunami Emergency Response (TER)	
6.1	9:00	11:00	Communication technologies for the transmission of tsunami warnings from national to local governments and communities – robustness, reliability, redundancy criteria for emergency communications – existing (reliable) methods; RANET communications technologies for multi-hazard emergency alerting; including WMO GTS, LRIT, EMWIN, broadcast media, Fax, internet/web/email, radio/HF, Mobile/Cell phones, SMS, social media, etc; sirens	Young, Sponberg
6.2	11:00	11:15	COFFEE / TEA BREAK	
6.3	11:15	11:45	10 Steps to Enable a Successful Tsunami Emergency Response: Tsunami Stakeholder Coordination Concept: Roles of government jurisdictions, non-government organizations (NGO's), private sector, roles of individual response agencies. Plans and Concept of Operations	Yanagi
6.4	11:45	12:15	Understanding and acting on TWC Messages, DMO Actions and Use of Timelines in Emergency Response	Yanagi
	12:15	13:30	LUNCH	
6.5	13:30	14:00	Public Coastal Evacuations: Alerting and moving people, sirens, inundation maps, evacuation routes and signage, safe return	Yanagi
6.6	14:00	14:45	Case Studies on experiences in developing and using SOPs - Japan, New Zealand, Indonesia	Yanagi
	14:45	15:00	COFFEE / TEA BREAK	
			TER, Role of the Media	
6.7	15:00	15:30	TER Standard Operating Procedures (SOP): Guidance and Templates for Distant and Local Threats, Checklists, and examples of SOP best practices. General Roles and Responsibilities, Evacuation Checklists, Timeline of Processes and Actions	Yanagi
6.8	15:30	16:30	Warning Dissemination and Public Alerts: Information Flow and The Role of Media: Examples and SOPs	Yanagi, Kong
7			TUESDAY, 30 AUGUST, DAY 7: SESSION 7	
			OHANA WAIKIKI WEST Pickup at 7:45 am	
			BIG ISLAND	
			Depart for Hilo, Hawaii (Big Island)	
	8:45	9:30	Arrive Honolulu Airport and check-in, Boarding 9:30	
	9:55	10:45	Hawaiian Air (HA) Flight # 382, Honolulu - Hilo	
	10:45	11:15	Transit to Pacific Tsunami Museum	
			Pacific Tsunami Museum, Hawaii County Civil Defense, Tsunami Memorials	
7.1	11:15	13:00	Pacific Tsunami Museum	Saiki, Curtis
	13:00	14:00	LUNCH	
7.2	14:00	16:30	Laupahoehoe and Hilo Tsunami Memorials; 1946 Aleutian Tsunami	Yanagi, Sonen
	17:00		Check-in Naniloa Hotel, Hilo, Hawaii	

8			WEDNESDAY, 31 AUGUST, DAY 8: SESSION 8	
			CHECK-OUT AND MEET IN NANILOA HOTEL LOBBY at 8:00 am	
			Tsunami Memorials, USGS Hawaiian Volcano Observatory	
	8:00	9:00	Drive to USGS HVO / Hawaiian Volcanoes National Park	Yanagi, Sonen
8.1	9:00	11:30	US Geological Survey Hawaiian Volcano Observatory: Seismic and Volcano monitoring of Kilauea Volcano; Seismic Vault visit; Jaggar Museum	Thelen
	11:30	13:00	LUNCH, Kilauea Military Camp; Steam Vents / Hawaiian Volcanoes National Park	
	13:00	14:15	Drive to Hilo Airport / check-in; Drive Hawaii County Civil Defense	Yanagi, Sonen
8.2	13:15	15:30	County of Hawaii: Tsunami Emergency Responses to PTWC Tsunami Messages	Mento, Curtis
			Depart for Honolulu, Hawaii (Oahu)	
	15:30	16:30	Arrive Hilo Airport; Boarding 16:00	
	16:30	17:20	Hawaiian Air Flight # 263, Hilo - Honolulu	
	17:20	18:30	Check-in Ohana Waikiki West Hotel	
			Finish Country PacWave11 Plans for presentation 1-2 September	Countries
9			THURSDAY, 1 SEPTEMBER, DAY 9: SESSION 9	
			Tsunami Mitigation and Preparedness	
9.1	9:00	10:00	Tsunami Mitigation - Hard Countermeasures: Designing buildings to withstand tsunami impact and flooding and earthquake shaking	Robertson
9.2	10:00	10:45	Tsunami Education and Awareness and Materials	Kong
	10:45	11:00	COFFEE / TEA BREAK	
9.3	11:00	11:45	US TsunamiReady programme and other international examples	Yanagi
9.4	11:45	12:15	Building Preparedness for Special Populations (Small Businesses, Tourism, Physically-impaired, others)	Yanagi
	12:15	13:30	LUNCH	
			Country SOPs and PacWave11 Plans	
9.5	13:30	14:45	Media Case Study: JMA and NHK	Yanagi
	14:45	15:00	COFFEE / TEA BREAK	
9.6	15:00	16:30	Country PacWave11 plans – Chile, Ecuador, Hong Kong China	Countries
10			FRIDAY, 2 SEPTEMBER, DAY 10: SESSION 10	
			Final Logistics, Country SOPs and PacWave11 Plans	
10.1	9:00	9:20	Final Logistics and Paperwork	Sonen, Yanagi
10.2	9:20	10:20	Country PacWave11 plans – Fiji, Antigua & Barbuda, Peru	Countries
	10:20	10:30	COFFEE / TEA BREAK	
	10:30	12:10	Country PacWave11 plans – Korea, Kiribati, Niue, Tonga, Malaysia	Countries
	12:15	13:30	LUNCH	
			Summary, Closing	
10.3	13:30	14:30	Final Questions and Answers	All
10.4	14:30	15:15	Training Summary and Wrap-up Discussion	All
	15:15	15:30	COFFEE / TEA BREAK	
10.5	15:30	16:00	Closing Ceremonies	ITIC, PTWC, NWS