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## UNESCO-IOC

### Strengthening Tsunami Warning and Emergency Responses: Training Workshop on the Development of End-to-End Tsunami Standard Operating Procedures (SOPs)

**Mission 2**  
**20-24 April 2009**  
**Institute of Geophysics**  
**Vietnam Academy of Sciences and Technology**  
**Hanoi, Vietnam**

## FINAL AGENDA

Sess ion	Start Time	End Time	TWC	TER		Lecturer
1-3					<b>DAY 1:</b>	
1					<b>MORNING</b>	
	8:30	9:00			Registration	IOC, Vietnam
1.1	9:00	9:15			Opening Ceremonies	IOC, Vietnam
1.2	9:15	9:30			Logistics and other administrative items	Elliott Vietnam
1.3	9:30	10:00			The Asia Tsunami - Disaster of the Century	Yanagi
	10:00	10:30			GROUP PHOTO, COFFEE / TEA BREAK	
2					<b>Progress in End-to-end Tsunami Warning</b>	
2.1	10:30	11:15			Mission 1 review and Mission 2 objective; End-to-End Tsunami Warning - National Tsunami Warning Systems	Kong
2.2	11:15	11:45			Vietnam Tsunami Standard Operating Procedures and progress since Mission 1	Vietnam TWC/TER, IGP/National Search and Rescue
2.3	11:45	12:15			Strategies, Approaches, Steps for achieving end-to-end TWS: Data, Resources, Stakeholders, Coordination	All - Discussion
	12:15	13:30			LUNCH	
					<b>AFTERNOON</b>	
3					<b>Progress in End-to-end Tsunami Warning (contd), International Tsunami Warning Centers, Exercises</b>	
2.3	13:30	14:00			Strategies, Approaches, Steps for achieving end-to-end TWS: Reliable and redundant communications	All - Discussion
3.1	14:00	14:30			International Tsunami Warning Center SOP - JMA NWPTAC	Kong
3.2	14:30	15:00			International Tsunami Warning Center SOP - PTWC	Kong
	15:00	15:30			COFFEE / TEA BREAK	
3.3	15:30	16:15			Exercises and Drills - Types, Planning, Evaluations, Indonesia Examples	Kodijat
3.4	16:15	17:00			Day 5 Exercise Coordination - planning discussion (format, scenario, etc)	Kong, Yanagi

					<b>DAY 2:</b>	
					<b>MORNING</b>	
<b>4</b>					<b>Tsunami Emergency Response and Preparedness</b>	
<b>4.1</b>	8:30	9:15			Tsunami Emergency Response - Roles, Procedures, Actions	Yanagi
<b>4.2</b>	9:15	10:00			Warning Dissemination - Alerts, Sirens, and other means of attention getting	Yanagi
	10:00	10:30			COFFEE / TEA BREAK	
<b>4.3</b>	10:30	11:15			Tsunami Warning Decision Support Tools - Earthquake and tsunami monitoring, Hazard Databases, Preparedness	Kong
<b>4.4</b>	11:15	11:45			Community Preparedness - US Examples	Yanagi
<b>4.5</b>	11:45	12:15			Community Preparedness - Indonesia Examples	Kodijat
	12:15	13:30			LUNCH	
					<b>AFTERNOON</b>	
<b>5</b>					<b>Information Flow</b>	
<b>5.1</b>	13:30	14:00			TWC/TER Case Studies: 14 June 2005 - Warning, Vertical Evacuation (Washington State), others	Yanagi
<b>5.2</b>	14:00	14:30			TWC/TER Case Studies – Successes and Continuing Challenges TWC and DMO interactions: Hawaii example between PTWC, Tsunami Advisor Scientists, Emergency Management for distant and local threat cases	Yanagi
<b>5.3</b>	14:30	15:00			Information Flow SOPs - Media and Public Information: Case Studies – 1986, 1994, 2004, Tonga (3 May 2006 and 19 March 2009); Stakeholder Coordination	Kong / Elliott
	15:00	15:30			COFFEE / TEA BREAK	
<b>5.4</b>	15:30	16:15			Break out Groups: Information Flow SOPs - Media and Public Information, Stakeholder Coordination needs – Vietnam FAQ and Information SOP	Small Groups
<b>5.5</b>	16:15	17:00			Break out Groups Presentations of SOPs	Breakout Group Chairs
					<b>DAYS 3 and 4: TWC and TER (DMO) MEET SEPARATELY FOR SPECIFIC TOPICAL AND TECHNICAL DISCUSSIONS</b>	
					<b>DAY 3: TWC SOPs (revised from Provisional in order to conduct Exercise on Day 4 afternoon)</b>	
<b>6</b>					<b>MORNING - Creating SOPs: Routine, Non-crisis operations</b>	
<b>6.1</b>	8:30	9:15			National Tsunami Warning Centres – Overview on Standard Operating Procedures - Daily Operations, Flow Charts, Timelines – Routine (non-crisis) and Event (crisis) SOPs - Introduction	Kong / Elliott
<b>6.2</b>	9:15	10:00			TWC SOPs - Guidance and Samples for Routine (non-crisis) operations, including procedures for operational readiness, data collection, and network maintenance	Kong / Elliott
	10:00	10:30			COFFEE / TEA BREAK	
<b>6.3</b>	10:30	11:15			TWC SOPs - Timeline-driven activities and procedures during event alarms: Guidance and Samples for Crisis (Event) operations, including procedures for real-time data collection, event alarm response and warning dissemination	Small Groups

6.4	11:15	12:15			Breakout Groups: Creating SOPs: Timeline-driven SOPs - Using Templates to Develop Timeline of Processes and Actions as SOP (NTWC Timelines - Cases 1-4), Focus on Manila Trench scenario	Breakout Group Chairs
	12:15	13:30			LUNCH	
					<b>AFTERNOON - Creating SOPs: Event Alarms</b>	
6.5	13:30	14:00			Breakout Groups: Report back and discussion	Kong / Elliott
6.6	14:00	15:00			Creating SOPs: Timeline-driven SOPs - Using Templates to Develop Timeline of Processes and Actions as SOPs (Messages)	Small Groups
	15:00	15:30			COFFEE / TEA BREAK	
6.6	15:30	16:00			Breakout Groups: Messages	Small Groups
6.7	16:00	17:00			Breakout Groups: Report back and discussion	Breakout Group Chairs
					<b>DAY 4: TWC SOPs</b>	
6					<b>MORNING - Creating SOPs: Event Alarms</b>	
6.8	8:30	9:00			Creating SOPs: Timeline-driven SOPs - Using Templates to Develop Timeline of Processes and Actions as SOPs (Checklists and Action Criteria)	Kong / Elliott
6.9	9:00	10:00			Breakout Groups: Checklists - Cases 1-4	Small Groups
	10:00	10:30			COFFEE / TEA BREAK	
6.10	10:30	11:15			Creating SOPs: Timeline-driven SOPs - Using Templates to Develop Timeline of Processes and Actions as SOPs (Information Flow)	Breakout Group Chairs
6.11	11:15	11:45			Breakout Groups: Review and improve, if needed, Information Flow SOP for TWC; Review and answer FAQs as an information resource	Kong / Elliott
6.12	11:45	12:15			Breakout Groups: Report back and discussion	Small Groups
	12:15	13:30			LUNCH	
					<b>DAY 3: TER SOPs (revised from Provisional in order to conduct Exercise on Day 4 afternoon)</b>	
6					<b>MORNING - Emergency Response SOPs</b>	
6.1	8:30	9:15			Review of 10 Steps to Enable a Successful Emergency Response	Yanagi / Kodijat
6.2	9:15	10:00			Understanding and acting on TWC Messages, DMO Actions, and use of Timelines in Emergency Response	Yanagi / Kodijat
	10:00	10:30			COFFEE / TEA BREAK	
6.3	10:30	11:30			Tsunami Emergency Response - Distant and Local Tsunami Threat - Case Studies on present operations, Indonesia	Yanagi / Kodijat
6.4	11:30	12:15			Case Studies on experiences in developing and using SOPs - Wakayama, Japan and Hawaii.	Yanagi / Kodijat
	12:15	13:30			LUNCH	
					<b>AFTERNOON - Emergency Response SOPs</b>	
6.5	13:30	14:15			SOP Templates - Distant and Local Threats	Yanagi / Kodijat
6.6	14:15	15:00			Creating SOPs - Response Processes, Flow Charts, Checklists	Yanagi / Kodijat
	15:00	15:30			COFFEE / TEA BREAK	
6.6	15:30	16:15			Breakout Groups: Using Templates to Create General Roles and Responsibilities	Yanagi / Kodijat
6.7	16:15	17:00			Break out Groups: Using Templates to Create Evacuation Checklists	Yanagi / Kodijat
					<b>DAY 4 MORNING: TER SOPs</b>	
6					<b>MORNING - Creating SOPs: Roles and Responsibilities, Evacuation</b>	

6.8	8:30	9:15			Break out Groups: Using Templates to Create Evacuation Checklists	Yanagi / Kodijat
6.8	9:15	10:00			continued	Small Groups
	10:00	10:30			COFFEE / TEA BREAK	
6.9	10:30	11:30			Creating SOPs: Timeline driven SOPs	Yanagi / Kodijat
6.10	11:30	12:15			continued	Small Groups
	12:15	13:30			LUNCH	
						Kong / Elliott
					<b>DAY 4 AFTERNOON: PLENARY</b>	
					<b>Both Groups re-convene for Table Top Exercise</b>	
					<b>AFTERNOON</b>	
6.11	13:30	14:00			Table Top Exercise Set-up according to Stakeholder Warning and Response Groups (TWC and TER groups)	TWC and TER Groups
6.12	14:00	16:00			Table Top Exercise – Manila Trench source, TWC and TER groups	TWC and TER Group
	16:00	16:30			COFFEE / TEA BREAK	
6.13	16:30	17:00			Preparation for Table Top Presentation by Group (TWC and TER)	TWC and TER Group
7-8					<b>DAY 5: SESSIONS 6 and 7, PLENARY</b>	
7					<b>MORNING – Post-Exercise Evaluation</b>	
7.1	8:30	10:00			Table Top Presentations by Groups (TWC and TER) and Discussion – Comments, Problems, Improvements	Exercise Group Chairs, All
	10:00	10:30			COFFEE / TEA BREAK	
					<b>TWC and TER (DMO) MEET SEPARATELY FOR SPECIFIC TOPICAL AND TECHNICAL DISCUSSIONS</b>	
					<b>TWC</b>	
7.2	10:30	11:15			National Tsunami Warning Centres – Overview on Standard Operating Procedures - Daily Operations, Flow Charts, Timelines - Summary	Kong/Elliott
7.3	11:15	12:15			TWC SOPs for Crisis (Event) operations - putting it all together again - practice through exercises, post-event activities for improving SOP	Kong/Elliott
					<b>TER</b>	
7.2	10:30	11:15			Evacuations: Alerting and Moving People, Inundation Maps, Evacuation Routes and Signage, Safe Return	Yanagi/Kodijat
7.3	11:15	12:15			Template Evacuation Occurrence	Yanagi/Kodijat
	12:15	13:30			LUNCH	
7-8					<b>AFTERNOON - Summary and Closing Ceremonies</b>	
7.4	13:30	14:30			Table Top Exercise – Summary and Next Steps Workshop Summary Discussion	Kong / Yanagi, All
8	14:30	15:00			Presentation of Certificates	All
8	15:00	15:30			Closing	IOC, VIETNAM