

Strengthening Tsunami Warning and Emergency Responses: One-week Training Workshop on the development of End-to-End Tsunami Standard Operating Procedures

Introduction

The UNESCO Intergovernmental Oceanographic Commission (IOC) Strengthening Tsunami Warning and Emergency Responses End-to-End Standard Operating Procedures Training Workshop was developed to support the IOC's effort to assist countries in developing and strengthening their tsunami warning operations. The 2008-2009 capacity building project, funded by Regional Multi-Donor Voluntary Trust Fund for Tsunami Early Warning Arrangements in the Indian Ocean and Southeast Asia administered by UNESCAP, consists of a regional training workshop and multiple-mission technical visits to four countries (Myanmar, Pakistan, Philippines, Vietnam). The Project emphasizes Standard Operating Procedures (SOP) as a key requirement for ensuring efficient, timely, and consistent responses by stakeholder agencies, principally tsunami warning centers and disaster management agencies.

To carry out the Project, guidance on tsunami warning and emergency response operations was developed and training workshops conducted using tsunami operations practitioners who shared their expertise, experience, and advice. The generic set of operational templates, checklists, and timeline-driven actions provides a common starting SOP point for countries to customize to meet their specific needs and tsunami threat. These materials are intended as a set of globally consistent procedures and protocols for tsunami warning and emergency response. Together, they represent part of the IOC's collaborative contribution to national capacity building and training on end-to-end tsunami warning and tsunami standard operating procedures to countries of the Indian and Pacific Oceans and Southeast Asia, and the Caribbean region.

To support the introductory one-week Training Workshop, this Training Manual was compiled and provided in hard copy and electronic formats. The Manual includes reference, best practice, decision support tools, and templates and guidance materials covering key components, requirements, and activities to enable an effective and timely warning and evacuation against tsunamis. The materials were developed under the lead of the International Tsunami Information Center (ITIC) and in close partnership with experienced practitioners in tsunami warning and emergency response, and have been used in numerous training courses since the 2004 Indian Ocean tsunami. The hard copy portion of the Manual includes materials referenced by the lecturers and/or used by participants for small group activities during the Workshop. The accompanying data DVD contains electronic files, including the Support Documents, copies of the lecturer's PowerPoint presentations and other Workshop materials.

The Training Workshop is intended to be a 5-day intensive course for tsunami warning center and emergency response agencies and their staff. An Agenda and Session Plan describe the topics covered, their learning points, teaching methodology, and references Manual and Support Documents for each topic. The Workshop concludes on Day 5 with participants carrying out an exercise simulation using the tsunami standard operating procedures learned about and created during the week. The exercise is intended to evaluate the feasibility of the created SOPs, and to illustrate how operational readiness can be improved through the regular conduct of drills and exercises to identify gaps and correct responses before an actual emergency. Post-exercise or

post-event evaluations emphasize the importance of reviewing an event's response and then immediately taking corrective action so that the same problem does not repeat itself.

The development of Standard Operating Procedures is a dynamic process, and each event is unique in its generation and impact, and so also in its response. In every event, we learn a little more about the science of tsunamis and how to better mitigate against their impact. There are always lessons learned which we must apply (modifying our SOPs accordingly) before the next event occurs. And so with time, this Training Manual will evolve too. We welcome your comment and input on ways to improve its usefulness.

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Japan Cabinet Office
Japan Meteorological Agency (JMA)
Shizuoka Prefectural Government and Earthquake Preparedness Education Center
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New Zealand Civil Defense and Emergency Management (CDEM)

Radio-Internet Project (RANET)

UNDP Regional Center, Bangkok

UN International Strategy for Disaster Reduction (ISDR)

USA

Hawaii State and Local Government, Civil Defense and Emergency Management
Washington State Government, Emergency Management
National Oceanic and Atmospheric Administration (NOAA)
National Geophysical Data Center (NGDC)
National Weather Service (NWS)
Pacific Tsunami Warning Center (PTWC)
West Coast / Alaska Tsunami Warning Center (WC/ATWC)
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