Regional Integrated Multi-Hazard Early Warning System
Facilitated by the Asian Disaster Preparedness Center

REGIONAL TRAINING COURSE ON
SEISMOLOGICAL COMMUNICATION PROCESSOR (SeisComP3)
25-29 May 2009, Bangkok, Thailand

In collaboration with gempa GmbH
Supported by UNESCAP through the Tsunami Regional Trust Fund

1. Background

The Regional Integrated Multi-Hazard Early Warning System (RIMES) is a regional cooperation on early warning by Bangladesh, Bhutan, Cambodia, China, Comoros, India, Lao PDR, Maldives, Mauritius, Mongolia, Myanmar, Nepal, Philippines, Sri Lanka, Thailand, Vietnam and Yemen. The Asian Disaster Preparedness Center (ADPC) facilitates this regional cooperation through bilateral agreements with the countries. East Timor, Kenya, Madagascar, Mozambique, Pakistan, Seychelles, Somalia, and Tanzania are in the process of joining this regional cooperation.

The regional program adopted by member countries in 2006 has the following inter-related components:

1) *Regional* tsunami observation, evaluation, prediction, and advisory communication to member countries, including regional research support in hydro-meteorological risk information generation and application
2) Strengthening *national* capacities in early warning, disaster preparedness and emergency response
3) Enhancing *local* capacities to assess disaster risks, respond to warnings, and undertake local risk reduction
4) Regional *exchanges* of information, best practices, and lessons learned
5) *Research* in all aspects and elements of the end-to-end early warning system

The project entitled *End-to-end early warning of tsunamis and other natural hazards for disaster preparedness and mitigation in the Indian Ocean and Southeast Asia: Phase 2*, supported by UNESCAP through the Tsunami Regional Trust Fund, contributes to the implementation of this regional program. The project aims at enhancing tsunami warnings with the use of pre-computed simulations. One of the key project activities is the training of seismologist/scientist of National Tsunami Warning Center to enhance capacities in the installation and use of SeisComP3.

2. Introduction

The key elements of an end-to-end early warning system, as defined by the Intergovernmental Oceanographic Commission (IOC), the global body overseeing tsunami early warning, are: a) hazard detection and forecast, consisting of a regional and national hazard detection network of instrumentation and communication mechanisms to continuously monitor and detect tsunamigenic events, and tsunami modeling, forecasting and scenario development; b) threat evaluation and alert formulation at regional and national levels; c) alert dissemination at national and local levels; and d) local preparedness and response.

As part of the operations of RIMES being the early warning system for the region, SeisComP3 will be utilized as the redundant seismic data acquisition and processing system. With its seismic monitoring capabilities, this tool would allow data transmission from RIMES' regional facility to the national warning center of its member states.

3. Purpose and Objectives

The course aims to enhance capacity of participating technical staffs and institutions in the installation and functionalities of SeisComP3 as a seismic component tool in end-to-end tsunami early warning systems. The course includes system configurations, theory, practical exercises, interactive and participative lectures and discussions on module functionalities.

Upon course completion, participants would be able to:

- install and configure SeisComP3 modules
- gain knowledge on the software's module functionalities
- practical experience in real-time earthquake monitoring for automatic and manual solutions
- gain understanding on seismological technique for rapid estimation of earthquake parameters
- acquire basic skills for system troubleshooting, database management and graphical user interface

4. Participants

The course is designed for technical officers who have responsibilities in seismic data evaluation particularly in making all observations and interpretations of available seismic data to locate an earthquake, determine its magnitude and evaluate its potential to generate a tsunami

Participation is by invitation. Participants are expected to have background on basic Seismology and Linux system.

Participants are requested to send back the attached *assessment form*, fully accomplished, to: muriel@adpc.net or muriel.naguit@gmail.com. Information from the assessment will be utilized by resource persons prior to and during the course to ensure that course content and activities are tailored to participants' background and needs.

5. Training Period

This regional training course will be conducted from 25-29th of May, 2009 in Bangkok, Thailand by experts from Global Earthquake Monitoring Processing Analysis (gempa GmbH).

6. Course Curriculum

This one-week training course will introduce and provide details about SeisComP3 including:

- Installation and configuration of SeisComP version 3.0
- Introduction to theory and concepts of system architecture and features
- Module functionalities, graphical user interface and processing tools
- Real-time seismic monitoring and event processing
- Database management

7. Course Schedule

The day-to-day training schedule is attached herewith.

8. Administrative Arrangements

8.1 Computing requirements

Participants are **required** to bring their own laptops to be able to bring the installed software to their respective warning centers after the training. The following are the hardware requirements:

> PC laptop with 2GB RAM, HDD>80 GB,
> dual core and actual linux system (SUSE11.1 32bit, (K) Ubuntu 8.04/8.10 32bit)

8.2 Travel

ADPC will provide the most direct, economy air ticket. Local travel cost, and visa and terminal fees will be reimbursed based on receipts.

8.3 Training Venue and Accommodation

> Amari Don Muang Airport Hotel
> 333 Chert Wudthakas Road, Bangkok, 10210 Thailand
> Tel.: +66 (0) 2566 1020
> Fax.: +66 (0) 2566 1941
> http://www.amari.com/donmuang/

8.4 Meals

ADPC will provide lunches and tea breaks for the duration of the training course. Breakfast is included in the room package. A modest per diem will be provided to cover dinners.

8.5 Organizing Committee Contact Details

On training content:
> Ms. Muriel E. Naguit, Seismologist
> E-mail: muriel@adpc.net or muriel.naguit@gmail.com
> Tel: +66-2516-5900 to 01
> Mobile: +66-86-773-3868

On logistics:
> Ms. Dusadee Morya, Administrative Associate
> E-mail: dusadee@adpc.net or dusadeep@gmail.com
> Tel: ++66-2516-5900 to 01 ext 105
> Mobile: +66-86-972-3205