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| WORLD METEOROLOGICAL ORGANIZATIONCOMMISSION FOR BASIC SYSTEMS OPAG on DPFSMEETING THE REGIONAL SUBPROJECT MANAGEMENT TEAM (RSMT) OF THE SEVERE WEATHER FORECASTING DEMONSTRATION PROJECT (SWFDP) IN SOUTHEAST ASIA Ha Noi, Viet Nam, 11-14 August 2015 |  | DPFS/RAII/SeA-SWFDP-RSMT /Doc. 9.3  (30.VII.2015)  \_\_\_\_\_\_\_  Agenda item : 9.3  ENGLISH ONLY |

**SWFDP Training Aspects**

*(Submitted by the Secretariat)*

##### Summary and purpose of document

This document provides information on specialized training programmes organized for capacity development of the NMHSs of SWFDP participating countries.

##### Action Proposed

The meeting is invited to review this information and consider the information to review and update the training component of Regional Subproject Implementation Plan (RSIP) for SWFDP- Southeast Asia.

**Reference(s):** Nil

**SWFDP Training Programme**

Capacity development of the NMHSs of SWFDP participating countries through specialized training programmes on NWP, EPS and satellite products and their interpretation and use in making forecasts of impending severe weather and issuance of warnings for associated hazardous hydrometeorological conditions is one of the key elements of SWFDP development and implementation in various regions. So far based on the regional and national needs, the following approach has been followed for planning and designing of the SWFDP training programmes:

1. *Two-week SWFDP training workshops*

Subject to the regional requirements and available resources, the two-week SWFDP training workshops are planned to be held preferably on yearly basis and are rotated among the participating countries of a SWFDP regional subproject so that maximum staff can be trained in each of the participating country. Such workshops are mainly conducted for forecasters of the involved NMHSs with combined responsibilities for preparing forecasts and warnings, as well as public weather services (PWS) staff of the NMHSs. The training workshops are organized with involvement of WMO’s Global Data Processing and Forecasting System (GDPFS) and PWS programme and through collaboration from other relevant programmes, such as Tropical Cyclone Programme (TCP), Marine Meteorology and Oceanography (MMO), Hydrology and Water Resources (HWR) and Agricultural Meteorology (AgM) Programmes.

In principle, a two-week training workshop includes one week training on the use of NWP, EPS and Nowcasting guidance products for severe weather forecasting including for tropical cyclones/typhoons if necessary, on forecast verification and on aspects related to required project-related tasks for the NHMSs in their SWFDP participation, which are described in the relevant Regional Subproject Implementation Plans (RSIPs). The second week of the training workshop mainly focuses on the delivery of forecast and warning services to key users of such services (e.g. disaster management offices, media, farmers and fishers etc.) in the context of emergency preparedness and response. Therefore, the host NMHS is always encouraged to invite representatives of its users during week-2 of the workshop to enhance engagement of the NMHS and users for making the forecasts and warnings more understandable. This engagement also aims to contribute in effective communication of severe weather forecasts and warnings for improved decision making and response system process to minimize the losses and damages from weather related hazards. The week-2 also emphasizes on impact based forecasts and risk based warnings.

The NMHSs of SWFDP participating countries in Southern Africa, Eastern Africa, Southeast Asia and Bay of Bengal regions benefit from such training workshops.

1. *RSMC Training Desk*

The establishment of a training desk at RSMC Pretoria has been adopted for SWFDP-Southern Africa since 2013. For this purpose, two forecasters from NMHSs of participating developing or least developed countries are invited to work with the RSMC forecasters for two weeks duration. RSMC training desk mainly serves two objectives: firstly, to improve the skills of invited forecasters by engaging them in the process of NWP, EPS and satellite products inference and analyses to develop RSMC Daily Guidance towards the participating NMHSs; and secondly to provide opportunity for the RSMC forecasters to gain local knowledge from the invited forecasters through discussion in order to improve RSM Daily Guidance for the benefitting countries. Two forecasters from Malawi and Mozambique and two forecasters from Lesotho and Swaziland attended the RSMC training desks in 2013 and 2014 respectively.

1. *Global Guidance Service*

Global guidance service involves daily video conferencing among the participating global, regional and national centres especially during rainy season in order to have discussions on current weather, synoptic analyses and inference from the NWP model products and satellite information to identify areas of potential severe weather in short- and/or medium-range. The objective of this guidance service is to improve the regional centre’s Daily Guidance Product issued towards the benefitting NMHSs. In addition, an expert from a global centre can also be invited to visit the RSMC/RFSC for short duration to help the forecasters in developing regional Guidance.

This approach was adopted for SWFDP-Eastern Africa during 2012, 2013 and 2014.

From 2014, this service has been in place in the region with participation of regional and national centres only.

1. *In-country Training*

In-country training approach has been adopted for the SWFDDP-Southwest Pacific because of the nature of the region which involves relatively small NMHSs of nine Small Island Developing States (SIDSs) in Southwest Pacific Ocean.

1. *Training at Global and Regional Centres*

A number of participants from SWFDP participating countries are also supported and sponsored for NWP and EPS products interpretation and high resolution limited-area NWP Modelling trainings offered by various global and regional NWP centres as mentioned below:

* ECMWF (annual trainings for WMO Members)
* DWD (annual training on COSMO aligned with SWFDP)
* Regional Training Centres (training programmes on forecasting aligned with the SWFDP)
* NOAA/NCEP Desks

**Training activities for SWFDP-Southeast Asia**

Since inception of the SWFDP-Southeast Asia in 2010, following two-week training workshops have been conducted for the benefitting countries of the subproject:

* SWFDP-SeA Training Workshop in Hong Kong, China (4-15 July, 2011)
* SWFDP Training Workshop in Macao, China (8-19 April, 2013) which was jointly organized for the NMHSs in Southeast Asia and the Bay of Bengal regions
* SWFDP-SeA Training Workshop in Quezon City, Philippines (2-13 June 2014)

In 2013, 33 participants from 16 countries of Southeast Asia and Bay of Bengal regions benefitted from the SWFDP training workshop in Macao. The training workshop in Philippines in 2014 was attended by 42 participants from 5 countries of Southeast Asia including 34 participants from the host country.

*Training activities in 2015 include:*

* In order to improve high-resolution limited-area NWP Modelling at RFSC Ha Noi, WMO sponsored two forecasters from RFSC Ha Noi for their participation in a Training course on COSMO/CLM/ART in Langen, Germany held from 23 to 31 March 2015.
* A two-week SWFDP Training Workshop has been planned in Bangkok, Thailand from 14 to 25 September 2015. The workshop will be held jointly for the NMHSs in Southeast Asia and Bay of Bengal regions. In addition to the 10 participating countries of SWFDP, Bhutan, Nepal and Pakistan have also been invited to send their operational forecasters and PWS staff to the training workshop.

**Conclusion**

The SWFDP training programme has proven to be successful in capacity development of the involved NMHSs in each region. The meeting is invited to consider this information to review and update the Regional Subproject Implementation Plan (RSIP) for SWFDP-Southeast Asia including especially its training component.