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| **WORLD METEOROLOGICAL ORGANIZATION**  **COMMISSION FOR BASIC SYSTEMS OPAG on DPFS**  **MEETING 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. 5.3/6.0  (10.VII.2015)  \_\_\_\_\_\_\_  Agenda item : 5.3/6.0  ENGLISH ONLY |

**SWFDP Cascading Forecasting Process: Role of National Meteorological Centres**

**(Thailand)**

*(Submitted by Surapong Sarapa – TMD, Thailand)*

**Summary and purpose of document**

This document provides information on the roles of TMD for implementation and application for Severe Weather Forecasting Demonstration Project in Southeast Asia (SWFDP-SeA)

**Action Proposed**

The meeting is invited to review this document and discuss the roles and progress in implementation and application for SWFDP-SeA in Thailand for enhancing the weather monitoring and forecasting processes, to improve the provision of weather services, including early warning system for severe weather events in order to protect and reduce loss of life of people and properties associated with natural hazards.

**CASCADING FORECASTING PROCESS: ROLES OF PARTICIPATING COUNTRIES**

**Thailand**

**Overview**

Many disasters have occurred in Thailand, leading to loss of life and economic damages. Most natural disasters that have happened in the country are storm and flood-related. In 2011, Thailand witnessed its worst flooding in half a century, leaving severe impairments to the country’s economy, industrial sector, and society. Factors that contributed to flood crisis range from natural to manmade. Consequently, floodwaters inundated 90 billion square kilometers of land, more than two-thirds of the country,

**Thai Meteorological Department (TMD) as the National Meteorological Centre: Status of Implementation**

* The severe weather events that impact Thailand include the following: heavy rainfall (by Monsoon, ITCZ, and Low pressure cell), tropical cyclone, storm surge, strong winds, high sea wave, severe thunderstorm and hail storm.
* TMD collects and analysis of the different Numerical Weather Prediction (MWP) models from global Centre (e.g ECMWF, JMA, GFS, NCEP, NAVGEN, KMA, CWB, and etc.) to be useful in enhancing the weather monitoring, forecasting.
* TMD has applied WRF model-3DVAR and its overlay with satellite images to use for improving of the short-range weather forecast and warning.
* TMD receive meteorological satellite data (Himawari-8, FY2 and NOAA) directly from the satellite and also receive from internet.
* TMD analysis satellite and radar images for nowcasting forecast, severe weather warning and tropical cyclone monitoring.
* TMD used various Numerical Weather Prediction (NWP) products on SWFDP website especially the Regional EPS Products gave good guidance for forecasters to issue warning information.
* The products on SWFDP website are a good reference to operational weather forecasting.

**Public Weather Services: Delivering Services to Target User Groups.**

**Government Agencies**

* TMD is a working group on Water and Flood Management with other Government Agencies (Royal Irrigation Department (RID), Department of Water Resources (DWR), The Electricity Generating Authority of Thailand (EGAT), Hydro and Agro Informatics Institute (HAII) and The Office of the National Water and Flood Management Policy). TMD reports on the weather situation, Short-range and medium-range weather forecast for the meeting every week.
* TMD has a very good cooperation with the National Disaster Warning Center (NDWC) and Department of Disaster prevention and Mitigation (DDPM). TMD disseminates many useful data (e.g. the real time weather information, weather forecast, advisory and warning) to both departments for disaster management. Also the TMD’s staff works as the committee of Disaster Prevention Centre in the National level and local level.

**Medias**

* TMD has 6 radio stations to broadcast
  + 1 A.M. radio station at Headquarter in Bangkok
  + 5 F.M. radio stations for in the others part of Thailand.
* TMD improves the website (http://www.tmd.go.th) and we have the Mobile Application as name Thai weather.

• The Media's have been used to disseminate observations data, weather forecast, warnings that include internet, intranet, Fax, and Social Media.

• TMD cooperated with TV channels to increase on broadcasting the weather forecast and warning to public with the Medias has a training program for TV’s reporter. Also TMD has seminar on improvement of provision weather forecast service with TV reporter every year.

**Users/General Public**

* TMD has seminar on using meteorological data and weather forecast product to support the user in different groups, receive the feedback from users to improve our services.

**Future Plan**

* To improve the weather information for the user’s needs.
* Plan to install a new supercomputer for use in numerical weather prediction(NWP)
* On the job training for weather forecasters to access & use NWP / EPS products for improving the severe weather forecast at NMHS.
* Improving the comparison and verification of the forecast with observations.
* To improve the Meteoalarm system for warning and announcement of occurrence of special, dangerous and unfavorable meteorological events.
* Plan to broadcast weather forecasts and severe weather information by TMD forecasters on Social Media and television. They are on the job training to become TV presenters.