

## Development of SWFDP – Southeast Asia Planning Information

### NMHS of Vietnam

#### Introduction

The outcomes of the Workshop on Severe Weather Forecasting Demonstration Project (SWFDP) Development for Southeast Asia, held 2 - 5 February 2010 in Ha Noi, Viet Nam hosted by National Hydro-Meteorological Service of Viet Nam, requested the participating NHMSs to provide information to assist in the planning of a SWFDP project. Please see the final report of the meeting, in “Section 6 – Planning a RA II Regional Subproject”, in particular paragraph 6.6.3.

The following information is designed to assist the participating NMHSs to provide the required information.

#### **A - NMCs to prepare a list of forecasting and warning products required**

##### **1. Data and products from global product centres:**

- Current high-resolution deterministic NWP fields (out to 5 days): charts to depict the large-scale flow (500 hPa , 700 hPa, 850 hPa geopotential height, 850 hPa temperature, upper air winds, MSLP, surface streamlines, 850 hPa, 700 hPa, 500 hPa, 200 hPa wind flow and relative humidity); surface weather elements (6-hour accumulated precipitation, surface (10m) wind-speed); charts to assist with forecasts of tropical cyclone formation, movement and intensification (850 hPa, 200hPa relative vorticity and convergence, 850-400 hPa deep layer mean flow, 850-200 hPa vertical wind shear, vertical motion); surface or 850hPa vortex track charts, tropical cyclone position fix and track forecast spread
- Current probabilistic forecast fields (max lead-time available): probability of severe weather events such as precipitation and wind higher than given thresholds, stamp maps, EPSgrams, severe weather risk index such as Extreme Forecast Index

##### **2. Data and products from regional centres:**

- Current deterministic limited area model fields (out to 2 days): charts to depict the large-scale flow (e.g. 500 hPa, 700 hPa, 850 hPa geopotential height, 850 hPa temperature, tropopause height, upper air winds, MSLP); surface weather elements (e.g. 6-hour accumulated precipitation, surface (10m) wind-speed and gusts (if available), 2m temperature, 850 hPa specific humidity); maps of convective indices such as CAPE, Lifting Index,..; special products derived from satellite images (e.g. derived precipitation or images annotated with guidance notes
- RSMC Severe Weather Forecasting Daily Guidance (to be determined for the Implementation Plan): interpretation of EPS and deterministic products; severe weather predictions (risk or probability estimates).

#### **B – NMCs to provide all warning criteria currently used**

<b>Hazard</b>	<b>Description</b> e.g. season, region	<b>Warning Criteria</b> e.g. 100 mm/24h	<b>Notes</b> e.g. general public
Heavy rain	Region, area	50 mm/12h	Public, CCFSC, local
Cold surge	Region, area	Temp. <20°C,	Public, local

		wind>12m/s	
Hot temperature	Region, area	Temp>35 <sup>0</sup> C	Public, local
Tropical cyclone	Region, area	Wind>12m/s	Public, local
Thunderstorm	Region, area		Public, local
Drought	Season		Public, local

**C – NMC to provide information on Internet access capability**

Yes, we provide information on Internet access capability

**D - Please reply to the following questions:**

**1. Does your NMC access image products from global products centres, such as JMA, ECMWF, etc.?** Please list a few sample images and provide the names of the sites.

Yes

Center	Model	Image	Site
ECMWF	IFS	Jpg, pcx, bmp	GTS, Internet
JMA	GSM	Jpg, pcx, bmp	GTS, Internet
CANADA	GEM	Jpg, pcx, bmp	GTS, Internet
AUS.	TXLAPS	Jpg, pcx, bmp	GTS, Internet
GERMAN	GME	Jpg, pcx, bmp	GTS, Internet
USA	GFS	Jpg, pcx, bmp	GTS, Internet

**2. Does your NMC download numeric files (e.g. GRIB) from other centres?** Please provide the name of a file and provide the name of the site. Yes

Center	Model	Format	Filename	Site
CMC	GEM	GRIB1	CMC_glb_APCP_SFC_0_latlon.6x.6_2010051612_P024.grib	<a href="http://dd.weatheroffice.ec.gc.ca/model_gem_global/high_resolution/grib1/lat_lon">http://dd.weatheroffice.ec.gc.ca/model_gem_global/high_resolution/grib1/lat_lon</a>
NCEP	GFS	GRIB2	gfs.t00z.pgrb2f24	<a href="ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/gfs/prod">ftp://ftpprd.ncep.noaa.gov/pub/data/nccf/com/gfs/prod</a>
JMA	GSM	GRIB2	Z_C_RJTD_2010050612000_GSM_GPV_Rra2_Gll0p25deg_Lsurf_FD0612_grib2.bin.gz	<a href="ftp://ds.data.jma.go.jp/">ftp://ds.data.jma.go.jp/</a>
		GRIB1	gsm12a_0100.tar gsm25a_0100.tar	<a href="ftp://dss.kishou.jp.go">ftp://dss.kishou.jp.go</a>
FNMOCC	NOGAPS	GRIB1	US058GMET-GR1mdl.0058_0240_02400F0RL2010051700_0001_00000-000000ttl_prpcp_03	<a href="http://www.usgodae.org/ftp/outgoing/fnmoc/models/nogaps">http://www.usgodae.org/ftp/outgoing/fnmoc/models/nogaps</a>
BoM	TXLAPS	GRIB1	IDYTX500.024.grb	<a href="ftp://ftp.bom.gov.au/register2/bom165/jobpkV7b/grib">ftp://ftp.bom.gov.au/register2/bom165/jobpkV7b/grib</a>

**3. What is the Internet access speed your NMC normally have (Mbps)?**

NHMS has 3 Internet lines, including: High-speed line with 155 Mbps, normal-speed line with 5Mbps and 2Mbps. The high-speed line belongs to the Trans-Eurasia Information Network (TEIN3) and is used for accessing numeric data. The normal-speed lines are rent

of ISP VDC and CMC of VietNam. The normal-speed line is used by forecasters for accessing graphical products from other centers.

Do the forecasters at your NMC consider their Internet access "slow", or "ok"? OK

Do the forecasters rely on the Internet as essential for severe weather forecasting at your NMC? Yes