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| WORLD METEOROLOGICAL ORGANIZATIONCOMMISSION FOR BASIC SYSTEMSOPAG on DPFSMEETING OF THE RA-IV EXPERTS GROUP ON SEVERE WEATHER FORECASTING DEMONSTRATION PROJECT (SWFDP)Fort de France, Martinique, 13-15 December 2016 |  | WDS-DPFS/RAIV-SWFDP/Doc.2.1(2)(07.XII.2016)\_\_\_\_\_\_\_ENGLISH ONLY |

**EXPLANATORY MEMORANDUM TO THE PROVISIONAL AGENDA**

**1. OPENING**

The Meeting of the RA-IV Experts Group on Severe Weather Forecasting Demonstration Project (SWFDP) will be opened at 09.00 hours on Tuesday, 13 December 2016 at the Regional Office of Meteo France, Fort de France, Martinique. Opening and welcome remarks are anticipated to be made by the representatives of Meteo France and the WMO Secretariat.

**2. ORGANIZATION OF THE MEETING**

**2.1 Adoption of the agenda**

The provisional agenda will be submitted to the participants for consideration and adoption.

**2.2 Working arrangements**

The meeting will agree on the details concerning the organization of its work, including the working hours and any other practical session arrangements. The documentation for the meeting and the meeting itself will be in English. A Documentation Plan (INF. 1) has been developed to assist participants to prepare for the meeting, which has been posted on the WMO web site at:

<http://www.wmo.int/pages/prog/www/BAS/CBS-meetings.html>

All participants are requested to provide input on assigned agenda items before end of November 2016. They are also welcomed to provide input to any other items.

**3. INTRODUCTION TO SEVERE WEATHER FORECASTING DEMONSTRATION PROJECT (SWFDP)**

**3.1 SWFDP framework including Guidebook for Planning Regional Subprojects**

The meeting will be presented with information on the SWFDP framework, including guidance from the Commission for Basic Systems (CBS), and the “*SWFDP Guidebook for Planning Regional Subprojects”* which is developed and reviewed by CBS Steering Group for SWFDP to provide guidelines on development planning of a SWFDP regional subprojects in a geographical area and its implementation plan.

**3.2 SWFDP summary of experiences and progress**

The meeting will also be informed on the SWFDP experiences since its inception in 2006, and progress and status of various on-going SWFDP regional subprojects in various regions.

The meeting will consider above information and follow up discussions in developing the outline of Regional Subproject Implementation Plan (RSIP) for SWFDP-Caribbean.

**4. SATELLITE INFORMATION, AND DATA-PROCESSING SYSTEMS AND PRODUCTS**

**FOR VERY SHORT-RANGE FORECASTING, INCLUDING NOWCASTING, IN RA IV**

The issuing of warnings of imminent threat (as part of forecasting in the first few hours of the forecasting range) requires specific tools, and such tools are even more important for regions having limited or no radar coverage. Therefore, the latest and useful products for severe weather monitoring, nowcasting and very short-range forecasting are highly important and desirable for the effective implementation of SWFDP. In this context, the meeting will be presented with brief reports by NOAA/NCEP and Meteo-France on satellite/radar information, and data-processing systems and products that are useful for very-short range forecasting including nowcasting in RA IV. The meeting will consider this information and follow up discussions in developing the outline of Regional Subproject Implementation Plan (RSIP) for SWFDP-Caribbean.

**5. SWFDP CASCADING FORECASTING PROCESS: ROLES OF PARTICIPATING GLOBAL, REGIONAL AND NATIONAL CENTRES INCLUDING NMCs’ FORECASTING AND WARNING CAPACITY**

**5.1 Global Centres: Meteo France, US NOAA/NCEP, Environment Canada, UK Met Office and ECMWF**

The representatives of Meteo France, US NOAA/NCEP, Environment Canada, UK Met Office and ECMWF will inform the meeting of the general features of their global NWP production systems, including their future development plans and the kinds of NWP/EPS products that are provided or could be provided to the project, with focus on severe weather monitoring and forecasting. The representatives of Global Centres will also inform the meeting on contributions for global and regional LAM NWP capabilities for the subproject and their roles and contributions in various other projects in synergy to the SWFDP in the region. The meeting will consider this information and follow up discussions in developing the outline of Regional Subproject Implementation Plan (RSIP) for SWFDP-Caribbean.

**5.2 Regional Centres: RFSC Martinique; RSMC Miami; CIMH Barbados**

The representative of Meteo-France will brief the meeting on potential contributions of Meteo France’s Regional Office in Martinique as a Regional Forecasting Support Facility (RFSF) to the subproject including i) its LAM NWP production system and products, project web site and portal, ii) its capacity to analyse available information and issue daily guidance product for hydrometeorological and coastal sea hazards towards the NMCs in the Caribbean based on RSMC Miami forecasts and products in case of tropical cyclone in the sub-region, iv) coordination mechanisms, and v) RFSF work plan and activities etc. The meeting will discuss the roles of and potential contributions by RFSF, Martinique as a lead Regional Centre for the subproject including for technical training support to the RTC (CIMH) in Barbados.

The representative of RSMC, Miami will inform the meeting of the general features of their NWP production system(s), relevant observational datasets and products (e.g. satellite-based) which are available or can be developed further, relevant to severe weather monitoring and forecasting including specifically for /hurricanes tropical cyclones forecast support and technical training support.

The representative of the Caribbean Institute for Meteorology and Hydrology (CIMH) will inform the meeting on activities of CIMH and its potential role and contributions as a regional centre for technical training support in the context of SWFDP.

The meeting will consider above information and follow up discussions in developing the outline of Regional Subproject Implementation Plan (RSIP) for SWFDP-Caribbean.

**5.3 National Meteorological Centres (NMCs) to be involved in the SWFDP-Caribbean**

The Chair of Expert Group will brief the meeting on forecasting and warning capacity of the NMCs in the region including their national needs and requirements to benefit from the implementation of SWFDP in the region for enhancing the severe weather monitoring and forecasting processes and delivery of warning services to the users especially general public, media, and disaster management and civil protection agencies (DMCPAs) for improved decision making processes and effective DRM and DRR activities. He will inform the meeting on NMCs’ internet infrastructure to access to the satellite information and NWP products made available through SWFDP’s *Cascading Forecasting Process* and on observational network in the region for verification of forecasts and warnings. He will also inform the meeting on capacity building and training needs of the NMCs. The meeting will consider this information and follow up discussions in developing the outline of Regional Subproject Implementation Plan (RSIP) for SWFDP-Caribbean.

**6. PUBLIC WEATHER SERVICES (WMO): DELIVERY OF WARNING SERVICES TO USERS**

6.1The Secretariat will provide information on WMO Strategy for Service Delivery. The meeting will discuss on improving service delivery through impact-based forecasting and warnings for the users especially general public, media, and DMCPAs including engagement of NMHSs with these groups for improved decision making process and DRR activities.

6.2 The Chair will brief the meeting on PWS Contingency Planning and Standard Operating Procedures (SOPs) in the region and NMCs’s warning services delivery system for users, including needs and requirements for further improvements.

The meeting will consider above information and follow up discussions in developing the outline of Regional Subproject Implementation Plan (RSIP) for SWFDP-Caribbean.

**7. VERIFICATION OF FORECASTS AND WARNINGS, AND THEIR EVALUATION, INCLUDING USEFULNESS AND USER RESPONSE**

Verification of forecasts and warnings, not only in terms of their accuracy and timeliness but also on their actual usefulness and the response from the users following their dissemination and reception by the intended users, is highly important for overall improvement in the observational and forecasting system. Based on SWFDP implementation in Africa, WMO Secretariat has recently published “Forecast Verification in African Severe Weather Forecasting Demonstration Projects” (WMO No. 1132). The Chair and representatives of NMCs will brief the meeting on the status of verification of forecasts and warnings in the Caribbean including NMCs’ further needs and requirements to improve verification. The meeting will consider this information and follow up discussions in developing the outline of Regional Subproject Implementation Plan (RSIP) for SWFDP-Caribbean.

**8. SWFDP FEEDBACK AND REPORTING MECHANISM (REPORTING THROUGH SWFDP DATABASE)**

As part of SWFDP implementation, regular feedback in the form of Progress Reports from participating NMCs is highly important for overall monitoring of a SWFDP regional subproject. The NMCs are required to provide their feedback on types of severe weather observed, forecasts and warnings issued including their accuracy, dissemination channels, users’ response etc. The meeting will be briefed on the development of SWFDP database using WMO’s Country Profile Database (CPDB) platform. The SWFDP Database has been designed to serve as an efficient and paper-free mode for submission of progress reports by the NMCs. The SWFDP database will be demonstrated for on-line submission of progress reports. The meeting will consider this information and follow up discussions in developing the outline of Regional Subproject Implementation Plan (RSIP) for SWFDP-Caribbean.

**9. IMPLEMENTATION OF THE SWFDP IN RA IV ( THE CARIBBEAN)**

**9.1 The Regional Subproject Management Team (RSMT)**

As per “*SWFDP Guidebook for Planning Regional Subprojects (2016)”,* each SWFDP regional subproject is to be managed by a Regional Subproject Management Team (RSMT) which mainly comprises of the designated representatives of participating Global, Regional and National Centres. The RSMT of a subproject which generally meets after every two years is also responsible to develop, review and update the Regional Subproject Implementation Plan (RSIP). The meeting will consider the regional subproject management system for SWFDP-Caribbean and in particular the responsibilities of the members who are to be appointed to the RSMT. The meeting will consider this information in developing the outline of Regional Subproject Implementation Plan (RSIP) for SWFDP-Caribbean.

**9.2 Regional Subproject Implementation Plan (RSIP)**

The meeting will be briefed on the requirements of a Regional Subproject Implementation Plan (RSIP) for the SWFDP-Caribbean following guidelines provided in the *“SWFDP Guidebook on Planning Regional Subprojects (2016)”.* Based on discussions including under previous agenda items, the meeting will be invited to develop and review the outlines of a Regional Subproject Implementation Plan (RSIP) for SWFDP-Caribbean.

**10. ANY OTHER BUSINESS**

The meeting may consider any other issues requiring discussion or actions.

**11. REVIEW THE MEETING REPORT**

The meeting will be invited to review the Report of Meeting.

**12. CLOSING**

The meeting is expected to close at 14:00 on Thursday, 15 December 2016.