



World Meteorological Organization
Organisation météorologique mondiale

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Weather • Climate • Water
Temps • Climat • Eau

Our ref.: DRA-AP/RA II-15/PPs

GENEVA, 15 March 2013

Annexes: 2 (Annex II available in English only)

Subject: Nomination of focal points and members of Coordinating Groups for the RA II Pilot Projects established at the fifteenth session of Regional Association II (Asia)

Action required: To return a completed form to the WMO Secretariat **before 4 April 2013** for focal points and members of Coordinating Groups for the Pilot Projects from your Service

Dear Sir/Madam,

I wish to refer to the decision of the fifteenth session of Regional Association II (Asia) held in Doha, Qatar from 13 to 19 December 2012 concerning the establishment of Pilot Projects.

The Association has re-established one Pilot Project and established four new Pilot Projects as follows:

- (a) Pilot Project to Develop Support for National Meteorological and Hydrological Services in Numerical Weather Prediction (re-established);
Co-coordinators: Hong Kong Observatory and Korea Meteorological Administration
- (b) Pilot Project on Information Sharing on Climate Services;
Lead: Tokyo Climate Center
- (c) Pilot Project to Develop Support for National Meteorological and Hydrological Services in the Collection and Application of Aircraft Meteorological Data Relay (AMDAR) Data;
Co-coordinators: China Meteorological Administration and Hong Kong Observatory
- (d) Pilot Project to Sustain and Enhance the Capacity of National Meteorological and Hydrological Services in the Provision of Official Weather Forecasts for the Medium Range;
Co-coordinators: Hong Kong Observatory and Korea Meteorological Administration
- (e) Pilot Project to Enhance the Seamless Provision of Regional Severe Weather Warnings and Advisories.
Coordinator: Hong Kong Observatory

To: Permanent Representatives of Members of Regional Association II (ASE-623)

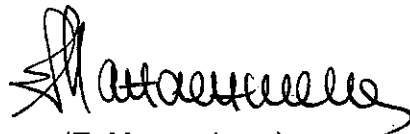
cc: President and vice-president of RA II (for information)

Relevant resolutions on the above Pilot Projects adopted at the session are attached as Annex I for your reference.

The Association further agreed that the Members desiring to participate in the Pilot Project(s) should designate experts to work within the Pilot Projects.

I would therefore like to invite you to send to the Secretariat the attached form (Annex II) as soon as possible, but preferably not later than **4 April 2013**, in order to ensure that Pilot Projects can initiate the tasks as early as possible.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'E. Manaenkova', with a stylized flourish at the end.

(E. Manaenkova)
for the Secretary-General

WORLD METEOROLOGICAL ORGANIZATION

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DRA-AP/RA II-15/PPs, ANNEX I

RESOLUTION 14 (RA II-15) – PILOT PROJECT TO DEVELOP SUPPORT FOR NATIONAL METEOROLOGICAL AND HYDROLOGICAL SERVICES IN NUMERICAL WEATHER PREDICTION

REGIONAL ASSOCIATION II (ASIA),

Noting:

- (1) The Strategic Operating Plan for the Enhancement of National Meteorological and Hydrological Services (NMHSs) in RA II (Asia) 2012-2015,
- (2) The *Abridged Final Report with Resolutions of the Fourteenth Session of Regional Association II (Asia)* (WMO-No. 1037), particularly Resolution 6 (XIV-RA II) - Pilot Project to Develop Support for National Meteorological and Hydrological Services in Numerical Weather Prediction,

Noting with satisfaction:

- (1) That a Coordinating Group comprising numerical weather prediction (NWP) operators and product providers, under the coordination of the Republic of Korea and Hong Kong, China, was established by XIV-RA II to support and assist NMHSs in the use of NWP products,
- (2) That the China Meteorological Administration (CMA) and the Japan Meteorological Agency (JMA) have agreed to provide the source codes, documentation and support for operating two community NWP models, namely the Global and Regional Assimilation Prediction System (GRAPES) and the Non-Hydrostatic Model (NHM) respectively,
- (3) That a number of NMHSs have indicated an interest to participate as users on applications of the community NWP models,
- (4) That a web-based portal called the "Asian Consortium for NWP Forecasts" (ACNF) is being developed by the Hong Kong Observatory to provide on-line resources and information to access: (a) the existing NWP products from RA II Members, including, among others, Hong Kong, China and the Republic of Korea; and (b) the source code and documentation of the community NWP models,

Further noting:

- (1) That a training workshop was successfully organized by Hong Kong, China in December 2012 under the Voluntary Cooperation Programme (VCP) on the ACNF Website, the use and interpretation of NWP products and the two community NWP models,
- (2) That feedback from participants of the training workshop in Hong Kong, China on the first phase of the Pilot Project as well as NWP research and development activities to be covered in the next phase of the Pilot Project has been sought,
- (3) That the Coordinating Group agrees to pursue the second phase of the Pilot Project in the next few years with emphases on post-processing of NWP products as well as data assimilation, with the relevant materials to be put up on the ACNF Website,

Recognizing:

- (1) That the Pilot Project will contribute to enhancing weather services delivery, disaster risk reduction and capacity development efforts of NMHSs in RA II,
- (2) The plan of the Coordinating Group to continue in the second phase of the Pilot Project in developing the ACNF portal to enhance the resources and support on the post-processing of the existing NWP and Ensemble Prediction System (EPS) products as well as data assimilation techniques such as remote sensing data assimilation,

Decides:

- (1) To continue taking forward the pilot project to develop support for NMHSs in NWP based on the plan of the Coordinating Group and the feedback solicited at the training workshop in Hong Kong, China in December 2012;
- (2) To continue the work of the Coordinating Group with the following terms of reference:
 - (a) To establish the requirements of NMHSs of developing countries regarding their NWP activities and NWP development plans;
 - (b) To facilitate communication between NWP operators and product providers willing to engage in the exchange of knowledge and best practices with the recipient Members, including such areas as data assimilation, modelling, post-processing and computational aspects of numerical weather prediction;
 - (c) To develop brief and effective action plans, taking into account the relevant existing activities, for consortium members and recipient Members;
 - (d) To organize assistance to recipient Members in accessing and using NWP products as a priority, and in development and operation of models and data assimilation systems, through training activities and exchange of scientific expertise;
 - (e) To monitor the progress of the project;
 - (f) To assess the effectiveness of the project;
- (3) To further invite Members desiring to participate in the pilot project to designate experts to serve as members of the Coordinating Group;
- (4) To request the co-coordinators of the Coordinating Group to submit annual progress reports and a final report to the president of the Association not later than three months prior to the sixteenth session of the Association;

Requests the Secretary-General to assist Members in the implementation of the pilot project.

RESOLUTION 15 (RA II-15) – PILOT PROJECT ON INFORMATION SHARING ON CLIMATE SERVICES

REGIONAL ASSOCIATION II (ASIA),

Noting:

- (1) The Strategic Operating Plan for the Enhancement of National Meteorological and Hydrological Services (NMHSs) in RA II (Asia) 2012-2015,
- (2) Resolution 48 (Cg-XVI) – Implementation of the Global Framework for Climate Services,
- (3) The draft Implementation Plan of the Global Framework for Climate Services adopted at the extraordinary session of Congress, especially Initial Priority Project 7 – Strengthening regional systems for providing climate services,
- (4) Resolution 1 (Cg-Ext.(2012)) – Implementation Plan of the Global Framework for Climate Services,

Recognizing:

- (1) That the information on climate services (product details, frequency of issuance, etc.) provided by NMHSs is not fully shared among Members at present,
- (2) That, for the successful implementation of GFCS, it is important to share good practices and lessons learned, including experienced project management capabilities, to develop projects and improve climate services by NMHSs as well as to avoid duplication and minimize the risk of failure,

Considering:

- (1) That the Internet offers a good and cost-effective opportunity to collect and share information and lessons learned among Members,
- (2) The network of Regional Climate Centres is an appropriate mechanism to provide such an opportunity,

Decides:

- (1) To establish a pilot project on information sharing on climate services, for collecting and sharing information on climate services provided by NMHSs as well as activities related to GFCS mainly through a dedicated Website;
- (2) To designate the Tokyo Climate Center, as Lead, to establish and maintain the dedicated Website for this project;
- (3) To request the Tokyo Climate Center to submit annual progress reports and a final report to the president of the Association not later than three months prior to the sixteenth session of the Association;

Invites Members:

- (1) To designate a focal point from each Member on this issue;
- (2) To actively participate in the pilot project by providing the designated centre with information on their climate services and activities related to GFCS, as appropriate;
- (3) To use the information available on the project Website to develop own activities and project as necessary;

Requests the Secretary-General to assist Members in the implementation of the pilot project.

RESOLUTION 16 (RA II-15) – PILOT PROJECT TO DEVELOP SUPPORT FOR NATIONAL METEOROLOGICAL AND HYDROLOGICAL SERVICES IN THE COLLECTION AND APPLICATION OF AIRCRAFT METEOROLOGICAL DATA RELAY (AMDAR) DATA

REGIONAL ASSOCIATION II (ASIA),

Noting:

- (1) Resolution 3 (Cg-XVI) – Global Observing System,
- (2) The Strategic Operating Plan for the Enhancement of National Meteorological and Hydrological Services (NMHSs) in RA II (Asia) 2012-2015,

Considering:

- (1) That Aircraft Meteorological Data Relay (AMDAR) is an important source of upper air observations and is a crucial source of data being assimilated in numerical weather prediction (NWP) models,
- (2) That the Region contributes about 25,000 AMDAR observations from 7 airlines on GTS daily out of around 300,000 AMDAR observations daily from 33 airlines worldwide, indicating a substantial room for potential growth in AMDAR programmes in RA II,

Recognizing:

- (1) That several NMHSs have experience in establishing a AMDAR programme,
- (2) That experience sharing by NMHSs already implementing AMDAR programme would be beneficial to other NMHSs in planning for implementing their own AMDAR programme,
- (3) That there is synergy in coordinating existing and emerging AMDAR programmes to achieve optimization and streamlining of AMDAR data collection,
- (4) That there is potential for further development of products from AMDAR data to support NWP data assimilation and weather forecasting and warning services,

Decides:

- (1) To establish a pilot project to develop support for NMHSs in the collection and application of AMDAR data with the following terms of reference:
 - (a) To promote experience sharing among NMHSs in setting up and operating AMDAR programmes;
 - (b) To assist NMHSs in RA II in establishing their own AMDAR programme;
 - (c) To promote sharing of AMDAR data from different AMDAR programmes;
 - (d) To identify and explore means to optimize the collection of AMDAR data;
 - (e) To assist NMHSs in RA II in decoding, processing and visualization of AMDAR data;

- (f) To assist NMHSs in RA II in the assimilation of AMDAR data in NWP models, development of new products/applications from AMDAR data to enhance the provision of weather forecasting and warning services;
 - (g) To share experience in the collection and application of AMDAR data with Members in RA II especially developing country Members;
 - (h) To liaise with the WMO AMDAR Panel for assistance, as necessary;
- (2) To establish a coordinating group to take forward this pilot project and designate the Civil Aviation Administration of China, the China Meteorological Administration and the Hong Kong Observatory as co-coordinators;
 - (3) To request the coordinating group to submit annual progress reports and a final report to the president of the Association not later than three months prior to the sixteenth session of the Association;

Invites Members:

- (1) To actively participate in the pilot project by designating a focal point on this issue;
- (2) To nominate an expert to participate in the work of the coordinating group;

Requests the Secretary-General to assist Members in the implementation of the pilot project.

RESOLUTION 17 (RA II-15) – PILOT PROJECT TO SUSTAIN AND ENHANCE THE CAPACITY OF NATIONAL METEOROLOGICAL AND HYDROLOGICAL SERVICES IN THE PROVISION OF OFFICIAL WEATHER FORECASTS FOR THE MEDIUM RANGE

REGIONAL ASSOCIATION II (ASIA),

Noting:

- (1) Resolution 20 (Cg-XVI) – Public Weather Services Programme,
- (2) The Strategic Operating Plan for the Enhancement of National Meteorological and Hydrological Services (NMHSs) in RA II (Asia) 2012-2015,

Considering that Numerical Weather Prediction (NWP) products are becoming indispensable in supporting the provision of weather forecasts by NMHSs especially in the medium range forecasts,

Noting further:

- (1) That NMHSs, particularly those in the developing countries, still face difficulties in providing official weather forecasts for their cities and for longer forecast period in the medium range,
- (2) That the World Weather Information Service (WWIS) is currently providing official weather forecasts for about 1,600 cities and there is room for more official city weather forecasts from NMHSs,
- (3) That there are increasing challenges of growing popularity of unofficial automatically-generated weather forecasts for extended period for many more cities (and even small districts within cities) around the world, which are available free of charge on the internet and mobile platforms (e.g. mobile app) in response to public's demands, marginalizing the role of the NMHSs, and presenting information inconsistent with the official and safety-critical weather information and warnings to the public,

Recognizing:

- (1) That the 'Project on the Provision of City-Specific NWP Products to Developing Countries via the Internet' is a possible source of reliable NWP products to support the provision of official weather forecasts for longer period in the medium range by developing countries,
- (2) That other notable global weather forecast centres are producing reliable NWP products that are also useful to assist NMHSs in the provision of weather forecast in the medium range,
- (3) That additional city weather forecasts with longer forecast period from NMHSs will significantly enhancing the WWIS to face the increasing challenges of unofficial weather forecasts available on the Internet and mobile platforms,
- (4) That enhancing the capability of NMHSs to provide weather forecast of longer range would project a positive image of NMHSs in providing reliable and user-friendly weather forecasting and warning services to reduce the risk of natural disasters due to inclement weather,

Decides:

- (1) To establish a pilot project to sustain and enhance the capacity of NMHSs in the provision of official weather forecasts for the medium range with the following terms of reference:
 - (a) To assist NMHSs in RA II in enhancing their provision of weather forecasts in the medium range;
 - (b) To explore and identify reliable sources of NWP products that are useful to support NMHSs in the provision of weather forecasts in the medium range;
 - (c) To explore means to post-process NWP products to better support NMHSs in the provision of weather forecasts in the medium range;
 - (d) To explore means to verify and validate NWP products with a view to ensuring the quality of the NWP based weather forecasts in the medium range, in compliance with the heads of NMHSs to be supported;
 - (e) To share experience in the post-processing, verification and validation of NWP products with Members in RA II especially developing country Members;
 - (f) To liaise with co-coordinators of the 'Project on the Provision of City-Specific NWP Products to Developing Countries via the Internet' for providing the required NWP products in support of this Pilot Project;
- (2) To establish a coordinating group to take forward this pilot project and designate the Hong Kong Observatory and the Korea Meteorological Administration as co-coordinators;
- (3) To request the coordinating group to submit annual progress reports and a final report to the president of the Association not later than three months prior to the sixteenth session of the Association;

Invites Members:

- (1) To actively participate in the pilot project by designating a focal point on this issue;
- (2) To nominate an expert to participate in the work of the coordinating group;

Requests the Secretary-General to assist Members in the implementation of the pilot project.

**RESOLUTION 18 (RA II-15) – PILOT PROJECT TO ENHANCE THE SEAMLESS
PROVISION OF REGIONAL SEVERE WEATHER
WARNINGS AND ADVISORIES**

REGIONAL ASSOCIATION II (ASIA),

Noting:

- (1) Resolution 52 (Cg-XVI) — Disaster Risk Reduction Programme,
- (2) The Strategic Operating Plan for the Enhancement of National Meteorological and Hydrological Services (NMHSs) in Regional Association I (Asia) 2012-2015,

Considering that the Sixteenth World Meteorological Congress called for further enhancement of regional and global Websites such as the WMO Severe Weather Information Centre (SWIC) for access to official national information and warnings, standardization of advisory and warning formats, in particular tropical cyclone information issued by Regional Specialized Meteorological Centres and national tropical cyclone warning centres, and alignment with the emerging protocols for “authoritative” warnings on a nation-by-nation basis,

Noting further:

- (1) That there is a lack of standardized format for severe weather warnings and advisories, especially tropical cyclone advisories, making it difficult to decode them for exchange and further application,
- (2) That, while several weather warnings and advisories from NMHSs are already available on the SWIC Website, there is no integrated view of all relevant severe weather warnings and advisories to enable users to have an overall and seamless picture of the official severe weather warnings and advisories. Users have to revert to the Website of a particular NMHSs to view the individual severe weather warnings/advisories, making it ineffective in respect of disseminating such essential severe weather warnings/advisories to the public,

Recognizing:

- (1) That data format designated for exchange of such essential information as severe weather warnings/advisories is already on the market, for example the Common Alerting Protocol (CAP). Internet platforms providing so-called crisis maps based on CAP, for example, Google.org, have already included severe weather information from various data sources, with the potential for presenting information inconsistent with the official severe weather warnings,
- (2) That there is benefit in exploring a common data format for severe weather warnings/advisories to facilitate their global exchange such that official severe weather warning/advisories can reach the users via more dissemination channels,
- (3) That, with a common data format that can be used to automatically decode severe weather warnings/advisories, it will be possible to display these official warnings/advisories in an overall and seamless manner on common platforms, for example, SWIC, noting that similar integrated display is available on certain “unofficial” Websites,

- (4) That the severe weather warnings/advisories, when available in common data format, will enable NMHSs in developing more user-friendly products to enhance their provisions of severe weather warning services,
- (5) That the severe weather warnings/advisories, when available in common data format, will also enable NMHSs in obtaining and displaying warnings/alerts offered by other alerting authorities more readily,

Decides:

- (1) To establish a pilot project to enhance the seamless provision of regional severe weather warnings and advisories with the following terms of reference:
 - (a) To share experiences in data formats for tropical cyclone warnings/advisories among RA II Members;
 - (b) To identify challenges to be solved for converting tropical cyclone warnings/advisories of RA II Members into a common data format;
 - (c) To seek potential benefits from using a common data format for tropical cyclone warnings/ advisories;and, based on the lessons learned from activities on (a) to (c):
 - (d) To assess the feasibility of developing a common data format for severe weather warnings/advisories by RA II Members;
 - (e) To give the Coordinator of SWIC advice on its development of a consolidated and seamless provision of severe weather warnings/advisories through SWIC;
- (2) To establish a coordinating group to take forward this pilot project and designate the Hong Kong Observatory as coordinator;
- (3) To request the coordinating group to submit annual progress reports and a final report to the president of the Association no later than three months prior to the sixteenth session of the Association;

Invites Members to nominate an expert to participate in the work of the coordinating group;

Requests the Secretary-General to assist Members in the implementation of the pilot project.

WORLD METEOROLOGICAL ORGANIZATION

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DRA-AP/RA II-15/PPs, ANNEX II

FOCAL POINTS AND MEMBERS OF COORDINATING GROUPS FOR RA II PILOT PROJECTS

Member: _____

- 1 Pilot Project to Develop Support for National Meteorological and Hydrological Services in Numerical Weather Prediction

Member of the Coordinating Group

Name (Dr/Mr/Ms): _____

E-mail: _____

- 2 Pilot Project on Information Sharing on Climate Services

Focal Point

Name (Dr/Mr/Ms): _____

E-mail: _____

- 3 Pilot Project to Develop Support for National Meteorological and Hydrological Services in the Collection and Application of Aircraft Meteorological Data Relay (AMDAR) Data

Focal Point

Name (Dr/Mr/Ms): _____

E-mail: _____

Member of the Coordinating Group

Name (Dr/Mr/Ms): _____

E-mail: _____

- 4 Pilot Project to Sustain and Enhance the Capacity of National Meteorological and Hydrological Services in the Provision of Official Weather Forecasts for the Medium Range

Focal Point

Name (Dr/Mr/Ms): _____

E-mail: _____

Member of the Coordinating Group

Name (Dr/Mr/Ms): _____

E-mail: _____

- 5 Pilot Project to Enhance the Seamless Provision of Regional Severe Weather Warnings and Advisories;

Member of the Coordinating Group

Name (Dr/Mr/Ms): _____

E-mail: _____

Date

Permanent Representative's signature

To be returned not later than **4 April 2013** to:

The Secretary-General
World Meteorological Organization
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Case postale No. 2300
1211 GENEVA 2

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