WMO OMM

WEATHER CLIMATE WATER
TEMPS CLIMAT EAU

World Meteorological Organization
Organisation météorologique mondiale
Organización Meteorológica Mundial
Всемирная метеорологическая организация
المنظمة العالمية للأرصاد الجوية
世界气象组织

Secrétariat
7 bis, avenue de la Paix – Case postale 2300
CH 1211 Genève 2 – Suisse
Tél.: +41 (0) 22 730 81 11
Fax: +41 (0) 22 730 81 81
wmo@wmo.int – public.wmo.int

Ref.: 05693/2018-1.1 LCP

Notre réf.: 04531/2018/ETR/CRS-518 27 février 2018

Annexe(s): 2 (disponibles en anglais seulement)

Objet: Cours sur l'utilisation des données de radar météorologique dans les Services météorologiques (siège de l'Administration météorologique coréenne, Séoul, 30 avril – 18 mai 2018)

Suite à donner: Pour information et mesures à prendre, le cas échéant

Madame, Monsieur,

J'ai le plaisir de vous informer que la République de Corée accueillera au siège de l'Administration météorologique coréenne (KMA), à Séoul, du 30 avril au 18 mai 2018, un cours sur l'utilisation des données de radar météorologique dans les Services météorologiques. Il est conçu pour 15 participants provenant de Services météorologiques et hydrologiques nationaux (SMHN) des Régions I, II et V, et s'inscrit dans le cadre de la contribution de l'Administration météorologique coréenne au Programme d'enseignement et de formation professionnelle de l'OMM.

Le cours a pour objectif de renforcer l'aptitude du personnel des SMHN, en particulier ceux des pays en développement et des pays les moins avancés, à mettre à profit les données de radar météorologique dans le cadre de la mise en œuvre du WIGOS (Système mondial intégré des systèmes d'observation de l'OMM) à l'échelon national. Il comporte trois volets:

i) Radars météorologiques: aspects théoriques et matériel utilisé;

ii) Analyse des données radar: théorie et application aux phénomènes météorologiques;

iii) Établissement du réseau de radars météorologiques.

Dispensé en anglais, ce cours s'adresse à des météorologues qui ont plus de deux ans d'expérience de la prévision météorologique. Au programme figureront des exposés et des études de cas sur les principes de base des radars météorologiques et sur la production et l'analyse des données radar, des visites de terrain et divers aspects pratiques. Vous trouverez ci-joint des informations sur le cours (annexe 1) ainsi que le formulaire de désignation des participants (annexe 2).

Aux: Représentants permanents des Membres du Conseil régional I
Représentants permanents des Membres du Conseil régional II
Représentants permanents des Membres du Conseil régional V

cc: Conseillers en hydrologie auprès des représentants permanents

Il est demandé à chaque gouvernement d'envisager de prendre en charge une partie des frais de participation de ses candidats, notamment le coût des billets d'avion. Si cela n'était toutefois pas possible, une demande d'assistance financière pourra être soumise dans le formulaire de désignation des participants, qui doit être approuvé par le représentant permanent auprès de l'OMM et renvoyé directement à l'Administration météorologique coréenne (par courrier électronique à l'adresse kpark33@korea.kr) le **3 avril 2018** au plus tard.

Veuillez agréer, Madame, Monsieur, l'expression de ma considération distinguée.

(W. Zhang)
pour le Secrétaire général

Ref.: 05693/2018-L1 LCP

Course Information

2018

International Training Course on Weather Radar Data Utilization for Meteorological Services

April 30 (Mon.) – May 18 (Fri.), 2018

Seoul, Republic of Korea

Korea Meteorological Administration

CONTENTS

KMA Training Program

The Korea Meteorological Administration, KMA, is committed to protecting the life and property of the public from weather hazards, improving the quality of life and economy and strengthening international cooperation in global weather services. The KMA conducts observations and analysis of meteorological phenomena, earthquake events and climate change and provides weather forecasts, warnings, long-term predictions and industrial meteorological information. The KMA has recently been recognized as WMO Regional Training Centre (WMO RTC), WMO Lead Centre for Long Range Forecast & Multi Model Ensemble (WMO LC-LRFMME), the WMO World Calibration Centre for SF6 and the WMO Information Service (WIS) Global Information System Centre (GISC) Seoul with improved observation, information and communication technology, short and long range forecasting services and climate science.

To enhance the personnel capacity of the WMO member countries, the KMA has delivered various short term(two to four weeks) international training courses such as “Weather forecasting for operational meteorologist”, “ICT for meteorological services”, “Satellite data analysis”, and “Radar data analysis”. Other notable KMA-organized courses include “Workshop on meteorological disaster responsiveness for African countries” to improve countermeasures to high-impact weather and “Climate prediction expert course” for the acquisition of innovative techniques on climate prediction for operational use. And the Korea National Meteorological Satellite Center has been recognized as the Center of Excellence (CoE) since 2010 and delivering the advanced analysis course for enhancing knowledge and skill of products from various meteorological satellites. About 883 persons from 85 countries from the whole world have participated in the KMA’s training courses since 1998.

Part I PROGRAM OVERVIEW

1. Title: International Training Course on Weather Radar Data Utilization for Meteorological Services

2. Duration: April 30 (Monday) ~ May 18 (Friday), 2018

3. Objectives

a) The purpose of the course is to enhance human capabilities for weather radar data utilization at NMHSs, in particular of the developing countries and least developed countries (LDCs) in line with their national WIGOS implementation.

b) Through the course, participants will acquire knowledge about 1) weather radar theories and hardware 2) lessons and practice on weather radar data analysis with meteorological phenomenon 3) establishing the weather radar network.

4. Number of Participants

15 participants from NMHSs of the WMO members

***** *In principle, only one nominee can be selected from one country. However, if there is any self -financing participant in the same country, one more nominee can be additionally selected. (a few nominees in total)*

5. Language: English only

6. Venue: Seoul, Republic of Korea

7. Training Institute: WMO Regional Training Centre in the republic of Korea (RTC-KOREA), Korea Meteorological Administration (KMA)

7. Qualification of Applicants:

a) Participants should be meteorologists with at least two years of experience in weather forecasting.

b) Participants should be expected to work in the related field for at least two years after the program.

c) Participants should have never attended KMA's training program over recent three years.

d) Participants should have sufficient command of both written and spoken English.(If English is not the mother tongue, certificate of proficiency in English is requested.)

※ Work experience in radar data analysis would be an advantage

8. Closing Date for Application: April 2, 2018

The completed nomination form with the signature of the PR of the relevant WMO Member should be returned to the KMA (E-mail: kpark33@korea.kr) with a copy for the WMO Secretariat no later than April 2, 2018.

9. Result of selected participants will be announced by April 4, 2018.

10. Country Report

a) **All participants are requested to prepare and submit their country report individually or as a group to the Coordinator** Ms. Hanna Yu via e-mail yuh@kmiti.or.kr **until April 20, 2018.**

b) If participants fail to submit a country report by e-mail, they will be asked to Hanna Yu after arrival in Korea. It is recommended that the report be submitted on USB memory device.

c) The Country Report should be in **MS PowerPoint** or **Word** format. The length of the report should **not exceed 10 A4-sized pages**. The report should be written **in English** and **double-spaced**.

d) All participants are required to make a **5-minute presentation on their country report**. For more effective presentations, a computer and projector will be available (PowerPoint presentations are preferred).

e) **Details of Country Report Preparation**

• Current situation

- Explain the general weather forecast system and radar system in your country.
- Describe the current status of weather radar data utilization in your country.
- Analyze the strengths and weaknesses of weather radar data utilization at your organization.
- Explain the operational NWP model (Atmosphere, Marine).
- Describe major challenges and opportunities your country is facing.

• Future direction and cooperation

- Describe a realistic and practical suggestion based on the current situation
- Describe your expectation from the training course

- **Country Report should also include the topic you would like to discuss during the workshop.**

Note. This Training Program includes a 'Country Report' session where participants have an opportunity to analyze their country's current status and circumstances in the program subject and share it with Korean experts. It aims to provide appropriate solutions and insights to the identified problems and issues of their countries.

- On May 1 (Tue.), please make an individual presentation titled “Country Report” on policies or issues above.

Part II PROGRAM CONTENTS

1. TENTATIVE PROGRAM MODULE

Module	Lecture & Discussion	Study Visit
Module 1 Understanding of Korea & KMA	▪ Korea's Culture, Society and Language ▪ Recent Developments and Future Plans of KMA ▪ Global Needs for Weather Forecasters	▪ National Meteorological Center ▪ Information and Communication Center
Module 2 Weather Radar Basics	▪ Understanding Weather Radar - Basic theories - Structures of Weather Radar ▪ Operating Weather Radar - Maintenance and Calibration	▪ Jincheon Ground Observation Site
Module 3 Weather Radar Data Production and Analysis	▪ Characteristics of Weather Radar ▪ Radar Data Quality Control ▪ Weather radar data analysis methods: Case Analysis ▪ Radar QPE(Quantitative Precipitation Estimation) Techniques & Hydrological Application ▪ Data Assimilation & Numerical Weather Prediction(NWP)	▪ National Meteorological Satellite Center (NMSC) ▪ National Meteorological Supercomputer Center ▪ Korea Meteorological Institute
Module 4 Action Learning	▪ Country Reports ▪ Action planning to improve radar observation and its applications	
Cultural Experience	▪ Seoul City Tour ▪ Field Trip	

Part III EXPENSES

1. FINANCIAL SUPPORT

It is requested that your governments consider contributing to the expenses related to the participation of their respective nominees, in particular the cost of air tickets. However, if this is not possible, requests for financial assistance can be indicated on the participants nomination form, and these will be considered within the limited funds available for the course.

2. INSURANCE

Participants will be provided with travel insurance for the period of the stay in the Republic of Korea with a minimal range of coverage.

3. ENTRY REQUIREMENTS

Foreigners wishing to enter the Republic of Korea should hold valid passports. Most visitors with confirmed round-trip tickets may stay for 15 days without a visa, although this does not apply to certain nationalities. Any visitors from countries with no diplomatic relations or no special visa exemption arrangements with the Republic of Korea should obtain an entry visa before entering the country. When uncertain as to the requirements for entry visa to the Republic of Korea, please contact your local Embassy or Consulate as soon as possible. For more information, please visit the website of the Ministry of Foreign Affairs of the Republic of Korea at http://www.mofa.go.kr/ENG/visa/application

Part IV USEFUL INFORMATION

1. TRAINING INSTITUTE

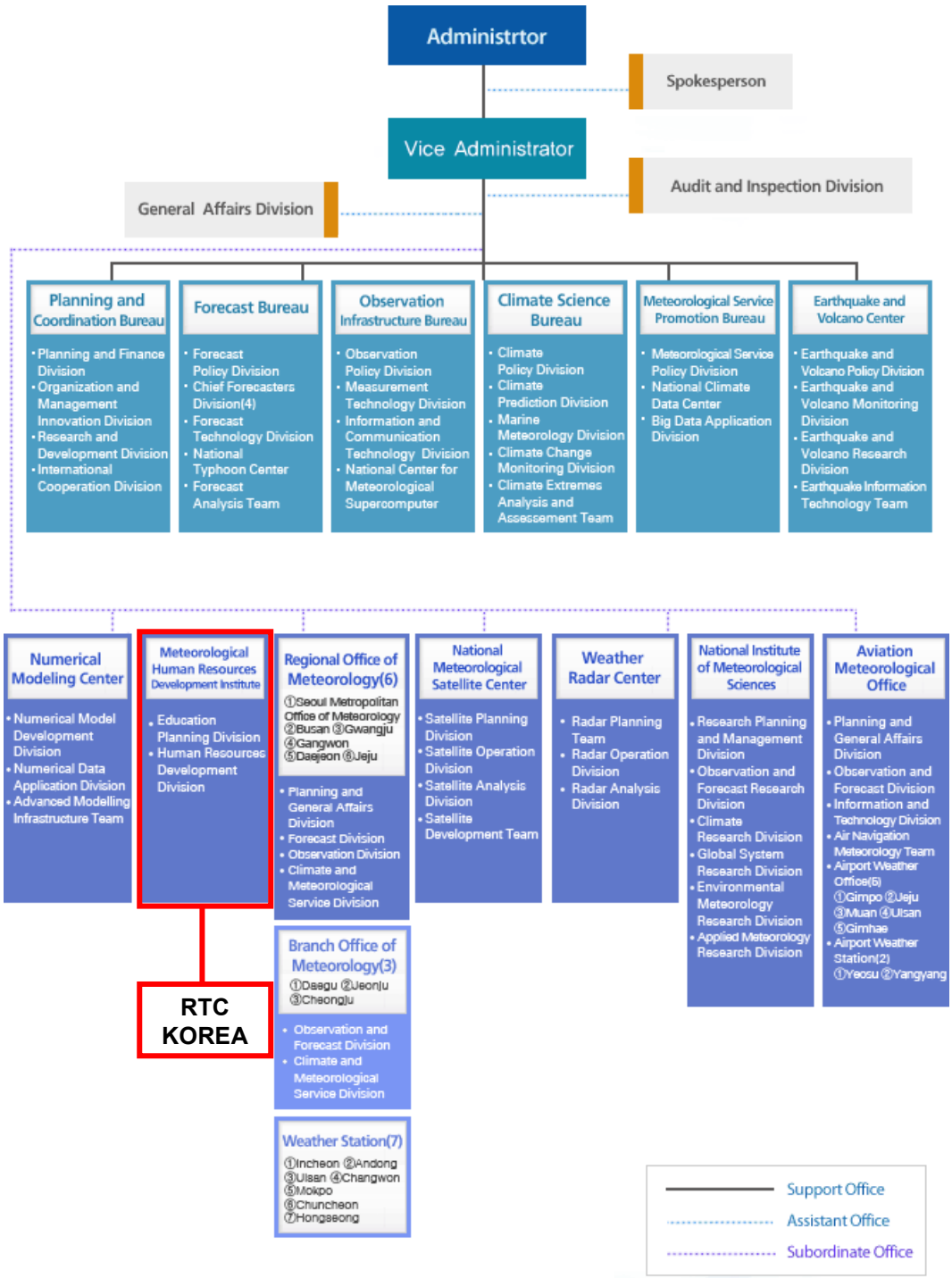
A. The Korea Meteorological Administration (http://www.kma.go.kr)

The KMA is a governmental organization of the Republic of Korea under the Ministry of Environment (MOE). Its mission is defined to protect citizens' lives and properties from natural disasters and improve the commonwealth of the public in ways such as providing support for economic activities. In this regard, KMA undertakes the observation and analysis of meteorological phenomena on the ground, in the ocean, and in the atmosphere, while providing weather forecasts and warnings, and presents climate statistics and industrial-meteorological data. Furthermore, KMA exchanges meteorological data and information with domestic and foreign organizations, conducts research and technology development activities, and prompts international cooperation.
KMA's head administration consists of 1 administrator, 1 vice administrator, 5 director generals, 30 divisions, and 3 centers. Its subsidiaries include the National Institute of Meteorological Research (NIMR), 5 Regional Meteorological Administrations, the National Meteorological Satellite Center, the Weather Radar Center, the Korea Aviation Meteorological Agency and the Meteorological Human Resources Development Institute. The total number of KMA staff is approximately 1,300

B. The Meteorological Human Resources Development Institute

Established the Meteorological Human Resources Development Institute to strengthen professional capacity building and future meteorological human resources development in January, 2017 Designated as a RTC of RA II (RTC-KOREA) at 'The 17th session of the World Meteorological Congress' held from May to June 2015, in Geneva, Switzerland Composed of 2 divisions, Education Planning Division and Human Resources Development Division.

Fig) KMA Organization



2. STUDY VISITS

National Meteorological Supercomputer Center

The weather forecast products that KMA provides go beyond merely predicting natural disasters and severe weather. They are being valued as critical elements that determine the nation's economic and socio-cultural conditions. KMA acquired its first supercomputer in 1999, second in 2004, third in 2009 and fourth in 2015. KMA also founded its national Supercomputer Center for Meteorology in the Ochang Science and Industry Complex in Cheongwon-gun, Chungcheong buk-do, to provide a stable operating base for its new supercomputer.

National Meteorological Satellite Center

National Meteorological Satellite Center (NMSC), which is located in Jincheon Gun about 70km southeast from Seoul, operate receiving and processing systems for foreign satellites, and the ground system of COMS(Communication, Ocean and Meteorological Satellite) that is the first geostationary meteorological satellite of Korea to be launched in 2010 and COMS data was serviced on April 2011. NMSC is also responsible for analysis, service of meteorological satellite data as well as research activities on remote sensing based on space.

Korea Meteorological Institute

Korea Meteorological Institute (KMITI) is a specialized organization to promote national meteorological industry since it has been designated as a government organization in January 2013. KMITI creates a synergy through bridging the R&D and industry promotion through conversions of meteorology and other industries by providing value added meteorological information. Furthermore, KMITI also builds a foundation for sound business environment for both domestic and global market by providing customized meteorological information service.

3. CONTACTS

- **The Korea Meteorological Administration**
  Meteorological Human Resources Development Institute (RTC KOREA)
  - Websites: http://www.kma.go.kr
  - **Program Coordinator: Dr. Kyungjeen PARK**
  - Tel: (+82) -2-2181-0033
  - Cell: (+82) -10-6215-4583
  - Fax: (+82) -2-2181-0029
  - E-mail: kpark33@korea.kr

Further information (e.g. schedule, accommodation, allowance) will be sent to the selected participants individually by e-mail.

International Training Course on
Weather Radar Data Utilization for Meteorological Services
April 30 (Mon.) – May 18 (Fri.), 2018
Korea Meteorological Administration
Seoul, Republic of Korea

PARTICIPANT NOMINATION FORM

The Government of ..... nominates the following candidate as a participant in the above mentioned training course:

1. Family Name(Surname): .....
2. First Name(Given): .....
3. Middle Name: .....
4. Date of Birth: .....
5. Nationality: .....
6. Gender: ☐ Male ☐ Female
7. Passport Number and Place and Date of Issue: .....

   .....
8. Passport Expiry Date: .....
9. Do you need an entry visa for Korea? ☐ No ☐ Yes

   http://www.mofa.go.kr/ENG/visa/application
10. Organization: .....
11. E-mail: .....
12. Telephone No: .....
13. Fax No: .....
14. Official Address: .....

    .....
15. Qualifications (Certificates, Diplomas, Degrees, etc.):

    .....
16. Present Position and Brief Description of Duties:

    .....

    .....

.....

.....

17. Please indicate your English language skills:

	Excellent	Good	Fair	Poor	Nil
Speaking					
Reading					
Writing					
*Certificates(In case you have):					

18. The nominee has experiences on weather forecasting:

☐ YES (how many years: .....) ☐ NO

The nominee has experiences on radar data analysis:

☐ YES (how many years: .....) ☐ NO

19. What do you wish to achieve by having your candidate participate in this course? .....

.....

.....

.....

20. We request financial assistance:

- Air Ticket: ☐ YES ☐ NO
- Daily Subsistence Allowance: ☐ YES ☐ NO

If YES, to whom you will request financial support?

.....

21. Name, address and phone number of a person to be notified in case of emergency: .....

.....

22. Name and Signature of Permanent Representative: .....

.....

23. Date: .....

Please complete and return this form no later than April 2, 2018 to:

Program Coordinator: Dr. Kyungjeen PARK
Meteorological Human Resources Development Institute (RTC KOREA)
Korea Meteorological Administration

Tel.: +82 2 2181 0033 / E-mail: kpark33@korea.kr