



Nuestra ref.: 11430/2018/WDS-DPFS/New Manual/GDPFS-2018 17 de mayo de 2018

Anexos: 2 (disponibles en inglés solamente)

Asunto: Publicación de la versión revisada del *Manual del Sistema Mundial de Proceso de Datos y de Predicción* (OMM-Nº 485)

Finalidad: Confirmar la clasificación del Centro Meteorológico Mundial o Centro Meteorológico Regional Especializado que acoge actualmente su Servicio respecto de las nuevas designaciones de centros (teniendo en cuenta las funciones de esos centros descritas en la versión revisada del *Manual del Sistema Mundial de Proceso de Datos y de Predicción*) con la mayor brevedad posible

Estimado Señor/Estimada Señora:

En relación con la carta de la Organización Meteorológica Mundial (OMM), de referencia 8384-16/WDS-DPFS/New Manual on GDPFS-2016 (véase el apéndice I), con fecha 15 de junio de 2015, me complace informarle de que la nueva versión del *Manual del Sistema Mundial de Proceso de Datos y de Predicción* (OMM-Nº 485), aprobada por el Consejo Ejecutivo de la OMM en virtud de la Resolución 18 (EC-69), ha sido publicada el día 16 de febrero de 2018 y se encuentra disponible en el sitio web de la Organización en la siguiente dirección:

https://library.wmo.int/opac/doc_num.php?explnum_id=4246

Se ruega a los Miembros de la OMM que acogen un Centro Meteorológico Mundial (CMM) y/o un Centro Meteorológico Regional Especializado (CMRE) que confirmen la clasificación de dichos centros en sus países (véase el anexo I) respecto de las nuevas designaciones con arreglo a las funciones descritas en la versión revisada del *Manual del Sistema Mundial de Proceso de Datos y de Predicción*. Se ruega a los Miembros que ya han confirmado dicha clasificación (véase el apéndice II) que comprueben que la información que han aportado ha sido introducida correctamente.

Sírvase tomar nota de que los centros cuya clasificación ha sido confirmada deberán demostrar que tienen capacidad para operar según sus nuevas funciones antes del Decimotavo Congreso Meteorológico Mundial, que tendrá lugar en junio de 2019, a fin de poder conservar la nueva designación con posterioridad a este. Se recuerda a los Miembros que actualmente acogen CMRE con especialización geográfica que deben asegurarse de clasificar sus centros respecto de las nuevas designaciones, tomando en consideración que los CMRE con especialización geográfica cesarán sus actividades con posterioridad al Decimotavo Congreso Meteorológico Mundial.

A los Representantes Permanentes (o Directores de los Servicios Meteorológicos o Hidrometeorológicos) de los Miembros de la OMM (distribución limitada)
 (Argelia, Argentina, Armenia, Australia, Austria, Brasil, Canadá, China, Egipto, Fiji, Francia, Alemania, Hungría, India, Italia, Japón, Kenya, Corea (República de), Países Bajos, Nueva Zelandia, Noruega, Federación de Rusia, Arabia Saudita, Senegal, Serbia, Sudáfrica, España, Suecia, Túnez, Turquía, Reino Unido, Estados Unidos de América y Uzbekistán)
 Director General del Centro europeo de predicción meteorológica a medio plazo

A este respecto, quisiera señalar a su atención que como parte de las disposiciones de transición, que recomendó la Comisión de Sistemas Básicos (CSB) en su reunión extraordinaria de 2014, el Decimoséptimo Congreso Meteorológico Mundial, en 2015, acordó que la condición actual de los CMM y los CMRE existentes se mantendría hasta el Decimoctavo Congreso Meteorológico Mundial que tendrá lugar en 2019. Para mantener dicha condición con posterioridad al Decimoctavo Congreso Meteorológico Mundial, estos centros deberán demostrar que cumplen plenamente con los criterios de designación.

Quisiera aprovechar la oportunidad para expresarle mi agradecimiento a usted y a su Servicio por su constante apoyo al Sistema Mundial de Proceso de Datos y de Predicción de la OMM.

Le saluda atentamente.



(W. Zhang)
por el Secretario General



Our ref.: 8384-16/WDS-DPFS/New Manual on GDPFS-2016

GENEVA, 15 June 2016

Annexes: 2 (available in English only)

Subject: Revision of the *Manual on the Global Data-processing and Forecasting System (GDPFS)* (WMO-No. 485)

Action required: To confirm the mapping of the WMC and/or RSMC currently hosted by your Service onto the new designations (taking into account their functions described in the revised *Manual on the GDPFS*) at your earliest convenience **but not later than 15 August 2016**

Dear Sir/Madam,

The *Manual on the Global Data-processing and Forecasting System (GDPFS)* (WMO-No. 485) is the single source of technical regulations for all operational data-processing and forecasting systems of WMO Members, including their designated meteorological centres. Following the request by the Commission for Basic Systems, at its fourteenth session (CBS-XIV, 2009), progress has been made with the revision of the Manual on the GDPFS, including the development of an outline for a new Manual, which was adopted by the Sixteenth World Meteorological Congress (Cg-XVI, 2011) through Resolution 6 (Cg-XVI). Noting that the new Manual introduces a number of changes to the current procedures, the Commission for Basic Systems, at its 2014 extraordinary session (CBS-Ext.(2014)), considered the comprehensive summary of changes of functions and procedures that would ensure a smooth transition to the new Manual. Acknowledging that the new Manual is being developed in accordance with quality management principles, which ensure its sustainability as part of the WMO Quality Management Framework (QMF), and would facilitate the review of compliance of GDPFS Centres against the designation criteria, CBS-Ext.(2014) recommended a roadmap for the completion of the new Manual (which will replace the current version), including transition arrangements for its implementation to manage the technical changes and the initial designation of the GDPFS Centres as defined in the new Manual, including World Meteorological Centres (WMCs) and Regional Specialized Meteorological Centres (RSMCs), which were approved by the Seventeenth World Meteorological Congress (Cg-17, 2015) in Resolution 12 (Cg-17).

I wish to bring to your attention that the new Manual introduces a clear definition for a WMC, for which a WMC shall be appointed if fulfilling the following functions:

- RSMC for global deterministic numerical weather prediction;
- RSMC for global ensemble numerical weather prediction; and
- RSMC for global numerical long-range prediction (known as Global Producing Centre for Long-range Forecasts).

To: Permanent Representatives of Members of Algeria, Argentina, Armenia, Australia, Austria, Brazil, Canada, China, Egypt, Fiji, France, Germany, Hungary, India, Italy, Japan, Kenya, Korea (Republic of), Netherlands, New Zealand, Norway, Russian Federation, Saudi Arabia, Senegal, Serbia, South Africa, Spain, Sweden, Tunisia, Turkey, UK, USA and Uzbekistan
Director General of ECMWF

In addition, as per the summary of changes of functions and procedures, RSMCs with geographical specialization would become RSMCs with specialization in one (or more) of the following activities:

- RSMC for regional severe weather forecasting;
- RSMC for global deterministic numerical weather prediction;
- RSMC for limited-area deterministic weather prediction;
- RSMC for global ensemble numerical weather prediction; and
- RSMC for limited-area ensemble numerical weather prediction.

RSMCs with other activity specialization are redefined in the new Manual for clarity in the description of functions, not altering the designation criteria.

As part of the above-mentioned roadmap, WMO Members hosting a WMC and/or an RSMC are invited to confirm the mapping of the WMC and/or RSMC currently hosted by your Service (as per Appendix I-1 of the current version of the Manual on the GDPFS, Annex I) onto the corresponding designations (taking into account their functions described in the revised Manual on the GDPFS) at your earliest convenience **but not later than 15 August 2016**. Also for your easy reference, I wish to inform you that the draft version of the revised Manual (table of contents given in Annex II) is available on the WMO website at:

https://www.wmo.int/pages/prog/www/DPS/Manual/Table-of-content_Manual-gdpfs.html

This version takes into account comments received by WMO Members following the request to review its content in the WMO circular letter ref. WDS-DPFS/New Manual on GDPFS-2015, dated 11 May 2015.

I wish to recall that as part of the transitional arrangements recommended by CBS-Ext.(2014), Cg-17 agreed that the existing WMCs and RSMCs will retain their status until the Eighteenth session of the World Meteorological Congress (Cg-18) in 2019; and to retain status after Cg-18, they need to demonstrate compliance by Cg-18.

I would like to take this opportunity to express my personal gratitude to you and your Service for your continued support in making meteorological products of the WMO's Global Data-processing and Forecasting System (GDPFS), including Emergency Response Activities (ERA), increasingly more relevant in the world.

Yours faithfully,



(E. Manaenkova)
for the Secretary-General

Confirmation form for mapping of the WMC and/or RSMC hosted by your Centre**WMO MEMBER:****Focal Point:****E-mail address:****Q1. World Meteorological Centre (WMC)**

The new Manual introduces a clear definition for a WMC, which WMC shall be appointed if fulfilling the following functions:

- RSMC for global deterministic numerical weather prediction;
- RSMC for global ensemble numerical weather prediction; and
- RSMC for global numerical long-range prediction (known as GPC).

If you currently host a WMC, please answer *YES* or *No* to confirm your will to map its functions onto a new designation of WMC.

Designated Centre	Mapping confirmation (Yes/No)
Melbourne (southern hemisphere only)	
Moscow	
Washington	

Q2. Regional Specialized Meteorological Centre (RSMC) with geographical specialization

RSMCs with geographical specialization would become RSMCs for one (or more) of the following activities:

- (1) RSMC for regional severe weather forecasting;
- (2) RSMC for global deterministic numerical weather prediction;
- (3) RSMC for limited-area deterministic weather prediction;
- (4) RSMC for global ensemble numerical weather prediction; and
- (5) RSMC for limited-area ensemble numerical weather prediction.

If you currently host an RSMC with geographical specialization, please answer *YES* if you confirm your will to map its functions onto a new designation(s) of one (or more) of RSMC(s).

Designated Centre	(1) RSMC for regional severe weather forecasting	(2) RSMC for global deterministic numerical weather prediction	(3) RSMC for limited-area deterministic weather prediction	(4) RSMC for global ensemble numerical weather prediction	(5) RSMC for limited-area ensemble numerical weather prediction
Algiers					
Beijing					
Brasilia					
Buenos Aires					
Cairo					
Dakar					
Darwin					
Exeter					
Jeddah					
Khabarovsk					
Melbourne					

Miami					
Montreal					
Moscow					
Nairobi					
New Delhi					
Novosibirsk					
Offenbach					
Pretoria					
Rome					
Tashkent					
Tokyo					
Tunis /Casablanca					
Washington					
Wellington					

Q3. Regional Specialized Meteorological Centre (RSMC) with activity specialization

If you currently host an RSMC with activity specialization, please answer *YES* or *No* to confirm your will to map its functions onto a new designation of its corresponding RSMC.

Designated Centre	Mapping confirmation (Yes/No)
Global Producing Centre for Long-range Forecasts (GPC)	
Beijing	
CPTEC (Brazil)	
Exeter	
Melbourne	
Montreal	
Moscow	
Pretoria	
Seoul	
Tokyo	
Toulouse	
Washington	
European Centre for Medium-range Weather Forecasts (ECMWF)	
Tropical Cyclone Centre / Hurricane Centre / Typhoon Centre	
Nadi – Tropical Cyclone Centre	
New Delhi – Tropical Cyclone Centre	
Miami – Hurricane Centre	
Tokyo – Typhoon Centre	
La Réunion – Tropical Cyclone Centre	
Honolulu – Hurricane Centre	
RSMC for Atmospheric Sand and Dust storm Forecasts	
Barcelona	
RSMC for Nuclear Environmental Emergency Response and/or Backtracking	
Beijing	
Exeter	
Melbourne	
Montreal	
Obninsk	
Offenbach (backtracking only)	
Tokyo	
Toulouse	
Vienna (backtracking only)	
Washington	

Regional Climate Centre		
Africa hosted by the African Centre of Meteorological Applications for Development (ACMAD) (RA I)		
Beijing (RA II)		
Tokyo (RA II)		
Moscow (RA II)		
Western South America hosted by the International Research Centre on El Niño (RA III)		
Network (RA VI)	De Bilt (Climate Data Service)	
	Offenbach (Climate Monitoring)	
	Toulouse (Long-range Forecasts)	
	Moscow (Long-range Forecasts)	

If you currently host an RSMC with activity specialization for Region VI (Europe), please answer *YES* or *No* to confirm your will to map its functions onto a new designation and indicate the corresponding RSMC.

Designated Centre	Mapping confirmation (Yes/No), if yes, please indicate the corresponding RSMC
RSMC for Medium-range Weather Forecasts for Region VI (Europe)	
ECMWF	
RSMC for the Provision of Ultraviolet-index forecasts for Region VI (Europe)	
Offenbach	

TABLE OF CONTENTS

INTRODUCTION

PART I – OUTLINE OF THE WMO GLOBAL DATA-PROCESSING AND FORECASTING SYSTEM (GDPFS)

1. PURPOSE AND SUPPORTED ACTIVITIES

- 1.1 General description
- 1.2 Activities supported by the GDPFS

2. CENTRES

- 2.1 Definitions
 - Appendix A.I.2.1 Definitions of meteorological forecasting ranges
- 2.2 Designation process

3. COORDINATION WITH OTHER SYSTEMS OR PROGRAMMES

PART II – SPECIFICATIONS OF GDPFS ACTIVITIES

1. OVERALL REQUIREMENTS AND STANDARDS

- 1.1. Quality control of incoming observations
 - Appendix A.II.1.1-a Techniques for monitoring the quality of observations
 - Appendix A.II.1.1-b Procedures and formats for the exchange of monitoring results
- 1.2. Data collection and product dissemination
- 1.3. Long-term storage of data and products
- 1.4. Product verification
- 1.5. Documentation on system and products
- 1.6. Training
- 1.7. Reporting on compliance
- 1.8. Graphical representation of observations, analyses and forecasts

2. SPECIFICATION OF ACTIVITIES AND PROCEDURES FOR THEIR MODIFICATION

- 2.1 General purpose activities
 - 2.1.1. Global Deterministic Numerical Weather Prediction
 - Appendix A.II.2.1.1-a Minimum list of global deterministic NWP products to be made available on the WIS
 - Appendix A.II.2.1.1-b Characteristics of global deterministic NWP systems
 - 2.1.2. Limited Area Deterministic Numerical Weather Prediction
 - Appendix A.II.2.1.2-a Minimum list of limited area deterministic NWP products to be made available on the WIS
 - Appendix A.II.2.1.2-b Characteristics of limited area deterministic NWP systems
 - 2.1.3. Global Ensemble Numerical Weather Prediction
 - Appendix A.II.2.1.3-a Minimum list of global EPS products to be made available on the WIS
 - Appendix A.II.2.1.3-b Characteristics of global EPS
 - 2.1.4. Limited Area Ensemble Numerical Weather Prediction
 - Appendix A.II.2.1.4-a Minimum list of limited area EPS products to be made available on the WIS
 - Appendix A.II.2.1.4-b Characteristics of limited area EPS
 - 2.1.5. Global Numerical Long-range Prediction
 - Appendix A.II.2.1.5-a Mandatory and highly recommended seasonal numerical prediction products to be made available on the WIS
 - Appendix II.2.1.5-b Characteristics of seasonal numerical prediction systems

Appendix II.2.1.5-c Additional seasonal numerical prediction products to be made available on the WIS

2.1.6. Numerical Ocean Wave Prediction

Appendix A.II.2.1.6-a Minimum list of numerical ocean wave prediction products to be made available on the WIS

Appendix A.II.2.1.6-b

Appendix A.II.2.1.6-c Characteristics of global NOWP systems

2.1.7 Global Numerical Ocean Prediction

Appendix A.II.2.1.7-a Minimum list of global numerical ocean prediction products to be made available on the WIS

Appendix A.II.2.1.7-b

Appendix A.II.2.1.7-c Characteristics of global NOP systems

2.1.8. Nowcasting

Appendix II.2.1.8 Characteristics of Nowcasting systems

2.2 Specialized activities

2.2.2. Regional Severe Weather Forecasting

2.2.3. Regional climate prediction and monitoring

Appendix A.II.2.2.3-a RCC mandatory functions

Appendix A.II.2.2.3-b Additional highly recommended RCC functions

Annex A.II.2.2.3-annex Guidelines for feedback from RCCs/NHMSs to GPCs

2.2.4. Coordination of Multi Model Ensemble Prediction for Long Range Forecasts

Appendix A.II.2.2.4-a Minimum information to be available from LCs-LRFMME

Appendix A.II.2.2.4-b Additional information to be available from LCs-LRFMME

Appendix A.II.2.2.4-c Access to GPC data and visualization products held by the Lead Centres for LRFMME

2.2.5. Tropical Cyclone Forecasting, including marine-related hazards

2.2.6. Volcanic Contaminants

2.2.7. Marine Meteorological Services

2.2.8. Nuclear Environmental Emergency Response

Appendix A.II.2.2.8-a Activation of support for nuclear emergency response and standards in the provision of international services by RSMCs

Appendix A.II.2.2.8-b Minimum list of products and rules for displaying products

Appendix A.II.2.2.8-c Default emission source parameters

Appendix A.II.2.2.8-d Characteristics of atmospheric transport modelling system

Appendix A.II.2.2.8-e Request form to activate RSMC support

Appendix A.II.2.2.8-f Specifications for support to CTBTO

2.2.9. Non-nuclear Environmental Emergency Response

Appendix A.II.2.2.9-a Activation of support for non-nuclear emergency response

Appendix A.II.2.2.9-e Request form to activate RSMC support

Appendix A.II.2.2.9-f Users interpretation guide for non-nuclear atmospheric transport model products provided by RSMCs

2.2.10. Atmospheric sand and dust storm forecasting

Appendix A.II.2.2.10-a Minimum list of atmospheric sand and dust storm products to be made available on the WIS

2.3 Non real-time coordination activities

2.3.1. Coordination of deterministic NWP verification

Appendix A.II.2.3.1 I – Standardized verification of deterministic NWP products

2.3.2. Coordination of EPS verification

Appendix A.II.2.3.2 II – Standard verification measures of global EPS

2.3.3. Coordination of LRF verification

Appendix A.II.2.3.3 II – Standardized verification System for long-range forecasts (SVSLRF)

2.3.4. Coordination of ocean wave forecast verification

2.3.5. Coordination of tropical cyclone forecast verification

2.3.6. Coordination of observation monitoring

PART III – GDPFS IMPLEMENTATION

ACRONYMS

INDEX

**STATUS OF CONFIRMATION OF THE MAPPING OF EXISTING WMCs, RSMCs
ACTIVITY SPECIALIZATION AND LEAD CENTRES (HOSTED BY MEMBERS) ONTO
THE CORRESPONDING DESIGNATIONS DESCRIBED IN THE REVISED MANUAL ON
THE GDPFS (WMO-No. 485) (2017 Edition)**

1. World Meteorological Centres (WMCs)

The new Manual introduces a clear definition for a WMC, which WMC shall be appointed if fulfilling the following functions:

- RSMC for global deterministic NWP;
- RSMC for global ensemble NWP; and
- RSMC for global numerical long-range prediction (known as GPC).

Designated Centre	Mapping confirmation received at WMO (Yes/No)
Melbourne (southern hemisphere only)	No response
Moscow	Yes
Washington	Yes
New WMCs designated by EC-69 (2017)	
Canada (Montreal)	Yes
UK (Exeter)	Yes
Japan (Tokyo)	Yes
China (Beijing)	Yes
ECMWF (Reading)	Yes
Designation of new WMC (to designated by EC-70 (in June 2018)	
Germany (Offenbach)	In consideration

2. Regional Specialized Meteorological Centre (RSMC) with geographical specialization

The Members who are currently hosting RSMCs with geographical specialization are especially required to map themselves against any of new types of centres considering that RSMCs with geographical specialization will cease to exist after Congress-18 in 2019.

Such RSMCs may become RSMCs for one (or more) of the following activities depending upon their functions and capacities:

- (1) RSMC for regional severe weather forecasting;
- (2) RSMC for global deterministic NWP;
- (3) RSMC for limited-area deterministic NWP;

- (4) RSMC for global ensemble NWP; and
- (5) RSMC for limited-area ensemble NWP.

Therefore, Members hosting RSMCs with geographical specialization, are requested to please answer YES if they confirm their Centre(s) will to map its functions onto a new designation(s) of one (or more) of following RSMC(s).

Designated Centre	(1) RSMC for regional severe weather forecasting	(2) RSMC for global deterministic NWP	(3) RSMC for limited-area deterministic NWP	(4) RSMC for global ensemble NWP	(5) RSMC for limited-area ensemble NWP	Mapping confirmation received at WMO (Yes/No)
Algiers						No response
Beijing	Yes	Yes		Yes		No response
Brasilia						No response
Buenos Aires						No response
Cairo						No response
Dakar						No response
Darwin						No response
Exeter		Yes	Yes	Yes	Yes	Yes
Jeddah						No response
Khabarovsk						No response
Melbourne						No response
Miami						No response
Montreal						No response
Moscow						No response
Nairobi						No response
New Delhi						No response
Novosibirsk						No response
Offenbach	Yes					Yes
Pretoria	Yes	-	Yes	-	-	Yes
Rome	-	Yes	-	-	Yes	Yes
Tashkent	Yes	-	-		-	Yes
Tokyo	Yes	Yes	-	Yes	-	Yes
Tunis /Casablanca						No response
Washington						No response

Wellington	Yes	-	-	-	-	No response
ECMWF (new centre)	-	Yes	-	Yes	-	Yes

3. Regional Specialized Meteorological Centre (RSMC) with activity specialization

If you currently host an RSMC with activity specialization, please answer YES or No to confirm your will to map its functions onto a new designation of its corresponding RSMC.

Designated Centre	Mapping confirmation received at WMO (Yes/No)
Global Producing Centre for Long-range Forecasts (GPC)	
Beijing	Yes
CPTEC (Brazil)	Yes
Exeter	Yes
Melbourne	No response
Montreal	Yes
Moscow	Yes
Pretoria	No response
Seoul	No response
Tokyo	Yes
Toulouse	Yes
Washington	Yes
European Centre for Medium-range Weather Forecasts (ECMWF)	Yes
Tropical Cyclone Centre / Hurricane Centre / Typhoon Centre	
Nadi – Tropical Cyclone Centre	Yes
New Delhi – Tropical Cyclone Centre	Yes
Miami – Hurricane Centre	Yes
Tokyo – Typhoon Centre	Yes
La Réunion – Tropical Cyclone Centre	Yes
Honolulu – Hurricane Centre	Yes
RSMC for Atmospheric Sand and Dust storm Forecasts	
Barcelona	
RSMC for Nuclear Environmental Emergency Response and/or Backtracking	
Beijing	Yes
Exeter	Yes

Melbourne		No response
Montreal		Yes
Obninsk		Yes
Offenbach (backtracking only)		Yes
Tokyo		Yes
Toulouse		Yes
Vienna (backtracking only)		Yes
Washington		Yes
Regional Climate Centre		
Africa hosted by the African Centre of Meteorological Applications for Development (ACMAD) (RA I)		Yes
Beijing (RA II)		Yes
Tokyo (RA II)		Yes
Moscow (RA II)		Yes
New Centres designated by EC-69 (2017)		
ICPAC		Yes
Pune		Yes
CIMH, Barbados		Yes
North Africa Network RA I		Yes
Western South America hosted by the International Research Centre on El Niño (RA III)		Yes
Network (RA VI)	De Bilt (Climate Data Service)	Yes
	Offenbach (Climate Monitoring)	Yes
	Toulouse (Long-range Forecasts)	Yes
	Moscow (Long-range Forecasts)	Yes

4. Lead Centres

Designated Centre	Mapping confirmation
Long-range Forecast Multi-model Ensemble (LRFMME)	
Seoul	No
Washington	Yes

Standard Verification System for Long-range Forecasts (SVSLRF)	
Melbourne	No
Montreal	Yes
Deterministic NWP Verification	
ECMWF	Yes
EPS Verification	
Tokyo	Yes