

Overview of WIPPS and its session

Pre INFCOM-3 Information Session
(25 March - 5 April 2024)

David RICHARDSON

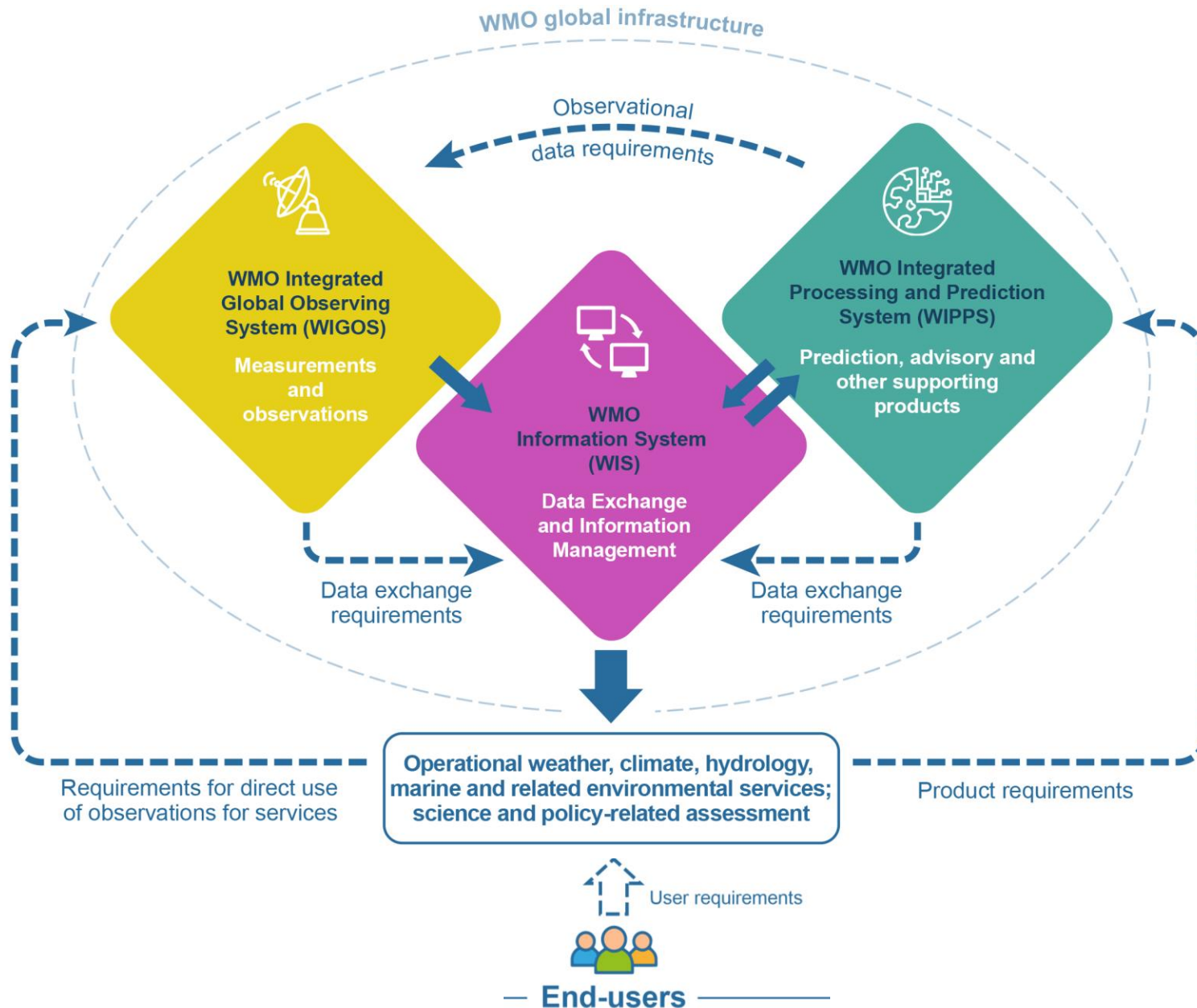
Chair of Standing Committee on Data Processing for Applied Earth
System Modelling and Prediction (SC-ESMP)



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3 & 4 April 2024

WIPPS in WMO Operational Infrastructure



- **WIPPS:** WMO Integrated processing and Prediction System
- **WIGOS:** WMO Integrated Global Observing System
- **WIS:** WMO Information System

WIPPS working arrangement among WIPPS Designated Centres and NMCs

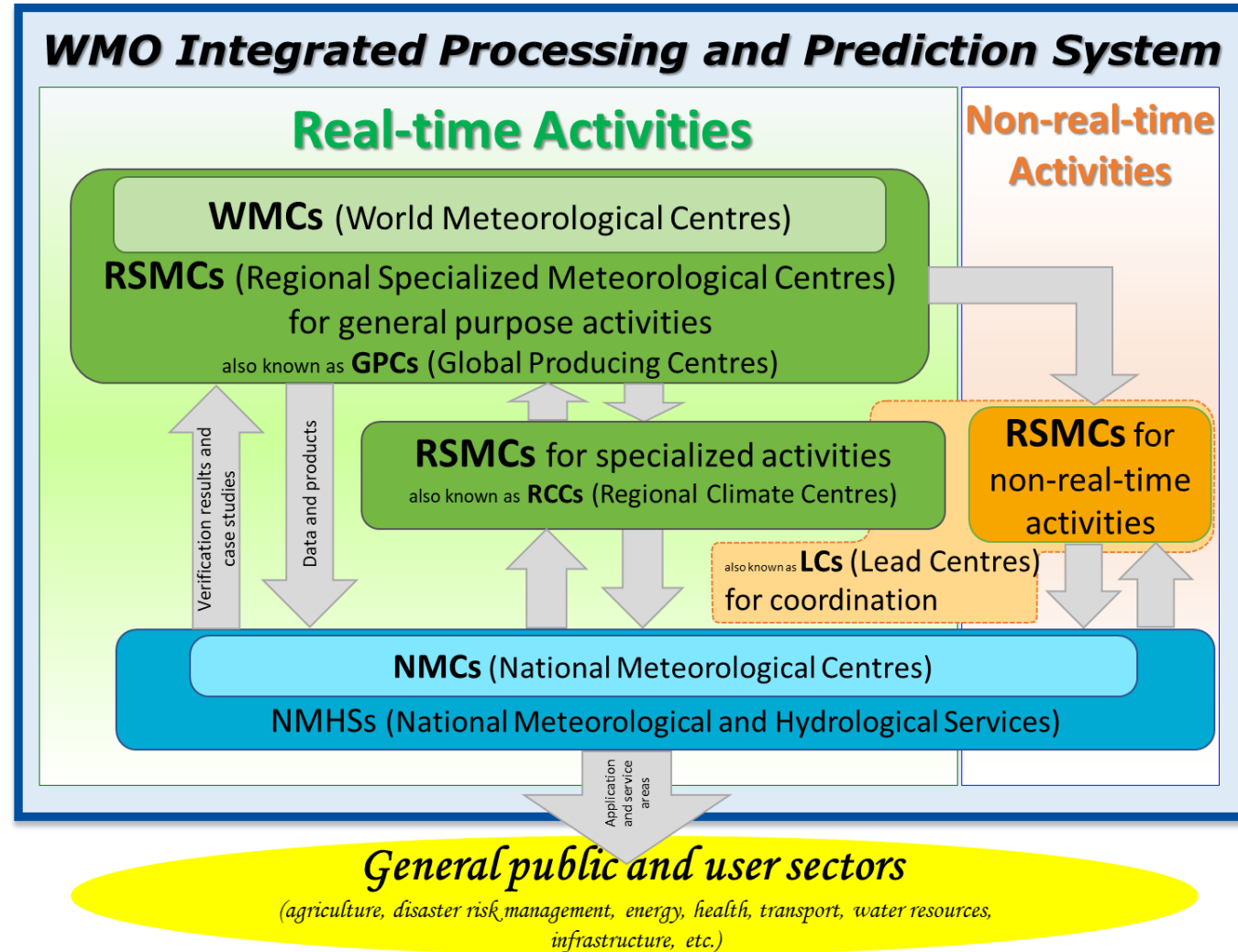
WMCs are advanced NWP centres that can carry out the following activities:

- Global deterministic NWP;
- Global ensemble NWP;
- Global numerical long-range prediction.

RSMCs (Three types)

- (1) for **general purpose activities**: essential data processing for a wide range of end use.
- (2) for **specialized activities**: tailored for a specific type of application and user community.
- (3) for **non-real-time activities**: to coordinate verification activities to support Members in using RSMCs' products.

NMCs prepare forecasts and warnings at all forecasting ranges necessary to meet the requirements of the Member.



WIPPS activities

General purpose activities (14)

- Global deterministic numerical weather prediction
- Limited area deterministic numerical weather prediction
- Global ensemble numerical weather prediction
- Limited area ensemble numerical weather prediction
- Global numerical long-range prediction
- Global numerical sub-seasonal forecasts
- Annual to decadal climate prediction
- **Global climate reanalysis**
- Numerical ocean wave prediction
- Global numerical ocean prediction
- **Global numerical storm surge prediction**
- Nowcasting
- Sub-seasonal to seasonal hydrological prediction
- Snow cover prediction

Non-real-time activities (5)

- Coordination of deterministic numerical weather prediction (NWP) verification
- Coordination of ensemble prediction system (EPS) verification
- Coordination of wave forecast verification
- Coordination of tropical cyclone forecast verification
- Coordination of observation monitoring

Specialized activities (15)

- Regional climate prediction and monitoring
- Coordination of multi-model ensemble prediction for long-range forecasts
- Coordination of multi-model ensemble for sub-seasonal forecasts
- Coordination of annual to decadal climate prediction
- **Coordination of assessment of multiple climate reanalysis**
- Regional severe weather forecasting
- Tropical cyclone forecasting, including marine-related hazards
- Nuclear environmental emergency response
- Non-nuclear environmental emergency response
- Atmospheric sand and dust storm forecasts
- **Vegetation fire and smoke pollution forecasts**
- Volcano watch services for international air navigation
- Marine meteorological services
- Marine **environmental** emergency response
- Flash flood forecasting

30 activities + 4 (INFCOM-3)

142 centres + 11 (INFCOM-3)

WIPPS Designated Centres (WDCs)

- WIPPS Web Portal: [WIPPS Web Portal | World Meteorological Organization \(wmo.int\)](https://wipps.wmo.int)

Designated WIPPS Centres Web portal for the WMO Integrated Processing and Prediction System

142 centres/networks **23** activities

WIPPS activities at a glance

Geo-statistics

List of designated centres

More info.

List of WIPPS products by a selected WDC the corresponding links to access them

Filter by Region

Filter by WIPPS Activities

World Meteorological Centre

Global deterministic numerical weather prediction

Limited-area deterministic numerical weather prediction

Global ensemble numerical weather prediction

Limited-area ensemble numerical weather prediction

Global numerical long-range prediction

Annual to decadal climate prediction

Numerical ocean wave prediction

Global numerical ocean prediction

Nowcasting

Regional climate prediction and monitoring

Coordination of multi-model ensemble prediction for long-range forecasts

Coordination of annual to decadal climate prediction

Regional severe weather

RA I 13

RA II 35

RA III 8

RA IV 26

RA V 11

RA VI 50

RA VI 50

RA I 13

RA II 35

RA III 8

RA IV 26

RA V 11

RA VI 50

WMC Beijing
World Meteorological Centre

WMC ECMWF
World Meteorological Centre

WMC Exeter
World Meteorological Centre

WMC Melbourne
World Meteorological Centre

WMC Montreal
World Meteorological Centre

WMC Moscow
World Meteorological Centre

WMC Offenbach
World Meteorological Centre

WMC Tokyo
World Meteorological Centre

WMC Toulouse
World Meteorological Centre

WMC Washington
World Meteorological Centre

RSMC Beijing
Global deterministic numerical weather prediction

Graphical display, ECMWF website

Product inventory. Open data from ECMWF are available for a wide range of products at 0.4 degrees resolution.

Information on key characteristics of the model and documentation

Geopotential height, 850 hPa [Inventory] [WIS Metadata]

Geopotential height, 500 hPa [Inventory] [WIS Metadata]

Geopotential height, 250 hPa [Inventory] [WIS Metadata]

Temperature, 850 hPa [Inventory] [WIS Metadata]

Temperature, 500 hPa [Inventory] [WIS Metadata]

Temperature, 250 hPa [Inventory] [WIS Metadata]

Wind zonal velocity (u), 925 hPa [Inventory] [WIS Metadata]

Wind zonal velocity (u), 850 hPa [Inventory] [WIS Metadata]

Wind zonal velocity (u), 700 hPa [Inventory] [WIS Metadata]

Information about RSMC ECMWF (Global deterministic numerical weather prediction)

ECMWF

Website: [Link](#)

Focal Point: [Mr David RICHARDSON](#)

Principal GISC: **Exeter**

This centre was designated in year **2017**.

Useful links

- A full list of designated WIPPS (GDPPS) centres (Part III of Manual on the Global Data-processing and Forecasting System)
- WIPPS Community site

Notes to User

- Please address requests for updating information to the Earth System Prediction Division of the Secretariat at dpfsmail@wmo.int.
- Focal points of designated WIPPS centres are linked to the [WMO Community Platform](#). WMO members will be able to get detailed contact information of the focal points after login.

Disclaimer

Good practices for utilizing WDC's products in regional and national levels

- Uptake of WDCs products for regional weather advisories / watches and climate outlooks
 - Andre KAMGAF (African Centre of Meteorological applications for Development, ACMAD)
- Unlocking WIPPS Products: Practical Aspects and Observed Benefits
 - Agie Wandala PUTRA (Meteorological, Climatological and Geophysical Agency (BMKG), Indonesia)
- Benefits of exercise of non-nuclear environmental emergencies with WIPPS designated centres
 - María Soledad OSORES, Servicio Meteorológico Nacional (SMN), Argentina

WIPPS session information

- Agenda

- Time

- ✓ Session 1: 1430 – 1600UTC, 3 April 2024

- ✓ Session 2: 0700 – 0830 UTC, 4 April 2024

Time (UTC) Session1/2	Subject	Presenter
14:30-14:35 07:00-07:05	Opening	David RICHARDSON
14:35-14:45 07:05-07:15	Uptake of WMCs products for regional weather advisories / watches and climate outlooks	Andre KAMGAF (ACMAD)
14:45-14:55 07:15-07:25	Unlocking WIPPS Products: Practical Aspects and Observed Benefits	Agie Wandala PUTRA (BMKG)
14:55-15:05 07:25-07:35	Benefits of exercise of non-nuclear environmental emergencies with WIPPS designated centres, español version is available	María Soledad OSORES (SMN)
15:05-15:45 07:35-08:15	Introduction of WIPPS INFCOM-3 documents	David RICHARDSON
15:45-16:00 08:15-08:30	Q & A and any other business	David RICHARDSON

Thank you.



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