

# ITU/WMO Joint Seminar on the use of radio spectrum in meteorology, climate and water

Essential role of radio frequencies

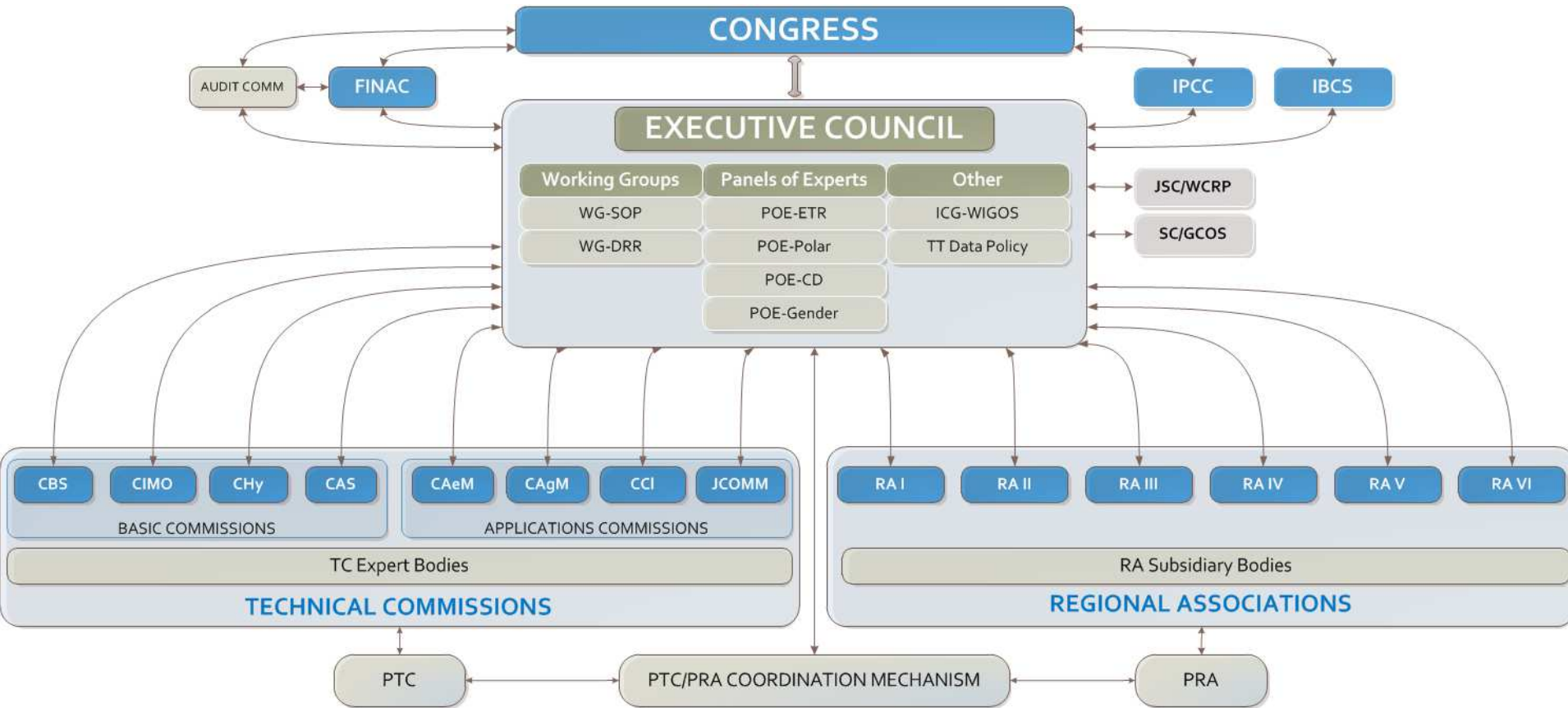


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World Meteorological Organization  
Organisation météorologique mondiale

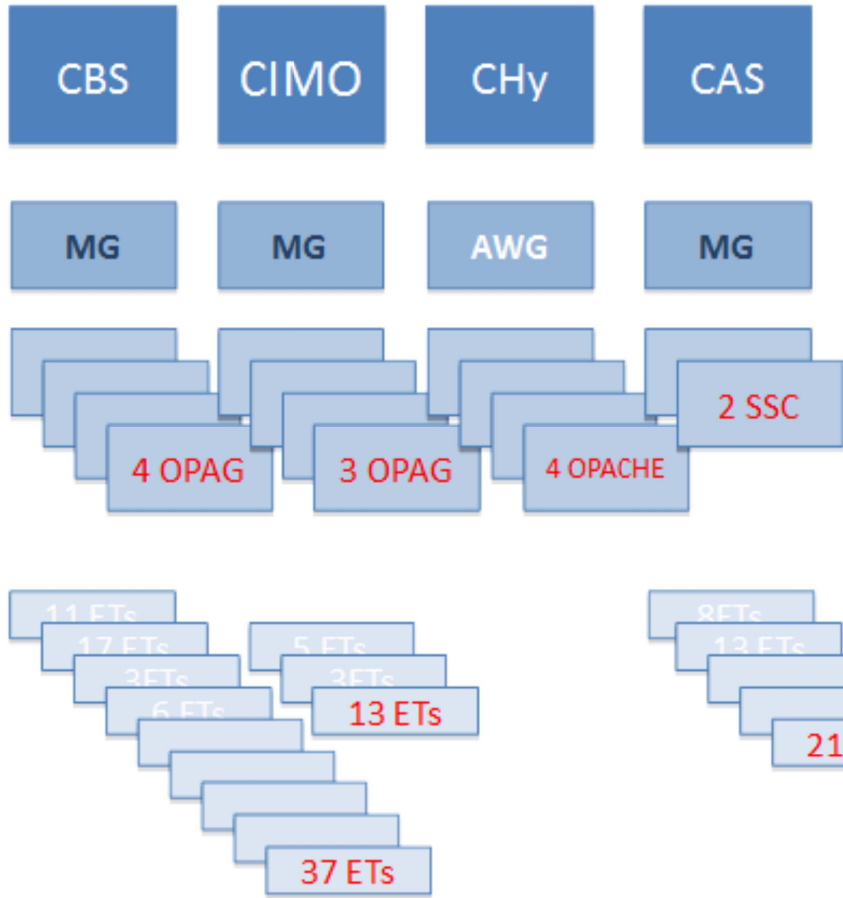
Eric Allaix (Chair SG-RFC)

# Current WMO structure

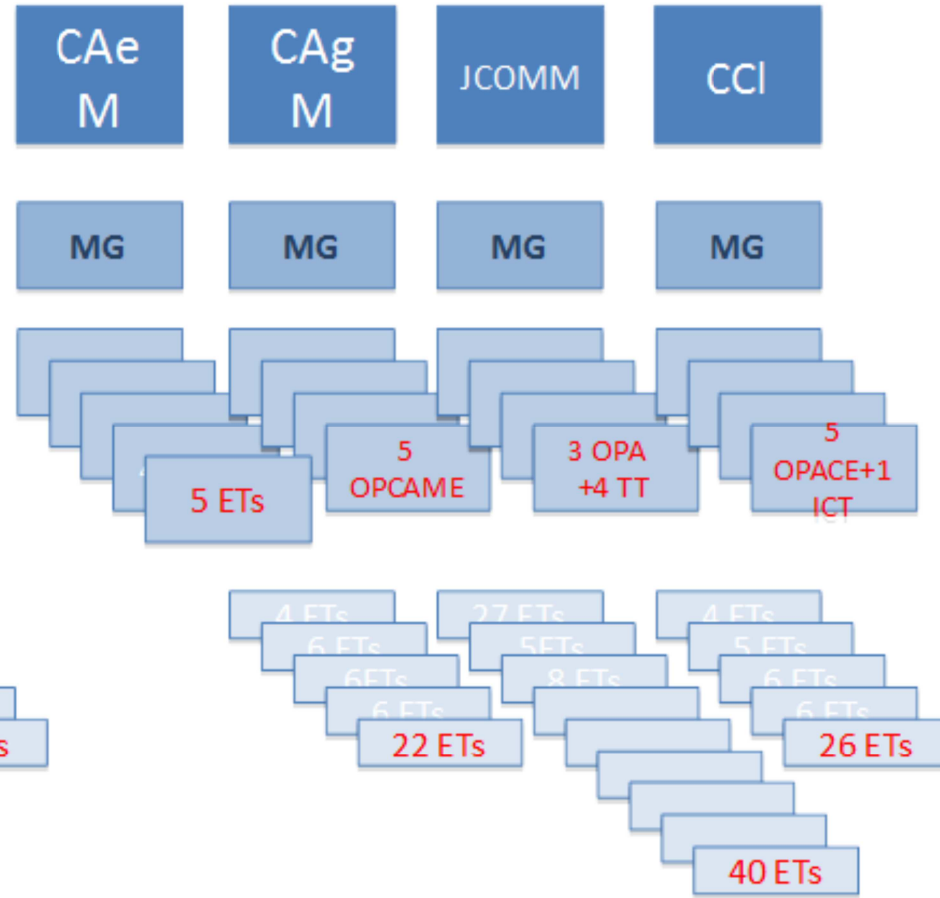


# Technical commission structures

## Basic commissions



## Application commissions



Total groups: **204** (8 MGs/AWGs, 36 OPAGs, 160 ETs); Average experts: **3100**

# COMMISSION OF BASIS SYSTEMS (1) (CBS)

## Main activities

- development, implementation and operation of integrated systems for observing, data processing, data communication and data management,
- the provision of public weather services

In response to requirements of all WMO Programmes and opportunities provided by technological developments.

The CBS is the lead Technical Commission for the overall World Weather Watch Programme (WWW), the WMO Space Programme and the Public Weather Services Programme.

# COMMISSION OF BASIS SYSTEMS (2) (CBS)

Work accomplished through :

- ✓ a Management Group
- ✓ four Open Programme Area Groups (OPAG)
  - Integrated Observing System (IOS)
  - Information System and Services (ISS)
  - Data-Processing and Forecasting System (DPFS)
  - Public Weather Services Delivery (PWSD)

Each OPAG relies on several Expert Teams and an Implementation Coordination Team:

- to develop and coordinate programme outputs
- to guide global implementation.

Steering Group on Radio-frequency Coordination (SG RFC) is relied to OPAG-IOS and close cooperates with all WMO entities dealing with frequency issues



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# Steering Group on Radio-frequency Coordination - 1 (SG RFC)

## SG RFC main activities :

### At WMO level :

- Undertake tasks and provide advice on and support for the implementation of the WIGOS framework;
- Provide advice and support to the chairperson of OPAG-IOS, and report on all activities relevant to its Terms of Reference.
- Review allocations of radio frequency bands and frequency assignments of systems and applications for meteorological activities;

# Steering Group on Radio-frequency Coordination - 2 (SG RFC)

## SG RFC main activities :

### With WMO Members :

Coordinate, with the assistance of the WMO Secretariat, to:

- Ensure the availability of radio-frequency spectrum to meteorological radiocommunication services;
- Ensure the proper notification and registration of frequency assignments used for meteorological purpose;
- Identify the future use of the radio-frequency spectrum for meteorological purpose;
- Prepare and coordinate proposals and advice to WMO Members on radio regulation matters;
- Facilitate the cooperation among WMO Members for the use of frequency bands allocated to meteorological;
- Facilitate the coordination of WMO frequency use activities with other international organizations;
- Assist WMO Members, upon request, on issues related to the assignment of frequency bands to radiocommunication systems;

# Resolution 29 (Cg-XVII) (1)

## RADIO FREQUENCIES FOR METEOROLOGICAL AND RELATED ENVIRONMENTAL ACTIVITIES

The Seventeenth World Meteorological Congress (Geneva, June 2015), attended by 167 Member countries, adopted the Resolution 29

### This resolution considers :

- The prime importance of the specific radiocommunication services for meteorological and related environmental activities required for the detection and early warning of hazards and the prevention and mitigation of natural and technological (human-induced) disasters, the safety of life and property, the protection of the environment, climate change studies and scientific research,
- The importance of information provided by the Earth-exploration systems including meteorological systems for a wide range of economic activities such as agriculture, transportation, construction and tourism,
- The crucial importance of the allocation of suitable radio-frequency bands for the operation of:
  - ❖ surface-based meteorological observing systems, including in particular radiosondes, weather radars and wind profiler radars
  - ❖ meteorological and research and development satellites, including remote-sensing, data collection and data distribution links,



# Resolution 29 (Cg-XVII) (2)

## RADIO FREQUENCIES FOR METEOROLOGICAL AND RELATED ENVIRONMENTAL ACTIVITIES

### This resolution stresses :

- that some radio-frequency bands are a unique natural resource due to their special characteristics and natural radiation enabling space-borne passive sensing of the atmosphere and the Earth surface, which deserve adequate allocation to the Earth-exploration satellite service (passive) and absolute protection from interference;

### This resolution expresses :

- its serious concern at the continuing threat to several radio-frequency bands allocated to the meteorological aids, meteorological-satellite, Earth-exploration satellite and radiolocation (weather and wind profiler radars) services posed by the development of other radiocommunication services;

### This resolution requests :

- the Commission for Basic Systems to pursue the continuous review of regulatory and technical matters related to radio frequencies for operational and research meteorological and related environmental activities, and preparation of guidance and information for National Meteorological and Hydrological Services, in coordination with other technical commissions, especially the Commission for Instruments and Methods of Observation, and in liaison with other relevant international bodies, in particular the Coordination Group for Meteorological Satellites;



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# Resolution 29 (Cg-XVII) (3)

## RADIO FREQUENCIES FOR METEOROLOGICAL AND RELATED ENVIRONMENTAL ACTIVITIES

This resolution urges :

- All Members to do their utmost to ensure the availability and protection of suitable radiofrequency bands required for meteorological and related environmental operations and research, and in particular:
  - ❖ to ensure that their national radiocommunication administrations are fully aware of the importance of and requirements for radio frequencies for meteorological and related activities, and to seek their support in the ITU World Radiocommunication Conferences and Radiocommunication Sector (ITU-R) activities;
  - ❖ To participate actively in the national, regional and international activities on relevant radiocommunication regulatory issues and, in particular, to involve experts from their Services in the work of relevant regional telecommunication organizations and of ITU-R, especially ITU-R Study Groups 5 and 7 on Terrestrial (including radiolocation) and Science Services, respectively;
  - ❖ To register adequately with their national radiocommunication administrations all radiocommunication stations and radio frequencies used for meteorological and related environmental operations and research;

# Resolution 29 (Cg-XVII) (4)

## RADIO FREQUENCIES FOR METEOROLOGICAL AND RELATED ENVIRONMENTAL ACTIVITIES

This resolution appeals :

- to the International Telecommunication Union and its Member Administrations:
  - ❖ To ensure the availability and absolute protection of the radio-frequency bands which, due to their special physical characteristics, are a unique natural resource for spaceborne passive sensing of the atmosphere and the Earth surface and are of crucial importance for weather, water and climate research and operations;
  - ❖ To give due consideration to the WMO requirements for radio-frequency allocations and regulatory provisions for meteorological and related environmental operations and research;
  - ❖ To pay special attention to the WMO positions related to the WRC agenda;

# Resolution 29 (Cg-XVII) (5)

## RADIO FREQUENCIES FOR METEOROLOGICAL AND RELATED ENVIRONMENTAL ACTIVITIES

This resolution requests :

➤ the Secretary-General:

- ❖ To bring the present resolution to the attention of all concerned, including the International Telecommunication Union;
- ❖ To pursue as a matter of high priority the coordination role of the Secretariat in radiofrequency matters, especially with ITU-R, including participation of WMO in ITU-R Radiocommunication Study Groups, conference preparatory meetings and World Radiocommunication Conferences;
- ❖ To facilitate the coordination between National Meteorological and Hydrological Services and their national radiocommunication administrations, particularly in preparing for the ITU World Radiocommunication Conferences, by providing appropriate information and documentation;
- ❖ To assist the Commission for Basic Systems in the implementation of the present resolution.

- Based on this Resolution 29 (Cg-XVII), on the Executive Council (EC-68) decision (36) and on the CBS-16 request, SG-RFC in close cooperation with ITU-R WP 7 reviewed the “Use of Radio Spectrum for Meteorology: Weather, Water and Climate Monitoring and Prediction” handbook.

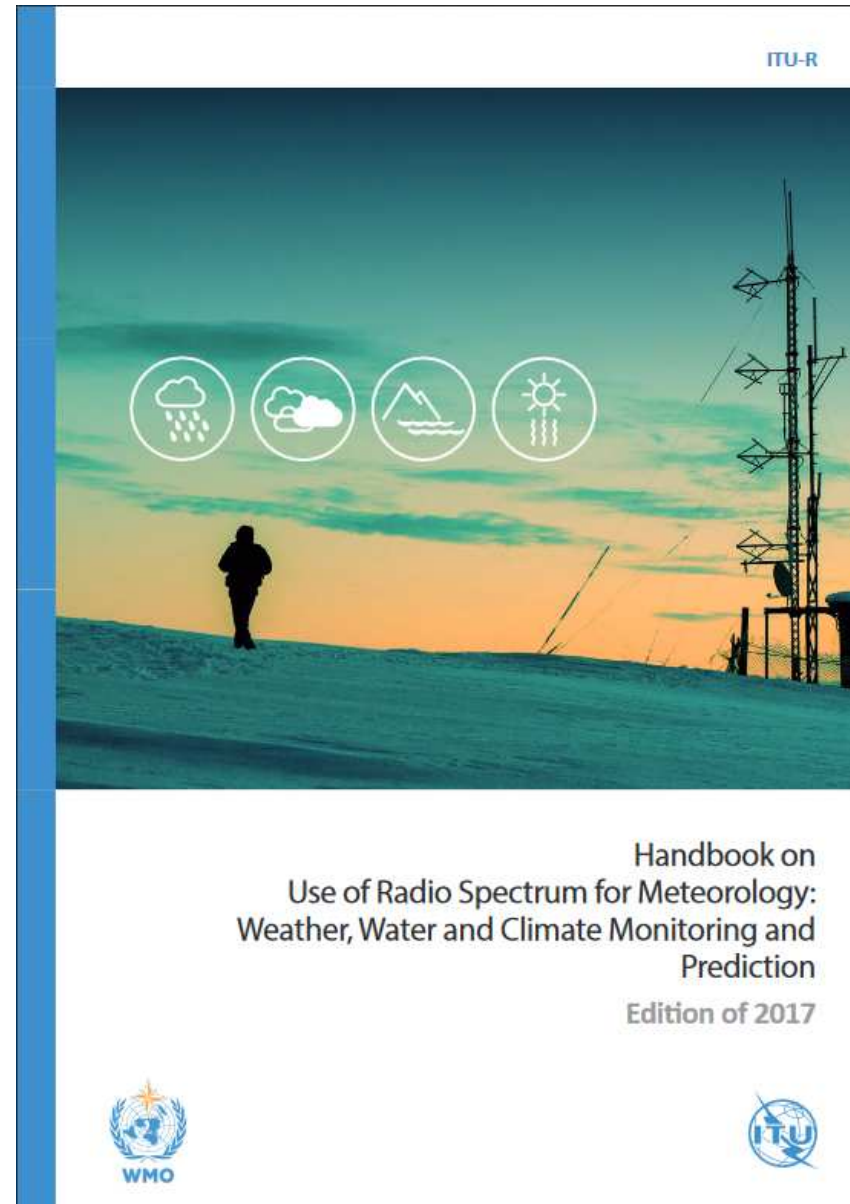
Available on the following addresses :

WMO website :

[https://library.wmo.int/opac/doc\\_num.php?explnum\\_id=3793](https://library.wmo.int/opac/doc_num.php?explnum_id=3793)

ITU website :

<http://www.itu.int/en/publications/ITU-R/pages/publications.aspx?parent=R-HDB-45-2008&media=electronic>



# Thank you Merci



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