

WMO Reform, Strategy and Ocean Activities

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WMO



WMO OMM

World Meteorological Organization

Organisation météorologique mondiale

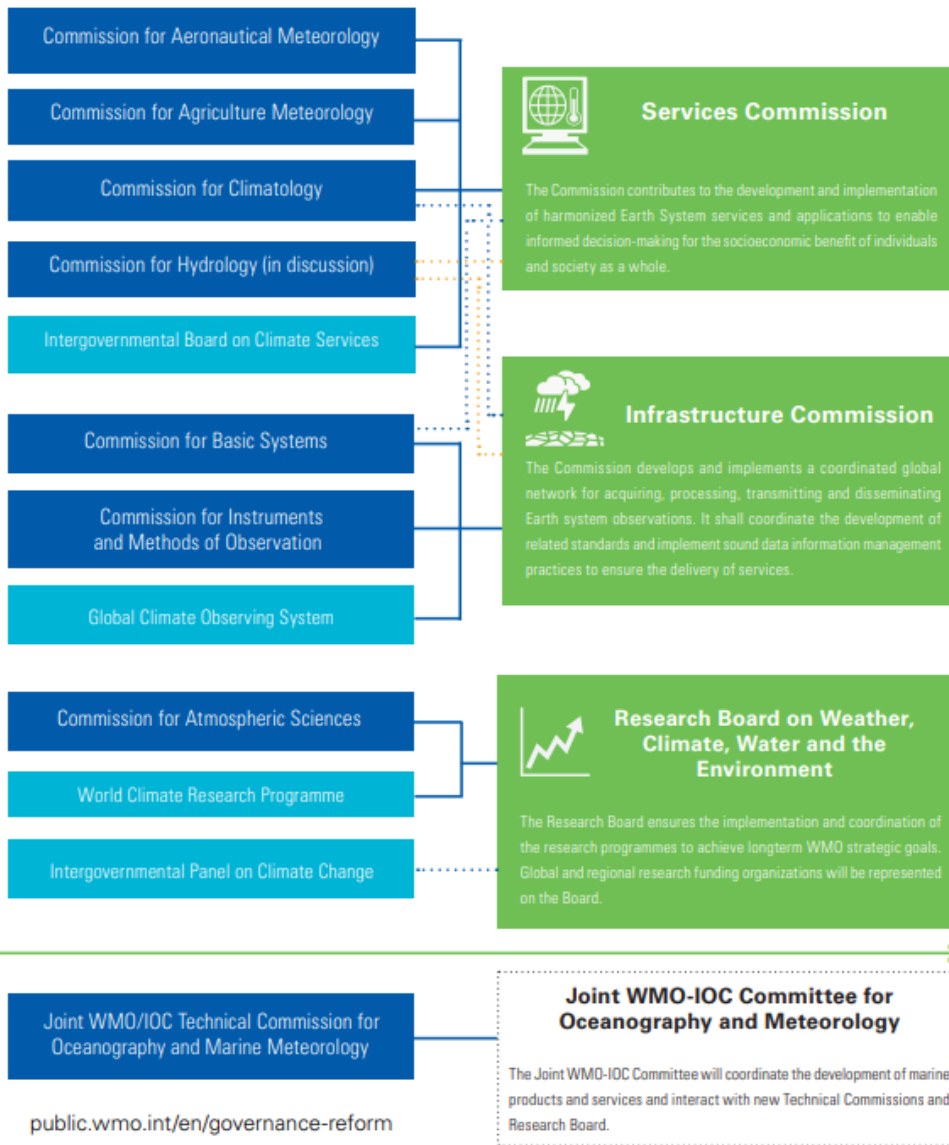
World Meteorological Organization

- UN Specialized Agency on **weather, climate & water** with 193 Members
- 2nd oldest UN Agency, 1873- with **science and technology** based action
- Coordinates work of > **200 000 national experts** from meteorological & hydrological services, academia & private sector
- Co-Founder and host agency of **IPCC**, WMO SG UN Climate Principal
- Global **real-time standardized weather & climate observing system** backbone of weather & climate services
- 13 WMO global centres, which provide global short and long term forecasts
- **Sharing of know-how**, developed => developing countries & regional co-operation

TODAY → **TOMORROW**

Technical Commissions and other bodies.

Technical Coordination Committee will coordinate the new Technical Commissions and Research Board.



public.wmo.int/en/governance-reform

REGIONAL ASSOCIATIONS (RAs)

Coordinate and organize the planning, implementation and evaluation of agreed programmes, strategies and activities at the regional and subregional levels.



Contribute to the WMO Strategic and Operating Plans to address regional priorities and ensure the best use of Members' expertise.



Establish regional networks and facilities in close coordination with the technical commissions.



Advocate for investment in systems and services at Regional and National levels.

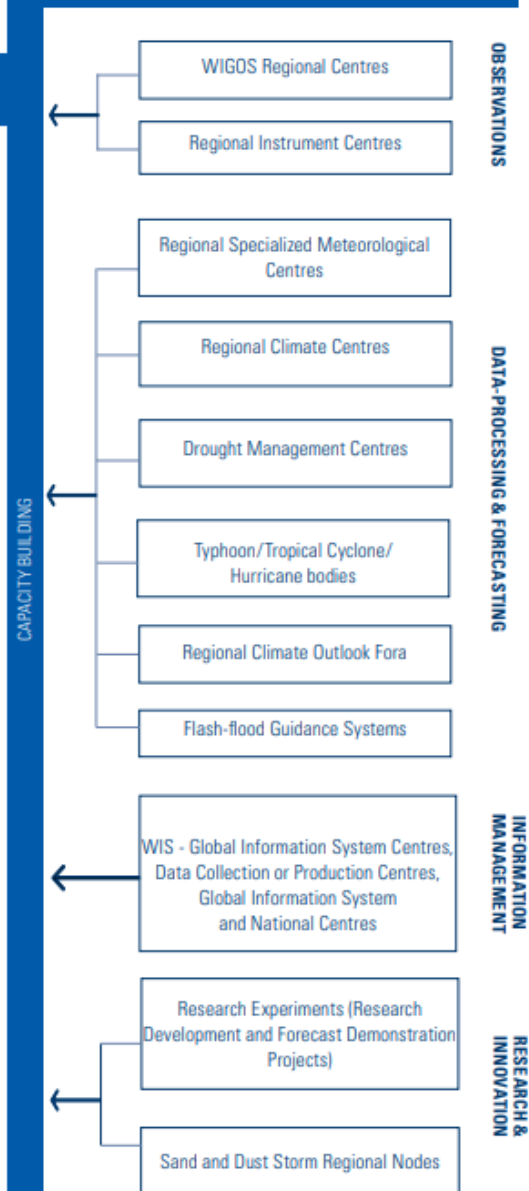


Raise visibility and engage stakeholders in initiatives and projects related to the strategic priorities and identify impediments to the timely implementation of planned programmes and activities.

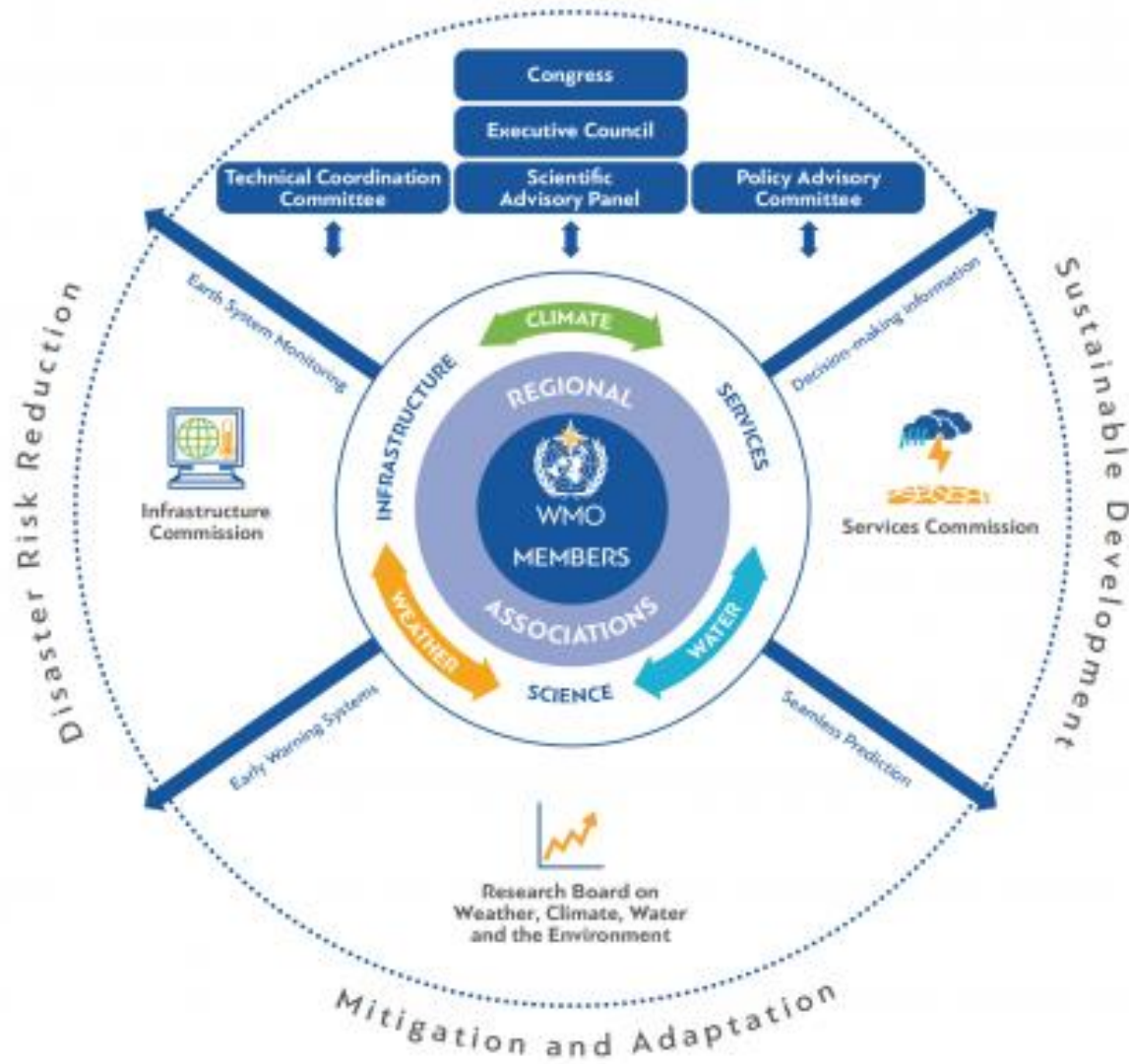


Build and promote regional partnerships.






REGIONAL IMPLEMENTATION OF WMO SERVICE BACKBONE



WMO - Today

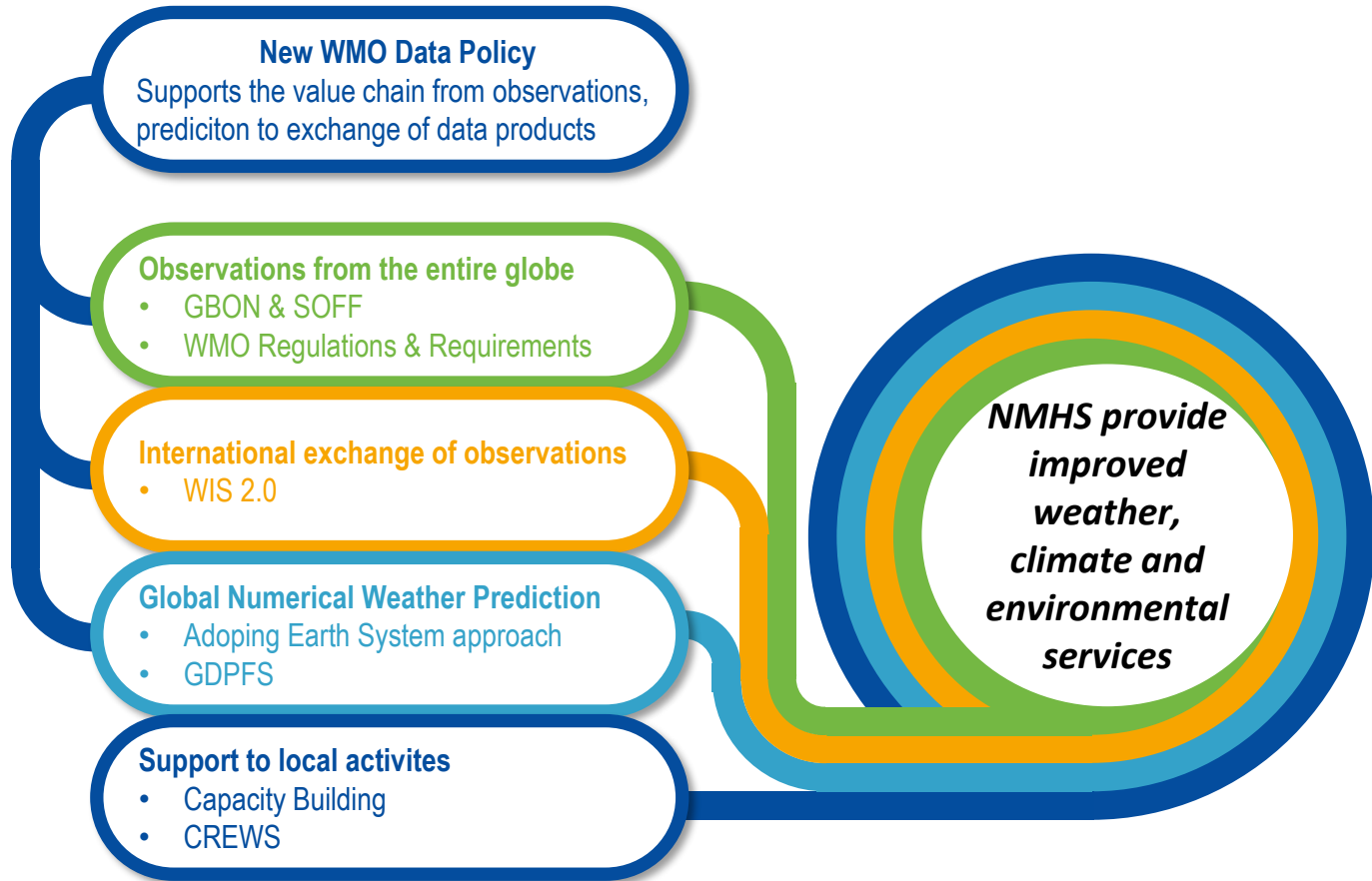


WMO Vision, Mission, Objectives and Strategy

| | | | | | |
|-------------------------------|---|---|---|---|--|
| VISION 2030 | By 2030, we see a world where all nations, especially the most vulnerable, are more resilient to the socioeconomic consequences of extreme weather, climate, water and other environmental events; and underpin their sustainable development through the best possible services, whether over land, at sea or in the air (<i>and in space</i>) | | | | |
| OVERARCHING PRIORITIES | Preparedness for, and reducing losses from hydrometeorological extremes | Climate-smart decision-making to build resilience and adaptation to climate risk | Socioeconomic value of weather, climate, hydrological and related environmental services | | |
| CORE VALUES | Accountability for Results and Transparency | Collaboration and Partnership | Inclusiveness and Diversity | | |
| LONG-TERM GOALS | 1 Services  Better serve societal needs | 2 Infrastructure  Enhance Earth system observations and predictions | 3 Science & Innovations  Advance targeted research | 4 Member Services  Close the capacity gap | 5 Smart Organization  Strategic realignment of structure and programmes |
| STRATEGIC OBJECTIVES | <ul style="list-style-type: none"> Strengthen national multi-hazard early warning/alert systems Broaden provision of policy- and decision-supporting climate, water and weather services | <ul style="list-style-type: none"> Optimize observation data acquisition Improve access to, exchange and management of Earth system observation data and products Enable access and use of numerical analysis and prediction | <ul style="list-style-type: none"> Advance scientific knowledge of the Earth system Enhance science-for-service value chain to improve predictive capabilities Advance policy-relevant science | <ul style="list-style-type: none"> Enable developing countries to provide and utilize essential weather, climate, hydrological and related environmental services Develop and sustain core competencies and expertise | <ul style="list-style-type: none"> Optimize WMO constituent body structure Streamline WMO programmes Advance equal, effective and inclusive participation |
| FOCUSED ON 2020-23 | | | | | |
| | See https://library.wmo.int/index.php?lvl=notice_display&id=21525 | | | | |

Achieving WMO's vision for the future

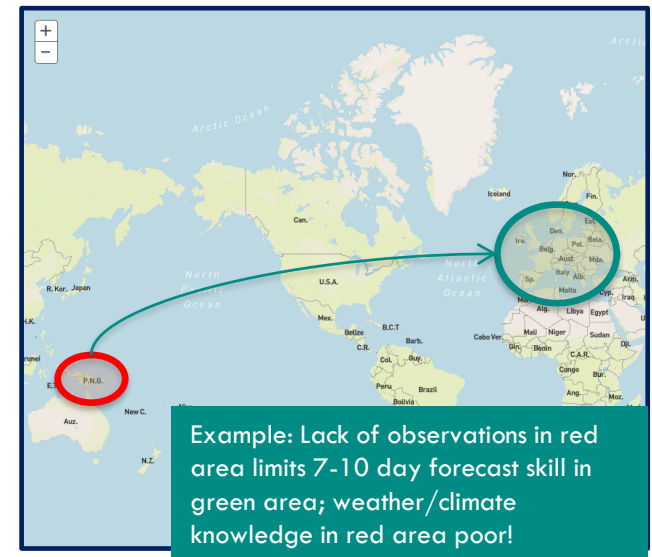
Improvements are needed to all parts of the value chain from observations to service delivery.



“Weather and climate know no boundaries”

- *the atmosphere has no horizontal boundaries*

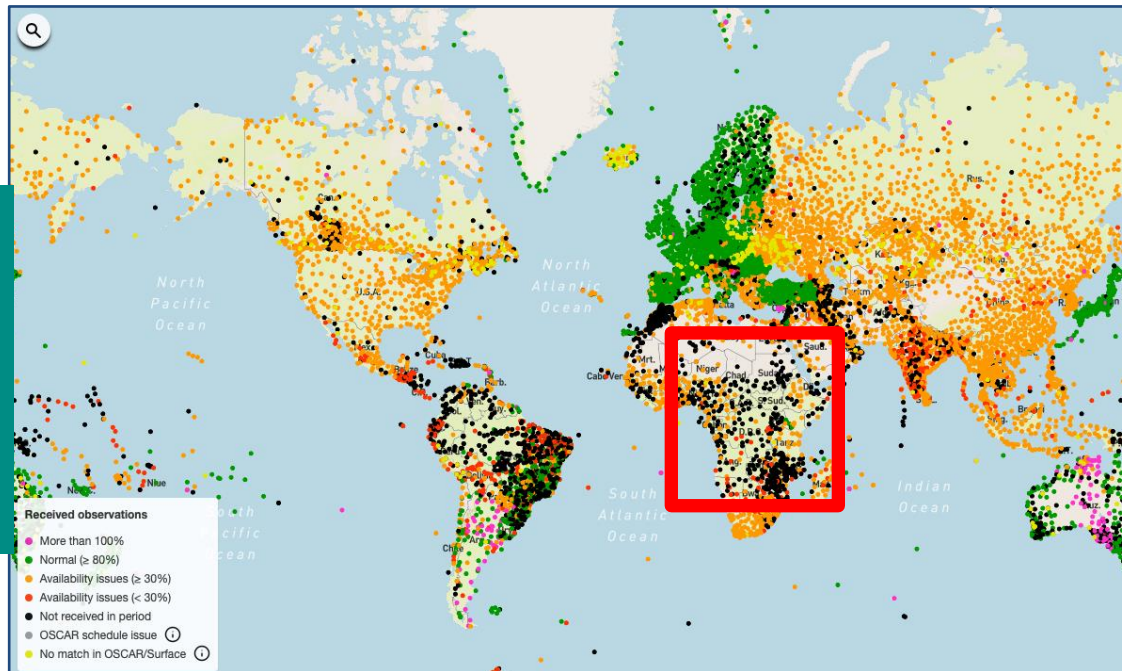
- **In order for us to predict it, weather must be modeled globally;** all modern weather prediction beyond 24 hours depends on **global Numerical Weather Prediction (NWP)**;
- **NWP requires observations from the entire globe;**
- **Lack of observations is a key limiting factor to monitoring and predicting weather and climate, both locally and globally;**
- Any local lack of observations will initially lead to poor local prediction quality; over time this will spread globally.



Current status of international exchange of observations for global NWP

In many areas the exchange of surface-based observations has been stagnant or declining since 1995;

Areas with red/black dots far from meeting data requirements.



Weather forecasts over areas with few observations (black dots and/or few dots) cannot be reliably verified!

Indirect verification via satellite data or reanalysis data indicate consistently poor quality of forecasts of convective weather;

Climate reanalysis fields used for monitoring, adaptation and prediction will also be of poor quality

Surface pressure observations received by global NWP Centers on Apr 27 2021, 12Z)
(source: [WIGOS Data Quality Monitoring System](#))

Successful application of weather and climate services depend on a functioning meteorological value chain

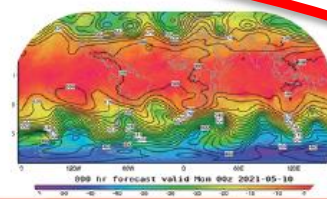
WMO Unified Data Policy



Observations from the entire globe



International exchange of observations



Global Numerical Weather Prediction

Weather and climate-related infrastructure - **must be designed and managed globally**

Last-mile activities undertaken primarily at regional, national and local level

Effective decision-making and action



Delivery of weather and climate services



Local data processing, forecast, warning and advisory products



Three linked strategic WMO initiatives

WMO Unified Data Policy

- Increased international exchange of observations by all Members (GBON)
- Return of high-quality model output to all Members

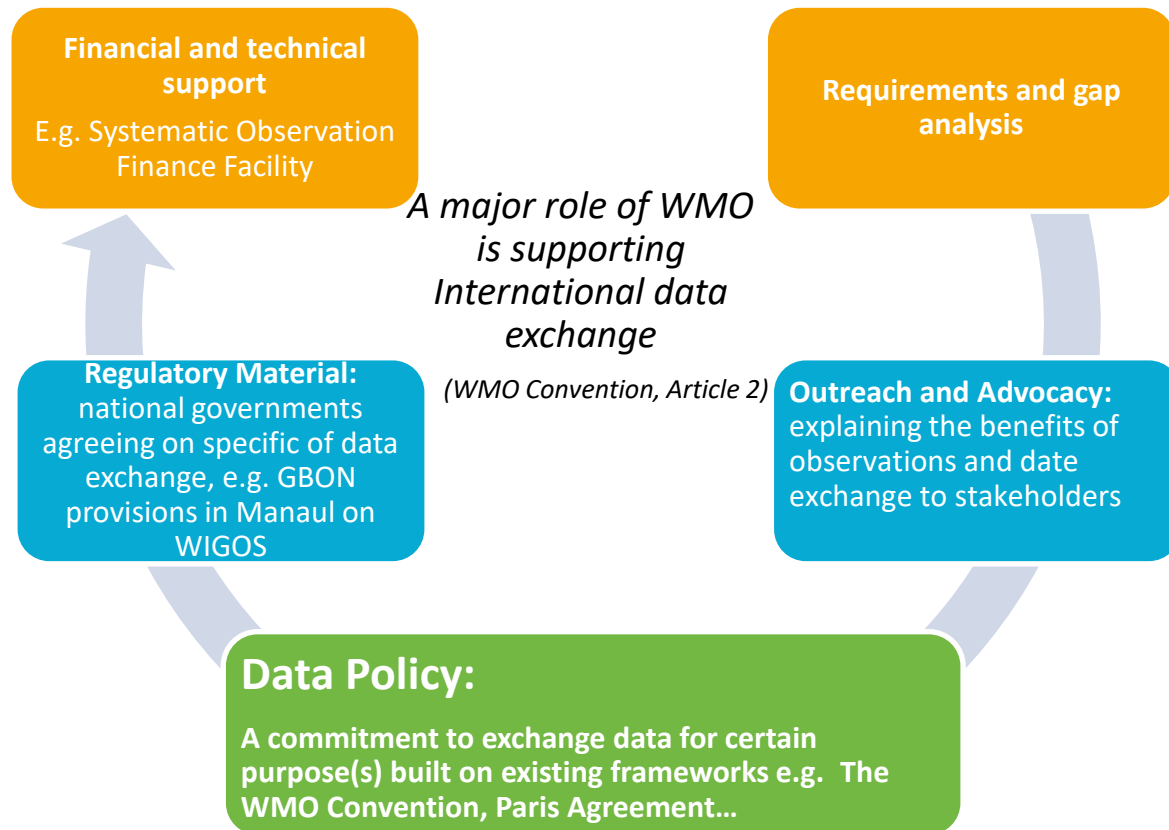
Global Basic Observing Network

- Example of regulatory implementation of data policy
- Increased exchange of observations by all Members, **facilitated by both Data Policy and SOFF**

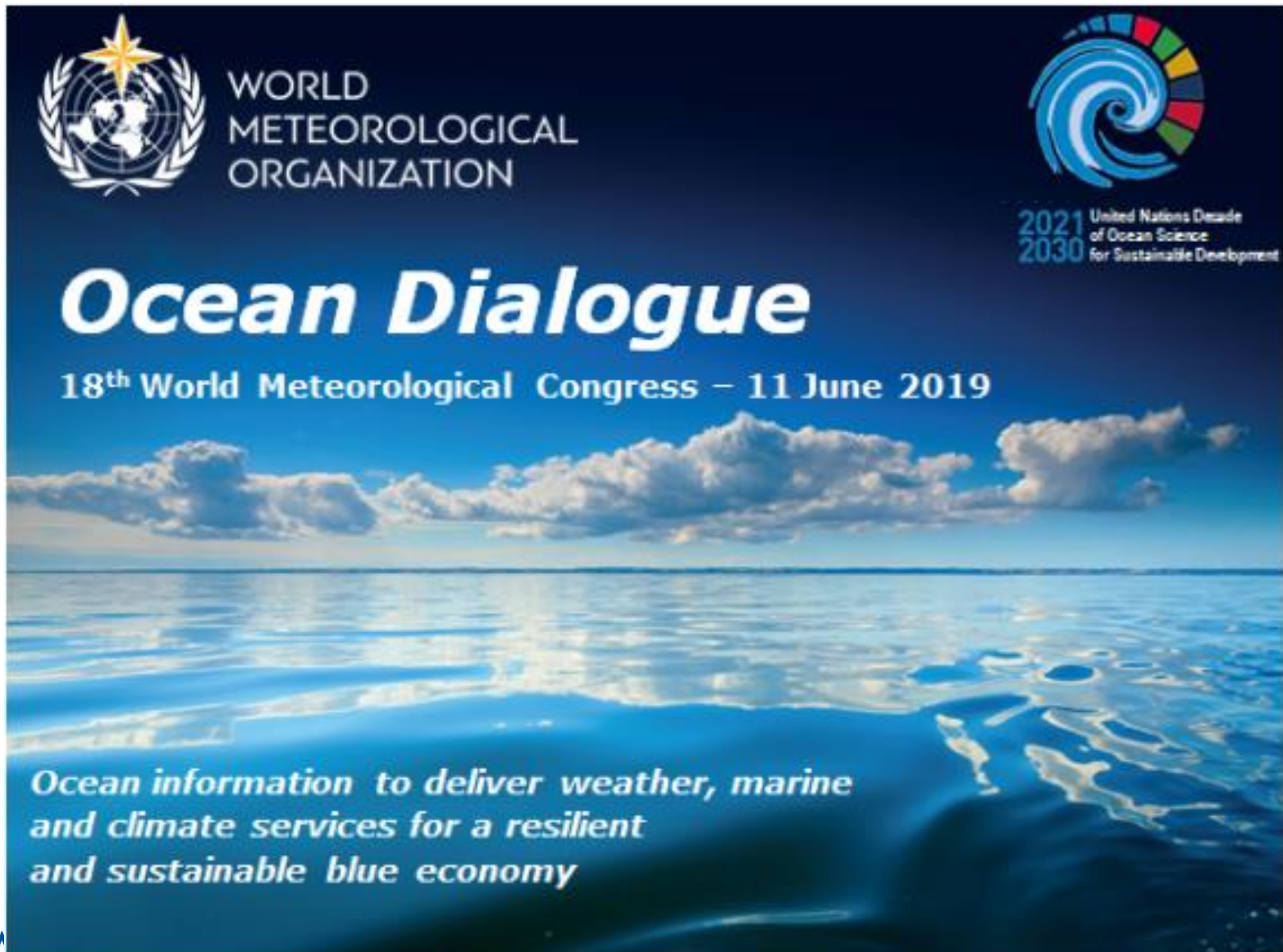
Systematic Observations Financing Facility

- Technical and financial support for GBON implementation where it is most needed
- Building on GBON regulations

Five essential ingredients for successful data exchange



WMO adopts new ocean agenda

The poster features a background image of a vast, calm blue ocean under a bright blue sky with scattered white clouds. The horizon line is visible in the distance. The text is overlaid on this background. In the top left is the WMO logo, a globe with a yellow star and laurel wreath. To its right is the text 'WORLD METEOROLOGICAL ORGANIZATION'. In the top right is a colorful circular logo with a blue swirl and segments of red, yellow, green, and blue. Below this is the text '2021 United Nations Decade of Ocean Science for Sustainable Development 2030'. The main title 'Ocean Dialogue' is in a large, bold, white serif font. Below it is '18th World Meteorological Congress – 11 June 2019' in a smaller white sans-serif font. At the bottom, the tagline 'Ocean information to deliver weather, marine and climate services for a resilient and sustainable blue economy' is written in a white italicized sans-serif font.

WORLD METEOROLOGICAL ORGANIZATION

2021 United Nations Decade of Ocean Science for Sustainable Development 2030

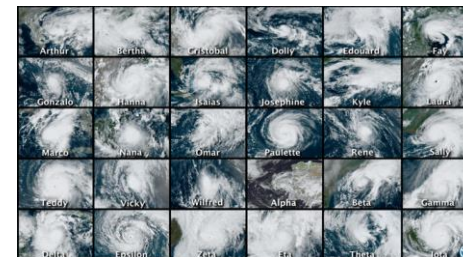
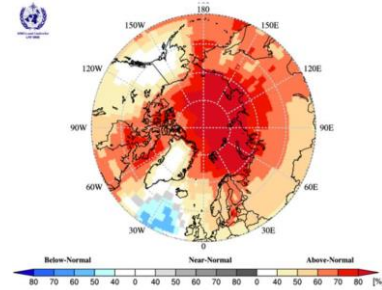
Ocean Dialogue

18th World Meteorological Congress – 11 June 2019

Ocean information to deliver weather, marine and climate services for a resilient and sustainable blue economy



WMO Focus on Ocean



- **Ocean (Data)** in earth system & seamless services; interactions esp. INFCOM, SERCOM, RB, CD Panel, Ras, Regional Centres; JCB
- **Ocean-climate:** input to UNFCCC, SBSTA etc; United in Science; Global Climate Statement; Regional Climate Centres; WCRP; GCOS
- **Ocean Monitoring & Data** (inc. GOOS, OOPC, satellite, OceanOps)
- **Ocean Prediction & Services:** maritime safety (SOLAS), coastal (esp. LDCs, SIDs), extreme weather (eg hurricanes), seasonal, DRR

Regional (Marine) Instrument Centres

- **Key role in implementation of the WMO strategy for traceability assurance.**
- **Main functions:**
 - assist Members in calibrating their national standards;
 - participate in, and/or organize, inter-laboratory comparisons;
 - participate, or assist, in the organization of workshops on calibration and maintenance;
 - provide advice on instrument performance;
 - make contribution to the quality of measurements.

WMO Regional Instrument Centres

RA I

[Algiers \(Algeria\)](#)

Gaborone (Botswana)

[Cairo \(Egypt\)](#)

[Nairobi \(Kenya\)](#)

[Casablanca \(Morocco\)](#)

RA II

[Beijing \(China\)*](#)

[Tsukuba \(Japan\)*](#)

RA III

[Buenos Aires \(Argentina\)](#)

RA IV

[Bridgetown \(Barbados\)](#)

RA V

[Melbourne \(Australia\)*](#)

[Manila \(Philippines\)](#)

RA VI

[Toulouse \(France\)](#)

[Hamburg/Oberschleissheim \(Germany\)*](#)

[Bratislava \(Slovakia\)*](#)

[Ljubljana \(Slovenia\)*](#)

[Ankara \(Turkey\)*](#)

WMO/IOC Regional Marine Instrument Centres

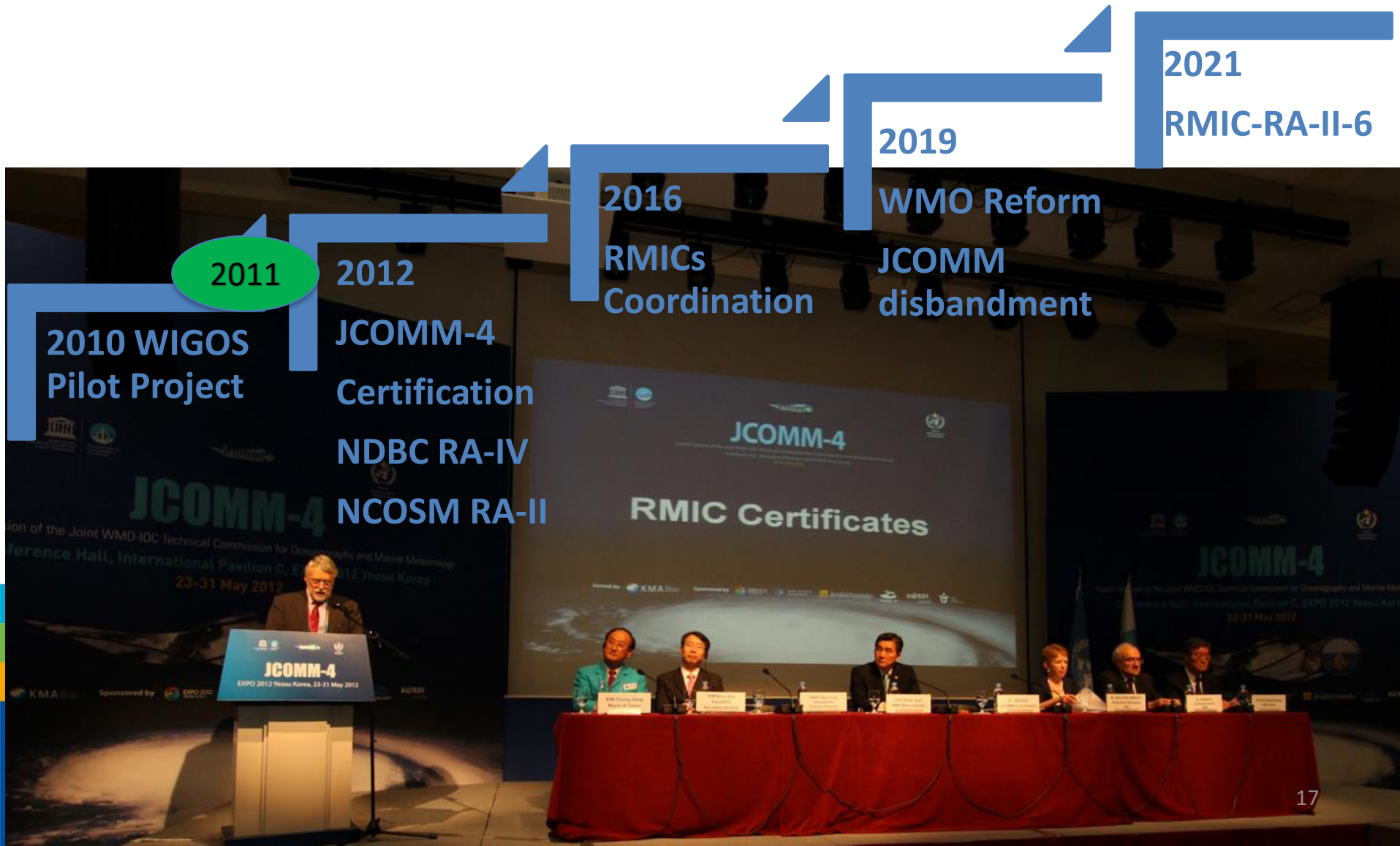
RMIC for Asia-Pacific Region

National Centre of Ocean Standards and Metrology (NCOSM, Tianjin),
Ministry of Natural Resources, China

RMIC for North and Central America

National Data Buoy Center/NOAA,
Mississippi, USA

Regional Marine Instrument Centres





WMO OMM

World Meteorological Organization
Organisation météorologique mondiale

شكرا لكم
Thank you
Gracias
Merci
Спасибо
谢谢