WEATHER CLIMATE WATER
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WMO/GAW activities of relevance to EMEP (update 2019)

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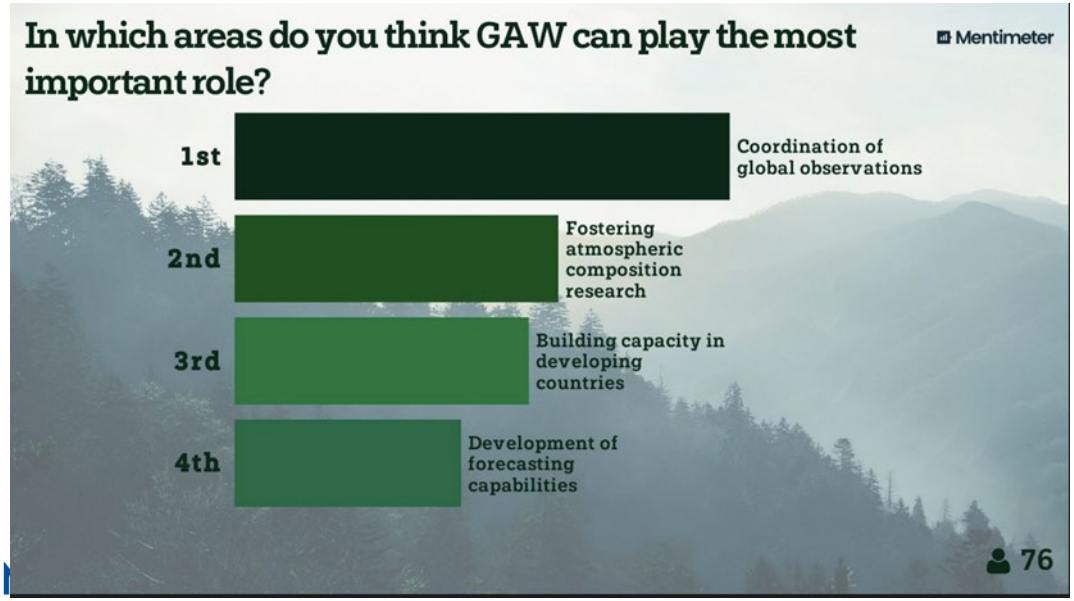
World Meteorological Organization
Organisation météorologique mondiale

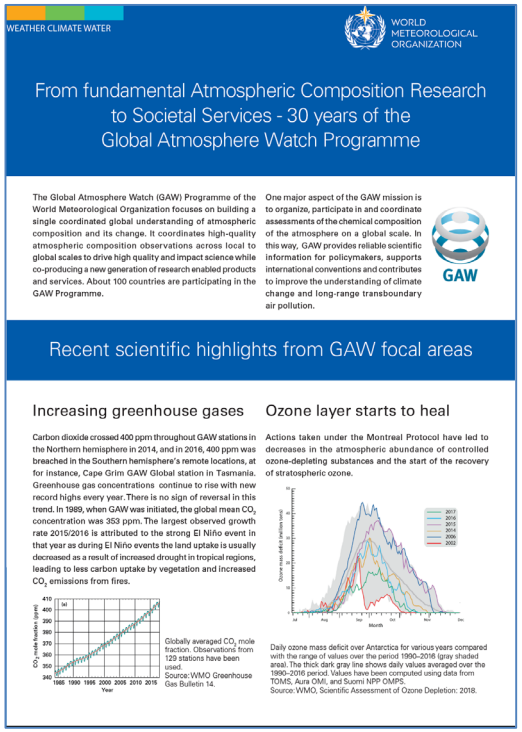
GAW

30th anniversary of GAW

- Union Symposium at the EGU General Assembly, 7-12 April 2019 “From fundamental Atmospheric Composition Research to Societal Services/30 years of the WMO Global Atmosphere Watch Programme” with 6 invited talks

  https://client.cntv.at/egu2019/us5
- Scientific highlights are published
- Photos collected for the production of the phoho album for GAW





Reform of WMO

The eighteenth World Meteorological Congress (Cg-18, Geneva, 3–14 June 2019) adopted a historical reform of the WMO constituent bodies to embrace a more **comprehensive Earth system approach**, with a stronger focus on water resources and the ocean, more coordinated climate activities and a more concerted effort **to translate science into services for society**.

The Congress approved a new WMO strategic plan 2020-2023. **Long-term Goals and Strategic Objectives:**

Goal 1: Better serve societal needs: delivering, authoritative, accessible, user-oriented and fit-for-purpose information and services

Goal 2: Enhance Earth system observations and predictions: Strengthening the technical foundation for the future

Goal 3: Advance targeted research: Leveraging leadership in science to improve understanding of the Earth system for enhanced services

Goal 4: Close the capacity gap on weather, climate, hydrological and related environmental services: Enhancing service delivery capacity of developing countries to ensure availability of essential information and services needed by governments, economic sectors and citizens

Goal 5: Strategic realignment of WMO structure and programmes for effective policy- and decision-making and implementation.

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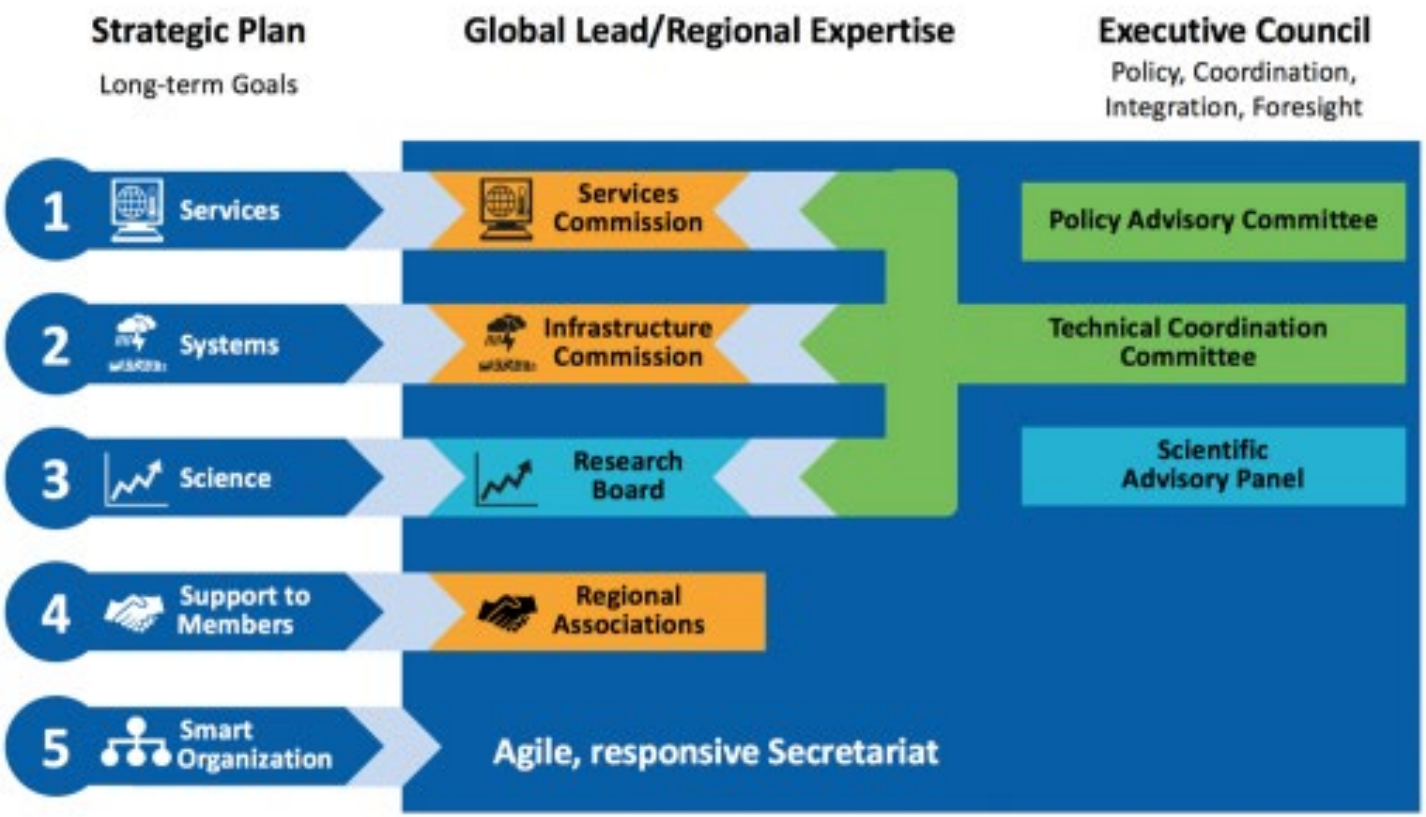
Structure of WMO constituent bodies



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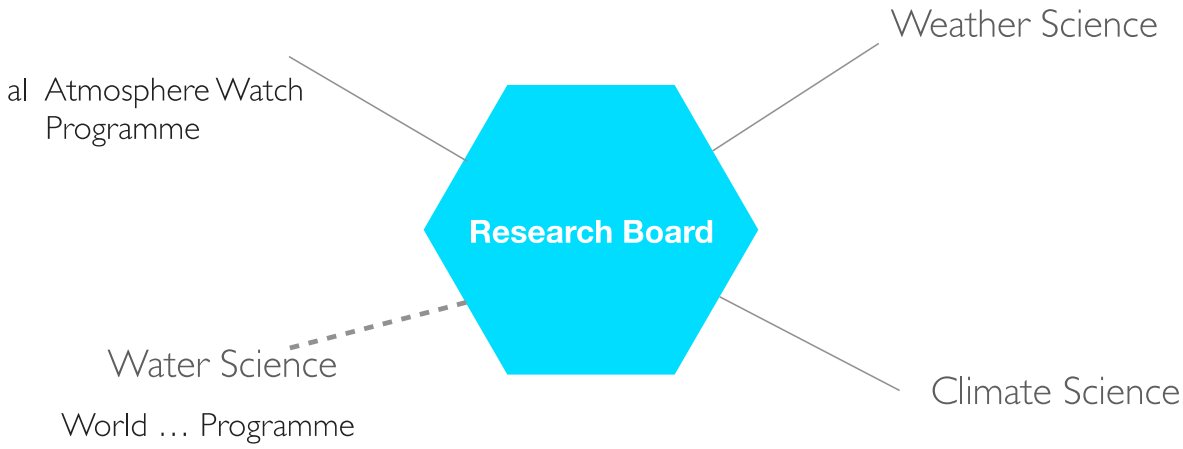
Research Board

1. Advance knowledge of the Earth System (fundamental knowledge development)
2. Advance policy relevant science (where some interaction with TCs happens)
3. Enhance connections between the science and the services through the value chain approach (where most of the interaction with other TCs will happen)



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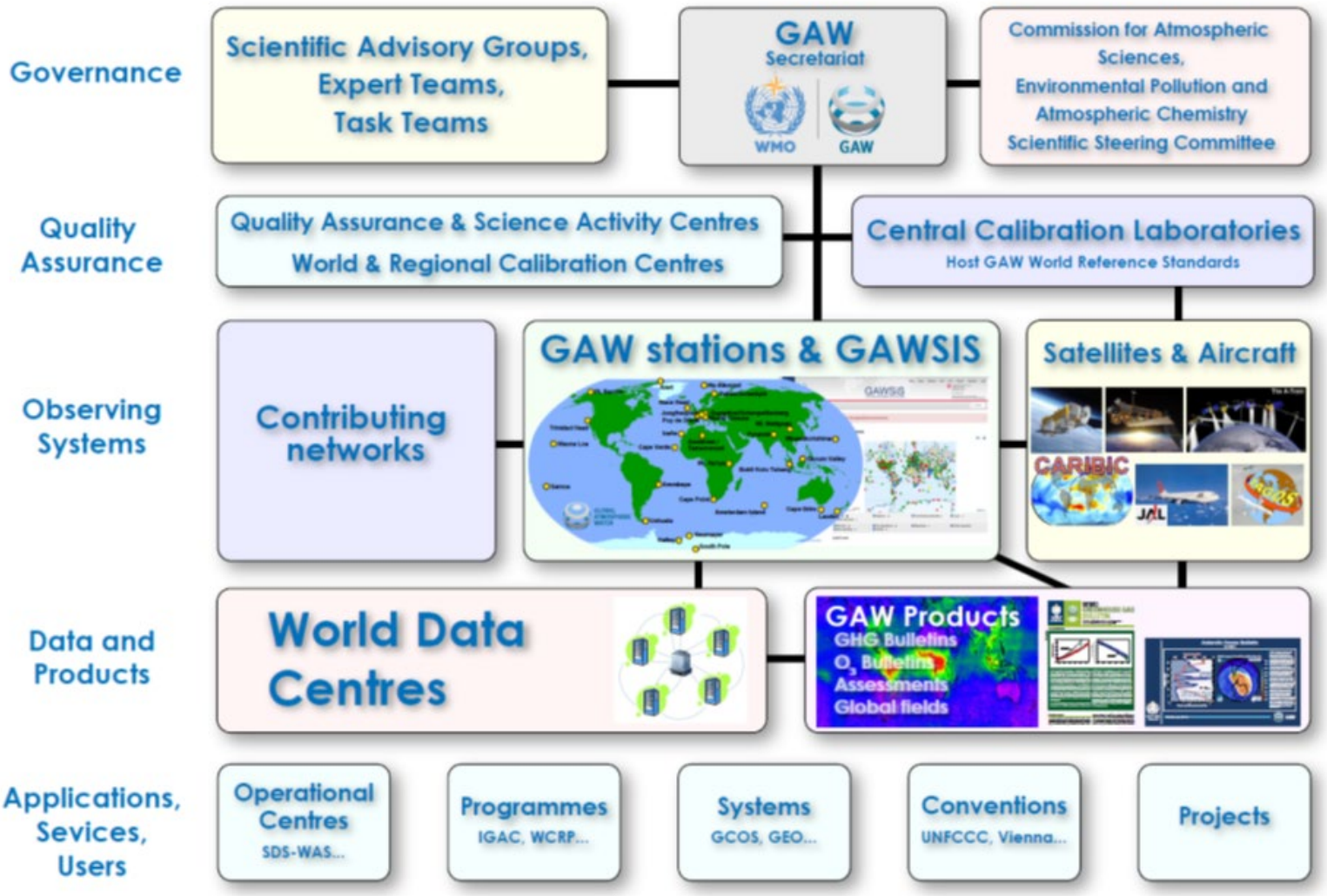
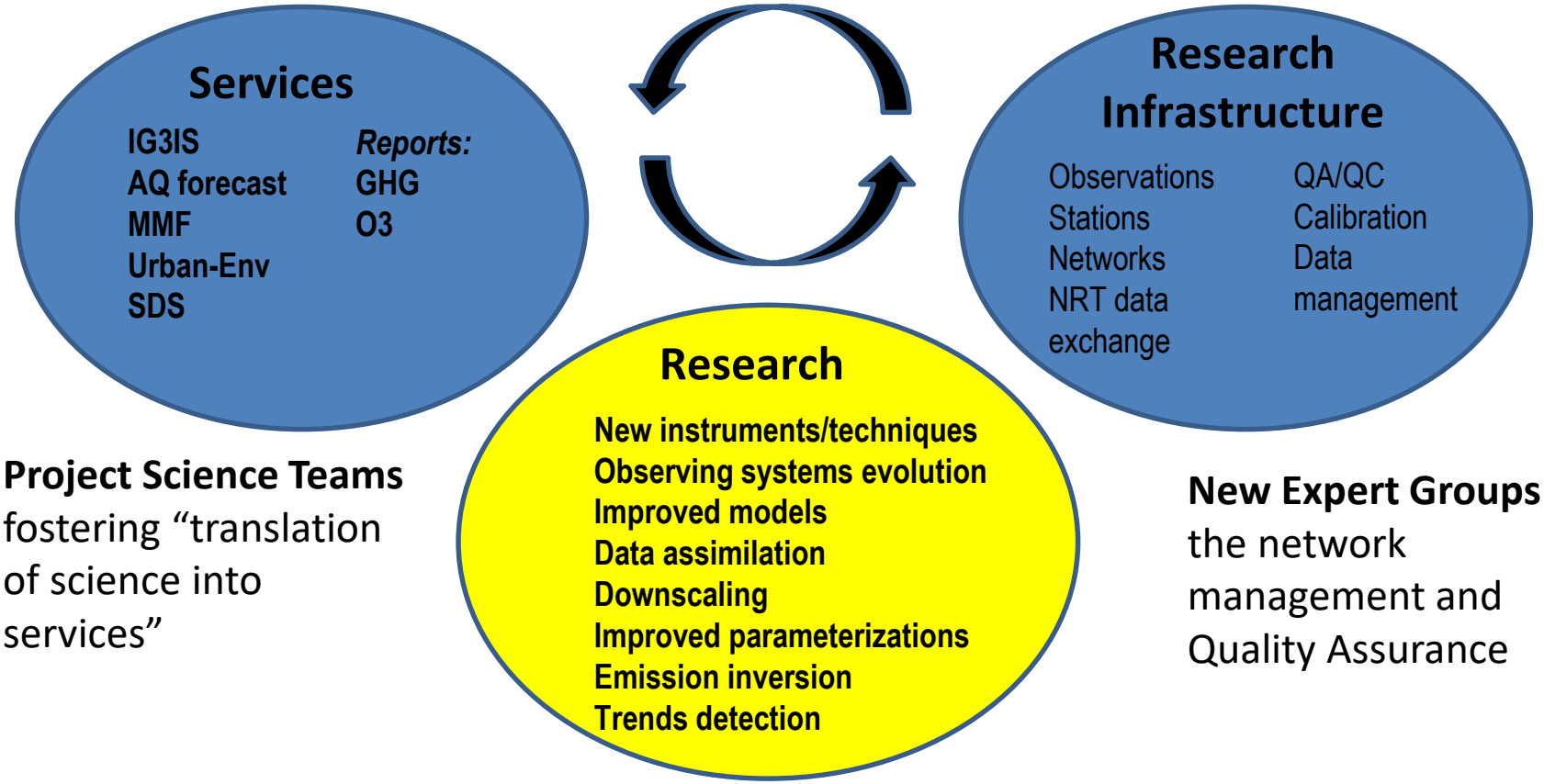
Current organization of GAW



GAW Program Elements: Aligning with new WMO structure



Project Science Teams fostering "translation of science into services"

New Expert Groups on the network management and Quality Assurance

Scientific Advisory Groups more focusing on the scientific aspects

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Cross-cutting thematic projects to develop new services :

- Integrated Global Greenhouse Gas Information System - IG^{3}IS (support of climate services)
- Measurement-model fusion for total atmospheric deposition (support of the ecosystem assessment and food security)
- Global Air Quality Forecasting (support of the health sector)
- Contribution to the integrated urban service

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Updates on the IG³IS activities

- Mario Peiro started as a new associated project officer on 15 February 2019
- Presentation of IG³IS at COP-24 (side event)
- IG³IS was included in the agreement between WMO and Green Climate Fund
- IG³IS was mentioned as a framework to improve estimates of GHG concentrations and fluxes by the 50th session of Subsidiary Body for Scientific and Technological Advice (SBSTA,) and in the 2019 Refinement to the 2006 Guidelines for National Greenhouse Gas Inventories adopted and accepted during the 49th Session of the IPCC in May 2019 (Volume I, Chapter 6)

IG³IS Symposium and User Summit, 13-15 November 2018, Geneva

More than 60 attendees from 24 countries, including scientists, national stakeholders and private sector representatives.

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ig3is.wmo.int

2019 Expert Meeting on MMF-GTAD

Held at WMO, Geneva on 26 and 27 February 2019

Objectives:

- Updated knowledge of stakeholder activities/needs, the state of global measurement databases, the state of MMF-related science including chemical transport modelling activities (global and hemispheric), global reanalysis activities and measurement-model fusion/mapping activities
- A reality check on the suitability of the 3 goals and other key recommendations from the 2017 Workshop
- Updated realistic goals and a path forward for the Global MMF-GTAD Project
- Development of the Project's Implementation Plan
- Development of strategies to obtain the necessary funds to finance the project’s objectives

MMF-GTAD Project: Goals

- ✓ Agreement to establish a formal WMO/GAW MMF-GTAD Project , with initial focus on S, N and O_3.
- ✓ A plan for a three-goal project:

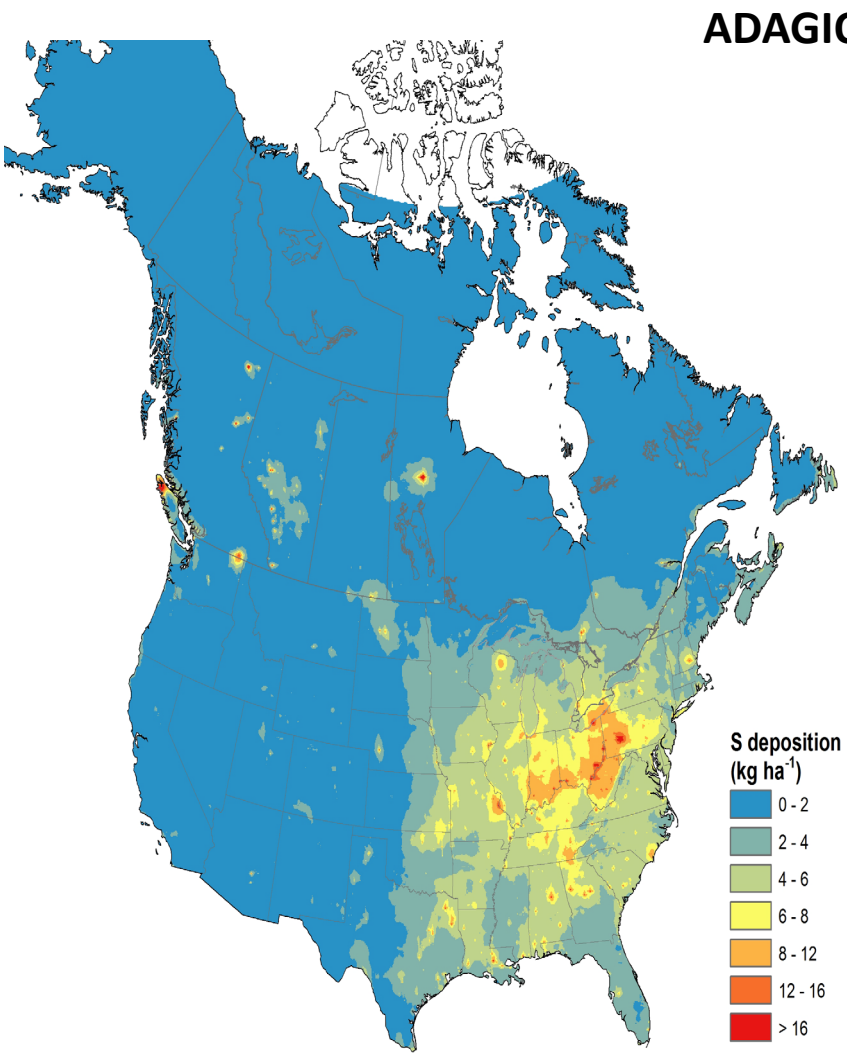
Goal 1a (Short Term) MMF of existing 2010 ensemble global model results with existing data sets (e.g. HTAP).

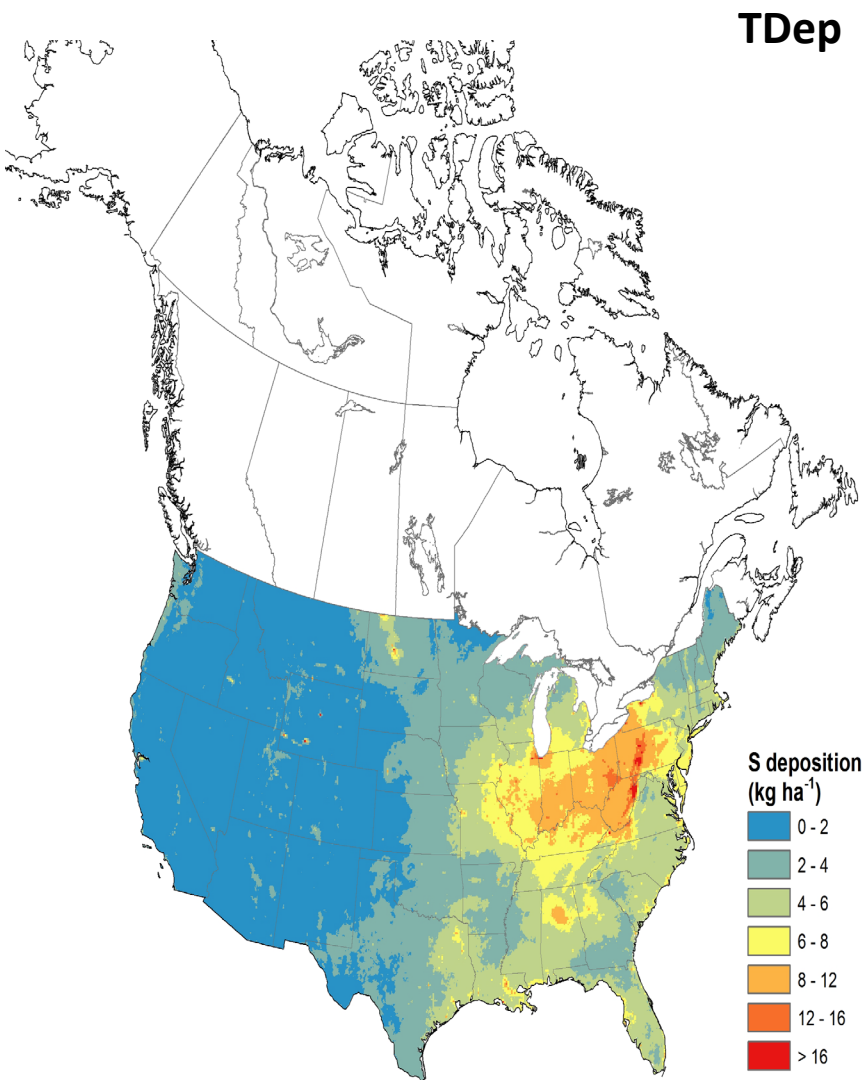
Product: comprehensive data set and model ensemble output files and gridded MMF maps

Goal 1b (Medium Term) "Stitching" together existing and new national/regional/global MMF-TAD maps (AQMEII, TFMM, Asia, Canada, USA, UK, Sweden, Norway) to produce global maps

Goal 2 (Long Term) Ongoing operational/semi-operational re-analysis using data assimilation (ECMWF/Copernicus)

Regional MMF maps: ADAGIO and Tdep, S deposition





Schwede, D., A. S. Cole, R. Vet, G. Lear. Ongoing US-Canada collaborations on nitrogen and sulfur deposition, Environmental Management, June 2019 (antic

SDG 3: Ensure healthy lives and promote well-being for all at all ages

Joint WHO and WMO Health, Environment, and Climate Action Plan

MoU between WMO and WHO was signed in May 2018

Agreed to develop **5 year Joint Workplan on Climate, Health, Environment**, and inform proposals for Integrated Health Services to WMO Congress-18

Objective: Enhance capacity building, technical support, and coordination for WHO and health partners to co-develop, access and use climate, weather, and environmental information.

Health Needs for Data Services, Research, Operational Services span four thematic areas:

- **Climate and Climate Services**
- **Air Pollution**
- **Extreme Weather**
- **Water**

Two geographic focus areas of common interest:

i) **small island developing states**
ii) **urban areas**

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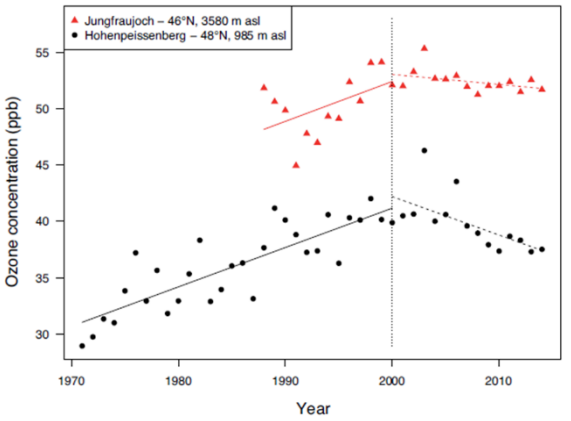
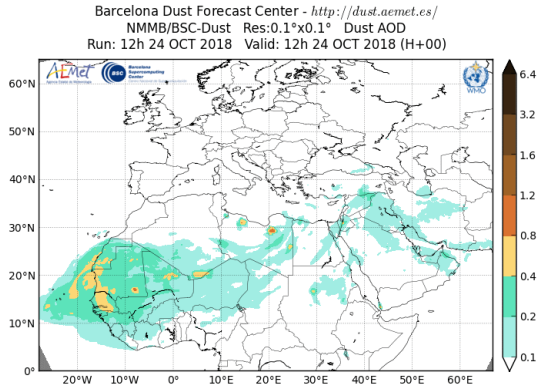
WMO commitments at the First WHO Global Conference on Air Pollution and Health

- providing scientific basis for policy-making and evidence-based monitoring of pollution via enhancing observations and communication, assessments and reports;
- providing tools to reduce risk via forecasts, warning and advisory services (including integrated urban and health services);
- enhance the capacity of the countries to support health sector in close collaboration with WHO





Development of the Global Air Quality Forecasting Services was initiated to support these commitments

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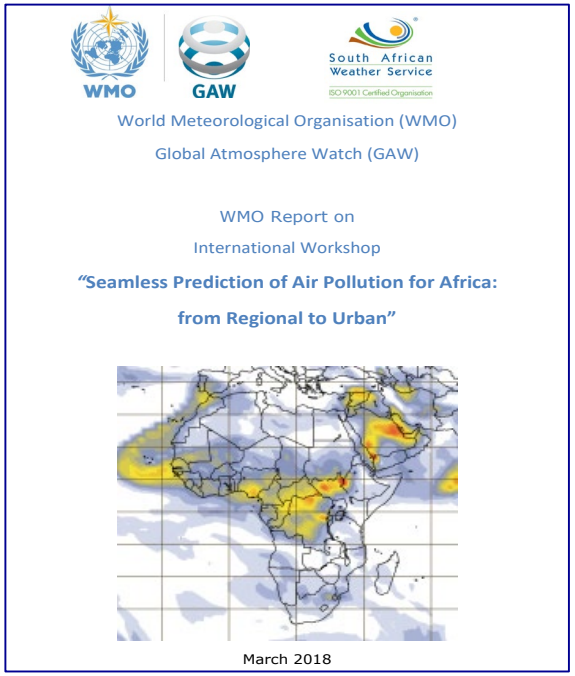
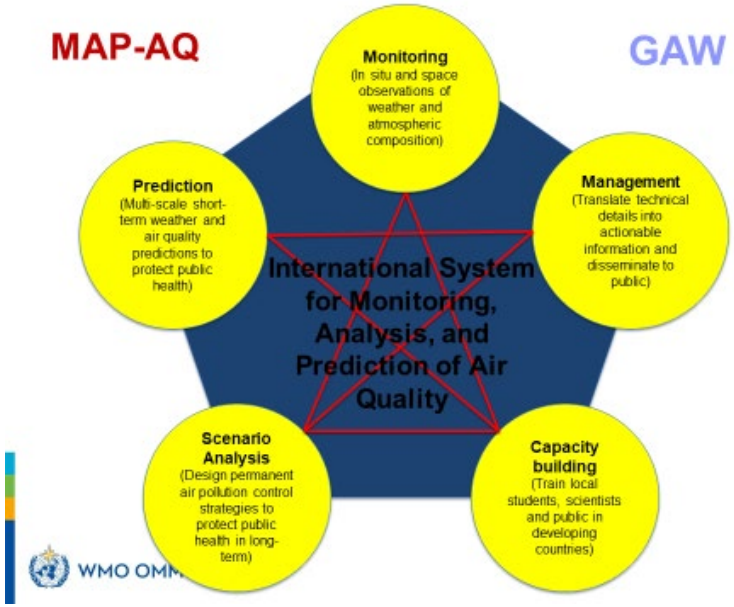
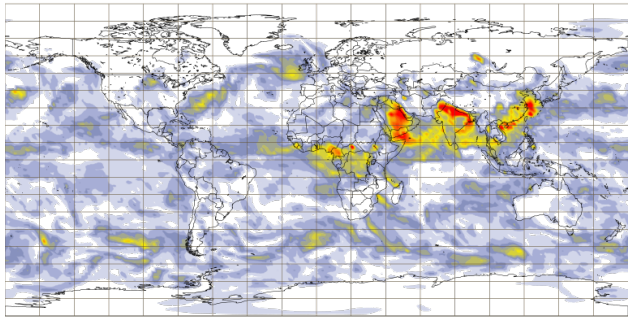
Towards Integrated Air Quality Forecast Systems in Africa

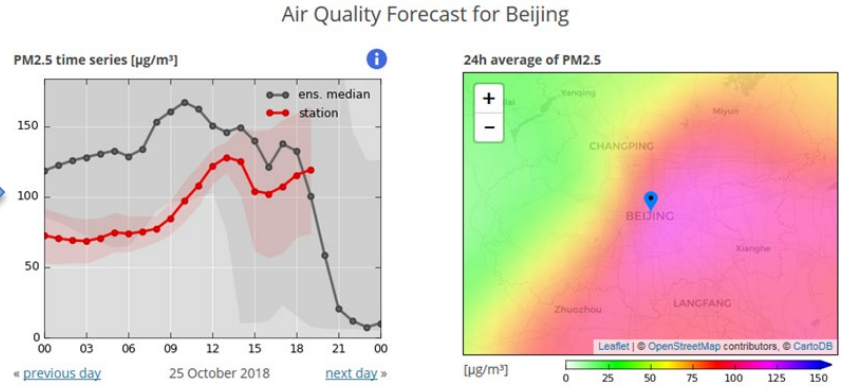




The workshop of the project and related air quality modelling training will take place in October in Nairobi



CAMS global forecast



MAP-AQ project forecast for China cities:
http://www.marcopolo-panda.eu/forecast/

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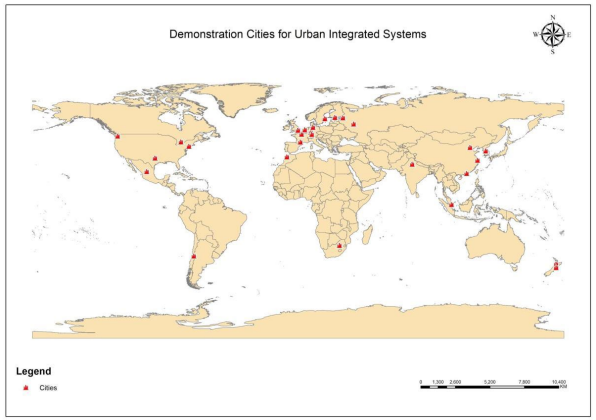
Integrated Urban and Health Services

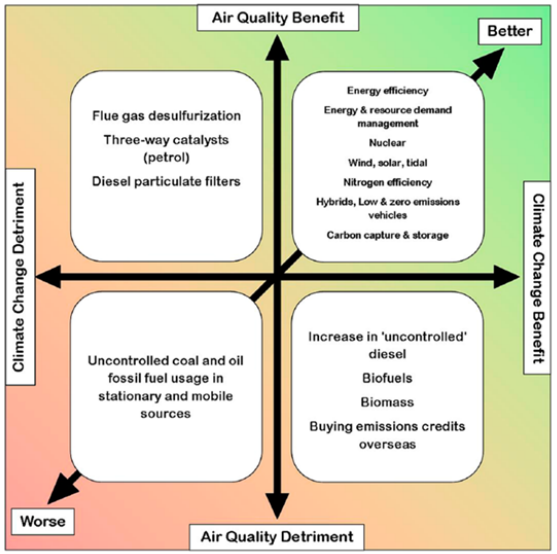
- Cg-18 adopted resolutions on integrated urban and health services that articulate the need for the development of the framework within WMO and with the external community that would allow for development and delivery of these type of services



- Guidance on Integrated Urban Hydrometeorological, Climate and Environment Services, Volume II: Demonstration Cities was finalized

- WMO-WHO 5 year joint plan of work was adopted

- Air Quality and Climate connection was **included** as one of the sidebars in the recent WMO Climate Statement



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Publications and capacity development

- **Second WMO Reactive Gases Bulletin highlights tropospheric ozone**

Main UN account, with 10 million followers also tweeted the ozone pollution report, with a link directly to our press release.

35th GAWTEC session , 7 - 20 October 2018: on reactive gases

36th GAWTEC session (Aerosols), 30 March- 13 April 2019, Schneefernerhaus, Zugspitze, Germany

Thank you!
Merci!

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GLOBAL ATMOSPHERE WATCH