

WMO Regional Association Reform, Priorities and Related Activities in RA II

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WMO OMM

World Meteorological Organization

Organisation météorologique mondiale

Outline

- 1. WMO Regional Association Reform - RA II
- 2. Enhanced Regional Partnership.
- 3. RA II Operating Plan 2021-2024
- 4. State of the Climate in Asia
- 5. First Regional WIGOS Centres
- 6. Regional Centers

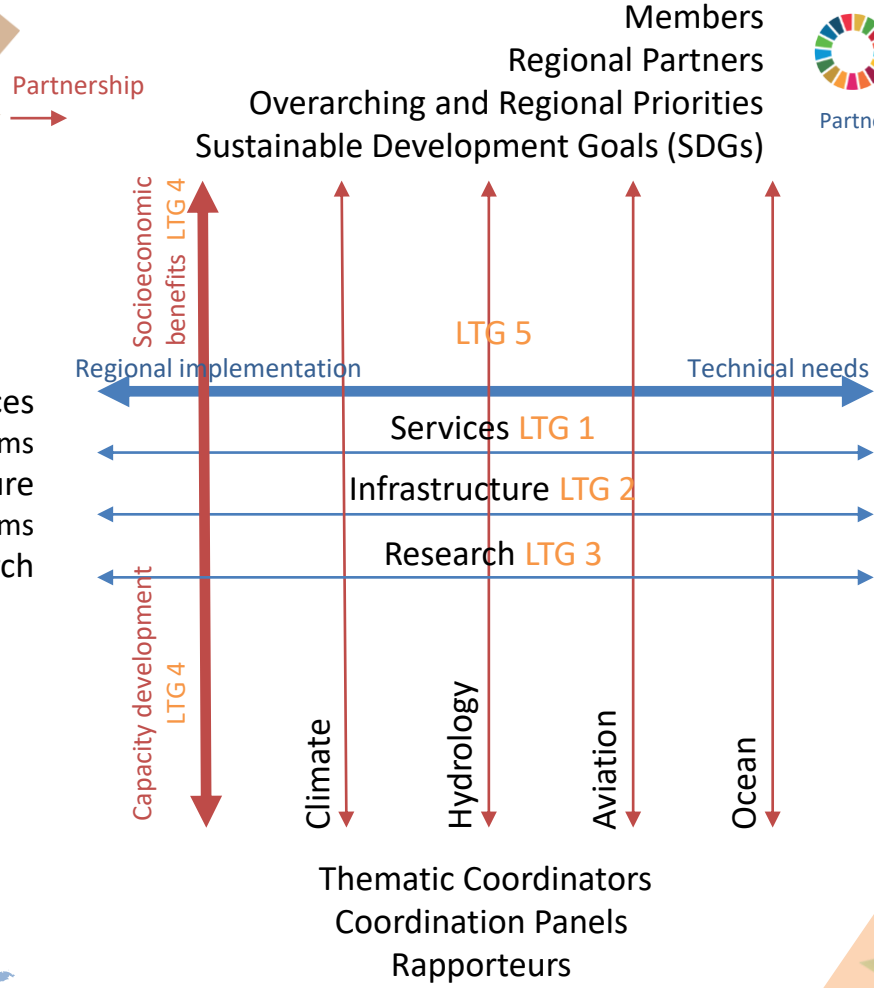
1. WMO Regional Association Reform - RA II

RA II Matrix - Concept



Regional Concept ↓

- Working Group Services
- Expert Teams
- Working Group Infrastructure
- Expert Teams
- Focal Points on Research

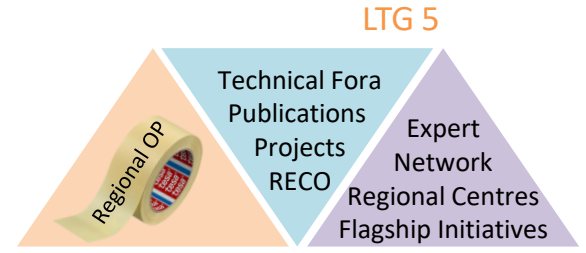
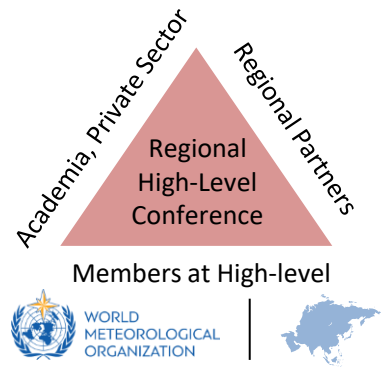


Partnership Strategy



- Congress
Strategic Plan/OP
Executive Council
- Task Force
 - Panels

- Technical Commissions
- Standing Committees
 - Study Groups
 - Coordinators
 - Expert Teams
- Research Board



Working Structure of Regional Association II (Asia)

Management Group (MG)

President

Dr Abdulla Ahmed AL MANDOUS

Vice-president

Prof. Tran Hong THAI

Members

Dr Mrutyunjay MOHAPATRA, Dr Sahar TAJBAKSH MOSALMAN, Mr Naoyuki HASEGAWA, Mr PARK Kwangsuk, Mr ZHUANG Guotai, Dr Sung KIM (Regional Hydrological Adviser)

Task Team on the Regional Concept (TT-RC)

C: Dr Sahar
TAJBAKSH
MOSALMAN
VC: Dr R.
VENKATESAN

Task Team on Review of the Regional Partnership and Sub- regional Cooperation (TT-RP)

C: Dr Mrutyunjay
MOHAPATRA
VC: Dr Ahad
VAZIFEH

WG Infrastructure

C: Mr SATO Yoshiaki
VCs: Ms SHI Lijuan
Dr K.S. HOSALIKAR
Dr Ahad VAZIFEH

Expert Teams (TBD)

- RWC
- WIS
- Seamless GDPFS
- Hydrometry
- Ocean Observations
- WICAP
- RIC
- Radio Frequency
- Satellite

WG Services

C: Mr ZHOU Qingliang
VCs: Dr/Ms Kamaljit RAY
Ms Saviz SEHAT KASHANI
Mr KYODA Masayuki

Expert Teams (TBD)

- DRR
- Climate Services
- Hydrological Services
- Marine Services
- Agriculture Services
- Aviation Services
- Urban Services

CP Hydrology

*Thematic
Coordinator on
Hydrology and
Water Resources*
C: Dr Hyo Seob CHO
Co-C: Dr Sung KIM

Joint Expert Teams (TBD)

- Third Pole
Regional Climate
Centre
- Environmental
Observations and
Services

Regional Focal Points on Research

Ms CHEN Jing (WWRP)
Dr Ashis Kumar MITRA (WCRP)
Dr Mai Van KHIEM (GAW/WWRP)



2. Enhanced Regional Partnership



UNITED NATIONS

الاستقرار
ESCWA



Association of Southeast Asian Nations

INTERNATIONAL



FEDERATION

International Federation of Red Cross and Red Crescent Societies Asia Pacific (IFRC AP)



Cooperation Council for the Arab States of the Gulf (GCC)

ICIMOD

The International Centre for Integrated Mountain Development



Asia-Pacific Space Cooperation Organization



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3. RA II Operating Plan 2021-2024

- **Adopted by RA II-17(II)**
- **be a living document** (to be updated from time to time by RA II WG/CP and approved by RA II Management Group)

- **Considered RA II priorities 2020-2023**
- **Directly related to the Resolutions and Decisions of Cg-18, EC-72 and 73**
 - ✓ **WIGOS**(RWCs, GBON,RBON,...); **WIS2.0**; **S/GDPFS**;...
 - ✓ **Service**(GMAS, Agriculture, Aviation, Marine, Climate, Urban ...)
 - ✓ **Hydrology**
 - ✓ ...

- | • Led by WG-Infrastructure | • Led by WG-Service | • Hydrology-focused | • Joint |
|--|---|---|---|
| <ul style="list-style-type: none"> – Establish RA II RWC – Develop phased GBON implementation plan – Develop regional AMDAR programmes – Improve services of RIC – Improve ocean observations – Improve satellite observations and applications – Implement WIS 2.0 – Accommodate S/GDPFS – Promote long term observing stations – Coordinate on RFC – Address WMO Data Policy and emerging data issues – Capacity Building in Radar Techniques in Southeast Asia - Next Phase | <ul style="list-style-type: none"> – Strengthen Multi-Hazard Early Warning Services: GMAS-A – Promote Impact-based Forecast and Warning Services – Improve Agricultural Meteorological Services – Improve meteorological services for aviation – Strengthen Marine and Coastal Services – Promote Climate Services Implementation – Promote WMO Cataloguing of Hazardous Events (WMO CHE) – Advance Integrated Urban Services – Global Air Quality Forecasting Information System (GAFIS) Asia Pilot | <ul style="list-style-type: none"> – Improvement in hydrological services – Promote cooperation in hydrology and water resources among RA II Members and ensure coordination among the hydrology substructures in RA II – Improve Capabilities on Water Resources Assessment – Improve Capabilities on Water Resources Assessment – Reinforcing Members' capacities in hydrometry and sediment transport | <ul style="list-style-type: none"> – Promote polar and high mountain activities – Improve observations and services for environmental needs, including air quality, and sand and dust storms – Improve drought observations and services – Public-Private Engagement for Smart Meteorological Services in Mega Cities |



RA II Operating Plan 2021-2024

-Improve ocean observations

No.	WMO LTG	Cg/EC Resolution/ Decision	RA II Priorities	Key Result Areas or PROJECTS (terminology to be discussed)	Deliverables	KPIs	Related Activities and Timeline
RA II-17-I-IP-5	LTG-2/ Objective-2.1	R44, R45, R46, R47/ Cg-18, 4.2(16)/ EC-73	4	Improve ocean observations	1. Promote marine meteorological and related oceanographic observational programmes at the regional level	1. Number of Members who complete the questionnaire 2. Number of NFPs of RA II Members trained	1. Questionnaire on Members' capability and needs for ocean observations (2022), based on existing results, if available, with the support of WMO Cross-cutting Coordinator for Ocean 2. Organize training in response to Members' Ocean observation requirements (2023) 3. 6th Marine Instrumentation Workshop for Asia-Pacific Region (2021)

4. State of the Climate in Asia



Key features

1st of its kind for Asia, led by the WMO Regional Association of Asia (WMO RA II).

67 experts from the region and from around the world.

26 international and regional organizations and institutions.

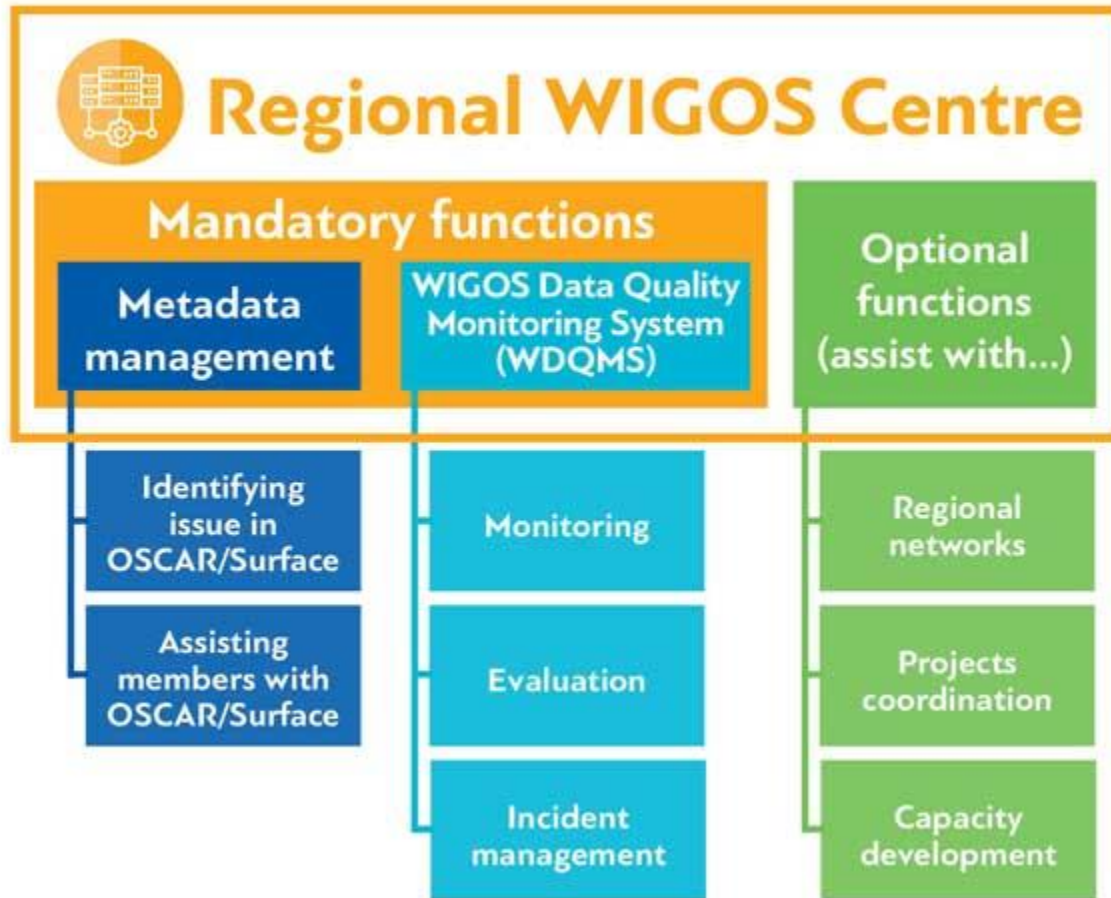
6 United Nations agencies directly involved.

Outline

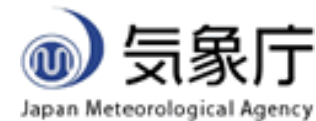
- ✓ Regional state of climate indicators
- ✓ Key climate drivers
- ✓ Extreme events
- ✓ Risks and impacts
- ✓ Climate policy

The report complements the 2020 WMO Annual Statement on Global Climate

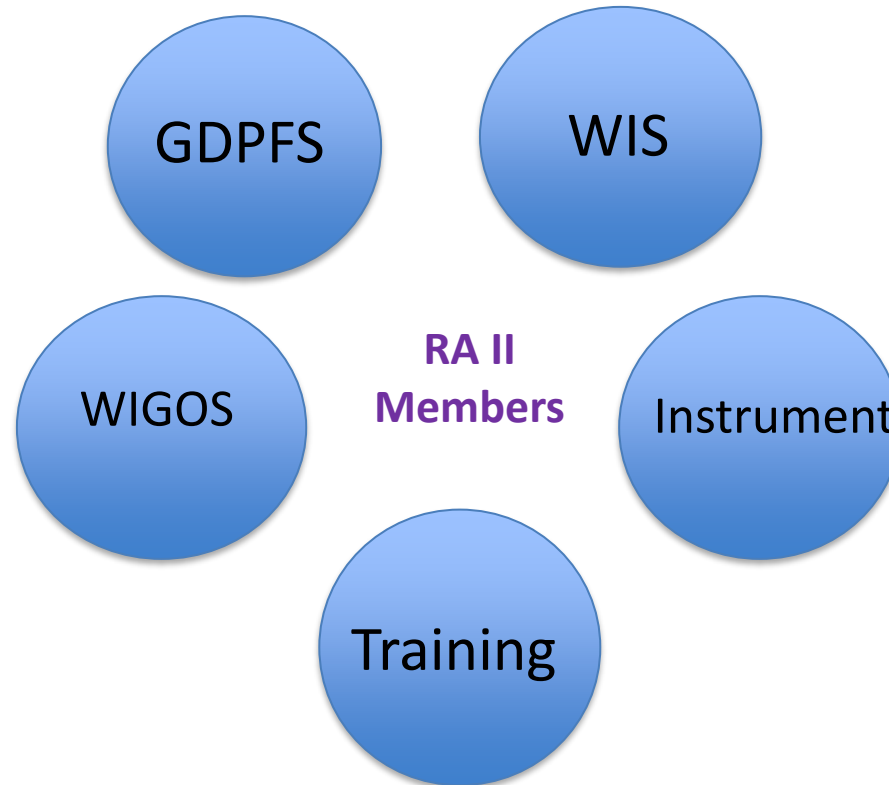
5. First Regional WIGOS Centres



RWCs play a critical role in advancing the implementation of WIGOS within their Region or subregion, providing regional coordination and technical support to Members.



6. Regional Centres



Regional Centres – GDPFS

(Global –RA II)



Legend (The number in parenthesis indicates the number of designated Centres)

- | | | |
|--|--|--|
| ☞ World Meteorological Centre (WMC) (10) 3 | 🌊 RSMC Numerical Ocean Wave Prediction (4) 1 | ☞ RSMC Sand and Duststorm Forecasts (2) 1 |
| △ RSMC* Geographic Specialization (12) 3 | Ⓝ RSMC Nowcasting (3) 2 | 🌋 ICAO designated Volcanic Ash Advisory Centres (9) 1 |
| ⚡ RSMC Global Deterministic NWP** (9) 2 | 🗺 RSMC Regional Severe Weather Forecasting (5) | 🌊 RSMC Marine Meteorological Services (24) 5 |
| ⚙ RSMC Global Ensemble NWP (8) 3 | 🌀 RSMC Tropical Cyclone Forecasting (6) 2 | ◆ Lead Centre for Deterministic NWP Verification (1) |
| ⌋ RSMC Limited-Area Deterministic NWP (6) 3 | ☢ RSMC Nuclear Emergency Response (10) 3 | ● Lead Centre for EPS Verification (1) 1 |
| ⚡ RSMC Limited-Area Ensemble NWP (2) | ☪ RSMC Non-Nuclear Emergency Response (3) | 🌊 Lead Centre for Wave Forecast Verification (1) |
| ☞ World Meteorological Centre (WMC) (10) 3 | ✳ Regional Climate Centre (RCC) (9) 4 | |
| ☆ GPC* for Long-Range Forecasts (14) 4 | ⊕ RCC Network node (11) | |
| ★ GPC for Annual to Decadal Climate Prediction (5) | ✳ Lead Centre for Long-Range Forecast Multi-Model Ensemble (2) | |
| | ☼ Lead Centre for Annual to Decadal Climate Prediction (1) | |

Regional Centres – WIS

WIS - Global Information System Centres/Data services		
GISC	China	<u>GISC Beijing</u>
GISC	India	GISC New Delhi
GISC	Iran, Islamic Republic of	GISC Tehran
GISC	Japan	<u>GISC Tokyo</u>
GISC	Republic of Korea	<u>GISC Seoul</u>
GISC	Russian Federation	<u>GISC Moscow</u>
GISC	Saudi Arabia	GISC Jeddah
S2S	China	S2S Archive Centre
TIGGE	China	TIGGE Archive Centre
Marine	China	CMOC Tianjin



Regional Centres – Instrument

REGIONAL INSTRUMENT CENTRES (RIC)			REGIONAL RADIATION CENTRES	
RIC	China	<u>RIC Beijing</u>	India	Pune
RIC	Japan	<u>RIC Tsukuba</u>	Japan	Tokyo
RMIC	China	RMIC for the Asia Pacific Region (and WMO Regional Association II)	Russian Federation	Saint Petersburg

Regional Centres - Training

Regional Training Centres		
RTC	China	RTC Beijing
RTC	China	RTC Nanjing
RTC	India	RTC New Delhi
RTC	India	RTC Pune - IMD
RTC	India	RTC Pune - NWA
RTC	India	RTC Roorkee
RTC	Iran, Islamic Republic of	RTC Tehran
RTC	Iraq	RTC Baghdad
RTC	Republic of Korea	RTC Seoul
RTC	Qatar	RTC Doha
RTC	Uzbekistan	RTC Tashkent
RTC	Russian Federation	RTC Moscow - ATI
RTC	Russian Federation	RTC Moscow - MGMTEH
RTC	Russian Federation	RTC St Petersburg
VLAB CoE	China	VLab CoE Beijing
VLAB CoE	China	VLab CoE Nanjing
VLAB CoE	Republic of Korea	VLab CoE Gwanghyewon
VLAB CoE	Russian Federation	VLab CoE Moscow
VLAB CoE	Russian Federation	VLab CoE St Petersburg

Regional Training Centre

Virtual Laboratory for Training and Education in Satellite Meteorology Centres of Excellence, established by WMO and CGMS





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Thank you

Спасибо