

Regional Association I (Africa)

Abridged Final Report of the Eighteenth Session

18–19 March 2021 (virtual session)

23–26 August 2021 (virtual session)



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METEOROLOGICAL
ORGANIZATION

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GENERAL SUMMARY OF THE WORK OF THE SESSION

1. The president of Regional Association I (RA I) (Africa), Mr Daouda Konate, opened the eighteenth session of RA I on Thursday, 18 March 2021 at 0800 UTC by videoconference. The president's opening remarks, and those of the Secretary-General, Professor Petteri Taalas, and the President of WMO, Mr Gerhart Adrian, concentrated on the WMO reform currently in progress and urged Members to be fully involved.

The Secretary-General emphasized that phase II of the reform, which focusses on "regional business", with respect to the role and functions of the regional associations, and the related role of the regional offices in supporting the regional associations and their presidents, would result in regional associations that were more efficient and more effective and would provide increased benefits to Members.

The presidents of the Commission for Observation, Infrastructure and Information Systems (INFCOM) and the Commission for Weather, Climate, Water and Related Environmental Services and Applications (SERCOM) made brief statements pertaining to their mandates and provided an update on the progress regarding the establishment of the subsidiary bodies of the technical commissions. They also invited Members to continue to submit the names of their experts for those various subsidiary bodies.

2. The agenda adopted by RA I is provided in [Appendix 1](#).
 3. The session adopted ten resolutions, given in [Appendix 2](#), and twelve decisions, given in [Appendix 3](#).
 4. The list of participants is given in [Appendix 4](#). Out of a total of 290 participants, the ratio of female to male participants was 1:4.
 5. Ms Stella Aura was elected vice-president of RA I.
 6. Subject to the evolution of the COVID-19 pandemic, and with a view to maintaining as much as possible the necessary communications and needed coordination, the association agreed that additional RA I-18 meetings could be held in September 2021 by videoconference in relation to the extraordinary session of the World Meteorological Congress, which will be held in October 2021.
 7. The association decided that its nineteenth session would be held in 2023.
 8. The eighteenth session of Regional Association I closed at 1615 UTC on Friday, 19 March 2021.
-

APPENDIX 1. AGENDA

1. Organization of the session

- 1.1 Opening of the session
- 1.2 Adoption of the agenda
- 1.3 Methods of work for the online session and use of the videoconference platform
- 1.4 Consideration of the report on credentials
- 1.5 Establishment of Nomination Committee

2. Reports

Report by the president of the association (including work of the Management Group, Working Groups, Task Teams and the Regional Office for Africa)

3. Regional Association working structure in line with WMO Governance Reform

- 3.1 WMO Regional Concept – Regional Association I response (establishment of High-Level Task Team on Regional Concept)
- 3.2 Working structure of Regional Association I

4. WMO Strategic and Operational Plan – Regional Implementation Support

- 4.1 Enhanced Services (including GMAS-MHEWS and Hydrology)
- 4.2 Annual Report on the State of Climate in Africa and RCC, RCOF and RHOF activities
- 4.3 Observations and data exchange (including GBON, RBON, WIS and Data Policy)
- 4.4 Research and Innovation
- 4.5 Capacity development

5. Regional and interregional cooperation – key initiatives

- 5.1 WMO engagement with the Regional UN System, Regional Intergovernmental Agencies and Development Partners (AMCOMET, AUC & UNECA, UNDRR and RECS)
- 5.2 Development Partnership Flagship Initiatives: Alliance for Hydromet Development, Systematic Observations Financing Facility (SOFF) and WMO Country Support Initiative
- 5.3 Public-Private Engagement: Action by the Regional Association

6. **WMO Strategic and Operating Plan: Regional Priorities – RA Implementation Plan**
 7. **Election of officers**
 8. **Review of previous resolutions of the association**
 9. **Any other business**
 10. **Date and place of the nineteenth session**
 11. **Closure of the session**
-

APPENDIX 2. RESOLUTIONS ADOPTED BY THE SESSION

RESOLUTIONS ADOPTED IN PART I

Resolution 1 (RA I-18)

Reconstitution of Regional Association I Management Group

REGIONAL ASSOCIATION I (AFRICA),

Recalling:

- (1) [Resolution 6 \(Cg-18\)](#) – WMO Regional Associations, which decided to continue to review the roles and functions of Regional Associations,
- (2) [Resolution 1 \(EC-72\)](#) – Effective coordination between Regional Associations, Technical Commissions and the Research Board,
- (3) [Resolution 2 \(EC-72\)](#) – Activities and working mechanisms of the Regional Associations,
- (4) [Resolution 11 \(Cg-18\)](#) – WMO Reform – next phase,
- (5) Article 18 relating to the composition of the Members of the Association,

Noting:

- (1) That [Resolution 11 \(Cg-18\)](#)– WMO Reform – next phase, calls for the continuation of the WMO Reform during the eighteenth financial period, focusing on a comprehensive review of the WMO regional concept and approaches, aimed at strengthening the role and effectiveness of the Regional Associations, with the support of the WMO Regional Offices,
- (2) The need to establish harmonized structures for the effective functioning of the Regional Association in alignment with the new constituent bodies of the Organization, which take into consideration the unique characteristics and priorities of the African region,

Decides to reconstitute, as follows, the RA I Management Group for the period 2021–2023:

- (1) President of the Regional Association I with revised Terms of Reference (the [annex](#) to this Resolution);
- (2) Vice-president of the Regional Association I with specific Terms of Reference (the [annex](#) to this Resolution);
- (3) Chair and two Vice-Chairs of RA I Committee on Services;
- (4) Chair and two Vice-Chairs of RA I Committee on Infrastructure;
- (5) Chair and two Vice-Chairs of Capacity Development and Research Committee;
- (6) Chair and two Vice-Chairs of the RA I Tropical Cyclone Committee of the South-West Indian Ocean;
- (7) Regional Hydrological Adviser;
- (8) RA I Gender Coordinator;

Further decides to appoint Mr/Ms xx [*to be filled at the session*] as Regional Hydrological Adviser (RHA) to serve as focal point on hydrological matters;

Agrees to adopt the Terms of Reference of the Management Group contained in the [annex](#) of this Resolution;

Directs the Management Group to establish, within three months after the eighteenth session of RA I, their membership structure and work plans for the 2021–2023 period;

Urges Members to ensure to avail the experts for the committees; and

Requests the Secretary-General to make the necessary resources available in order to facilitate the activities and any subsidiary bodies.

Annex to Resolution 1 (RA I-18)

Terms of reference for (1) the reconstituted Management Group, (2) the President and (3) Vice-President of the Regional Association I

1. Terms of Reference for the Management Group

- (1) To plan and coordinate the work of the Regional Association and its subsidiary bodies;
- (2) To discuss matters related to the work of the Regional Association I (Africa), including emerging matters or matters requiring the adoption of actions that could not be postponed until the following regular session of the Association;
- (3) To ensure that priorities of the region are addressed, and to advise on the appropriate arrangements to achieve results according to the revised RA I Strategic Plan for the enhancement of National Meteorological and Hydrological Services in RA I for 2020–2023 and the Regional Operating Plan, in line with WMO Strategic Plan;
- (4) To ratify the nominated Chair and Vice-Chair of the RA I Committees and their subsidiary bodies;
- (5) To collaborate with the WMO Secretariat in the mobilization of resources, to advise on the way to align resources with regional priorities and the implementation of the Operating Plan;
- (6) To address other issues as they arise, including strengthening of strategic partnerships with regional organizations, development agencies and other stakeholders;
- (7) To support development of the Gender Strategy and Implementation Plan for RA I;
- (8) To encourage good practices in enhancing observations and increasing resilience in the management of NMHSs during and after the COVID-19 pandemic.

2. Terms of Reference for the President

The president is expected to concentrate on the governance and working structures of RA I, in line with Regulation 134 of the WMO General Regulations, [Basic Documents No. 1](#) (WMO-No. 15), additionally the RA requests the president to:

- (1) Engage in high-level political advocacy, visibility and partner engagement;
- (2) Represent the interests of the entire RA I members in the Executive Council;
- (3) Chair RA I Sessions and meetings of the Management Group (MG);

- (4) Assume overall responsibility for the formulation and implementation of the 2020–2023 RA I Strategic and Operating Plans;
- (5) In consultation with the MG, support the nomination of experts to the subsidiary bodies of SERCOM, INFCOM and the Research Board;
- (6) Monitor, periodically assess and evaluate the activities of the WMO Regional Centres in RA I in collaboration with the Technical Departments and the Regional Office for Africa;
- (7) Support the Technical Chair of AMCOMET;
- (8) Oversight capacity development efforts and activities in collaboration with the RA I Capacity Development and Research Committee;
- (9) Ensure close collaboration between national and regional meteorological and hydrological services, particularly with respect to common infrastructure and early warnings of extreme weather;
- (10) Promote inter and intraregional cooperation and partnerships.

3. Terms of Reference for the Vice-President

The RA requests the vice-president to be responsible for supervising and monitoring the implementation of activities of the subsidiary bodies of RA I, specifically:

- (1) Assist the president in the management and representation of RA I, including acting as President in the absence of the President;
- (2) Act as Vice-Chair of the RA I Management Group;
- (3) Monitor the Work Plans and activities of the subsidiary bodies of RA I in collaboration with their Chairs;
- (4) Ensure alignment of RA I activities with those of SERCOM and INFCOM;
- (5) Monitor activities relating to the LDCs and SIDS in Africa with the support of RAF;
- (6) Support the RA to participate actively in the comprehensive reform of RA processes and business;
- (7) Coordinate with the RAF Office to ensure that the Country Profile Data Base (CPDB) and the status tracking tool for RA I is updated regularly.

Resolution 2 (RA I-18)

Regional Association I Committee on Services

REGIONAL ASSOCIATION I (AFRICA),

Decides:

- (1) To establish the RA I Committee on Services with the following terms of reference:
 - (a) Contribute to assessing Member capacities and identify prioritized needs for new and improved services and analyse related capabilities among Members in the region to help inform the development of the RA I Implementation Plan (including

weather, climate, hydrological and relevant environmental services), with the purpose of supporting and strengthening the services capability of Members;

- (b) Collaborate with the Standing Committee(s) and study groups of the WMO Services Commission (SERCOM) and establish effective coordination with the relevant subsidiary bodies of RA I;
 - (c) Develop, promote and oversee the implementation of strategies to strengthen the capacity of RA I Members to provide quality and adequate weather, climate and water services tailored for specific users and purposes;
 - (d) Provide guidance to Members for appropriate user-interface actions with the relevant stakeholders, to address priorities and needs for improved services' provision in aviation, agriculture, water, marine and oceanography, disaster risk reduction and public services, health, energy and urban integrated services, in coordination with the related RA I Working Groups to be established by the MG within 3 months;
 - (e) Promote and support strategies for the development and implementation of multi-hazard early warning systems at local, national and regional scale, as appropriate, keeping the exchange of products and experiences as the highest priority;
 - (f) Advise on the designation of Regional Specialized Meteorological Centres (RSMCs) and Regional Climate Centres (RCCs) and report on gaps in their mandatory functions, with recommendations for improving the quality of their services;
 - (g) Promote the services provided through RSMCs, RCCs and RCOF mechanisms including adopting new approaches such as through the objective seasonal Forecast, operational climate monitoring and climate watch systems in support of decision-making;
 - (h) Encourage the development of international financing projects related to weather, climate and water services in the region (e.g. African Development Bank (AfDB), Global Centre on Adaptation (GCA), Intra-ACP (African, Caribbean, Pacific Group of States), etc.);
 - (i) Promote the engagement of the public and private sectors in matters related to the full business chain(s) of weather, water and climate services
- (2) That the Committee shall, taking due account of gender balance where possible, be comprised of:
- (a) Chair;
 - (b) Two Co-Vice-Chairs;
 - (c) Chair of each working group to be established by the MG related to services in RA I;
 - (d) Representative of the RCCs, RSMCs and Regional Training Centres (RTCs);
 - (e) RA I experts participating in the relevant working structures of INFCOM, SERCOM and RB;
 - (f) Minimum of five (5) Permanent Representatives, one each from the Regional Economic groupings;
 - (g) By invitation, representatives of global data, analysis and forecasting centres, members of academic and research institutes and private sector.

- (3) Designated Mr Mnikeli NDABAMBI (South Africa) as Chair of the Committee, and Mr Oumar KONTE (Senegal) and Dr David GIKUNGU (Kenya) as two Co-Vice-Chairs;
 - (4) To prepare and submit to the Management Group, no later than June 2021, a work plan for 2021–2023 that advances the activities of the Committee especially in the development of Multi-Hazard Early Warning Systems (MHEWS) and Regional and National Framework for Climate Services (R/NFCS) activities, as well as National Strategic Plans including proposals for the establishment of special teams and their mandate.
-

Resolution 3 (RA I-18)

Regional Association I Committee on Infrastructure

REGIONAL ASSOCIATION I (AFRICA),

Decides:

- (1) To establish the RA I Committee on Infrastructure with the following terms of reference:
 - (a) Coordinate and oversee, together with the National Meteorological and Hydrological Services (NMHSs) of RA I, the integrated design of their observation and information systems and those of other parties in terms of standardization, interoperability, technology, availability and access to data for identified users following regional and global guidelines;
 - (b) Promote exchange of experiences and oversee the implementation of strategies to strengthen the operational, technical, administrative, and infrastructure capacity of the integrated observing and information Systems and data management practices of RA I Members to access and provide high-quality meteorological, climate, hydrological and environmental services that are cost-effective and adequate for identified needs;
 - (c) Liaise with the Infrastructure Commission (INFCOM), and establish effective coordination with other WMO and RA I subsidiary bodies, and oversee the activities of the Regional WIGOS Centres;
 - (d) Encourage the application and compliance with WMO guidelines on calibration and traceability of instruments, data processing, and observation methods, to improve the certification of the products and services of members, in coordination with RA I Regional Instrument Centres (RICs);
 - (e) Coordinate the implementation of WIGOS/WIS in the region in accordance with the R-WIP-I and the guidance and technical support of WMO Secretariat;
 - (f) Coordinate the establishment and implementation of RBON in close collaboration with the Standing Committee on Earth Observing Systems and Monitoring Networks (SC-ON) and the Joint Expert Team on Earth Observing System Design and Evolution (JET-EOSDE) of INFCOM;
 - (g) Promote the implementation of the regional Aircraft Meteorological DATA Relay (AMDAR) based on the agreement between the International Air Transport Association (IATA) and WMO, and other systems for acquiring meteorological data through aircraft;

- (h) Ensure that the region has sustained access to satellite data both actual and future generations satellite in close collaboration with EUMETSAT and other satellite providers;
 - (i) Promote technical solutions to support the engagement of the private sector in the elements of the value chain connected to integrated information systems and observation of the Earth System;
- (2) That the Committee shall, taking due account of gender balance where possible, be comprised of:
- (a) Chair;
 - (b) Two Co-Vice-Chairs;
 - (c) Chair of each working group related to observation, telecommunications and infrastructure in RA I;
 - (d) Representative of the Regional WIGOS Centres (RWCs);
 - (e) RA I experts participating in the relevant working structures of INFCOM, SERCOM and RB;
 - (f) Representative of the Regional Training Centres (RTCs);
 - (g) Minimum of five (5) Permanent Representatives, one each from the Regional Economic groupings (RECs);
- (3) Designated Mr Omar CHAFKI (Morocco) as chair of the Committee, and Mr Simplicie TAZO TCHINDA (Cameroun) and Dr Pascal WANIHA (Tanzania) as two co-vice-chairs;
- (4) To prepare and submit to the Management Group, no later than June 2021, a work plan for 2021–2023 that advances the activities of the Committee especially in the development and implementation of Regional WIGOS Centres and WIS activities, including proposals for the establishment of special teams and their mandate.

Resolution 4 (RA I-18)

Regional Association I Committee on Capacity Development and Research

REGIONAL ASSOCIATION I (AFRICA),

Recalling:

- (1) [Resolution 1 \(EC-72\)](#) – Effective coordination between Regional Associations, Technical Commissions and the Research Board,
- (2) [Resolution 2 \(EC-72\)](#) – Activities and working mechanisms of the Regional Associations,
- (3) [Resolution 7 \(EC-71\)](#) on establishment of the Capacity Development Panel,
- (4) [Decision 12 \(EC-72\)](#) on Recommendations for Revision of the WMO Capacity Development Strategy,
- (5) [Decision 13 \(EC-72\)](#) on Developing and Sustaining Core Competencies and Expertise,

Having considered:

- (1) The enormous development needs and lack of appropriately skilled human, organizational and institutional capacity in the region,
- (2) The importance of coordinating the WMO research programmes in the region in accordance with the purposes of Organization defined in Article 2(f) of the Convention,

Mindful of the need for knowledge and development of innovation in weather, water and climate in Regional Association I,

Decides:

- (1) To establish the Regional Association I Capacity Development and Research Committee with the following terms of reference:

Capacity Development

Make appropriate recommendations to the RA I Management Group, after consultation with the relevant bodies, for programme development and implementation of capacity development activities in the following spheres:

- (a) Policy Development and Institutional Matters;
- (b) Human Resources Development, Education and Training and status of Regional Training Centres, education and training collaborating institutions, universities and academies of sciences;
- (c) Capacity Development within the framework of WMO Technical Programmes;
- (d) Capacity Development through Resource Mobilization, Partnerships and Development Assistance;
- (e) RA I Capacity Development Strategy; and
- (f) Support the development of National Strategic Plans of NMHSs;

Research

Make appropriate recommendations for programme development and implementation of research activities in the following spheres:

- (a) Enhancement of use of Numerical Weather Prediction (NWP) model outputs and Climate Products from Global Producing Centres (GPCs) and Regional NWP Centres by NMHSs to improve the skill of forecasts at the national level and facilitate the delivery of real time weather observations from NMHSs in Africa to GPCs to improve the quality of global forecasts;
- (b) Assistance with the development of strategies with respect to research communities in RA I to foster joint activities to accelerate scientific progress, promote the 'science-for-service' approach and continuous dialogue between science and operations with a particular focus on the "Climate Research for Development" (CR4D) initiative in Africa;
- (c) Foster close coordination among the physical and social sciences in the region;

- (2) That the Committee shall, taking due account of gender balance where possible, be comprised of:
 - (a) Chair;
 - (b) Two co-vice-chairs;
 - (c) Chair of each working group related to services in RA I;
 - (d) Representative of the RCCs;
 - (e) RA I experts participating in at relevant working structures of INFCOM, SERCOM and RB;
 - (f) Representative of the Regional Training Centres (RTCs);
 - (g) Minimum of five (5) Permanent Representatives, one each from the Regional Economic groupings (RECs);
 - (h) By invitation, members of academic and research institutes and private sector;
 - (3) Designated Dr Ashraf ZAKAY (Egypt) as chair of the Committee, and Mr Katiellou Gaptia LAWAN (Niger) and Dr Kumar Ram DHURMEA (Mauritius) as two co-vice-chairs;
 - (4) To prepare and submit to the Management Group, no later than June 2021, a work plan for 2021–2023 that advances the activities of the Committee.
-

Resolution 5 (RA I-18)

Regional Association I Tropical Cyclone Committee for the South-West Indian Ocean

REGIONAL ASSOCIATION I (AFRICA),

Recalling:

- (1) [Resolution 23 \(Cg-XVI\)](#) – Tropical Cyclone Programme (TCP), and the reports of the sessions of the RA I Tropical Cyclone Committee,
- (2) Resolutions of the General Assembly of the United Nations on the International Strategy for Disaster Reduction (ISDR),
- (3) Decisions of the United Nations Commission on the Sustainable Development of Small Island Developing States (SDSIDS) (Bridgetown, 25 April-6 May 1994),

Considering:

- (1) The need for the countries affected by tropical cyclones to continue to work together and increase action to reduce the loss of human life and damage caused by tropical cyclones and associated violent winds, torrential rainfall, storm surge and coastal inundation, floods and landslides,
- (2) The need for coordination in the implementation of the regional cooperation programme elaborated by the Committee,

- (3) The role and contributions of Meteo-France La Réunion (Regional Specialized Meteorological Centre La Réunion – Tropical Cyclone Centre)

Decides:

- (1) To re-establish the Regional Association I Tropical Cyclone Committee for the South-West Indian Ocean with the following terms of reference:
- (a) Coordinate tropical cyclone forecast and warning operational procedures;
 - (b) Review regularly the Tropical Cyclone Operational Plan (TCOP) for the South-West Indian Ocean and recommend any amendments to the president of RA I for approval;
 - (c) Promote the dissemination of the regional guidance with single voice;
 - (d) Make recommendations on improvements in facilities and procedures to ensure efficient and effective early warning systems including fit-for-purpose impact-based forecast and warning services;
 - (e) Serve as a forum for exchange of best practices, information on new developments in the science and technology of tropical cyclone observation, tracking and forecasting and disaster prevention and preparedness activities appropriate to meteorological and hydrological services in close coordination with SERCOM, INFCOM, the Research Board and other relevant WMO bodies;
 - (f) Engage the appropriate experts in areas such as integrated observing systems, the WMO Information System, hydrology, disaster risk reduction and service delivery, as well as other experts or institutions as appropriate;
 - (g) Facilitate technical development of the Committee by reviewing regularly the Technical Plan;
 - (h) In alignment with the WMO Capacity Development Strategy and the regional TC forecasting competencies, develop a capacity development plan to update the competency and skills of the TC forecasters, and implement it through the provision of appropriate facilities and financial support as necessary;
 - (i) Seek financial and technical support for the activities of the Committee;
 - (j) Consider and recommend working arrangements and coordination mechanisms with international and regional centres, as well as other regional tropical cyclone bodies, in particular with the Regional Association V Tropical Cyclone Committee for the South Pacific and South East Indian Ocean;
 - (k) Coordinate as appropriate with other subsidiary bodies of RA I to promote the development at national level of a coordinated response mechanism and strategy under tropical cyclone circumstances, considering the long-term effects of climate change;
 - (l) Foster cooperative efforts of WMO and other international bodies in those aspects of tropical cyclone disaster preparedness and prevention that can benefit from meteorological and hydrological assistance;
- (2) That the Committee will be comprised of:
- (a) Representatives of the following Members of the RA I: Botswana, Comoros, Eswatini, France, Kenya, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, United Republic of Tanzania, Zimbabwe;

chairpersons (or their representatives) of RA I subsidiary bodies and an expert designated by Australia¹ as ex-officio members;

- (b) A Chair and two Vice-Chairs elected by the Committee;

Requests the Secretary-General:

- (1) To accord very high priority to the convening of the biannual session of the Committee prior to the tropical cyclone season;
- (2) To take the necessary steps to assist the Committee and ensure the provision of appropriate Secretariat support to its activities;
- (3) To ensure the necessary cooperation with the Southern African Development Community (SADC), the African Ministerial Conference on Meteorology (AMCOMET), the United Nations Office for Disaster Risk Reduction (UNDRR), the International Federation of Red Cross and Red Crescent Societies (IFRC) and its regional platform (Plateforme Régionale d'Intervention Océan Indien, PIROI), the Indian Ocean Commission (IOC), the International Civil Aviation Organization (ICAO), the UNESCO-IOC, and such other organizations;
- (4) To promote strong links with the other regional tropical cyclone bodies under the TCP and relevant scientific institutions.

See RA I-18/INF. 3.2 for more information.

Note: This Resolution replaces [Resolution 9 \(RA I-XIV\)](#), Tropical Cyclone Committee for the South-West Indian Ocean, which is no longer in force.

Resolution 6 (RA I-18)

RA I Hydrological and Water Coordination Panel

REGIONAL ASSOCIATION I (AFRICA),

Decides:

- (1) To establish the RA I Hydrological and Water Coordination Panel with the following terms of reference:
 - (a) Assist the president of RA I in ensuring that the hydrological contributions to the Region's priority needs and activities are coordinated with weather and climate within the RA I management structure;
 - (b) Track best practices in the operational activities of the National Hydrological Services in the Region, acting as a mechanism for the exchange of scientific and technical expertise;

¹ To deal with cross boundary matters between the tropical cyclone areas/committees of South-West Indian Ocean and South-East Indian Ocean;

- (c) Develop a Road map for the Region, implement the corresponding Plan of Action and contribute to its implementation at national level, based on Art 9 and Art 18 of the Convention;
 - (d) Undertake, under the guidance of the RA I MG, activities that strengthen hydrological monitoring, service delivery and capacity-building, risk and disaster reduction; hydrological inputs on the priority issues of the Association; and ensure linkage with the relevant meteorological and climatological activities within the Region;
 - (e) Liaise with the Hydrological Coordination Panel (HCP) and establish coordination with other regional associations and committees and expert teams of RA I;
 - (f) Promote regional projects and contribute to WMO initiatives² and report on their progress to the RA I MG;
 - (g) Promote the commitment of the public and private sector in matters related to operational hydrology;
 - (h) Define the agenda of the online RA I Hydrological Advisers Forums, held every three months, to share experiences, maintain the engagement of the hydrological community and promote its linkage with other WMO communities;
 - (i) Identify education, training and research needs and inform the corresponding RA I focal points in order to assure proper interactions with the Capacity Development Panel and the Research Board;
 - (j) Liaise and seek cooperation with appropriate scientific, technical and development organizations such as the International Hydrological Programme of UNESCO, the United Nations Environment Programme (UNEP), the Global Water Partnership regional branches;
 - (k) Submit to the MG, no later than May 2021, a road map (and corresponding work plan) for 2021–2023, including proposals for the establishment of special teams and their mandate taking due account of the activities described in the RA I Operating Plan, as well as an annual progress report;
- (2) That the Hydrological and Water Coordination Panel shall be composed of eleven members: The Regional Hydrological Adviser (RHA), who will also serve as the chair, and ten members appointed by the president of the Association in consultation with the RHA and the Association's MG. Of the ten members, two should be from West Africa, two from North Africa, two from Southern Africa and two from the East Africa and two from Central Africa, to ensure appropriate regional representation. The RHA may invite chairpersons (or their representatives) of other RA I subsidiary bodies to participate in the Panel meetings as needed, subject to the availability of financial resources.

Note: This Resolution replaces [Decision 11 \(RA I-17\) – Working Structure of RA I](#), especially for what concerns the establishment of the Working Group on Hydrology, which is no longer in force.

² For example, data exchange activities based on phase II of the WMO Hydrological Observation System (WHOS), Hydro-SOS, Hydro-Hub, hydrometeorological early warning and forecasting systems and the Flash Flood Guidance System; regional hydrological projections based on seasonal forecasts or regional drought warning systems, in coordination with the regional committees for services and for infrastructure and information management; and other projects that have the potential to promote hydrology actions in the region.

RESOLUTIONS ADOPTED IN PART II

Resolution 7 (RA I-18)

Regional Activities in Aeronautical Meteorology

REGIONAL ASSOCIATION I (AFRICA),

Recalling [Resolution 4 \(RA I-17\)](#) – Improving aeronautical meteorological service provision in Regional Association I, urging Members to apply the outcomes of a 2018 African Conference on Meteorology for Aviation (ACMA-2018) at the national level,

Convinced that the importance of this has been elevated by the impacts of the Coronavirus (COVID-19) pandemic on international civil aviation and aeronautical meteorology sectors,

Noting the continuing importance to aeronautical meteorological service provision of the qualification and competency of aeronautical meteorological personnel, implementation of a properly organized quality management system and, where applicable, cost recovery mechanisms based on the International Civil Aviation Organization (ICAO) four key charging principles of non-discrimination, cost-relatedness, transparency and consultation with users ([ICAO Doc 9082](#)),

Noting also, through 2020 and 2021 updates to the WMO *Technical Regulations, Volume II – Meteorological Service for International Air Navigation* (WMO-No. 49) corresponding with Amendments 79 and 80 to ICAO Annex 3, Meteorological Service for International Air Navigation, that international standards and recommended practices have been improved in respect of the implementation of the ICAO meteorological information exchange model (IWXXM), the upper-air forecasts supplied by the world area forecast centres (WAFCs) and the bilateral and/or multilateral coordination of significant meteorological information (SIGMET) between meteorological watch offices (MWOs),

Mindful that an aviation system block upgrades (ASBU) methodology and basic building blocks (BBB) framework in ICAO's Global Air Navigation Plan (GANP) ([ICAO Doc 9750](#)) are contributing to a revolution in the air transport sector,

Appreciating the development by the former Commission for Aeronautical Meteorology (CAeM), of a long-term plan ([Resolution 28 \(Cg-18\)](#)) – Long-term plan for Aeronautical meteorology, and [AeM SERIES No. 5](#), which provides a framework for aeronautical meteorological service providers to plan a progressive transformation from a conventional "product-centric" approach to a modern "information-centric" approach to services,

Decides to request Members:

- (1) To continue their efforts to comply with WMO and ICAO requirements pertaining to the qualification and competency of aeronautical meteorological personnel and the implementation of a properly organized quality management system for aeronautical meteorological service provision, making effective use of cooperative mechanisms such as twinning, mentoring and sharing of expertise across Members wherever necessary;
- (2) To ensure the effective implementation of the international standards and recommended practices in the 2020 update to *Technical Regulations, Volume II – Meteorological Service for International Air Navigation* (WMO-No. 49), Amendment 79 to ICAO Annex 3, Meteorological Service for International Air Navigation;
- (3) To consider the long-term plan for aeronautical meteorology ([AeM SERIES No. 5](#)) and the ICAO Global Air Navigation Plan ([ICAO Doc 9750](#)) with a view to proactively informing national plans for aeronautical meteorology service delivery;

- (4) To proactively respond to and mitigate to the extent practicable the impacts of the COVID-19 pandemic on aeronautical meteorological service delivery, taking note of preliminary guidelines available on the [WMO Services for Aviation website](#);

Further decides to request the president of the regional association to forward to the president of the Services Commission any feedback received from Members in respect of the foregoing, so that timely support can be provided to the Member(s) concerned.

Resolution 8 (RA I-18)

Regional progress on WMO GMAS framework components

REGIONAL ASSOCIATION I (AFRICA),

Recalling:

- (1) [Resolution 13 \(Cg-18\)](#) – WMO Global Multi-hazard Alert System,
[Resolution 26 \(Cg-18\)](#) – Provision of Impact-based Forecast and Warning Services in an Innovative and Integrated Way,
[Resolution 1 \(RA I-17\)](#) - Enhancing multi-hazard and impact-based services for disaster risk reduction in Regional Association I,
[Resolution 2 \(RA I-17\)](#) - Filling the gap regarding the implementation of the Common Alerting Protocol (CAP) for effective public weather service delivery in Regional Association I,
- (3) Congress endorsement of the implementation of the CAP standard and the need for further guidance and technical assistance to Members for the implementation of the CAP standard ([Cg-17 report](#), paragraphs 3.1.53 and 3.1.59),
- (4) Congress emphasis on the importance of the [WMO Register for alerting authorities](#) in achieving a “single official voice for the dissemination of weather warnings” and request to Members to keep the Register updated and to make reference to their membership in this Register when asserting their authoritative role in issuing national warnings ([Cg-17 report](#), paragraph 3.1.58),

Convinced that the combination of implementing both Impact-based Forecasting and Warning Services (IBFWS) and CAP greatly enhances the capacity of a National Meteorological and Hydrological Service (NMHS) to provide effective warning services that enable early action in anticipation of hazardous situations,

Endorses:

- (1) Implementation of IBFWS by Members through active engagement between NMHSs, Disaster Management and Civil Protection Agencies (DMCPAs) and other national stakeholders;
- (2) The function of the WMO Register of Alerting Authorities in enabling aggregators of warnings to automatically recognize warnings issued by official, authorized sources and the provision of proper credit to these sources in line with the objectives of the Global Multi-hazard Alert System (GMAS);
- (3) The adoption of CAP as an additional dissemination channel, apart from those that may already be in use, for warnings to stakeholders;

Decides to establish an RA I Task Team on the further development of the GMAS framework, composed of Permanent Representatives and Hydrological Advisers (or their alternates) from RA I with the terms of reference detailed in the [annex](#) to this Resolution;

Requests RA I Members to engage in the further development of the GMAS framework, and the RA I President and the RA I Management Group to guide the process;

Urges RA I Members to consider, where feasible, collaboration and support to Members not operating comprehensive early warning systems, to enable them to issue their warnings by adopting relevant approaches, methods and technologies;

Invites Services Commission to progress on the GMAS framework implementation plan development and the incorporation of CAP in WMO Technical Regulations;

Requests the Secretary-General to support Members in their engagement with the technical and procedural components of the GMAS framework.

Annex to Resolution 8 (RA I-18)

Terms of Reference (TORs) Regional Association I Task Team on the further development of the GMAS framework for Africa

1.1 The task team will work according to the following TORs:

- (1) Review successful approaches, methodologies and technologies already implemented by Members in RA I and other regions in order to systematize and prepare RA I background information for the further regional development of the GMAS framework;
- (2) Seek the views of the Members of RA I about their position regarding establishing a regional GMAS framework and draft a position paper/ conclusion on the way forward;
- (3) Submit the position paper to the RA I president and the management group, which will further agree on the approach and accordingly inform/support the work of the Commission for Weather, Climate, Water and Related Environmental Services and Applications (Services Commission) and its GMAS Expert Team, through RA I representatives therein;
- (4) Further derive a draft outline of the regional implementation plan with possible key activities of GMAS Africa in RA I, such as subregional pilots as appropriate.

1.2 Composition

The task team will be composed of a chair, a vice-chair and core members.

Initial membership of the task team (to be decided at the session):

Chair: Mr Adérito ARAMUGE (Mozambique)

Vice-chair: Mr Mansur MATAZU (Nigeria)

Core-member: Mr Premchand GOOLAUP (Mauritius)

Core-member: Mr Aristómenes Amadeu DO NASCIMENTO (Sao Tome and Principe)

Core-member: Mr Hédi AGREBI JAOUADI (Tunisia)

Resolution 9 (RA I-18)

Regional progress on Hydrological and Water Resources Services components

REGIONAL ASSOCIATION I (AFRICA),

Recalling Resolution 24 (Cg-18) – Vision, Strategy and Organizational Arrangements for Hydrology and Water Resources in WMO, and Resolution 25 (Cg-18) – Major Hydrological Initiatives,

Noting that Cg-18 defined the following eight long-term ambitions to address the global water challenge:

- (1) No one is surprised by a flood,
- (2) Everyone is prepared for drought,
- (3) Hydroclimate and meteorological data support the food security agenda,
- (4) High-quality data supports science,
- (5) Science provides a sound basis for operational hydrology,
- (6) We have a thorough knowledge of the water resources of our world,
- (7) Sustainable development is supported by information covering the full hydrological cycle,
- (8) Water quality is known,

Noting also that Cg-18 decided that the following ongoing hydrological activities and systems, in view of their relevance to the fulfilment of the long-term ambitions for the operational hydrological community are fundamental pillars that support the WMO Strategic Plan and its further development:

- (1) Quality management framework – Hydrology,
- (2) Assessment of the performance of flow measurement instruments and techniques,
- (3) The Global Hydrometry Support Facility (HydroHub),
- (4) Hydrological data operations and management,
- (5) The WMO Flood Forecasting Initiative including development of the Global Flash Flood Guidance Strategy for sustainability, the strategic priority to develop a Multi-Hazard Early Warning System (MHEWS), and hydrological contributions to disaster risk management, including flooding (APFM) and drought (IDMP),
- (6) WMO Global Hydrological Status and Outlook System (HydroSOS),
- (7) Capacity-building in hydrology and water resources management,
- (8) The World Water Data Initiative (WWDI),

Noting with satisfaction the recent initiative of the Secretariat to organize quarterly regional online forums between the regional hydrological adviser and the national hydrological advisers, directors of National Hydrological Services and Permanent Representatives of RA I, aimed at providing consistent hydrological regional input and requirements to the technical commissions, Research Board, Hydrological Coordination Panel and the Hydrological Assembly,

Taking note that several hydrological experts from the region have been selected to become members of the Standing Committee on Hydrology,

Decides to entrust the regional hydrological adviser, with the assistance of the RA I Hydrological and Water Coordination Panel and support from the WMO HCP, with the development of a road map for Hydrology in RA I (including the corresponding plan of action, as per the request of EC-71) as a contribution to the Regional Operating Plan (see [Decision 9 \(RA I-18\)](#)). In preparing the road map, due consideration should be given to regional priorities, [Resolution 24 \(Cg-18\)](#) - and [Resolution 25 \(Cg-18\)](#);

Requests the regional hydrological adviser and the president of RA I to hold an information session with respect to the Water and Climate Coalition ([Decision 3 \(EC-72\)](#) - Extraordinary Session of Congress in 2021) and to prepare regional input to the Extraordinary session of Congress in 2021 (Cg-Ext.(2021));

Requests the RA I Hydrological and Water Coordination Panel to develop a regional implementation plan for HydroSOS and to present this plan to Cg-Ext. (2021), conditioned to the availability of the documents on results of the pilot phase of HydroSOS three months in advance of Cg-Ext.(2021);

Further requests the RA I Hydrological and Water Coordination Panel to design, with the assistance of the Secretariat, capacity-building activities in hydrology and water resources of relevance to the less advanced NMHSs of the region;

Further requests the RA I Hydrological and Water Coordination Panel to support the implementation of ongoing projects related to hydrology and water resources (such as the ongoing "Integrating Flood and Drought Management and Early Warning for Climate Change Adaptation in the Volta Basin (VFDM)"), project under consideration by donor such as "*Building Regional Resilience through Strengthened Meteorological, Hydrological and Climate Services in the Indian Ocean Commission*" and the development of new project proposals (such as the proposed "Integrated water resources management and early warning system for climate change resilience in the Lake Chad Basin"), facilitating and promoting countries consultations;

Requests the Secretary-General to continue facilitating the online regional hydrological forums on a regular basis and support the regional and subregional hydrological outlook forums;

Requests the WMO Hydrological Coordination Panel to share its experience in developing the WMO Plan of Action for hydrology, in particular the methodology, methods of consultation and planning approach used, and assist in their adaptation to the requirements of RA I;

Further requests the RA I Hydrological and Water Coordination Panel to coordinate within the RA I management structure the integrated inclusion of hydrology to support the implementation of the WMO Strategic Plan for an Earth system approach to weather, water and climate;

Invites Members that have not already done so, to designate their national hydrological adviser in accordance with General Regulation 5(b) ([Basic Documents No. 1](#) (WMO-No. 15)) or request the assistance of the Secretariat should the procedure be unclear.

Resolution 10 (RA I-18)**Review of previous resolutions of the Association**

REGIONAL ASSOCIATION I (AFRICA),

Noting paragraph 3.7.1 of the General Summary of the *Ninth Session of the Executive Committee Abridged Report with Resolutions* (WMO-No. 67),

Considering:

- (1) That a number of the resolutions adopted before the eighteenth session of Regional Association I (Africa) have been revised and incorporated into the resolutions of the eighteenth session (as per the [annex](#) to the present Resolution),
- (2) That some of the previous resolutions have been incorporated into appropriate WMO publications or have become obsolete,
- (3) That some of the previous resolutions are still to be implemented,

Decides to keep in force the resolutions in the [annex](#) of this resolution.

Note: This Resolution replaces [Resolution 17 \(RA I-17\)](#) - Review of previous resolutions and recommendations of the Association, which is no longer in force.

Annex to Resolution 10 (RA I-18)**List of previous resolutions and recommendations of Regional Association I (Africa) in force at the time of the eighteenth session**

(Reference: World Meteorological Organization, 2019: *Regional Association I (Africa): Abridged Final Report of the Seventeenth Session* (WMO-No. 1231). Geneva.
[Resolution 17 \(RA I-17\)](#) - Review of previous resolutions and recommendations of the Association).

Resolution No.	Resolution Title	Proposed measures		
		It will remain in force	Will be replaced	It will not remain in force
1 (RA I-16)	Implementation of the WMO Strategy for Service Delivery in Regional Association I (Africa)			X
3 (RA I-16)	Tropical Cyclone Operation Plan for the South-West Indian Ocean	X		
4 (RA I-16)	Technical Plan of the Regional Association I Tropical Cyclone Committee for the South-West Indian Ocean	X		
5 (RA I-16)	Implementation of disaster risk reduction activities in Regional Association I (Africa)	X		

Resolution No.	Resolution Title	Proposed measures		
		It will remain in force	Will be replaced	It will not remain in force
6 (RA I-16)	Launching the annual Statement on the Status of the Climate in the African Region		X	
7 (RA I-16)	Implementation of Regional Climate Centres and Networks in Region I (Africa)	X		
8 (RA I-16)	WMO Integrated Global Observing System Implementation Plan for Regional Association I (Africa)	X		
10 (RA I-16)	WMO/AMCOMET Regional Space Programme for Africa	X		
11 (RA I-16)	WMO Information System Implementation Plan for Regional Association I (Africa)	X		
12 (RA I-16)	Implementation of the WMO Strategy for Capacity Development in Regional Association I (Africa)	X		
13 (RA I-16)	Management Group and subsidiary bodies of Regional Association I (Africa)		X	
1 (RA I-17)	Enhancing multi-hazard and impact-based services for disaster risk reduction in Regional Association I	X		
2 (RA I-17)	Filling the gap regarding the implementation of the Common Alerting Protocol for effective public weather service delivery in Regional Association I	X		
3 (RA I-17)	Consolidation of severe weather forecasting and contribution to the enhancement of data processing, forecasting and applications in Regional Association I	X		
4 (RA I-17)	Improving aeronautical meteorological service provision in Regional Association I	X		
5 (RA I-17)	Improving marine meteorology service provision in Regional Association I	X		
6 (RA I-17)	Regional approach for implementation of a Climate Services Information System	X		
7 (RA I-17)	Enhancing the development and application of climate services for adaptation and policy support	X		
8 (RA I-17)	Data rescue for recovering millions of African climate data records archived on obsolete microfiches	X		
9 (RA I-17)	Enhancing provision and exchange of selected climate datasets	X		
10 (RA I-17)	Regional hydrological priorities		X	

Resolution No.	Resolution Title	Proposed measures		
		It will remain in force	Will be replaced	It will not remain in force
11 (RA I-17)	Regional WMO Integrated Global Observing System Implementation Plan 2019–2022	X		
12 (RA I-17)	Regional Basic Synoptic Network and Regional Basic Climatological Network in Region I (Africa)	X		
13 (RA I-17)	Regional Instrument Centres	X		
14 (RA I-17)	Development of the Region I Aircraft Meteorological Data Relay programme under the International Air Transport Association and WMO collaboration	X		
15 (RA I-17)	Space-based observing system	X		
16 (RA I-17)	WMO Information System in RA I (Africa)	X		
17 (RA I-17)	Review of previous resolutions and recommendations of the Association		X	
18 (RA I-17)	Gender equality	X		

APPENDIX 3. DECISIONS ADOPTED BY THE SESSION

DECISIONS ADOPTED IN PART I

Decision 1 (RA I-18)

Methods of work for conducting the session online

Regional Association I (Africa) decides to adopt the methods of work for conducting the first session online.

Decision justification: The present decision is based on [Decision 1 \(EC-72\)](#) – Methods of work for online sessions of the Executive Council, and adapted appropriately for regional associations, as described in [Decision 1 \(RA IV-18\)](#).

Annex to Decision 1 (RA I-18)

Methods of work for conducting online sessions of the Regional Associations

1. Legal provisions

The Convention, General Regulations and the Rules of Procedure for Regional Associations shall continue to apply in full, subject to consideration of any online practice that would be exceptionally required to conduct the online session, as identified in the attached table.

2. Registration

2.1 Representatives of Members represented in regional associations, invited observers and representatives of other WMO Members shall notify the Secretary-General of the names of the persons who will participate in the session following the normal practice in accordance with the General Regulations and Rules of Procedure for Regional Associations.

2.2 Online registration will follow normal practice. Additional information is provided on the RA I-18 website.

2.3 Guidance for identification of participants of online sessions is provided in the attached table.

3. Attendance and quorum

3.1 Attendance by members of the regional association, invited observers, and representatives of WMO Members, shall be through a secured access to the videoconference.

3.2 The number of participants, besides the members of the regional association simultaneously connected, may be limited depending on the capacity of the selected videoconference system.

3.3 Online attendance by principal delegates (or their alternates) shall be checked and registered in each meeting of the session to ensure the quorum of the simple majority of Members with voting rights who are represented in the association.

4. Documents

4.1 Documents for the session will be made available and managed following normal practice through the RA I-18 website.

4.2 To optimize discussions of documents in online sessions, members of the regional association are encouraged to submit comments on documents to plenary@wmo.int prior to the session, preferably one week before the opening of the session.

5. Interventions

5.1 During the online session, principal delegates or their alternates on their behalf shall be provided with the opportunity to take the floor. Individual statements are normally limited to three minutes.

5.2 Any member of the regional association wishing to take the floor should signal their wish to speak or to raise a point of order using the videoconference system, as indicated in RA I-18/INF. 1.

6. Recording of sessions

Pursuant to *Basic Documents No .1* (WMO-No. 15), General Regulation 95(c), audio recordings of plenary meetings shall be made and retained for record-keeping purposes.

7. Decision-making

All decisions of the session should as far as possible be taken by consensus. Should certain matters require substantive debate, the presiding officer may propose the establishment of drafting groups, which will meet separately and report back to the plenary.

For elections of the officers of the regional association, which would normally take place by consensus, if a vote is required, and an e-vote is not possible, the regional association may consider voting by correspondence (in accordance with the provisions of the *Rules of Procedure for Regional Associations* (WMO-No. 1241), Rule 6.15.4).

8. Committees

All business shall be conducted in plenary except for the Nomination Committee or other committees that may be established, which shall meet separately, through an online platform that will be specified. All matters to be discussed by the committees shall be determined by the plenary.

9. Languages

General Regulation 97 shall continue to apply, whereby interventions made shall be interpreted into the other working languages of the session.

Explanatory note on online practices in conducting online sessions of a Constituent Body

Procedure	Physical session	Reference	Online session
<p>Delegates registration and credentials</p>	<p>(a) Prior to a session of a constituent body other than the Executive Council, each Member concerned shall communicate to the Secretary-General the names of the persons composing its delegation to that body, indicating which of these shall be regarded as its principal delegate;</p> <p>(b) Besides this communication, a letter giving these particulars and otherwise conforming with the provisions of the Convention and of these Regulations and signed by, or on behalf of, an appropriate governmental authority of the Member shall be sent to the Secretary-General or handed to the representative at the session and shall be regarded as appropriate credentials for the participation of the individuals named therein in the session;</p> <p>(c) The same procedure shall apply as regards the credentials of observers representing non-Member countries;</p> <p>(d) The credentials of observers representing international organizations shall be signed by the competent authority of the organization concerned.</p>	<p>GR 20</p>	<p>Same</p>
<p>Delegates attendance and identification</p>	<p>In addition, online registration takes place through the Event Registration System.</p> <p>One nameplate per Member regardless of the size of the delegation.</p>		<p>Specific naming convention will be determined by the Secretariat to facilitate the online participation of RA I-18 participants as follows:</p> <p>WMO Members within RA I: Principal Delegate(s), Alternate(s), and Delegate(s)</p>

Procedure	Physical session	Reference	Online session
	<p>The number of participants simultaneously present at the meetings is limited by the capacity of the Salle Obasi. If the meeting room proves to be insufficient to accommodate all Technical Commission (TC) participants, the Secretariat arranges for video broadcasting in another room.</p>		<ul style="list-style-type: none"> • Principal Delegate (Principal): Member name/Principal/Surname • Alternate: Member name/Alternate/Surname • Delegate: Member name/Delegate/ Surname • WMO Members outside RA I: Principal Delegate(s), Alternate(s), and Delegate(s) • Principal Delegate (Principal): Member name/Principal/Surname • Alternate: Member name/Alternate/Surname • Delegate: Member name/Delegate/ Surname <p>President, Vice-Presidents of WMO</p> <ul style="list-style-type: none"> • <i>President of WMO: President/WMO</i> • <i>Vice-Presidents of WMO: 1st VP/ WMO; 2nd VP/WMO; 3rd VP/WMO</i> <p>Presidents of regional associations, presidents and vice-presidents of technical commissions, Regional Hydrological Advisers, and Invited Experts</p> <ul style="list-style-type: none"> • Presidents of regional associations: P/RA I (II, ..., VI) for presidents (acting presidents) • Regional Hydrological Advisers: HA/RA I (II, ..., VI) • Presidents of technical commissions: P/INFCOM, P/SERCOM • Vice-presidents of technical commissions: VP/INFCOM, VP/SERCOM

Procedure	Physical session	Reference	Online session
			<ul style="list-style-type: none"> • Invited Experts: Expert/Surname Representatives of International Organizations/Non-Members <ul style="list-style-type: none"> • Organization name/Surname • Non-Member name/Surname WMO Secretariat <ul style="list-style-type: none"> • Secretariat/Surname The number of participants simultaneously connected to the session may be limited depending on the capacity of the selected videoconference system. Conference Officer (system administrator) will optimize the number of connections and capacity of the system.
Quorum	<p>Presence of Members represented in the regional association with voting rights confirmed through registration and credentials. Quorum of simple majority of RA members is established at the beginning of the session and confirmed at each plenary meeting.</p> <p>If a quorum is not obtained at a meeting, the decisions, other than elections, adopted by a simple majority vote of those members present shall be referred by correspondence to all Members of the Organization belonging to the association. Any such decision shall be considered a decision of the commission only when it has been approved by a simple majority of votes cast for and against within 90 days after it has been sent to the Members.</p>	GR 139 and 140	<p>Online presence shall be confirmed based on active connections. A quorum of the simple majority of the Members with voting rights belonging to the association will be established at the beginning of the session and confirmed at each plenary meeting.</p> <p>In the absence of a quorum, i.e. due to connectivity problems, the meeting could be:</p> <ul style="list-style-type: none"> (i) suspended until connectivity is restored, provided this is within the agreed working hours of the session, (ii) postponed until the following working day, (iii) continued with those present to further adopt the decision by correspondence.

Procedure	Physical session	Reference	Online session
Interventions and submission of written comments	<p>Request the floor by raising the nameplate.</p> <p>Members represented in the regional association (principal delegates or their alternates/advisers/delegates on their behalf) intervene first, followed by observers. Individual statements are normally limited to three minutes.</p> <p>Submit written comments on documents following the intervention to plenary@wmo.int.</p>		<p>Signal wish to speak using the videoconference system, as indicated in RA I-18/INF. 1.</p> <p>Same.</p> <p>In view of the limited time for online sessions and in order to optimize discussions during the meeting, Members are encouraged to submit comments on documents to plenary@wmo.int prior to the session, preferably one week before the start of the session.</p>
Recording of Sessions	<p>Audio recordings of plenary meetings shall be made and retained for record-keeping purposes.</p>	GR 95 I	Same
Conduct of business during sessions (i.e. points of order, motions, amendments)	<p>A point of order may be raised by any delegation or member by means of a specific gesture from the floor. It shall be immediately addressed by the presiding officer in accordance with the regulations.</p>	GR 79	<p>A point of order may be raised by any delegation or member through the chat function, writing "Point of Order". It shall be immediately addressed by the presiding officer in accordance with the regulations.</p>
Decision-making		Rule 6.15.1 and 6.15.4	<p>Same</p> <p>For elections of the officers of the regional association, which would normally take place by consensus, if a vote is required, and e-voting is not possible, the regional association will consider voting by correspondence (in accordance with the provisions of Rule 6.15.4).</p>

Procedure	Physical session	Reference	Online session
Committee (Nomination)	At each session of a constituent body holding elections, a Nomination Committee shall be established to prepare and submit to the body a list of nominees for each office or place for which an election is to be held. Any candidatures proposed and maintained in that committee by a minority shall be included in the list of nominees.	GR 25	Same
Languages	Interventions interpreted into the other working languages of the session. Participants select their desired language from the device at their seat.	GR 97	Same. Participants will be able to select their desired language option from the online menu.

Decision 2 (RA I-18)

Report by the President of the Association

Regional Association I (Africa) decides:

- (1) To note with satisfaction the reports in RA I-18/INF. 2.1(1) and INF. 2.1(2) from the RA I president, chairs of working groups and the WMO Regional and Representative Offices for Africa describing the achievements during the intersessional period;
- (2) To recognize the Members' contribution towards the implementation of the RA I Regional Work Plan 2019–2020;
- (3) To encourage the Secretary-General, regional associations and technical commissions to engage further in regional activities and launch new initiatives that would lead to closer regional cooperation.

Decision justification: RA I-18/INF. 2.1(1) and INF. 2.1(2)

Decision 3 (RA I-18)

RA I High-level Task Team on the Regional Concept

Regional Association I (Africa) decides:

- (1) To establish a High-level Task Team to lead a comprehensive review of the WMO Regional Concept in the context of RA I;
- (2) That the RA I Management Group will serve in the role as the RA I High-level Task Team, respecting, to the extent possible, geographical and gender balance, with the terms of reference as defined in the following [annex](#). The RA I president may invite other permanent representatives to participate in the RA I High-level Task Team on the Regional Concept, as needed.

Decision justification:

- (1) [Resolution 11 \(Cg-18\)](#) – WMO Reform – Next phase;
 - (2) [Resolution 6 \(Cg-18\)](#) – WMO Regional Associations;
 - (3) [Resolution 1 \(EC-72\)](#) – Effective Coordination between Regional Associations, Technical Commissions and the Research Board;
 - (4) [Resolution 2 \(EC-72\)](#) – Activities and Working Mechanisms of the Regional Associations.
-

Annex to Decision 3 (RA I-18)

RA I High-level Task Team on the Regional Concept – Terms of Reference

The Terms of Reference of the RA I High-level Task Team on the Regional Concept are:

- (1) Consider all relevant high-level guidance by the World Meteorological Congress and the Executive Council on how regional work could be conducted;
- (2) Propose the way forward in the implementation of this guidance, bearing in mind the characteristics of the region, and capacity gaps among Member States (e.g. level of development, membership of different technical and political organizations, policy-relevant issues such as: data policy, relations with the private sector, cooperation and collaboration with academic institutions, etc.);
- (3) Submit its recommendations to the RA I president, on further steps towards the implementation of the recommendations, keeping the RA I Member States informed through the Regional Office for Africa;
- (4) Request the RA I president to submit the agreed position of RA I to the EC Task Force for the Comprehensive Review of the WMO Regional Concept and Approaches according to [Resolution 11 \(Cg-18\)](#) – WMO Reform – Next phase, and to keep the association abreast of deliberations of the EC Task Force.

Decision 4 (RA I-18)

Annual Report on the State of the Climate in Africa

Regional Association I (Africa) decides:

- (1) To welcome the publication by WMO of the first edition of the *State of the Climate in Africa in 2019* (WMO-No. 1253), jointly released with the African Union Commission (AUC) and the Economic Commission of Africa (ECA) in October 2020;
- (2) To establish a regular process for the publication of the State of the Climate in Africa, on an annual basis, availing of scientific and technical guidance of the Expert Team on Climate Monitoring and Assessment (ET-CMA) of the Standing Committee on Climate Services (SC-CLI) in the Commission for Weather, Climate, Water and related Environmental Services and Applications (SERCOM). The report will rely on regional expertise and build on existing material from the region, the data provided by Members and global data centres, the analysis performed by Regional Climate Centres (RCC) and Regional Climate Outlook Forums (RCOF) and the approach taken in the annual WMO State of the Global Climate and State of Climate Services reports;
- (3) To ensure that future editions of the Report be led by African institutions and experts and be scientifically based, using best available methodologies and datasets and practices;
- (4) Invites Global centres to work with regional centres and Members and ensure there is transfer of knowledge and skills;
- (5) To entrust the Management Group and the Secretariat to oversee the delivery of this report in a timely manner;
- (6) To partner in this process with the regional entities of the United Nations System organizations and other relevant organizations, and to invite them to collaborate on this report, particularly on high impact events data and input regarding the climate impacts on socio-economic sectors, and on climate adaptation and mitigation policies and practices;

- (7) To request the Secretary-General to facilitate collaboration among Members and involved parties for data collection; analyses and review, and support the publication, launch and communication of the report at the highest political levels;
- (8) Individual member contributions should focus on the analysis of relevant station data, reporting of significant events as well as local impacts of e.g. droughts and floods, especially socio-economical– those aspects to which individual NMHSs have best access to and complemented by other impact data from authoritative sources.

Decision justification:

- (1) [Resolution 20 \(Cg-18\)](#) – WMO Contributions to the Provision of Climate Information and Services in Support of Policy and Decision-making;
- (2) [Resolution 2 \(EC-72\)](#) – Activities and Working Mechanisms of the Regional Associations;
- (3) [State of the Climate in Africa in 2019](#) (WMO-No. 1253).

Decision 5 (RA I-18)

Coordination through Regional Climate Centres (RCC) and Regional Climate Outlook Forums (RCOF) to support improved climate prediction for applications in climate sensitive sectors

Regional Association I (Africa) decides:

- (1) To increase collaboration, coordination and capacity development mechanisms to ensure consistency, harmonization of operations and mutual support of the RCCs in RA I, with the guidance of the RA I Committee on Services;
- (2) To establish coordination and cooperation mechanisms through RCOFs in the region for the implementation of objective seasonal forecasts and tailored products on subregional scales (including country-level service delivery), and to facilitate collection of users' requirements in agriculture and food security, water resources management (including flood and drought status and outlook through the HydroSOS (WMO Global Hydrological Status and Outlook System) initiative, health, energy and disaster risk reduction, as well as scientific discussion forums in order to support progress towards sub-seasonal predictions.

Decision justification:

- (1) [Resolution 20 \(Cg-18\)](#) – WMO Contributions to the Provision of Climate Information and Services in Support of Policy and Decision-making;
 - (2) [Resolution 58 \(Cg-18\)](#) – Future Integrated Seamless Global Data-processing and Forecasting System Collaborative Framework;
 - (3) [Decision 9 \(EC-72\)](#) – Operationalization of Objective Seasonal Forecasts and Tailored Products on Subregional Scales;
 - (4) The WMO [Guidance on Operational Practices for Objective Seasonal Forecasting](#) (WMO-No. 1246).
-

Decision 6 (RA I-18)

Capacity Development in RA I

Regional Association I (Africa) decides:

- (1) To further develop and promote capacity development initiatives of the association by taking into account the key strategic areas of focus identified by the Executive Council Capacity Development Panel (CDP), namely;
 - (a) Policy Development and Institutional Matters;
 - (b) Human Resources Development, Education and Training;
 - (c) Capacity Development through WMO Technical Departments;
 - (d) Capacity Development through Resource Mobilization, Partnerships and Development Assistance;
 - (e) Revision of Capacity Development Strategy in the Region;
- (2) To request its members to submit information on capacity development needs and initiatives in their respective countries to the WMO Secretariat in coordination with the Regional Office, for the purpose of WMO harmonizing support in the Region;
- (3) To request the president of RA I to commission a capacity development strategy for the region, through the Capacity Development and Research Committee of RA I, with the support of the Secretariat and considering the above strategic focus areas.

Decision justification: Taking into consideration [Resolution 7 \(EC-71\)](#) – Capacity Development Panel, [Decision 11 \(EC-72\)](#) - Scaling up Effective Partnerships and Scope, Scale and Progress of WMO Development Projects, [Decision 12 \(EC-72\)](#) - Recommendations for Revision of the WMO Capacity Development Strategy, [Decision 13 \(EC-72\)](#) - Developing and Sustaining Core Competencies and Expertise, as well as (1) the need of more interaction and cooperation among the Regional Training Centres (RTCs) in and outside the region and (2) the need to innovate the provision of education and training activities.

Decision 7 (RA I-18)

WMO development partnership flagship initiatives

Regional Association I (Africa) decides:

- (1) To invite RA I Member States to join the Secretary-General in advocating and mobilizing resources for the creation of the Systematic Observations Financing Facility (SOFF), including by securing highest level African political support and voicing the urgency of SOFF creation in particular through various stakeholders and funding partners;
- (2) To urge RA I Member States to commit to contribute to the further development and prompt implementation of the SOFF; the Country Support Initiative (CSI) and the Country Hydromet Diagnostics (CHD);
- (3) To invite RA I Member States to actively engage with the Secretary-General and RA I president on the implementation of these WMO development partnership initiatives.

Decision justification:

- (1) [Resolution 74 \(Cg-18\)](#) - Closing the capacity gap: scaling up effective partnerships for investments in sustainable and cost-efficient infrastructure and service delivery;
- (2) [Decision 11 \(EC-72\)](#) - Scaling up effective partnerships and scope, scale and progress of WMO development.

Decision 8 (RA I-18)

Public-Private Engagement

Regional Association I (Africa) decides:

- (1) That the RA I president and the management group should give due consideration to the Guidelines for Public-private Engagement in planning relevant regional activities, in particular those for raising mutual awareness and building trust between the sectors, and utilizing the potential of the public-private engagement in bridging the capacity gap;
- (2) To encourage the RA I Member States to use the guidelines in establishing cooperation and collaboration and partnership at a national level across the public, private, academic and civil society sectors that pursue the common goals for public good, and to consider appropriate mechanisms for engagement with the above sectors when designing and implementing existing and future projects and initiatives in RA I;
- (3) To further encourage Members to share cases of good national practices of cooperation and collaboration with the private and academic sectors, and provide those to the Secretariat for inclusion in the Compendium of Good Practices;
- (4) To consider organizing, in partnership with associations of the private sector, a Regional Forum on public-private engagement, linked [to the Open Consultative Platform \(OCP\)](#) to discuss region-specific issues, opportunities and initiatives for leveraging cooperation and collaboration between sectors that enhance socio-economic benefits;
- (5) That the RA I president and Management Group ensure the Secretariat helps NMHSs to put in place regulations for PPE as soon as practicable. Furthermore, to increase awareness of donors of the cost borne by NMHSs on data measurement and collection as well as the minimum public services required.

Decision Justification:

- (1) [Resolution 11 \(EC-72\)](#) – Guidelines for Public-private Engagement (edition 2020);
- (2) [Resolution 33 \(EC-70\)](#) – Public-private engagement;
- (3) [Resolution 79 \(Cg-18\)](#) – Open Consultative Platform “Partnership and Innovation for the Next Generation of Weather and Climate Intelligence”;
- (4) [Resolution 80 \(Cg-18\)](#) – Geneva Declaration – 2019: Building Community for Weather, Climate and Water Actions.

There have been several PPE activities in RA I aimed at raising awareness of the Members and identifying challenge and opportunities through better partnerships with private sector. Among

those activities were the presentation to the RA I Management Group in June 2020 through which the following proposals have been made:

- (1) Form a community of NMHS 'activists' for PPE – start small and grow;
- (2) Identify 'quick wins' areas where PPE can enhance the capacity of the NMHS; a proposed area is to enhance the IT capabilities of the NMHS:
 - (a) Private sector (and academia) can help RA I NMHSs to significantly improve their IT service delivery options;
 - (b) Such partnerships will help with the development of web and mobile apps and the use of API technology;
 - (c) This will improve significantly the visibility and appreciation of the services provided by the NMHSs;
- (3) Apply 'People First' principle to develop means for reaching remote and vulnerable communities – private companies (including telecoms) and NGOs should be the right partners;
- (4) Apply PPE in development projects – pilots needed to demonstrate the added value.

It has been recognized that the RA I needed further efforts to raise awareness of the potential benefits of the PPE, and also the potential risks, to build trust between the sectors and work better together for the benefits of the society. Realizing that this was a paradigm change that needed a substantial cultural change, it was proposed to organize a regional mechanism (e.g. conference or forum), to inform Members on PPE and discuss issues of primary importance for the future of the NMHS, such as:

- (a) PPE business models – how to build scalable models for various national scenarios;
- (b) Long-term vision for NMHS and for the enterprise as a whole;
- (c) Legal frameworks enabling PPE;
- (d) Data policy implementation;
- (e) Sustainability of national systems – how the PPE could help;
- (f) Human resources development;
- (g) Resolving critical deficiencies within a clear time frame.

Such a regional mechanism will help RA I Members to adapt to the changing landscape of the weather and climate enterprise at global, regional and national levels.

The PPE Office supported the Hydromet Africa event in October 2020 providing presentations on the PPE policy of the Organization, including the Geneva Declaration 2019 and other related policy and guidance being developed; presentation on the need for national legal frameworks to define clearly the roles and responsibilities of the NMHS and other stakeholders, as well as, to enable effective PPE at national level.

In addition, PPE Office provided assistance to individual RA I Members on the development of legal frameworks and other PPE-related issues.

Note: The WMO [Guidelines for Public-Private Engagement](#) (WMO-No. 1258) has been published and is available for download from the WMO library.

Decision 9 (RA I-18)

WMO Strategic and Operating Plan: Regional Priorities-RA Implementation Plan

Regional Association I (Africa)

Having considered:

- (1) That the [Decision 10 \(RA I-17\)](#) - Priorities for WMO Strategic and Operating Plans and the WMO Constituent Body Reform, largely remains valid, and that these were considered and re-affirmed by the RA I Management Group on 10–12 June 2020,
- (2) Resolution 18 (RA I-17) that requests RA I Management Group to undertake steps to implement the gender-related objectives and activities as well as the WMO Gender Action Plan at the regional and national levels,
- (3) That since RA I-17, new issues have emerged, most notably the impact of the COVID-19 pandemic and the requirement for Members States to comply with the Minamata Convention on the banning of the transportation and use of mercury which came into force on 31 December 2020,
- (4) The deliberations of the Technical Commissions (SERCOM and INFORM), the Research Board, the Hydromet Alliance (HA) and the development of the Systematic Observations Financing Facility (SOFF),
- (5) That the WMO Reform has also raised the importance of research and innovation, gender equality and harmonization of the activities of the working bodies of the Regional Associations and Technical Commissions,

Noting that these priorities are in line with the WMO Strategic Plan 2020–2023 endorsed by the Eighteenth Session of the World Meteorological Congress (Cg-18),

Decides to endorse the following priorities to be implemented in RA I for the period 2021–2023:

- (1) Enhancement of RA I surface-based meteorological and hydrological observational network (Regional Basic Observing Network – RBON), and the capabilities of the National Meteorological and Hydrological Services (NMHSs), Global Information System Centres (GISCs), Regional WIGOS Centres (RWCs), Regional Climate Centres (RCCs) and Regional Instrument Calibration Centres (RICs) to observe, monitor and enhance the exchange of data and products using the WMO Integrated Global Observing System/ WMO Information System (WIGOS/WIS) platforms and attendant telecommunication facilities;
- (2) Collaboration with the WMO Joint Expert Team on Aircraft-Based Observing Systems (JET-ABO), the WMO-IATA Collaborative AMDAR Programme (WICAP) Governing Board, the International Air Transport Association (IATA), regional airlines and national civil aviation authorities on the establishment of programs to deliver aircraft-based observations (ABO) and the global Aircraft Meteorological Data Relay (AMDAR) data on the WMO Global Telecommunication System (GTS);
- (3) Establishment of Multi-Hazard Early Warning systems at national and regional levels through the launch and operationalization of the regional component of the Global Multi-Hazard Alert System (GMAS) in all five subregions;
- (4) Improvement of the capacity of Members to strengthen the production of, delivery to, and access of tailor-made products and services by their clients across all sectors, with specific attention to improving services in aviation and marine sectors for cost recovery purposes;

- (5) Strengthening partnerships with regional organizations including the United Nations Economic Commission for Africa (UNECA), the Agency for Aerial Navigation Safety in Africa and Madagascar (ASECNA), development partners and the private sector through concrete initiatives and activities;
- (6) Strengthening partnerships between NMHSs and the Academia in the area of research, capacity development and innovation with a particular focus on the linkages with the Climate Research for Development (CR4D) and the academia and the African Academy of Sciences;
- (7) Capacitating Members to prepare for the products from the METEOSAT Third Generation Satellite (MTG) under the umbrella of the African Ministerial Conference on Meteorology (AMCOMET) and in partnership with the African Union Commission (AUC) and EUMETSAT through increasing support to the Africa Meteorological Satellite Applications Facility (AMSAF) and enhancing facilities for polar orbiting satellite data reception;
- (8) Strengthen the linkage between the meteorological, hydrological and oceanographic communities in designing of networks, use of common infrastructure, data sharing, common alert protocols and production of early warnings;
- (9) Meteorological and hydrological communities are invited to working closer together in developing major hydrological initiatives such as the Global Hydrometry Support Facility (HydroHub), the WMO Flood Forecasting Initiative including development of the Global Flash Flood Guidance Strategy for sustainability, the strategic priority to develop a Multi-Hazard Early Warning System (MHEWS), and hydrological contributions to disaster risk management, including flooding (APFM) and drought (IDMP), and the WMO Global Hydrological Status and Outlook System (HydroSOS);

Tasks the RA I Management Group to meet before the seventy-third session of the Executive Council (EC-73) in June 2021 to adopt the 2021–2023 RA I Work Plan and submit it to the Secretary-General;

Requests:

- (1) Members, Regional Centres and Technical bodies, with the support of Regional Office and overall Secretariat to ensure experts are available and targets are met during the intersession;
- (2) The president of Regional Association I and the Secretariat to begin consultations with Members on priorities for the Region for the period 2023–2027;
- (3) The Secretary-General to take on board these decisions and recommendations and provide the necessary support and adequate resources.

Decision justification: [Resolution 6 \(Cg-18\)](#) - WMO Regional Associations, in its annex reformulates the mandate of the Regional Associations, emphasizing: (i) the need to identify regional priorities that contribute to the WMO Strategic and Operational Plan; and, (ii) that the work structure of the Regional Association is such that it can respond to the regional priorities identified.

DECISIONS ADOPTED IN PART II**Decision 10 (RA I-18)****WMO World Weather Information Service platform****Regional Association I (Africa):**

Noting the current status of participation in the WWIS initiative as summarized below:

- (1) From November 2020 to 10 February 2021, the number of Members providing forecast information on WWIS in RA I is 24 out of 57 members,
- (2) 16 out of the 24 Members that participate in WWIS are providing forecasts for 25 to 30 days per month. The others are providing data at a lower frequency than recommended,
- (3) 13 out of the 24 Members are providing forecasts for at least 10 cities. Others are providing for a smaller number of cities, which members are encouraged to increase,
- (4) 13 of the participating Members provide forecasts within forecast ranges of 5 days or more. All the others are providing forecasts for a lower number of days than recommended,

Decides to strongly encourage Members to provide official city forecasts for display on the WMO World Weather Information Service (WWIS) platform and to ensure that city forecasts are provided for at least 10 cities (where possible), in a five-day or longer forecast range, daily, without breaks.

Decision justification:

- (1) The WMO WWIS website presents official weather observations, weather forecasts and climatological information for selected cities supplied by NMHSs. WWIS enables NMHSs to increase the reach of the official forecasts that they produce. The following are the recommended levels of participation of Members in the WMO WWIS initiative:
 - (a) Members to participate in WWIS and provide city forecast information every day (to view the WWIS website click [here](#));
 - (b) Members to submit forecasts for at least 10 cities. It is noted that some small Island states may not be able to meet this condition.
 - (2) Through [Resolution 5 \(Cg-17\)](#) – Public Weather Services Programme, Congress requested commissions to provide further guidance to Members in enhancing their city forecasts with longer lead times, higher spatial and temporal resolutions, and additional weather elements.
 - (3) To assist in Member participation and visibility on WWIS, the European Centre for Medium Range Weather Forecasting (ECMWF) has offered technical support in which it provides easy access to city forecast data for 10 cities, for any Member in need of such data.
 - (4) To view the status of participation of your country in the WMO WWIS initiative, please click [here](#).
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Decision 11 (RA I-18)**Regional Basic Observing Network (RBON) Design****Regional Association I (Africa) decides:**

- (1) To initiate the foundation of the Regional Basic Observing Network (RBON) by designating all selected observing stations from the Regional Basic Synoptic (RBSN) and Regional Basic Climatological Network (RBCN), as RBON stations, noting that the Global Basic Observing Network (GBON) stations will also form the core of RBON;
- (2) To request the Committee on Infrastructure to undertake the following activities in support of the implementation of the RBON in the region:
 - (a) Defining prioritization of application areas addressed in the region, and definition of regional observational user requirements to be met by RBON;
 - (b) Undertaking the initial RBON design that complements the GBON design, and defining specific criteria for the selection of RBON stations, in consideration of regional needs, priorities, and process to be defined by the Commission for Observation, Infrastructures and Information Systems (INFCOM);
 - (c) Defining the role of the Regional WMO Integrated Global Observing System (WIGOS) Centre(s) in the region, with regards to the tools necessary for the design of RBON;
 - (d) Developing the roadmap for the RBON implementation, in compliance with the RBON related regulations specified in the *Manual on the WMO Integrated Global Observing System* (WMO-No. 1160), including section 3.2.3 RBON and Appendix 2.1 Observing Network Design Principles;
- (3) To further request the Committee on Infrastructure to consider the interest members in initiating a RBON pilot activity on regional data exchange of certain types of observations, with an initial focus on radar observations and hydrological observations;
- (4) To request Members to make sure that all RBON stations are properly registered in OSCAR/Surface according to the *Manual on the WMO Integrated Global Observing System* (WMO-No. 1160);
- (5) To request the Committee on Infrastructure to work closely with the Standing Committee on Earth Observing Systems and Monitoring Networks (SC-ON), and the Joint Expert Team on Earth Observing System Design and Evolution (JET-EOSDE) of the INFCOM on the implementation of RBON in the region;
- (6) To request the Secretary-General to provide the necessary technical assistance and Secretariat support for the implementation of RBON in the region, and to facilitate the merging of RBSN and RBCN networks into RBON;
- (7) To request the Secretary-General to provide support in capacity development of Members in the maintenance of RBON;
- (8) To invite regional partner organizations and programmes to participate in relevant implementation activities;
- (9) To invite the INFCOM to undertake the development of the process for the design of RBON, including relevant regulatory and guidance material, in consultation with the regional association.

Decision justification: The *Manual on the WMO Integrated Global Observing Systems* (WMO-No. 1160).

Decision 12 (RA I-18)

Research priorities in Regional Association I

Regional Association I (Africa) decides:

- (1) To promote convergence and integration of the regional activities supporting the WMO sponsored and co-sponsored research programmes (the World Climate Research Programme (WCRP), the World Weather Research Programme (WWRP), the Global Atmosphere Watch Programme (GAW)) and the Global Framework for Climate Services (GFCS) within the National Meteorological and Hydrological Services (NMHSs) and with the broader academic and research community;
- (2) To define the initial research priorities for the region as listed in the [annex](#) to this decision;
- (3) To appoint an RA I focal point on research to represent RA I on the Research Board and to ensure coordination on the research priorities of RA I with the Research Board;
- (4) To engage with the Research Board to contribute to the execution of the WMO research programmes according to the priorities established for the region and focusing on the transformation of scientific knowledge to operations and services;
- (5) To develop a road map, coordinated by the RA I focal point to refine research priorities and to address them with a strong involvement of WMO sponsored and co-sponsored research programmes, universities, research centres and scientific partner organizations;
- (6) To enhance efforts to obtain funding for research and build partnerships with research institutions in the region with the assistance of WMO.

Decision justification:

[Resolution 6 \(Cg-18\)](#) – WMO Regional Associations,

[Resolution 8 \(Cg-18\)](#) – Research Board,

[Resolution 1 \(EC-72\)](#) – Effective Coordination Between Regional Associations, Technical Commissions and the Research Board.

Annex to Decision 12 (RA I-18)

Research priorities in Regional Association I

WMO Long-term Goals	Regional Priority Programme Areas	Regional Priority Activities
<p>Goal 3: Advance targeted research: Leveraging leadership in science to improve understanding of the Earth system for enhanced services</p>	<p>Research Programme and Co-sponsored Programmes (WWRP, WCRP, GAW, Regional Research Entities, Public and Private Sector, Foundations, etc.)</p>	<p><u>Synoptic, Mesoscale and Tropical Weather Prediction</u></p> <ul style="list-style-type: none"> Multi-hazard impacts and frequency/intensity of synoptic and mesoscale systems and tropical cyclones, lake weather (for instance Lake Victoria, etc.), taking into account subseasonal variability at a changing climate. <p><u>Climate Change</u></p> <ul style="list-style-type: none"> Increased understanding of climate extremes, compound events and climate change-related issues including impacts on agriculture, food security, health, wildfires, energy, water, etc. in particular related to regional risk and attribution; Tropical cyclones, monsoons, MJO, hydrological extremes, heat waves; Climate variability over different time and space scales, in particular in the near- to medium-term (subseasonal to decadal); Regional sea level rise and wide range of direct and indirect impacts. <p><u>Hydrology</u></p> <ul style="list-style-type: none"> Coastal and inland flooding improve Quantitative Precipitation Estimation (QPE) and Quantitative Precipitation Forecasting (QPF), drought hydrology modelling, particularly at the level of shared infographic networks allowing early warning for prevention and control, management of extreme events (floods/drought). <p><u>Marine</u></p> <ul style="list-style-type: none"> Development of high-resolution probabilistic coastal inundation modelling guidance and products. <p><u>Atmospheric composition</u></p> <ul style="list-style-type: none"> Greenhouse gases and their sources and sinks; reactive gases, aerosols and stratospheric ozone variability and trends; Air pollution, its source and transport and deposition (including sand and dust storms and biomass burning) and its impacts on health, biodiversity, and food security; Research in support of integrated urban and health services; Atmospheric composition (including extreme event forecasting and warning systems).

APPENDIX 4. LIST OF PARTICIPANTS

1. Officers of the session

Daouda KONATE	President of RA I
Aura STELLA	Vice-president of RA I

2. WMO Members within RA

Algeria

Mohammed BOURAHLA	Delegate
Djaouida NEGGACHE	Delegate
Salah SAHABI ABED	Delegate

Benin

Joseph BESSOU P	Principal Delegate
Inès OYEDE	Delegate

Botswana

Chandapiwa SEBEELA	Principal Delegate
Radithupa RADITHUPA	Alternate
Tapologo KEPALETSWE	Delegate
Sacrasta NCHENGWA	Delegate
Janet SELATO	Delegate
Omolemo SELAT	Delegate

Burkina Faso

Joël ZOUNGRANA	Principal Delegate
Guillaume NAKOULMA	Alternate
Amedee BAGA	Delegate

Cabo Verde

Maria da Cruz SOARES	Principal Delegate
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Cameroon

Simplice TCHINDA TAZO	Principal Delegate
Christelle Ariele NGOM	Delegate

Côte d'Ivoire

Daouda KONATE	Principal Delegate
Firmin YA	Delegate

Egypt

Hesham TAHOUN	Principal Delegate
Abdelghafar ADAM	Alternate
Mohamed TAWFIK	Alternate
Yasser ABDEL-GWAD	Delegate
Walid AHMED	Delegate
Abdalla Abdelrahman BALIGH	Delegate
Abdelhamid ELAWADI	Delegate
Mohamed Husain KORANY	Delegate
Amr MAHMOUD	Delegate
Emad Eldin MAHMOUD	Delegate
Samira REFAAT	Delegate
Mahmoud SHAHEEN	Delegate

Ethiopia

Fetene TESHOME	Principal Delegate
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Gambia

Lamin Mai TOURAY Principal Delegate

Guinea

Mamadou Lamine BAH Principal Delegate

Kenya

Aura STELLA (Ms) Principal Delegate
 David GIKUNGU Alternate
 Bernard CHANZU Delegate
 Mary KILAVI (Ms) Delegate
 Nicholas MAINGI Delegate
 Peter MASIKA Delegate
 Daniel MOGUSU Delegate
 Charles MUGAH Delegate
 Onesmus RUIRIE Delegate

Lesotho

Motoho MASEATILE Delegate
 Retsepile NEKO Delegate

Libya

Ashour SASSI Principal Delegate
 Mohamed ELBSHENI Delegate
 Nureddin SAWAN Delegate
 Hani SHTEWI Delegate

Madagascar

Nirivololona RAHOLIJAO Principal Delegate
 Tatiana ARIVELO Delegate
 Stephason KOTOMANGAZAFY Delegate
 Voahanginirina Anne Marie Pierrette Delegate
 RAMIANDRISOA

Mali

Djibrilla A MAIGA Principal Delegate
 Fatoumata SANGHO DIABATE Delegate
 Mamadou Adama DIALLO Delegate
 Adama KONATE Delegate
 Henri KONATE Delegate
 Mamadou SAMAKE Delegate
 Daouda TRAORE Delegate

Mauritania

Mohamed CHEIKH MOHAMD EL MAMY Principal Delegate

Mauritius

Renganaden VIRASAMI Principal Delegate
 Kumar Ram DHURMEA Delegate

Morocco

Omar CHAFKI Principal Delegate
 Brahim ELMESSAOUDI Alternate
 Said ELKHATRI Delegate
 Karam ESSAOUINI Delegate

Niger

Gaptia Iawan KATIELLOU	Principal Delegate
Traoré ABDOULKARIM	Alternate
Ibrahim Housseini MOHAMED	Delegate
Mouhaimini MOUSSA	Delegate

Nigeria

Mansur Bako MATAZU	Principal Delegate
Oluwaseun Wilfred IDOWU	Alternate
Mosunmola IDUMU	Delegate
Mailadi Yusuf MISAU	Delegate

Rwanda

Aimable GAHIGI	Principal Delegate
Fidele MANIRAGUHA	Delegate
Mathieu MUGUNGA MBATI	Delegate
Alphonsine MUSANGANIRE	Delegate
Didace MUSONI	Delegate

Senegal

OUSMANE NDIAYE	Principal Delegate
Sadibou BA	Alternate
Hamidou KONATE	Delegate
Oumar KONTE	Delegate

Seychelles

Chantale BIJOUX	Delegate
Nelson LALANDE	Delegate

South Africa

Ishaam ABADER	Principal Delegate
Mnikeli NDABAMBI	Alternate
Mary-Jane BOPAPE	Delegate
Portia BUTHELEZI	Delegate
Gaborekwe KHAMBULE	Delegate
Tracey LABAN	Delegate
Samantha LINNERTS	Delegate
Zoleka MANONA	Delegate
Francis MOSETLHO	Delegate
Jonas MPHEPYA	Delegate
Musariri MUSARIRI	Delegate
Ezekiel SEBEGO	Delegate
Bafentse SENGANE	Delegate
Kenosi SETLHAKO	Delegate
Lee-Ann SIMPSON	Delegate

Spain

Jose Pablo ORTIZ DE GALISTEO MARIN	Principal Delegate
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Sudan

Hanan RABBAH	Principal Delegate
Faiz ABDALLA	Delegate
Mohamed MOHAMED ZAIN	Delegate
Mohamedahmed SABAHELKHEIR	Delegate

Togo

Latifou ISSAOU	Principal Delegate
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Tunisia

Hedi AGREBI JAOUADI	Principal Delegate
Farhat AOUNALLAH	Delegate
Hatem BACCOUR	Delegate
Fadhel GRAMI	Delegate
Ahmed HMAM	Delegate
Abderrahman OUASLI	Delegate
Abderrahman WASLI	Delegate

United Kingdom of Great Britain and Northern Ireland

Nyree PINDER	Principal Delegate
Karen MCCOURT	Alternate
Sarah JACKSON (Ms)	Delegate

United Republic of Tanzania

Agnes KIJAZI	Principal Delegate
Wilbert MURUKE	Alternate
Ladislaus CHANGA	Delegate
Hamza KABELWA	Delegate
George LUGOMELA	Delegate
Mohammed NGWALI	Delegate
Robert K. M. SUNDAY	Delegate
Pascal WANIHA	Delegate

Zimbabwe

Rebecca MANZOU	Principal Delegate
Linia GOPO	Delegate
Freedom MUKANGA	Delegate
Tambu PASIPANGODYA	Delegate

3. WMO Members outside RA**United States of America**

Catlin BLAIR	Observer
William Carl BOLHOFER	Observer

4. Invited experts

Karolin EICHLER

5. Representatives of international organizations and other bodies**African Centre of Meteorological Applications for Development (ACMAD)**

Andre KAMGA FOAMOUHOUE	Observer
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Regional Training Centre for Agrometeorology and Operational Hydrology and their Applications (AGRHYMET)

Mohamed HAMATAN	Observer
Ibrah SEIDOU SANDA	Observer
Seydou B. TRAORE	Observer

European Organization for the Exploitation of Meteorological Satellites (EUMETSAT)

Herve TREBOSSSEN	Observer
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International Environmental Data Rescue Organization (IEDRO)

Richard CROUTHAMEL	Observer
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6. Presidents of constituent bodies and Chairs of other bodies

Gerhard ADRIAN	President
Andrea Celeste SAULO	First Vice-President
Agnes L. KIJAZI	Third Vice-President
Ian LISK	President of SERCOM

7. Regional Hydrological Adviser

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