

Regional Association V (South-West Pacific)

Abridged Report of the Eighteenth Session
1–3 September 2021 (virtual session)



WORLD
METEOROLOGICAL
ORGANIZATION

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BACKGROUND INFORMATION SUPPORTING THE WORK OF THE SESSION

GENERAL SUMMARY OF THE WORK OF THE SESSION

1. The president of Regional Association V (RA V) (South-West Pacific), Mr 'Ofa Fa'anunu, opened the eighteenth session of RA V (RA V-18) on 1 September 2021 at 0200 UTC by videoconference. The president welcomed the Members of the Association and other participants to the first online RA V session, noting the challenging conditions due to the COVID-19 pandemic. The president highlighted the regional reform, including the new working structure, regional priorities and a review of the terms of reference of the president and the vice-president as the key issues to be discussed. The president also stressed the importance of enhanced interactions with the technical commissions and the Research Board through improved working arrangements and communications and a more active engagement of the experts of the Association in their activities. The president also mentioned the new data policy, hydrology, the Systematic Observations Financing Facility (SOFF), multi-hazard early warning systems, climate services, aviation and marine meteorological services, capacity development and partnerships as other vital issues for the region to address.
 2. Dr Wenjian Zhang, Assistant Secretary-General of WMO, welcomed all the participants to the session on behalf of Prof. Petteri Taalas, Secretary-General of WMO. Dr Zhang noted the timeliness of this session to consider a number of recommendations, including the regional concept and approaches made at the seventy-third session of the Executive Council (EC-73) in June 2021 for the upcoming extraordinary session of the World Meteorological Congress in October 2021. Dr Zhang underscored the regional reform, enhanced services, observations and data exchange, and partnerships as critical agenda items for the session, expecting Members to engage in an active discussion. Dr Zhang also mentioned the enhanced technical expertise in the regional office in the form of newly recruited technical coordinators for infrastructure and services who will play a pivotal role by serving as a bridge between the regional associations and the technical commissions.
 3. Prof. Gerhard Adrian, President of WMO, recalled the successful restructuring of the technical commissions over recent years and expressed his expectations for the role of the president of the Association with respect to the implementation of the regional reform process. Prof. Adrian also invited the members of the Association to provide the president with feedback on the regional reform so the president can develop a comprehensive and consolidated view of the Association. Prof. Adrian mentioned the WMO unified data policy as a critical agenda item for the extraordinary session of the World Meteorological Congress.
 4. The agenda adopted by RA V is provided in [Appendix 1](#).
 5. The session adopted seven Resolutions, given in [Appendix 2](#), and nine Decisions, given in [Appendix 3](#).
 6. The list of participants is given in [Appendix 4](#). Out of a total of 103 participants, the ratio of female to male participants was 32:71, that is 31:69%.
 7. The Association elected by acclamation Mr 'Ofa Fa'anunu (Tonga) as president and Mr Terry Atalifo (Fiji) as vice-president of RA V.
 8. The eighteenth session of Regional Association V closed at 0415 UTC on Friday, 3 September 2021.
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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 the Nomination Committee

2. REPORTS

- 2.1 Report by the president of the Association, including reports of Working Groups/Tropical Cyclone Committee for the South Pacific and the South-East Indian Ocean and the Regional Office for Asia and the South-West Pacific

3. REGIONAL REFORM

- 3.1 Working structure of Regional Association V in context of Comprehensive Regional Reform
- 3.2 WMO Strategic and Operating Plan: Regional priorities

4. STRATEGIC PRIORITIES: REGIONAL ASPECTS

- 4.1 Enhanced Services (including Hydrology)
- 4.2 Observations and data exchange
- 4.3 Capacity development

5. DEVELOPMENT PARTNERSHIP FLAGSHIP INITIATIVES

- 5.1 State of Climate Report in the South-West Pacific
- 5.2 Public-Private Engagement
- 5.3 Systematic Observations Financing Facility (SOFF)
- 5.4 RA V and the Ocean

6. ELECTION OF OFFICERS

7. REVIEW OF PREVIOUS RESOLUTIONS OF THE ASSOCIATION

8. ANY OTHER BUSINESS

9. DATE AND PLACE OF THE NINETEENTH SESSION

10. CLOSURE OF THE SESSION

APPENDIX 2. RESOLUTIONS ADOPTED BY THE SESSION

Resolution 1 (RA V-18)

Working Structure of RA V in context of Comprehensive Regional Reform

REGIONAL ASSOCIATION V (SOUTH-WEST PACIFIC),

Recalling:

- (1) [Resolution 1 \(Cg-18\)](#) – WMO Strategic Plan,
- (2) [Resolution 6 \(Cg-18\)](#) – WMO Regional Associations,
- (3) [Resolution 7 \(Cg-18\)](#) – Establishment of WMO Technical Commissions for the Eighteenth Financial Period,
- (4) [Resolution 8 \(Cg-18\)](#) – Research Board,
- (5) [Resolution 11 \(Cg-18\)](#) – WMO Reform – Next Phase,
- (6) [Resolution 1 \(EC-72\)](#) – Effective Coordination between Regional Associations, Technical Commissions and the Research Board,
- (7) [Resolution 2 \(EC-72\)](#) – Activities and Working Mechanisms of the Regional Associations,

Noting the need for an alignment of the RA V regional structure with the new constituent bodies of the Organization as a result of the WMO reform efforts and for strong links to be made between RA V working mechanisms, technical commissions and other bodies of the Organization to support Members and the effective implementation of the region's operating plan and regional priorities,

Noting further:

- (1) That the twenty-second session of the RA V Management Group (April 2021) decided to establish RA V Task Team on the Regional Concept (TT-RC) and Task Team on Regional Cooperation, Collaboration and Partnerships (TT-RCCP), and approve their Terms of Reference and nomination process resulting in the subsequent composition/membership,
- (2) That the TT-RC has commenced its work and met on two occasions,
- (3) [Resolution 7 \(Cg-18\)](#) requesting presidents of the regional associations to work actively with their Members to ensure that nominated experts are representative of geographic, gender and technical diversity,

Having considered:

- (1) The needs for improved processes and mechanisms for enhanced regional and interregional cooperation and partnerships, resource mobilization and plans for resolving existing capacity gaps and deficiencies, and the challenges in achieving these during the periods of WMO Reform and COVID-19 disruptions,
- (2) The recommendations of the TT-RC for RA V's working structures to be flexible to the emerging strategic and operational needs of Members and to recognize the evolving and differing capacity of Members to engage in the work of subsidiary bodies,

Decides:

- (1) To propose the following initial RA V working structure to address the needs and priorities of RA V members:
 - (a) Regional Association V Management Group;
 - (b) Regional Association V Tropical Cyclone Committee for the South Pacific and South-East Indian Ocean;
 - (c) Regional Association V Working Group on Services;
 - (d) Regional Association V Working Group on Infrastructure;
 - (e) Regional Association V Working Group on Hydrology and Water Resources;
- (2) To adopt the Terms of Reference and composition for each subsidiary body as given in the annex;
- (3) To invite Members to fully engage in the work of RA V's subsidiary bodies and to nominate experts to join these bodies;
- (4) To authorize the Management Group to appoint Chairs and Vice-chairs of the other RA V subsidiary bodies, among candidates nominated by Members, considering appropriate technical and geographical representation, and gender balance;
- (5) To authorize the president to take necessary decisions on behalf of the Association, after consultation with the Management Group, on matters of importance to the region;

Decides further to appoint a Regional Hydrological Adviser to serve as focal point on hydrological matters;

Requests the Secretary-General:

- (1) To make the necessary resources available, including the provision of appropriate Secretariat support, to facilitate the activities of RA V's subsidiary bodies;
- (2) To accord very high priority to the convening of an annual session of the Tropical Cyclone Committee prior to the tropical cyclone season;

Also requests the TT-RC:

- (1) To continue its work as directed by the Management Group in developing and reviewing the initial working structure of RA V subsidiary bodies, particularly in light of RA V-18 discussions on regional priorities, and in consultation with the Management Group, to propose any further modifications to the president of RA V for approval;
- (2) To invite Members to fully engage with the work of TT-RC and to nominate additional members to join the Task Team;

Further requests the technical commissions, the Research Board, and other bodies of the Organization to actively support the work of the RA V subsidiary bodies.

Note: This resolution replaces [Resolution 14 \(RA V-17\)](#), [Resolution 15 \(RA V-17\)](#), [Resolution 16 \(RA V-17\)](#), [Resolution 17 \(RA V-17\)](#), [Resolution 18 \(RA V-17\)](#) and [Resolution 19 \(RA V-17\)](#), which are no longer in force.

Annex to the Resolution 1 (RA V-18)**Terms of Reference and Composition of RA V Subsidiary Bodies****1. Regional Association V Management Group**

- (1) The Management Group of Regional Association V (South-West Pacific) assists the president and makes recommendations on matters relevant to the Association with the following terms of reference:
 - (a) Prioritize, plan and coordinate the work of the Association and its subsidiary bodies in accordance with Congress and Executive Council resolutions/decisions and promote the execution of these resolutions/decisions in the region with the RA V Operating Plan contributing to the implementation of the WMO Strategic Plan;
 - (b) Oversee and guide the Reform in RA V, review the recommendations from the Task Team on the Regional Concept (TT-RC) and the Task Team on Regional Cooperation, Collaboration and Partnerships (TT-RCCP), and oversee the implementation of the recommendations;
 - (c) Review matters related to the work of the Association, in particular emerging issues or matters requiring actions that cannot wait for the next regular session of the Association;
 - (d) Establish and review the structure and work of the subsidiary bodies of the Association, including the implementation of their recommendations, and to disband or reorganize these bodies as needed;
 - (e) Select members of the subsidiary bodies from among candidates nominated by Members and establish specific task teams, as needed;
 - (f) Keep under review the requirements and priorities for developing the capacity of National Meteorological and Hydrological Services (NMHSs) of Members, training and other events to be organized in the region for the implementation of WMO programmes and activities;
 - (g) Oversee the activities of WMO-designated regional centres, such as Regional Specialized Meteorological Centres (RSMCs), Regional Training Centres (RTCs), Regional Instrument Centres (RICs), Regional Climate Centres (RCCs), Regional WIGOS Centres (RWCs) and WMO Information System (WIS) Centres;
 - (h) Address issues on strengthening partnerships with regional entities and other partners, including the private sector;
 - (i) Establish and monitor the implementation of the Operating Plan for the Enhancement of National Meteorological and Hydrological Services (NMHSs) in RA V and provide the Association's input to the WMO Strategic and Operating Plan.
- (2) RA V invites the president to act as Chair of the Management Group, which is composed of:
 - (a) President;
 - (b) Vice-president;
 - (c) Three other Executive Council members of the region or their designated alternates to be invited by the president;

- (d) Regional Hydrological Adviser;
 - (e) Chair of the RA V Tropical Cyclone Committee for the South Pacific and South-East Indian Ocean (as an ex officio member);
 - (f) Chairs of the RA V Working Groups (as ex officio members).
- (3) The president invites, as appropriate, other Directors of NMHSs and the Chair of the Pacific Meteorological Council to participate in Management Group meetings, subject to the relevance of the issues and the availability of financial resources.
- (4) The president shall:
- (a) Ensure the Group meets on a regular basis including via videoconference, and scheduled at a time that ensures that a majority of members are able to attend;
 - (b) Review the terms of reference, structures and composition of RA V subsidiary bodies at the earliest opportunity.

2. Regional Association V Tropical Cyclone Committee for the South Pacific and South-East Indian Ocean

- (1) The Regional Association V Tropical Cyclone Committee for the South Pacific and South-East Indian Ocean is re-established with the following terms of reference:
- (a) Promote and coordinate the planning and implementation of measures required to minimize loss of life, damage and economic losses caused by tropical cyclones and their related hazards in the South Pacific and South-East Indian Ocean area;
 - (b) Review regularly the Tropical Cyclone Operational Plan (TCOP) for the South Pacific and South-East Indian Ocean and recommend amendments to the president;
 - (c) Review regularly the status of warning systems for tropical cyclones and their associated hazards within the South Pacific and South-East Indian Ocean area, and recommend measures for the development or improvement of those systems including fit-for-purpose impact-based forecast and warning services (IBFWS);
 - (d) Review regularly the tropical cyclone forecasting capability and development needs of Committee members, and in alignment with the WMO Capacity Development Strategy, recommend appropriate training measures to meet those needs;
 - (e) Coordinate its activities with other RA V subsidiary bodies to facilitate the implementation of the RA V Operating Plan;
 - (f) Establish task teams as it deems necessary to carry out the work of the Committee.
- (2) That the Committee shall be composed of:
- (a) Nominated experts from the following RA V Members to serve on the Committee:
 - Australia
 - Cook Islands
 - Fiji
 - French Polynesia
 - Indonesia
 - Kiribati
 - Micronesia, Federated States of

Nauru
 New Caledonia
 New Zealand
 Niue
 Papua New Guinea
 Samoa
 Solomon Islands
 Timor-Leste
 Tonga
 Tuvalu
 United Kingdom of Great Britain and Northern Ireland
 United States of America
 Vanuatu

- (b) In accordance with *Basic Documents No. 1* (WMO-No. 15), General Regulation 3, a Chair and, if necessary, a Vice-chair of the Committee.
- (3) The following non-WMO Member Pacific Island Countries and Territories are invited to designate experts to participate in the work of the Committee as observers:
- Marshall Islands
 Palau
 Tokelau
- (4) The Chair of the RA I Tropical Cyclone Committee for the South-West Indian Ocean is invited to serve as an ex officio member.
- (5) Other experts are invited as necessary to participate in the work of the Committee as observers, such as from international or regional organizations and agencies as may be deemed appropriate.

3. Regional Association V Working Group on Services

- (1) The Regional Association V Working Group on Services shall have the following terms of reference:
- (a) Follow up on the resolutions, decisions and recommendations of the World Meteorological Congress, the Executive Council, RA V and RA V MG, Technical Commissions and the Research Board, addressing services- and application-related matters (Strategic Goal 1), for the activities to be undertaken at a regional level;
- (b) Identify and regularly monitor critical gaps and needs for new and improved services and analyse related capabilities among Members, particularly for developing Members, including (but not exclusively) the implementation of the regional aspects of the Global Multi-hazard Alert System (GMAS), operationalization of objective seasonal forecasts and associated tailored products, Regional Climate Forums (RCFs) and develop a roadmap and regional implementation plan to support improvements and capacity development activities (Strategic Goal 4), to be included in the RA V Operating Plan;
- (c) Draft and update on a regular basis the RA V Operating Plan for the relevant components pertaining to services and applications, and monitor the progress of the implementation for the Association's review and approval;
- (d) Provide feedback to the Commission for Weather, Climate, Water and Related Environmental Services and Applications (SERCOM) on RA V Members' requirements and needs on weather, climate, water and related environmental

services and applications including providing inputs to the proposed work plan of the Commission;

- (e) Collaborate with RA V Members, SERCOM and other bodies, as necessary, to support, monitor and regularly review and audit relevant regional centres established by WMO bodies, ensuring that the services and functions being delivered by them continue to respond to the needs of the region and are in compliance with WMO standards and guidelines;
 - (f) Consult with SERCOM on the identification of common experts to assist with the sharing of regional priorities and requirements and the implementation of technical priorities and associated capacity-building activities;
 - (g) Facilitate the production of the pilot report on State of the Climate in the South-West Pacific and the further development of the concept leading to the publication of regular reports;
 - (h) Propose and monitor RA V workshops and forums, and share information on these in advance, with the support of Members;
 - (i) Facilitate the sharing of knowledge, experience and technology among Members.
- (2) The Working Group is composed of:
- (a) A Chair and Vice-Chair(s);
 - (b) Where feasible, selected experts from RA V Members who are serving in working structures of SERCOM;
 - (c) Leaders of task teams (that are established under the Working Group in case of necessity).
- (3) The president, in consultation with the Management Group, designates a chair and vice-chair(s) of the Working Group.
- (4) Experts are required to be registered in the WMO experts database and the selection process considers appropriate technical and geographical representation and gender balance.
- (5) The Chair may invite the chairs of other RA V subsidiary bodies and representatives from WMO-designated regional centres to attend meetings, as appropriate.
- (6) Members are to nominate experts who are committed to serve the Association actively and regularly update their profiles on the WMO experts database.
- (7) The Chair, considering the RA V Operating Plan and the aligned areas of responsibility of the Working Group, is to:
- (a) Propose, in consultation with the TT-RC, substructures of the Working Group, their terms of reference and invite nominations for membership, as necessary, in order to facilitate successful implementation of the RA V priorities, and to disband these substructures when their work has concluded;
 - (b) Provide an annual progress report to the president of the Association and to share the report with Members of the Association and the Management Group of SERCOM.

4. Regional Association V Working Group on Infrastructure

- (1) The Regional Association V Working Group on Infrastructure shall have the following terms of reference:
 - (a) Follow up on the resolutions, decisions and recommendations of the World Meteorological Congress, the Executive Council, RA V and RA V MG, Technical Commissions and the Research Board, addressing observation- and infrastructure-related matters (Strategic Goals 2 and 4) for the activities to be undertaken at a regional level;
 - (b) Identify and assess critical gaps and opportunities for improvement in RA V Members' capabilities, particularly for developing Members, to implement WMO standards and regulations, including the implementation of the regional aspects of the WMO Integrated Global Observing System (WIGOS), the Global Basic Observing Network (GBON), the WMO Information System 2.0 (WIS 2.0) and WMO Global Data processing and Forecasting System (GDPFS) implementation plans, and develop a regional roadmap to support Members including with capacity development activities (Strategic Goal 4);
 - (c) Prepare the infrastructure component of the RA V Operating Plan, addressing observations, infrastructure, information and data processing and forecasting systems for the approval of the Association; establish, with the support of the regional office, the regional infrastructure systems baselines and benchmarks; and provide progress updates to the RA V MG;
 - (d) Provide feedback to the Commission for Observation, Infrastructure and Information Systems (INFCOM) on RA V Members' requirements and needs on observation, infrastructure and information systems including providing inputs to the proposed work plan of the Commission;
 - (e) Collaborate with RA V Members, INFCOM and other bodies, as necessary, to support, monitor, review and audit relevant regional centres established by WMO bodies, ensuring that the services and functions continue to respond to the needs of the region and are in compliance with WMO standards and guidelines;
 - (f) Consult with INFCOM on the identification of common experts to assist with the sharing of regional priorities and requirements and the implementation of technical priorities and associated capacity development activities;
 - (g) Propose and monitor RA V workshops and forums, and share information on these in advance, with the support of Members;
 - (h) Facilitate the sharing of knowledge, experience and technology among RA V Members.

- (2) The Working Group is composed of:
 - (a) A Chair and Vice-Chair(s);
 - (b) Where feasible, selected experts from RA V members who are serving in working structure of INFCOM;
 - (c) Leaders of task teams (that are established under the Working Group in case of necessity).
- (3) The president, in consultation with the Management Group, designates a chair and vice-chair(s) of the Working Group.
- (4) Experts are required to be registered in the WMO experts database and the selection process considers appropriate technical and geographical representation and gender balance.
- (5) The Chair may invite the chairs of other RA V subsidiary bodies and representatives from WMO-designated regional centres to attend meetings, as appropriate.
- (6) Members are to nominate experts who are committed to serve the Association actively and update their profiles regularly on the WMO experts database.
- (7) The Chair, considering the RA V Operating Plan and the aligned areas of responsibility of the Working Group, is to:
 - (a) Propose, in consultation with the TT-RC, substructures of the Working Group, their terms of reference and invite nominations for membership, as necessary, in order to facilitate successful implementation of the RA V priorities, and to disband these substructures when their work has concluded;
 - (b) Provide an annual progress report to the president of the Association and to share the report with Members of the Association and the Management Group of INFCOM.

5. Regional Association V Working Group on Hydrology and Water Resources

- (1) The Regional Association V Working Group on Hydrology and Water Resources shall have the following terms of reference:
 - (a) Support the Regional Hydrological Adviser in ensuring that the contributions in operational hydrology pertaining to the region's priorities are coordinated across infrastructure, services and research domains, and are coordinated with weather, climate and other thematic areas; contribute to components of the RA V Operating Plan relevant to hydrological and water resource matters;
 - (b) Recommend hydrological-related substructures under the Working Group on Services and the Working Group on Infrastructure in accordance with specific tasks;
 - (c) Support the Regional Hydrological Adviser in the development of a Hydrological Action Plan in RA V (as per the request of EC-71) as a contribution to the Regional Operating Plan, and other tasks as requested in Resolution 4 (RA V-18);
 - (d) Establish Task Teams and/or Expert Groups within the Working Group on Hydrology and Water Resources, as and if necessary, to most efficiently carry out the tasks of the Group, and to disband these substructures when their work is concluded;

- (e) Recommend experts in hydrology and water resources from RA V, to be represented in the different substructures of the Working Groups, to carry out specific tasks, if and as needed;
 - (f) Liaise with the Hydrological Coordination Panel (HCP) of the Executive Council, ensuring alignment on behalf of the Association;
 - (g) Serve as the organizing committee for the Regional Hydrological Assembly and the Regional Hydrological Advisers' Forums, as necessary.
- (2) The Working Group is composed of:
- (a) A Chair, normally the Regional Hydrological Adviser;
 - (b) Hydrology and water resources experts that are part of any relevant task teams established under the RA V working groups;
 - (c) Other members appointed by the president in consultation with the Regional Hydrological Adviser.
- (3) The Chair may invite the chairs of other RA V subsidiary bodies and other experts to attend meetings, as appropriate.
- (4) The Chair shall provide an annual progress report to the president of the Association and to share the report with Members of the Association and the HCP.

Resolution 2 (RA V-18)

Regional activities in aeronautical meteorology

REGIONAL ASSOCIATION V (SOUTH-WEST PACIFIC),

Recalling Resolution 3 (RA V-17) - Scientific research and development in aeronautical meteorology, Resolution 4 (RA V-17) - Global and regional landscape of aeronautical meteorological service provision and Decision 8 (RA V-17) - Regional activities in aeronautical meteorology intended to promote the implementation of aeronautical meteorological services by RA V members,

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

Acknowledging that a regional conference on the future of aeronautical meteorological provision, as requested through Resolution 4 (RA V-17), has not yet been conducted,

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, inter alia, 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 in ICAO’s Global Air Navigation Plan (GANP) ([ICAO Doc 9750](#)) is contributing to a revolution in air transport sector,

Appreciating the development by the former Commission for Aeronautical Meteorology (CAeM) of a long-term plan for aeronautical meteorology ([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 and 2021 updates to *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;
- (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 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 3 (RA V-18)

Regional progress on WMO Global Multi-hazard Alert System (GMAS) framework components

REGIONAL ASSOCIATION V (SOUTH-WEST PACIFIC),

Recalling:

- (1) [Resolution 13 \(Cg-18\)](#) - WMO Global Multi-Hazard Alert System (GMAS),

[Resolution 26 \(Cg-18\)](#) – Provision of Impact-based Forecast and Warning Services in an Innovative and Integrated Way,
[Decision 4 \(RA V-17\)](#) - Strengthening multi-hazard early warning services and contribution of Regional Association V to a WMO GMAS,
[Decision 13 \(RA V-17\)](#) - Enhancing international exchange of weather forecasts and warnings,

- (3) Congress endorsement of the implementation of the Common Alerting Protocol (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) The 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 GMAS;
- (3) The adoption of CAP as an additional dissemination channel, apart from those that may already be in use, for warnings to stakeholders;

Requests the Management Group to consider establishing, as soon as possible in light of the tight timelines of GMAS framework development, a RA V Task Team, or other appropriate working arrangement, on the further development of the GMAS framework, composed of Permanent Representatives and Hydrological Advisers (or their alternates) from RA V, with consideration of the proposed terms of reference detailed in the annex to this Resolution;

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

Urges 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 3 (RA V-18)

Terms of reference (TORs) Regional Association V Task Team on the further development of the GMAS framework for the South-West Pacific

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 V in order to systematize and prepare RA V background information for the further regional development of the GMAS framework;
- (2) Seek the views of the Members of RA V 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 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 V representatives therein;

1.2 Composition

The Task Team will be composed of a Chair, a Vice-Chair and core members.

Resolution 4 (RA V-18)

Regional progress on Hydrological and Water Resources components

REGIONAL ASSOCIATION V (SOUTH-WEST PACIFIC),

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 V, 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 several subsidiary bodies of the technical commissions and the Research Board,

Decides to entrust the regional hydrological adviser, with the assistance of the RA V subsidiary body in charge of hydrology and support from the WMO HCP, with the development of Hydrological Action Plan for RA V (as per [Resolution 5 EC-71](#)) as a contribution to the Regional Operating Plan (see Document 6 (RA V-18)). In preparing the Hydrological Action Plan, due consideration should be given to regional priorities, [Resolution 24 \(Cg-18\)](#) - Vision, Strategy and Organizational Arrangements for Hydrology and Water Resources in WMO, and [Resolution 25 \(Cg-18\)](#) - Major Hydrological Initiatives;

Requests the regional hydrological adviser and the president of RA V with support from the WMO Secretariat to hold an information session with respect to the WMO Water Declaration and 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 V subsidiary body in charge of hydrology 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;

Further requests the RA V subsidiary body in charge of hydrology 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 V subsidiary body in charge of hydrology to support the implementation of ongoing projects (including extrabudgetary) related to hydrology and water resources (such as the proposals for a Pacific-HYCOS2 or equivalent) and the development of new project proposals (such as the proposed "Integrated flash flood early warning system for climate change resilience in Pacific Island countries"), and 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 V;

Further requests the RA V subsidiary body in charge of hydrology to coordinate within the RA V 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\(b\)](#) or request the assistance of the Secretariat should the procedure be unclear or prove difficult.

Resolution 5 (RA V-18)

Regional Activities in Marine Meteorology and Oceanographic Services

REGIONAL ASSOCIATION V (SOUTH-WEST PACIFIC),

Recalling:

- (1) [Resolution 15\(Cg-18\)](#) – Strengthening Multi-hazard early warning services in areas prone to all flooding types and severe weather
- (2) [Resolution 29 \(Cg-18\)](#) – Strengthening Marine and Coastal Services,
- (3) [Resolution 30 \(Cg-18\)](#) – Exploring Costing Options For Marine Services in the Future,
- (4) [Resolution 65 \(Cg-18\)](#) – WMO and the Ocean,
- (5) [Resolution 26 \(EC-70\)](#) - Amendments to the *Manual on the Global Data processing and Forecasting System* (WMO-No. 485) approving the amendments to the Manual and in particular the formal designation of centres as Regional Specialized Meteorological Centres (RSMCs) for numerical ocean wave prediction and marine meteorological services,
- (6) [Resolution 4 \(EC-72\)](#) - Strengthening Marine Services,
- (7) [Resolution 10 \(EC-71\)](#) - Amendments to the Guide to Wave Analysis and Forecasting,

Acknowledging:

- (1) That early warnings for coastal inundation are a critical service needed in the Region,
- (2) Inclusion of the marine weather competency framework within the *Guide to Competency* (WMO-No 1205),
- (3) The revised publications available on the WMO Library for the *Guide to Wave Analysis and Forecasting* (WMO-No. 702) (2019) and *Sea-ice Information and Services* (WMO-No. 574) (2021) providing guidance in wave forecasting, and sea-ice information services,

- (4) The results of the Online Assessment of National Marine and Coastal Services published in 2019 by WMO (MMO Series 1) demonstrating significant gaps within the Regional Association V (RA V) region,

Acknowledging further, with appreciation all Members that:

- (1) Provide marine and coastal services within their respective areas of responsibility,
- (2) Completed recent surveys issued by the WMO Secretariat, to help assess the status of their marine services, and associated costs,
- (3) Provided experts to the work of the Standing Committee for Marine Meteorology and Oceanographic Services (SC-MMO) in support of strengthening marine weather, coastal and marine climate services,

Notes with satisfaction:

- (1) The completion of Coastal Inundation Forecasting Demonstration Project (CIFDP) in Indonesia and Fiji, in 2019, and the resultant operationalization, and successful early warnings that have been issued during subsequent coastal flood events;
- (2) The RA V contributions that have led to the successful completion and assessment of the overall CIFDP concept, whereby the 'demonstration' aspect has been removed, and the following establishment of the Coastal Inundation Forecasting Initiative (CIFI), approved at Cg-18 ([Resolution 15\(Cg-18\)](#) – Strengthening Multi-hazard early warning services in areas prone to all flooding types and severe weather and [Resolution 29 \(Cg-18\)](#) – Strengthening Marine and Coastal Services);
- (3) The WMO public awareness material about the dangers of coastal flooding, and the value of ocean buoys for people's safety that have been produced in 2019 and 2020, for the Pacific Islands subregion, so far in English, French, Fijian and Hindi;
- (4) The newly developed WMO Marine Services Course, currently underway in the RA V Pacific Islands subregion (August to October 2021), part of which includes marine weather forecaster competencies;
- (5) The contributions of RAV Members at WMO-International Meteorological Organization (IMO) Symposium for Extreme Maritime Weather (London, October 2019), and the offer from Indonesia Meteorology, Climatology, and Geophysical Agency (BMKG) to host the second WMO-IMO Symposium;

Invites Members to:

- (1) Designate their national marine services focal points, and/or update, if they have not already done so (List of RA V members with respective focal points as in the annex);
- (2) Participate in any service delivery assessments and surveys sent by the WMO Secretariat to assess the strengths and gaps in marine services of Members;
- (3) Participate in and offer support to the second WMO-IMO Symposium for Extreme Maritime Weather, to be held in Indonesia, as an opportunity to highlight to a global audience, the important role and work of marine services in the region;

Encourages Members:

- (1) To nominate relevant Experts to the WMO Expert Network, for future contributions to the marine-related work within the Commission for Weather, Climate, Water and Related

Environmental Services and Applications (SERCOM), and in particular contributions to the SC-MMO and its subsidiary teams, in addition to the work of the Commission for Observation, Infrastructures and Information Systems (INFCOM), Research Board and the WMO Climate and Capacity Development Panels, that contribute to marine weather, coastal and marine climate services;

- (2) With wave and ocean modelling capability to apply to become a wave and/or ocean model RSMC;
- (3) Interested in accessing the marine-related RSMC standard products to consult the WMO Information System catalogue;
- (4) To use, promote and widely distribute the videos specifically targeted to coastal communities, explaining coastal flooding and its dangers, and what to do during an event; and the value of ocean buoys for people's safety; to inform vulnerable communities in the Pacific Island and south-east Asian subregions;
- (5) To consider establishing and/or strengthening CIFI;
- (6) To gather, refine to the extent possible and share bathymetry data to improve numerical prediction in support of coastal inundation forecasting and warning services;
- (7) To utilize the WMO publications available for strengthening marine and coastal services, including the recently revised [Sea-ice Information and Services](#) (WMO-No. 574), [Guide to Wave Analysis and Forecasting](#) (WMO-No. 702) and [Guide to Competency](#) (WMO-No. 1205);
- (8) To use, promote and widely recommend standards, technologies and best practices for environmental stewardship in the use of ocean data buoys with the goal of reducing the environmental footprint of ocean data buoys, and to work with the Data Buoy Cooperation Panel to develop and maintain a repository of sustainable best practices that minimize impact on the environment of marine observations;

Decides to:

- (1) Identify Members requiring assistance to prepare for the IMO Member State Audit Scheme on met-ocean services under the International Convention for the Safety of Life at Sea (SOLAS) and request assistance from the president of SERCOM;
- (2) Continue prioritizing training needs in coastal inundation and marine services;

Urges Members to strengthen their engagement with the Global Buoy Drifter Program to improve coverage of ocean observations and use of their data for their marine service products;

Requests the Secretary-General to facilitate:

- (1) Training on relevant instrumentation, improved access to ocean forecasting products, especially for search and rescue services required of those party to the SOLAS Convention;
- (2) Further capacity development for marine and coastal services, including the rollout of the WMO Marine Services Course Phase II in the RA V Pacific Islands subregion, and Phases I and II, in the RA V South-East Asian subregion;
- (3) Improved training for Port Meteorological Officers and those working in the WMO-IOC Voluntary Observing Ship Programme;
- (4) Further enhancement in marine service capabilities using the Marine Competency Framework to help advance marine services in RA V;

- (5) Support for Members wishing to establish and/or strengthen coastal inundation forecasting early warning initiatives;

Requests the president of SERCOM to facilitate the technical assistance for all the above, especially through the SC-MMO and its subsidiary teams;

Requests National Marine Service Focal Points to strengthen communication about the value of the marine services work, within their Services and to national counterparts and partners working in marine-related safety activities such as Maritime Safety Agencies, Port Authorities, Hydrographic agencies, national disaster management organizations, etc.;

Requests the president to reinforce and strengthen the connection and collaboration, and reduce duplication of efforts, between the work of WMO and the Pacific Meteorological Council's Pacific Island Marine and Ocean Services (PIMOS) Panel, that has mutual benefit to Members.

Annex to Resolution 5 (RA V-18)

List of RA V National Marine Services Focal Points

Australia	Neal Moodie
Fiji	Stephen Meke
France (including all territories)	Mireille Mayoka
Indonesia	Andri Ramdhani
Malaysia	Nursalleh K Chang
New Zealand	Michael Martens
Samoa	Mulipola Tainau Ausetalia Titimaea
Singapore	Wee Kiong Cheong
Solomon Islands	David Hiba Hiriasia
Timor-Leste	Abalo Affo Dogo
Tonga Met	'Ofa Fa'anunu / Gary Vite
USA	Darren Wright

Resolution 6 (RA V-18)

RA V and the Ocean

REGIONAL ASSOCIATION V (SOUTH-WEST PACIFIC),

Recalling:

- (1) The *World Meteorological Organization (WMO) Strategic Plan 2020–2023* (WMO-No. 1225),
- (2) *Resolution 65 (Cg-18)* – WMO and the Ocean,
- (3) *Resolution 9 (Cg-18)* – Joint World Meteorological Organization-Intergovernmental Oceanographic Commission Collaborative Board,
- (4) *Resolution 28 (EC-73)* – WMO-IOC Joint Collaborative Strategy,

Considering that:

- (1) RA V is uniquely an “ocean region”:
 - (a) Where the Indian, Pacific, and Southern oceans play a significant role in influencing global climate,
 - (b) In which all Members have coastal populations and an exclusive economic zone (EEZ), in addition to a heavy reliance on marine resources, maritime trade, plus recreational space,
 - (c) With a variety of ocean environments and characteristics ranging from polar, to tropical, from large continental coasts to small islands, and
 - (d) That is tectonically active, with frequent cyclogenesis and experiences significant seasonal climate phenomena driven by ocean-atmosphere interactions (e.g. ENSO, Madden-Julian Oscillation all of which have the potential to trigger severe marine-related disasters),
- (2) The world is currently responding to a global call to focus on the ocean and ocean-related hazards, including through the United Nations Sustainable Development Goals (2015–2030), the United Nations Decade of Ocean Science for Sustainable Development (2021–2030), the Sendai Framework for Disaster Risk Reduction (2015 – 2030), the Paris Agreement (2015), and the Small Island Developing States Accelerated Modalities of Action Pathway (SAMOA Pathway) (2014 – 2024),

Acknowledging the:

- (1) Numerous WMO bodies and affiliations that significantly contribute to ocean-related work in the RA V, including, for example METAREA Coordinating Members (Australia and New Zealand), the Regional Specialized Meteorological Centre (RSMC)-Nadi (Fiji) and the RA V Tropical Cyclone Committee, Regional Training Centres (Indonesia and the Philippines), the Global Ocean Observing System (GOOS) and its Regional Alliances, and Regional Climate Centres, among others,
- (2) The role of more than two thirds of the RA V National Meteorological and Hydrological Services (NMHS) involved in national tsunami detection, transmission and/or early warnings (see annex), and, the leadership roles of Australia Bureau of Meteorology (BOM), the Agency for Meteorology, Climatology, and Geophysics of the Republic of

Indonesia (BMKG), and the United States of America National Oceanic and Atmospheric Administration (USA NOAA) in the regional intergovernmental coordination for tsunami early warning in the Indian and Pacific oceans,

- (3) Two separate but complementary initiatives for 'Tsunami Ready' and 'Weather Ready' Nations,

Considering the:

- (1) Expanded collaboration between WMO and the United Nations Educational, Scientific and Cultural Organization – Intergovernmental Oceanographic Commission (UNESCO-IOC) in marine meteorology, oceanography, cryology, and marine climatology, global climate including in services, observation and information management, research and capacity development, and the mutual interest to strengthen regional connections as discussed at the first Session of the Joint WMO-IOC Collaborative Board (JCB),
- (2) Need for a coordinating mechanism in RA V to support activities to address the priority ocean issues across the full region and in the subregions,

Decides to develop a regional roadmap for marine meteorology and oceanography that builds off the WMO-IOC Joint Collaborative Strategy across the entire value chain, to establish coastal and ocean priorities for the RA V, in consultation with the relevant WMO bodies, as well as relevant international and regional partners such as the UNESCO-IOC, International Maritime Organization (IMO), the International Hydrographic Organization (IHO), the United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP), Pacific Meteorological Council, Secretariat of the Pacific Community (SPC) etc.;

Encourages Members to conduct consultations with relevant national stakeholders, including academia, to contribute to the development of the roadmap;

Urges Members to align with 'whole of Government' marine interests in their countries through working closely with their national counterparts such as agencies supporting maritime safety, marine-related disaster risk reduction, operational and research oceanography, and marine climate services;

Further encourages Members to consider national and regional ocean activities that may contribute to the UN Decade of Ocean Science for Sustainable Development;

Invites the:

- (1) JCB to consider the Draft Regional Roadmap in the context of the WMO-IOC Joint Collaborative Strategy;
- (2) Leadership of the WMO Commission for Weather, Climate, Water and Related Environmental Services & Applications (SERCOM), the Commission for Observation, Infrastructure and Information Systems (INFCOM), the Research Board, and the Executive Council Panels for Climate Coordination, and Capacity Development, to consider how their respective activities can address the regional ocean priorities;
- (3) Leadership of the WMO and UNESCO-IOC (amongst others) co-sponsored activities including Global Ocean Observing System (GOOS), Global Climate Observing System (GCOS), and the World Climate Research Program (WCRP), to consider how their respective activities can address the regional priorities;

Requests its Management Group to:

- (1) Coordinate support, and to liaise with NMHSs, Regional Climate Centres and Regional Specialized Meteorological Centres, and with the relevant RA V Working Groups and experts, to support engagement in the development of such a roadmap, and collaboration with other ocean stakeholders in support of sustainable development of, and minimizing the risk of disasters within, the RA V region;
- (2) Explore the synergies and potential collaboration in the region, between the complementary initiatives for 'Weather Ready' and 'Tsunami Ready' Nations.

Annex to Resolution 6 (RA V-18)

RA V NMHS and Tsunami Early Warning

Listed below are NMHS in RA V who have a known role in national tsunami early detection, transmission and/or warning. Those in **bold with asterisks** are the lead National Tsunami Warning Centre for their country, issuing advisories and warnings. Those without asterisks play a supporting role in their country.

1	Australia – Bureau of Meteorology *
2	Brunei Meteorological Service *
3	Cook Islands Meteorological Service *
4	Fiji Meteorological Service
5	Republic of Indonesia – Agency for Meteorology, Climatology and Geophysics of the Republic of Indonesia *
6	Kiribati Meteorological Service *
7	Malaysia Meteorology Department *
8	New Zealand MetService
9	Niue Meteorological Service *
10	Samoa Meteorological Service *
11	Papua New Guinea Meteorological Service
12	Meteorological Service Singapore*
13	Solomon Islands Meteorological Service
14	Tonga Meteorological Service
15	United States of America – National Oceanic and Atmospheric Administration (USA NOAA)*
16	Vanuatu Meteorology and Geo-hazard Department*

Resolution 7 (RA V-18)**Review of Previous Resolutions and Decisions**

REGIONAL ASSOCIATION V (SOUTH-WEST PACIFIC),

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 and decisions adopted before the eighteenth session of Regional Association V (South-West Pacific) have been revised and incorporated into the resolutions and decisions of the eighteenth session (as per the annex to the present resolution),
- (2) That some of the previous resolutions and decisions have been incorporated into appropriate WMO publications or have become obsolete,
- (3) That some of the previous resolutions and decisions are still to be implemented,

Decides to treat the resolutions and decisions in the annex of this resolution as per the proposed measures.

Note: This resolution replaces [Resolution 20 \(RA V-17\)](#) - Review of previous resolutions, which is no longer in force.

Annex to Resolution 7 (RA V-18)**List of previous resolutions and decisions of Regional Association V (South-West Pacific) in force at the time of the eighteenth session**

(Reference: World Meteorological Organization, 2018: *Regional Association V (South-West Pacific): Abridged Final Report of the Seventeenth Session* (WMO-No. 1226). Nuku'alofa, Tonga. [Resolution 20 \(RA V-17\)](#) - Review of previous resolutions)

Resolution No.	Resolution Title	Proposed measures			Remarks
		It will remain in force	It will be replaced	It will not remain in force	
7 (XII-RA V)	Climate Change in the South-West Pacific			X	Obsolete contents as various terms and instruments mentioned in the Resolution are outdated or no longer in force. Suggested to have a new resolution in the next session

Resolution No.	Resolution Title	Proposed measures			Remarks
		It will remain in force	It will be replaced	It will not remain in force	
4 (XV-RA V)	Support for the Joint WMO/IOC Technical Commission for Oceanography and Marine Meteorology			X	JCOMM no longer exists. The continued work for marine services, and ocean (general) is captured in Doc. 4.1 and 5.4.
1 (RA V-16)	Implementation of the WMO Strategy for Service Delivery in Regional Association V (South-West Pacific)	X			
5 (RA V-16)	Implementation of Regional Climate Centre Networks in Regional Association V (South-West Pacific)	X			
9 (RA V-16)	Implementation of the WMO Capacity Development Strategy in Regional Association V (South-West Pacific)	X			
1 (RA V-17)	Improvement of flood early warnings, including flash floods		X		Replaced by Resolution 4 (RA V-18)
2 (RA V-17)	Tropical Cyclone Operational Plan for the South Pacific and South-East Indian Ocean	X			
3 (RA V-17)	Scientific research and development in aeronautical meteorology	X			
4 (RA V-17)	Global and regional landscape of aeronautical meteorological service provision	X			
5 (RA V-17)	Service delivery in marine meteorology in Regional Association V (South-West Pacific)		X		Replaced by Resolution 5 (RA V-18)
6 (RA V-17)	Implementation of the Climate Services Information System in Regional Association V (South-West Pacific)	X			

Resolution No.	Resolution Title	Proposed measures			Remarks
		It will remain in force	It will be replaced	It will not remain in force	
7 (RA V-17)	Enhancing provision and exchange of selected climate datasets	X			
8 (RA V-17)	Regional hydrological priorities	X			
9 (RA V-17)	Regional WMO Integrated Global Observing System Implementation Plan 2018–2021			X	The Plan will be obsolete as it covers up to 2021. Regional WIGOS initiatives may be included in the RA V Operating Plan 2020–2023 (pending development)
10 (RA V-17)	WMO Information System	X			
11 (RA V-17)	Development of the Region V Aircraft Meteorological Data Relay Programme under the International Air Transport Association and WMO collaboration	X			
12 (RA V-17)	Regional Basic Synoptic Network and Regional Basic Climatological Network in Region V (South-West Pacific)			X	It will not remain in force once the transition to RBON network is complete (expected to be end-2023)
13 (RA V-17)	Regional Instrument Centres	X			
14 (RA V-17)	Regional Association V Management Group		X		Replaced by Resolution 1 (RA V-18)
15 (RA V-17)	Regional Association V Tropical Cyclone Committee for the South Pacific and South-East Indian Ocean		X		Replaced by Resolution 1 (RA V-18)
16 (RA V-17)	Regional Association V Working Group on Hydrological Services		X		Replaced by Resolution 1 (RA V-18)
17 (RA V-17)	Regional Association V Working Group on Weather Services		X		Replaced by Resolution 1 (RA V-18)

Resolution No.	Resolution Title	Proposed measures			Remarks
		It will remain in force	It will be replaced	It will not remain in force	
18 (RA V-17)	Regional Association V Working Group on Climate Services		X		Replaced by Resolution 1 (RA V-18)
19 (RA V-17)	Regional Association V Working Group on Infrastructure		X		Replaced by Resolution 1 (RA V-18)
20 (RA V-17)	Review of previous resolutions		X		Replaced by Resolution 7 (RA V-18)
21 (RA V-17)	Gender	X			

Decision No.	Decision Title	Proposed measures			Remarks
		It will remain in force	It will be replaced	It will not remain in force	
1 (RA V-17)	Organization of the session		X		Replaced by Doc. 1 (RA V-18)
2 (RA V-17)	Disaster risk reduction governance in Regional Association V (South-West Pacific)	X			
3 (RA V-17)	Implementation of the approach for cataloguing high-impact weather, water and climate events in Regional Association V (South-West Pacific)	X			
4 (RA V-17)	Strengthening multi-hazard early warning services and contribution of Regional Association V (South-West Pacific) to a WMO Global Multi-Hazard Alert System		X		Replaced by Resolution 3 (RA V-18)
5 (RA V-17)	Support to the United Nations and humanitarian agencies	X			
6 (RA V-17)	Implementation of seamless Global Data processing and Forecasting System		X		Replaced by Decision 3 (RA V-18) with relevant text

Decision No.	Decision Title	Proposed measures			Remarks
		It will remain in force	It will be replaced	It will not remain in force	
7 (RA V-17)	Severe Weather Forecasting and Disaster Risk Reduction Demonstration Project	X			
8 (RA V-17)	Regional activities in aeronautical meteorology		X		Replaced by Resolution 2 (RA V-18)
9 (RA V-17)	Regional agricultural meteorology and drought activities	X			
10 (RA V-17)	Impact-based forecast and warning services	X			
11 (RA V-17)	Standard interfaces for accessing data and services for public service delivery	X			
12 (RA V-17)	Delivery of integrated health and urban services in Regional Association V (South-West Pacific)	X			
13 (RA V-17)	Enhancing international exchange of weather forecasts and warnings	X			
14 (RA V-17)	Implementation and coordination of Regional Climate Centre operations in Regional Association V (South-West Pacific)	X			
15 (RA V-17)	Regional WMO Integrated Global Observing System Centre	X			
16 (RA V-17)	Pacific Region Observing Network		X		Replaced by Decision 5 (RA V-18) and Decision 9 (RA V-18)
17 (RA V-17)	Radio frequency coordination	X			
18 (RA V-17)	Global Cryosphere Watch, related high-mountain activities and climate services	X			
19 (RA V-17)	Regional Basic Observing Network pilot in Region V (South-West Pacific)		X		Replaced by Decision 5 (RA V-18)

Decision No.	Decision Title	Proposed measures			Remarks
		It will remain in force	It will be replaced	It will not remain in force	
20 (RA V-17)	Country Profile Database and monitoring and evaluation	X			
21 (RA V-17)	WMO Regional Training Centres and collaboration on education and training activities	X			
22 (RA V-17)	Public-private engagement		X		Replaced by Decision 8 (RA V-18)
23 (RA V-17)	Scaling up effective partnerships		X		Replaced by Decision 9 (RA V-18)
24 (RA V-17)	Priorities for WMO Strategic and Operating Plans and the WMO constituent body reform		X		Priorities updated in Decision 3 (RA V-18)

APPENDIX 3. DECISIONS ADOPTED BY THE SESSION

Decision 1 (RA V-18)

Methods of work for conducting the session online

Regional Association V (South-West Pacific) decides to adopt the methods of work for conducting the session online.

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

Annex to Decision 1 (RA V-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 V-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 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 V-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 V-18/INF. 1.

6. Recording of sessions

Pursuant to Regulation 95(c), audio and video 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 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>	GR 20	Same

Procedure	Physical session	Reference	Online session
<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>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 TC participants, the Secretariat arranges for video broadcasting in another room.</p>		<p>Specific naming convention will be determined by the Secretariat to facilitate the online participation of RA V-18 participants as follows:</p> <p>WMO Members within and outside RA V: Principal Delegate(s), Alternate(s), and Delegate(s)</p> <ul style="list-style-type: none"> • Principal Delegate (PD): Member name/PD/Surname • Alternate: Member name/Alt/ Surname • Delegate: Member name/Del/ Surname <p>President, Vice-Presidents of WMO</p> <ul style="list-style-type: none"> • President of WMO: P/WMO • Vice-Presidents of WMO: 1st VP/ WMO; 2nd VP/WMO; 3rd VP/WMO <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 • Vice-presidents of regional associations: VP/RA I (II, ..., VI) • Regional Hydrological Advisers: HA/RA I (II, ..., VI)

Procedure	Physical session	Reference	Online session
			<ul style="list-style-type: none"> • Presidents of technical commissions: P/INFCOM, P/SERCOM • Vice-presidents of technical commissions: VP/INFCOM/Surname, VP/SERCOM/Surname • Invited Experts: Expert/Surname <p>Representatives of International Organizations/ Non-Members</p> <ul style="list-style-type: none"> • Organization name/Surname • Non-Member name/Surname <p>WMO Secretariat</p> <ul style="list-style-type: none"> • Secretariat/Surname <p>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.</p>
<p>Quorum</p>	<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</p>	<p>GR 139 and 140</p>	<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> <p>(i) suspended until connectivity is restored, provided this is within the agreed working hours of the session,</p>

Procedure	Physical session	Reference	Online session
	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.		(ii) postponed until the following working day, (iii) continued with those present to further adopt the decision by correspondence.
Interventions and submission of written comments	Request the floor by raising the nameplate. 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. Submit written comments on documents following the intervention to plenary@wmo.int .		Signal wish to speak using the videoconference system, as indicated in RA V-18/INF. 1. Same. 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.
Recording of Sessions	Audio recordings of plenary meetings shall be made and retained for record-keeping purposes.	GR 95 (c)	Audio and video recordings of plenary meetings shall be made and retained for record-keeping purposes.
Conduct of business during sessions (i.e. points of order, motions, amendments)	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.	GR 79	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.
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.	Rule 6.15.1 and 6.15.4	Same 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).

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 V-18)**Report by the President of the Association****Regional Association V (South-West Pacific) decides:**

- (1) To note with satisfaction the reports from the president of RA V, leads of working groups, Chair of the RA V Tropical Cyclone Committee for the South Pacific and the South-East Indian Ocean and the Regional Office for Asia and the South-West Pacific describing the achievements during the intersessional period;
- (2) To recognize the Members' contribution towards the implementation of regional activities.
- (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: See RA V-18/INF. 2.1.

Decision 3 (RA V-18)**Regional Association V Priorities for the
2021–2023 Operating Plan of the Association**

Recalling [Decision 24 \(RA V-17\)](#) – Priorities for WMO Strategic and Operating Plans and the WMO constituent body Reform,

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

Regional Association V (South-West Pacific) decides:

- (1) To align the RA V strategic, governance and financial cycles with WMO cycles;
- (2) To entrust the Management Group to develop a Regional Operating Plan, with measurable KPIs and milestones, as soon as possible after RA V-18, in consultation with the Members, the technical commissions and the Research Board, and with the assistance of the subsidiary bodies of the Association and the Secretariat, to implement Congress and Executive Council resolutions, and with reference to the priorities set out in the annex;
- (3) To request the president, with support from the RA V Management Group, to develop regional priorities for the next financial period (2024–2027) and to provide these priorities to the WMO Policy Advisory Committee and Technical Coordination Committee as input into the WMO Strategic Plan 2024–2027;
- (4) To invite all the Members to actively contribute to the preparation of the Regional Operating Plan in order to ensure that their needs are adequately represented.

Decision justification:

- [Resolution 6 \(Cg-18\)](#) – WMO Regional Associations 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.
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Note: This resolution replaces [Decision 24 \(RA V-17\)](#) which is no longer in force.

Annex to Decision 3 (RA V-18)

Regional Association V Priorities for 2021–2023

Multi-Hazard Early Warning Systems (MHEWS): Strengthen national multi-hazard early warning/alert systems

- Enhance impact- and risk-based forecast and warning products and services to enable better preparedness and response to extreme meteorological and hydrological events;
- Strengthen national capacity in multi-hazard early warnings including in reaching the last mile;
- Strengthen partnerships with key national stakeholders in the disaster risk management community to increase reach to the community level.

Climate services: Broaden the provision of climate information and services

- Improve production and delivery of national climate information products and services that meet the needs of users;
- Refine products containing key climate indicators, seasonal outlooks, and improved characterization of extremes and associated impact information;
- Coordinate activities and products of the Regional Climate Centres to support NMHS and facilitate the sharing of expertise across Regional Climate Centres.

Hydrological services: Strengthen services in support of flood forecasting, warning and water management

- Improve hydrological services, forecasts and warnings for water resources, drought and flood risk management and planning as a contribution to the Water and Climate Coalition for Sustainable Development Goal (SDG) 6.
- Improve hydrological data networks in the region, including enhancement of rain gauge networks.

Aviation weather services: Strengthen services in support of aviation weather services

- Enhance the capability of Members to deliver weather services to meet the needs of the aviation sector, with a focus on meeting regulatory requirements and addressing the significant deficiencies in aeronautical services in the region;

- Provide National Meteorological and Hydrological Services (NMHSs) with further guidance and assistance in the provision of aviation services on a cost recovery basis;
- Strengthen the engagement of Members with aviation entities at the national and regional level, with a focus on participation in regional International Civil Aviation Organization (ICAO) activities.

Marine weather services: Enhance the value and provision of decision-supporting information and services

- Enhance and increase marine weather services by uptake of modern technology in service delivery and quality management principles;
- Identify critical gaps in marine data coverage, and address that through the integrated design of observing networks.

WMO Integrated Global Observing System (WIGOS): Optimize the acquisition of Earth system observation data through WIGOS

- Advance the implementation of WIGOS at the regional and national level including an initial regional operation of the Global Basic Observing Network (GBON) and the Regional WIGOS Centres in the pilot phase;
- Identify critical gaps in observational data coverage and address that through the integrated design of observing networks;
- Strengthen efforts to establish observational networks on a sustainable basis, including amongst regional Least Developed Countries (LDCs) and Small Island Developing States (SIDS) Members, through the Systematic Observations Financing Facility (SOFF) to achieve GBON compliance.

WMO Information System (WIS): Improve and increase access to, exchange and management of observation data and derived products through WIS

- Foster the continuous growth and evolution of WIS amongst regional Members to accommodate and exploit the different technical capabilities of Members.

Global Data Processing and Forecasting System (GDPFS): Enable access and use of numerical analysis and prediction products from the WMO seamless GDPFS

- Enhance the GDPFS, including the sustainment of the Severe Weather Forecasting Programme (SWFP), to enable all Members to improve their national predictive capabilities and benefit from advances in quantitative model- and impact-based forecasting products.
- Contribute to the implementation of Seamless GDPFS particularly in developing and running pilot projects identified in the S/GDPFS Collaborative Framework.

Address the needs of developing countries, especially SIDS to enable them to provide and utilize essential weather, climate, hydrological and related environmental services

- Mobilize strategic resources involving development partners and national governments and assisting NMHSs to develop long-term strategies and operational plans to address the identified capacity needs.
- Increase visibility and sustainability of NMHSs in LDCs and SIDS by demonstrating, promoting and communicating the societal-economic value of their weather, climate, water and related environmental observations, research and services.

Develop and sustain core competencies and expertise

- Support Members to acquire the qualification and competencies required for effective service delivery through appropriate education and training programmes, with a focus on marine and aviation competencies, leadership and management training, and observations instrumentation.
- Support cooperation between developing and developed Members and full utilization of the WMO Regional Training Centres.

Strengthen effective partnerships for investment in sustainable and cost-efficient infrastructure and service delivery

- Strengthen partnerships and alliances among Members to share knowledge, technology and expertise with an emphasis on the use of twinning arrangements.
- Establish strategic, functional and mutually beneficial development partnerships and alliances with the key global, regional and national entities in the United Nations (UN), intergovernmental and non-governmental organizations, the private sector, and academia.
- Develop institutional and legislative frameworks which support the national mandate of NMHSs to deliver services.
- Establish principles and guidance for successful public-private engagement and facilitate a continuous dialogue between national and regional players.
- Provide NMHSs with further guidance and assistance in the assessment and enhancement of socioeconomic benefits of their marine, aviation and public weather services.
- Strengthen regional and national community outreach and education programmes.

Optimize the Regional Association structures as well as coordination and working mechanisms for more effective decision-making

- Strengthen the relationships and interactions between regional WMO bodies and other regional bodies with similar mandates, such as the Pacific Meteorological Council (PMC) and the Association of Southeast Asian Nations (ASEAN).
- Implement the decisions of Congress on optimized constructs, processes and duties of regional WMO bodies to enhance efficiency and effectiveness and good governance.
- Organize the working structures of the region to ensure effective alignment of regional working programmes with areas of priority need.

Decision 4 (RA V-18)

WMO World Weather Information Service platform

Regional Association V (South-West Pacific):

Noting the current status of participation in the World Weather Information Service (WWIS) initiative as summarized below:

- (1) Based on data from 1 January to 20 July 2021, the number of Members providing forecast information on WWIS in RA V is 11 out of 24 Members,

- (2) Of the 11 Members that participate in WWIS, six of them were providing forecasts for 25 to 30 days per month. The others are providing forecasts for all the days of the month.
- (3) 7 out of the 11 Members are providing forecasts for at least 10 cities. Others are providing for a smaller number of cities, which is understandable considering they are Small Island States,
- (4) 6 of the participating Members provide forecasts with 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 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 Members' participation in the WMO WWIS initiative, please click [here](#).

Decision 5 (RA V-18)

Regional Basic Observing Network (RBON) Design

Regional Association V (South-West Pacific) decides:

- (1) To initiate the foundation of the RBON by designating all selected observing stations from the Regional Basic Synoptic Network (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 RA V Working Group on Infrastructure to undertake the following activities in support of the implementation of the RBON in the region:

- (a) Prioritize application areas relevant to the region, and catalogue regional observational user requirements related to those areas to be met by RBON;
 - (b) Undertake an initial RBON design that complements the GBON design, and define specific criteria for the selection of RBON stations, considering regional needs and priorities, following the process to be defined by the Commission for Observation, Infrastructure and Information Systems (INFCOM);
 - (c) Define the role of the Regional WMO Integrated Global Observing System (WIGOS) Centre(s) in the region, in particular to provide the tools necessary to assist in the design of RBON;
 - (d) Develop the roadmap for the RBON implementation, in compliance with the RBON related regulations specified in the *Manual on the WMO Integrated Global Observing System - Annex VIII to the WMO Technical Regulations* (WMO-No. 1160), including section 3.2.3 Regional Basic Observing Network and Appendix 2.1 Observing Network Design Principles;
- (3) To further request the Working Group on Infrastructure to explore the interest among Members in establishing an RBON pilot activity on regional data exchange of certain types of observations relevant to the prioritized application areas;
 - (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 - Annex VIII to the WMO Technical Regulations* (WMO-No. 1160);
 - (5) To request the Working Group 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 invite regional partner organizations and programmes to participate in relevant implementation activities;
 - (8) 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 System - Annex VIII to the WMO Technical Regulations*, 3.2.3 Regional Basic Observing Network (WMO-No. 1160); *Resolution 9 (RA V-17)* - Regional WMO Integrated Global Observing System Implementation Plan 2018–2021; *Decision 19 (RA V-17)* - Regional Basic Observing Network pilot in Region V (South-West Pacific).

Decision 6 (RA V-18)

Capacity Development in Regional Association V

Regional Association V (South-West Pacific) 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 (EC) Capacity Development Panel, namely:
 - (a) Policy Development and Institutional Matters;
 - (b) Human Resources Development, Education and Training;
 - (c) Capacity Development through collaborations with WMO Technical Departments;
 - (d) Capacity Development through Resource Mobilization, Partnerships and Development Assistance;
 - (e) Revision of Capacity Development Strategy;
- (2) Urges its Members to submit information on capacity status, development needs and initiatives in their respective countries to the Capacity Development Panel during the revision process, towards ensuring that the assessment of development needs/gaps in the region feeds into the revised Capacity Development Strategy (2022);
- (3) Requests the Management Group to review and endorse the revised Capacity Development Strategy, with the support of Regional Office and relevant Secretariat Departments, for the purpose of better understanding the capacity of regional Members and ensuring harmonized WMO support in the region;
- (4) Appreciates the positive and continuous roles of Regional Training Centres of WMO in RA V – RTC Indonesia and RTC Philippines in regularly delivering capacity-building activities to enhance capacities of Members in the Region;
- (5) Appreciates the continued support of the Meteorological Service Singapore (MSS) to the delivery of the Leadership and Management Programme for Senior Management of National Meteorological and Hydrological Services;
- (6) Also appreciates the continued support of the Secretary-General to the leadership and management development of National Meteorological and Hydrological Services (NMHS);
- (7) Requests the Secretary-General to continue with the support to skill, knowledge, leadership and management development activities, particularly with an emphasis on socioeconomic issues, strategic planning and communication skills.

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 for more interaction and cooperation among the Regional Training Centres (RTC) in and outside the region and (2) the need to innovate in such a way as to provide education and training activities.

Decision 7 (RA V-18)**State of Climate Report in the South-West Pacific****Regional Association V (South-West Pacific) decides:**

- (1) To welcome the ongoing effort to develop the first edition of the WMO State of Climate Report (SoC) in the South-West Pacific for 2020, in collaboration with Members, international data and analysis centres and the United Nations system organizations. The SoC report is planned to be launched in 2021 at a high-level event and submitted at relevant United Nations Framework Convention on Climate Change (UNFCCC) events;
- (2) To consider establishing a process for the publication of the State of Climate Report in the South-West Pacific 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 (RCCs) and Regional Climate Forums (RCFs) and the approach taken in the annual WMO State of the Global Climate and State of Climate Services reports. The report will need to remain consistent with the global reports and indicators;
- (3) To entrust the Management Group, with the support of the RA V subsidiary bodies in charge of climate services and the Secretariat, to oversee the delivery of this report in a timely manner;
- (4) To encourage contributions to future reports, particularly from authors from Small Island Developing States within the region;
- (5) To continue to partner in this process with the regional entities of the United Nations system organizations and other relevant organizations, and to consult with them and invite them to collaborate on this report, particularly on high-impact events' data and input regarding the climate impacts on socioeconomic sectors, and on climate adaptation and mitigation policies and practices;
- (6) 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 higher levels.

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.
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Decision 8 (RA V-18)

Public-Private Engagement

Regional Association V (South-West Pacific) decides:

- (1) That the RA V president and the Management Group should give due consideration to [Guidelines for Public-private Engagement](#) (WMO-No. 1258) in planning relevant regional activities, in particular those for raising mutual awareness and building trust between the sectors, and utilizing the potential of public-private engagement in bridging the capacity gap;
- (2) To encourage the RA V 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 common goals for the public good, and to consider appropriate mechanisms for engagement with the above-mentioned sectors when designing and implementing existing and future projects and initiatives in RA V;
- (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 socioeconomic benefits.

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.

1. The Executive Council at its seventy-second session (EC-72) endorsed the Guidelines for Public-private Engagement, which has been published (2020 edition) on the WMO website as a guiding document for Members pursuing cooperation with non-State entities. The aim of these guidelines is to inform and facilitate global, regional and national actions by WMO and its Members undertaken to encourage proactive engagement among stakeholders in the public, private and academic sectors for the purpose of providing better services to governments, economies and citizens.

2. Since the Eighteenth World Meteorological Congress (Cg-18) there have been several Public-private Engagement (PPE) activities specifically related to RA V which aimed at raising awareness of the Members and identifying challenges and opportunities through better partnerships with the private sector, including the following:

- PPE Office’s briefing to the Regional Office for RA II and RA V to update the status of PPE-related policies and activities and to provide advice on possible regional activities at the RA II Regional Consultation Meeting held on 29 October 2020.

3. Through consultations with the regional office, it has been recognized that RA V needs 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 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 National Meteorological and Hydrological Service (NMHS) such as:

- PPE business models — how to build scalable models for various national scenarios;
- Long-term vision for NMHSs and for the enterprise as a whole;
- Legal frameworks enabling PPE;
- Data policy implementation;
- Sustainability of national systems — how the PPE could help;
- Human resources development;
- Resolving critical deficiencies within a clear time frame.

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

Decision 9 (RA V-18)

Systematic Observations Financing Facility (SOFF)

Regional Association V (South-West Pacific) decides:

- (1) To invite RA V members 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 political support and voicing the urgency of SOFF creation through various stakeholders and funding partners and the United Nations Framework Convention on Climate Change (UNFCCC) process;
- (2) To urge RA V members to commit to contribute to the further development and prompt implementation of the SOFF and the supporting Country Support Initiative (CSI) and Country Hydromet Diagnostics (CHD);
- (3) To invite RA V Members to actively engage with the Secretary-General and RA V 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.
- (3) [Resolution 4 \(EC-73\)](#) - Update of Regulatory Material Related to Establishment of the Global Basic Observing Network (GBON).

APPENDIX 4. LIST OF PARTICIPANTS

1. Officers of the session

'Ofa Fa'anunu President of RA V

2. WMO Members within RA

Australia

Andrew JOHNSON Principal Delegate
Louise WICKS Alternate
Robert ARGENT Delegate
Tim HAILES Delegate
Karl MONNIK Delegate
Sally MORGAN Delegate

Brunei Darussalam

Muhamad Husani AJI Principal Delegate
Shahalmie EMRAN Delegate

Cook Islands

Arona NGARI Principal Delegate

Fiji

Terry ATALIFO Principal Delegate
Viliame VEREIVALU Delegate

French Polynesia

Sophie MARTINONI-LAPIERRE Principal Delegate

Indonesia

Dwikorita KARNAWATI Principal Delegate
Ardhasena SOPAHELUWAKAN Alternate
Riris ADRIYANTO Delegate
Endarwin ENDARWIN Delegate
Anni Arumsari FITRIANY Delegate
Helminah HERAWATI Delegate
Iqbal IQBAL Delegate
Mohamad MUSLIH HUDDIN Delegate
Nurhayati NRUHAYATI Delegate

Tri NURMAYATI	Delegate
Donaldi Sukma PERMANA	Delegate
Ratih PRASETYA	Delegate
Rr. Yuliana PURWANTI	Delegate
Agie Wandala PUTRA	Delegate
A. Fachri RADJAB	Delegate
Nelly Florida RIAMA	Delegate
Bagus Rachmat RIEVAN	Delegate
Rusgito RUSGITO	Delegate
Maman SUDARISMAN	Delegate
Hasmororini SULISTAMI	Delegate
Edward TRIHADI	Delegate
Regina Yulia YASMIN	Delegate

Kiribati

Ueneta TOORUA	Principal Delegate
Mauna ERIA	Delegate
Thomas ZACKIOUS	Delegate

Malaysia

Muhammad HELMI ABDULLAH	Principal Delegate
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New Zealand

Norm HENRY	Principal Delegate
James LUNNY	Alternate
Paula ACETHORP	Delegate
Kevin ALDER	Delegate
Bapon FAKHRUDDIN	Delegate
John FENWICK	Delegate
Andrew HARPER	Delegate
Chris NOBLE	Delegate
Doug RAMSAY	Delegate

Philippines

Vicente MALANO	Principal Delegate
Esperanza CAYANAN	Alternate

Samoa

Afaese LUTERU TAUVALE	Principal Delegate
Asuao MALAKI LAKOPO	Delegate
Francella STRICKLAND	Delegate

Singapore

Chin Ling WONG	Principal Delegate
Darryl BOH	Delegate
Wee Kiong CHEONG	Delegate
Boon Ning CHEW	Delegate
Lesley CHOO	Delegate
Kwok Wah CHOW	Delegate
Patricia EE	Delegate
Vanessa LIM	Delegate
Jeff LO	Delegate
Aurel MOISE	Delegate
Raizan RAHMAT	Delegate
Jinny Claire SIM	Delegate
Cheryl TAN	Delegate
Tien Ser TAN	Delegate
Thea TURKINGTON	Delegate
Songhan WONG	Delegate
Cheng Xun YEO	Delegate
Kaiyuan ZHENG	Delegate

Solomon Islands

Tahani LLOYD	Principal Delegate
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Timor-Leste

Simao Teles FERNANDES	Delegate
Terencio T.T. FERNANDES MONIZ	Delegate
Flaviana FERNANDES PINTO	Delegate

Tonga

'Ofa FA'ANUNU	Principal Delegate
Laitia FIFITA	Delegate
Taaniela KULA	Delegate
Mafua 'i Fanga'utukakau MAKAKA	Delegate

Moleni TU'UHOLOAKI	Delegate
Rennie VAIOMOUNGA	Delegate

United Kingdom of Great Britain and Northern Ireland

Sarah JACKSON	Principal Delegate
Nyree PINDER	Alternate
Karen MCCOURT	Delegate

United States of America

Raymond TANABE	Principal Delegate
Courtney Jeanne DRAGGON	Alternate
Marcus AYDLETT	Delegate
Christopher BRENCHLEY	Delegate
Tom EVANS	Delegate
Elinor LUTU-MCMOORE	Delegate
John NANGLE	Delegate
Susan WEST	Observer

3. WMO Members outside RA**China**

Wanzhi XU	Observer
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4. Invited experts

Karolin EICHLER

5. Representatives of international organizations and other bodies

Asian Disaster Reduction Centre (ADRC)

Gerald POTUTAN Observer

The European Cooperation in Science and Technology (COST)

Deniz KARACA Observer

Food and Agriculture Organization (FAO)

Hideki KANAMARU Observer

The Association of Hydro-Meteorological Equipment Industry (HMEI)

Josephine WILSON Observer

The International Centre for Water Hazard (ICHARM)

Mamoru MIYAMOTO Observer

The Secretariat of the Pacific Regional Environment Programme (SPREP)

Nihmei SALESA Observer

6. Presidents of constituent bodies and Chairs of other bodies

Gerhard ADRIAN President

Ian LISK President of SERCOM

7. Regional Hydrological Adviser

John FENWICK Regional Hydrological Adviser

For more information, please contact:

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