

REPORT OF THE SERCOM MANAGEMENT GROUP

3rd Face-to-Face Meeting



Cape Town, South Africa
1-5 December 2025

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Meeting Objectives

- i. To develop proposals for consideration by SERCOM-4 of reductions in scope of SERCOM 2024-27 Work Programme and consequential top-level (reporting directly to MG) structural changes;
- ii. To agree changes (for implementation in Q1 2026) to SERCOM Standing Committees' subsidiary body structures based on the guiding principles put forward by P/SERCOM and consequent proposals submitted by the SCs;
- iii. To ensure alignment of current and future SERCOM activities with the work of other WMO bodies;
- iv. To develop proposals for consideration by SERCOM-4 of updates to the WMO technical regulatory framework (Tech Regs, Manuals, Guides and supporting guidance);
- v. To agree a draft F2F meetings and SERCOM sessions schedule through until SERCOM-5 (Q1/Q2 2028) to include alignment with WMO strategic planning (2028-31) process.
- vi. To share initial thoughts on how AI-based capabilities are likely to impact respective application areas to better inform wider WMO initiatives and plans.

1. Opening, Agenda and Organization of the Meeting

The 3rd SERCOM Management Group face-to-face meeting opened on 1 December at 9:00 am in Cape Town, South Africa. The tentative agenda is provided in Annex I, and all documentation was made available beforehand on the meeting's mini-site ([SERCOM Management Group 3rd face-to-face meeting](#)). The list of participants who attended in person (plus a few invited to attend remotely) is provided in Annex II.

The meeting was opened by Mr Ian Lisk, SERCOM president (P/SERCOM), who thanked the South Africa Weather Service (SAWS) for hosting the meeting. He brought to the attention of participants the ongoing reform process investing the Secretariat, which translated in limited physical attendance of relevant Secretariat focal points; and noted the regretful unavailability of VP Ray Tanabe and C/SC-MMO Allison Allen, both engaged in domestic restructures at NOAA. He also noted that, compared to the gender balance during SERCOM MG-2 in 2023, the representation has significantly improved, with an equal gender distribution of participants.

The opening speech was followed by the Chair of the SAWS Board, Ms Sandika Daya, who welcomed all participants to the meeting. She noted the unprecedented climate extremes recorded in 2025, and recognized the WMO role in guiding NMHSs, according to the WMO Strategic Plan that reflects Members' needs. Ms Daya underlined the regulatory role of WMO, and that NMHSs often require technical and financial support to meet the provisions of Technical Regulations. However, she also reminded how compliance with the Technical Regulations will contribute to achieve SDGs, especially in support to energy, water, and agriculture sectors, hence adding value to the initial investment. She also noted the cordial relations between South Africa and WMO, with the recognition of SAWS expertise which is well used in supporting other countries in the SADC region. Concluding her intervention, the Chair of the SAWS Board reaffirmed the engagement of SAWS in continuing the implementation of WMO activities in relation to Early Warning for All initiative (EW4All), Severe Weather Forecasting Programme (SWFP), and Flash Flood Guidance System (FFGS) among others.

Finally, the Senior Director of the WMO Services Department, Dr Johan Stander, provided his deepest appreciation to the South African Government, and particularly the South African Weather Service for hosting the meeting. He congratulated the government for launching the EW4All initiative at the national level, supporting the other SADC countries, and successfully hosting the G20 meeting. Dr Stander noted the need for SERCOM to work together with INFCOM, reflecting the good cooperation spirit currently ongoing at the Secretariat level between the Services and Infrastructure Departments. He referred to the Youth Action Plan recently approved by Congress and wished to see this implemented by the NMHSs. He noted the emerging technologies, AI and ML on which he said we need to move together to embrace the technologies, working closely with the Research Board.

The opening concluded with a tour de table during which participants as in the annexed list.

2. Strategic and Governance Matters

2.1. Review of MG Tors & Composition – Overview of WMO Governance Mechanism

P/SERCOM reminded the composition and terms of reference of the SERCOM Management Group.

He also reminded participants about the overall governance of WMO, and which role should the technical commissions be playing. For the benefit of participants, P/SERCOM also reminded the Management Group about the Rules of Procedure of Technical Commissions (WMO-No.1240) and the different types of subsidiary bodies. Particularly, he underlined that the MG has full decisional power on the establishment or disbandment of second level subsidiary bodies, but not on the first level ones, for which the SERCOM plenary should be deciding. Regarding the composition of these subsidiary bodies, he also reminded about the definition of the different roles listed in Annex IV of WMO-No.1240. This provided also the opportunity to clarify the role of the Secretariat in the meeting, which is purely to support the Management Group and, if needed, remind about the boundaries in which the group is to operate.

P/SERCOM reminded the Management Group about the hierarchy of WMO planning, which sees the Strategic Plan (SP) at the top of the hierarchy. From the SP, the hierarchy cascades down to the work programmes of technical commissions and regional associations and finally summarized in a detailed Operating Plan managed by the Secretariat. He reminded as well that any thematic planning and (long-term) plans (e.g. for hydrology, aviation, etc.) should be properly reflected at all levels in such hierarchy, and seen as a kind of “thematic filter” for the benefit of specific sectors to reply, for example, to the question “what is WMO plan on hydrology/aviation/agricultural meteorology for the next intersessional period?”. Mindful also of the fact that the Major Work Programmes descriptions detail the responsibilities of each stakeholder (TCs, RAs, RB, Members and the Secretariat), P/SERCOM concluded his introductory presentation with a draft timeline of the next steps related to SERCOM until SERCOM-5 in 2028.

2.2. WMO Strategic Planning and Budget Update

C/PFPO, Assia Alexieva, presented on Insights from WMO Sub-regional Consultations. Drawing on the results of WMO’s 2025 sub-regional consultations, she presented the major trends influencing the next WMO Strategic Plan (2028–2031). The consultations reaffirmed that the future of NMHSs will be shaped by rapid technological change, especially the rise of AI and digital tools, alongside expanding private-sector involvement and persistent disparities in national capacities. Many Members—particularly the most

climate-vulnerable—face existential threats and increasing service demands, making agility, innovation and impact-driven governance more important than ever.

C/PFPO outlined the extensive engagement process used to gather Member perspectives, which included a pre-workshop survey covering 84 Members and ten interactive workshops held in all UN languages, with participation from 131 Members. These sessions asked Members to identify the trends likely to shape their NMHSs over the next two decades, the challenges they expect to face, and the areas where WMO support is most needed.

Across all regions, Members described a similar set of pressures. They anticipate that AI/ML will become central to forecasting and service delivery, while demand for tailored, sector-specific and impact-based services will continue to grow. At the same time, NMHSs expect difficulties in modernizing observing systems, maintaining digital infrastructure, ensuring data quality, and developing the workforce required for an increasingly technical service environment. Many expressed concerns about losing their authoritative voice in a crowded information marketplace and highlighted gaps in legal mandates, financing mechanisms and user-engagement approaches.

When asked where WMO should focus its support, Members overwhelmingly prioritized guidance on integrating AI and machine learning, strengthening observing networks, and advanced forecasting and nowcasting training. They also called for help in re-skilling staff, improving quality control and calibration practices, and building impact-based and sector-specific services across domains such as agriculture, health, energy, transport, hydrology and air quality. Members further requested support for multi-hazard early warning systems, legal and institutional modernization, digital platforms, and regional capacity-building initiatives. Most of these needs fall directly under SERCOM's remit.

From these inputs, several emerging priorities were identified for SERCOM: accelerating digitalization and innovation, expanding technical guidance for impact-based and sectoral services, strengthening Members' institutional and financial resilience, and enhancing communication, coordination and quality assurance. Members also emphasized the need for WMO to help them develop investment cases, socio-economic benefit assessments and cost-recovery models to support sustainable financing.

The presentation concluded by considering the implications for the Strategic and Operating Plans for 2028–2031. SERCOM, together with INFCOM and the Research Board (RB), is expected to contribute technical priorities and requirements early in 2026, ahead of PAC and Executive Council discussions. Given the converging challenges and heightened expectations from Members, SERCOM was urged to take a proactive role in shaping a forward-looking, Member-driven plan—one that supports innovation, strengthens operational capacity and ensures that NMHSs remain authoritative, trusted and effective in a rapidly changing world.

Action 1: P/SERCOM to review the implications of sub-regional consultation results on the Strategic and Operating Plans for 2028–2031 given that SERCOM, together with INFCOM and RB, is expected to contribute technical priorities and requirements early in 2026, ahead of PAC and Executive Council discussions.

During the discussion, a point was raised by C/SC-HYD in relation to the terminology used by C/PFPO in her presentation while referring to the recipients of the consultations being "Permanent Representatives, International Advisers and Hydrological Advisers": despite its wide use within the regional associations, the term "international adviser" is not an officially defined role in WMO Convention and General Regulations (WMO-No.15), (contrary to hydrological adviser, defined in Regulation 5(b)). The SERCOM MG therefore advised/reminded the Secretariat to avoid inferring that "international advisers" are at the same level as Hydrological Advisers.

2.3. Report of P/SERCOM including Cg-Ext(2025) Outcomes & SERCOM Work Programme Review/Update

P/SERCOM presented updates related to SERCOM since EC-79. Besides the regular quarterly virtual meetings of the subsidiary bodies, the following meetings of subsidiary bodies were held face to face since June 2025:

- AG-SEB 1st In-Person Meeting, Geneva Switzerland, 13-14 November 2025
- SC-AVI-4, Geneva, Switzerland, 4-6 November 2025
- SC-DRR-2, Sao José do Campos, Brazil, 28-31 October 2025
- SC-AGR, Marrakesh, Morocco, 28-30 October 2025
- SC-MMO-2, Hamburg, Germany, 15-18 September 2025
- SC-HYD Core Group and Technical Drafting Team Meetings, Geneva, Switzerland, 22-26 September 2025

In addition, P/SERCOM attended the following meetings in-person (unless otherwise stated)

- INFCOM Officers and Chairs Meeting, Geneva, Switzerland, 25-26 November 2025
- Cg-Ext (2025) and EC-Ext (2025), Geneva Switzerland, 20-24 October 2025
- HMEI GA-25, Vienna, Austria, 15 October 2025
- 12th RB (VP Angela Corina) and 4th SAP Meetings, Geneva, Switzerland, 30 September 3 October 2025
- Virtual Technical Coordination Committee (TCC-2(2025)) meeting, 15-18 September
- Virtual Capacity Development Panel (CDP), 23-25 September 2025 (P/SERCOM represented as VP Sena was unavailable)
- Virtual RA V-19(I), 9-11 September 2025 (VP Sena and briefly P/SERCOM)
- WMO AI Conference, Abu Dhabi, UAE, 9-11 September 2025
- Advancing Volcanic Hazards in EW4All workshop, Geneva, Switzerland, 7-9 July 2025
- TRCG, Geneva, Switzerland, June 2025

In relation to the TRCG (Technical Regulations Coordination Group), it was noted that this is a group internal to the Secretariat with the participation of Presidents of Technical Commissions, revamped in early 2025 to supervise and assess compliance of the proposed amendments to the technical regulations to the relevant guidelines (WMO-No.1127). This group has however initiated a wider analysis of the publication development modalities, and it is expected (in 2026, once re-established following the Secretariat Reform) to clarify the process for development of WMO technical publications. Concerning technical publications, SERCOM MG was reminded that:

- a. most of the deliverables of SERCOM relate to technical publications (and in a couple of cases, SERCOM experts are also contributing to general information publications such as the Global State of the Climate reports of the State of Water Resources), and
- b. for the sake of the discussion of documents proposed for the SERCOM-4 session, only Tier III to Tier I need to be presented to SERCOM in plenary (Tier III – Guides, to be approved by SERCOM through Resolutions; Tiers II and I as recommendations to Congress)

Still in relation to publications, it was noted how, from an analysis of past reports of P/SERCOM in 2022 (SERCOM-2), 2023 (Cg-19), 2024 (SERCOM-3), and 2025 (EC-79), not all publications declared as finalized have been published on the WMO e-library. In order to a) optimize the resources and efforts invested in finalizing those publications for the benefit of Members, and b) achieve deliverables that are in fact “low hanging fruit”, it would be beneficial for the Secretariat to undertake the “last mile” and get those publications edited and processed for their inclusion in the e-library.

Action 2: Secretariat to focus on finalizing the publications listed in Annex III – Publications pending finalization – Q1/Q2 2026

P/SERCOM then introduced the main outcomes of the Congress extraordinary session (and the extraordinary session of Executive Council that followed it) in October 2025.

The main success of Congress, from SERCOM point of view, has been clearly the endorsement of the amendments to Technical Regulations to include EWS ([Resolution 1 Cg-Ext\(2025\)](#)). As a follow up, Congress requested SERCOM to develop a Guide on Early Warning Services and related training material, and to explore the need for revision of parts of other technical regulations to ensure alignment with the proposed amendments.

Another technical topic covered by Congress was the inclusion of AI in the WIPPS: this translated in actions mainly to be implemented by INFCOM, but with the support of RB and SERCOM, to:

- support Members to plan and execute WIPPS pilot projects
- develop a draft new WIPPS strategy, including the incorporation of AI into WIPPS
- enhance the capacity development on the use of AI under WIPPS

Besides the approval of the Youth Action Plan, another topic debated at Congress and that has a direct impact on SERCOM is the reform of the Secretariat and the newly established Task Force to prepare proposals for prioritization (or deferral) of components of the Strategic and Operating Plans. This Task Force (which includes also P/SERCOM and whose terms of reference are included in [Resolution 2 EC-Ext\(2025\)](#)) has the objective to formulate proposals for prioritization or deferral of activities, as planned to be discussed at the Management Group in the following days.

Such a prioritization should aim also at optimizing resources: noting the different thematic subsidiary bodies focusing on similar cross-cutting topics (e.g. capacity development), better coordination could be sought with CDP and regional associations on cross-cutting topics such as Capacity Development, QMS, Business Continuity Management, or Socio-Economic Benefits. This exercise will likely result in the reduction of the number of dedicated subsidiary bodies related to these cross-cutting topics currently existing under different Standing Committees. A larger involvement of other actors would also help decrease the burden on SERCOM, and a better synergy with other entities such as the regional associations.

Action 3: P/SERCOM to use the outcomes of the SERCOM MG 3 meeting to inform/contribute to the work of the EC Task Force on the Review of 2024-27 Strategic Priorities to prepare proposals for prioritization (or deferral) of components of the Strategic and Operating Plans (Resolution 2 EC-Ext(2025)).

Action 4: P/SERCOM to consult with regional associations and Capacity Development Panel about the roles and responsibilities for cross-cutting topics (Capacity Development, QMS, Business Continuity Management, Socio-Economic Benefits, etc.) to enable the delivery of updated SERCOM work programme proposals at SERCOM-4

Notwithstanding the need to prioritize activities during the current shortage of financial and human resources, P/SERCOM also highlighted new activities that will need to be reflected in the work programme to be presented at SERCOM-4, as requested by SERCOM-Ext(2025) or EC.

From [Resolution 1 SERCOM-Ext\(2025\)](#): SC-DRR in close coordination with INFCOM should examine, in consultation with regional associations, efficient and feasible coordination procedures for cataloguing hazardous events (CHE) at regional level between WIPPS Designated Centres and Members affected. Also, SC-DRR should further coordinate the possible consolidation of similar hazardous events and submit an updated WMO Event Types List and updated Guidance to SERCOM-4. In cooperation with INFCOM, SC-DRR should guide and facilitate the development of a highly structured and well-documented process to ensure that the WMO-CHE can be cross-analysed with other data collections such as loss and damage, early-warnings, disaster impact databases and others.

Also, as a follow up to Decision 2 (EC-79), the following tasks need to be added to the SERCOM work programme:

- propose to EC-80 the inclusion of geophysical hazards (earthquakes and volcanic eruptions) in the Hazardous Events list
- assist INFCOM in the development of requirements for cataloguing hazardous events (CHE) by WIPPS Designated Centres
- similarly, to follow up on Recommendation 1 (RA VI-19) on the establishment of a Regional Agricultural Meteorology Centre in RA VI, SERCOM to assist INFCOM in the development of requirements for such a centre

The same EC-79 decision 2 delegated to PAC (In response to Decision 16 (SERCOM-3)) to consider the definition of "developing country" and make a proposal to EC-80. This topic of defining "developing countries" led to a lot of tense debate at last Congress Extraordinary, making it in a sense a highly "political" session.

P/SERCOM also took the opportunity to highlight that one of the impacts of the reform of the technical commissions in 2019 has been a significant reduction in the number of application-specific technical experts attending (face-to-face and online) the 2-yearly sessions of the technical commissions. Feedback from WMO experts strongly suggests that this has resulted in a consequent reduction in the wider (all-important) expert engagement in the work of WMO. One mean of addressing this issue would be for each WMO application area to look to convene an in-person global technical conference once every 4-years or so, noting that such a (good) practice is already undertaken as part of the 4-yearly planning and budgeting process by SC-AVI (science to services; volcanic hazards) and SC-MMO (joint symposium with IMO). The Management Group agreed and therefore invited each application area to consider the convening of technical conferences for their respective thematic areas within the overarching planning and budgeting process for the next financial period (2028-31).

Action 5: Additions to the SERCOM work programme

- **development of the Guide on Early Warning Services and related training material to include elements related to IBF, CHE, CAP and the urban environment**
- **revision of other technical regulations to ensure alignment with the proposed EWS-TR amendments**
- **provision of AI application-specific updates and service requirements to the WMO Joint Advisory Group on AI (see also Annex IV)**
- **supporting the implementation of the Youth Action Plan**
- **development of a proposal to EC-80 for the inclusion of geophysical hazards (earthquakes and volcanic eruptions) in the Hazardous Events list (Res. 1 SERCOM-Ext(2025) and Dec. 2 (EC-79))**
- **assisting INFCOM in the development of requirements for cataloguing hazardous events (CHE) by WIPPS Designated Centres (Res. 1 SERCOM-Ext(2025) and Dec. 2 (EC-79))**
- **assisting INFCOM in the development of requirements for the establishment of a Regional Agricultural Meteorology Centre (Recommendation 1 (RA VI-19) and Dec. 2 (EC-79))**
- **investigation of guidance material requirements and possible community of practice support for HydroSOS (see section 3.6)**
- **each application area to consider the convening of a major technical conference for their respective thematic area within the overarching planning and budgeting process for the next financial period (2028-31)**

2.4. SERCOM Expert Composition – Updated Approvals, Review of Statistics against SERCOM-3 ‘Balance Principles’, Proposals for Remedial Actions to Address Under-Representation of SERCOM Members

P/SERCOM informed the Management Group that the SERCOM membership stands at 136 Members as of 18 August 2025. SERCOM subsidiary bodies include participants from 75 countries. 61 Members that expressed interest in playing an active role in SERCOM activities are not represented in any subsidiary body, and among them, twenty-five have not appointed any experts to the Expert Network.

P/SERCOM further informed that data for the second intersessional period, updated to 24 October 2025, shows that SERCOM’s membership is composed of 39% women and 61% men. Regional participation is distributed across all six WMO regional associations: RA-I accounts for 16%, RA-II for 15%, RA-III for 13%, RA-IV for 18%, RA-V for 11%, and RA-VI represents the largest share at 27%.

A number of new experts were approved for SERCOM subsidiary bodies across several Standing Committees. SC-DRR welcomed two new core members, Fernando Sedano (from the European Commission Joint Research Center) and Craig Earl-Spurr (Australia), while Japan nominated Masaaki Ikegami as a core member of AG-WWMIWS-SubC/SC-MMO, in his role as METAREA XI (N) Coordinator. SC-HYD added three associate experts, including Rajesh Sharma (UNDP) and two nominees from India who will serve within the BIP-H Task Team (Sumit Sen from RTC Roorkee and Dattakumar Chaskar from Central Water Commission – Pune). Whilst acknowledging their continued support to the SC-HYD activity related to BIP-H, the MG did not endorse the proposals for a further two core experts from India to be added to the BIP-H Task Team membership as this would contravene SERCOM’s expert ‘balance’ principles. However, both experts contributions will still be duly acknowledged in the final draft of the BIP-H.

Action 6: Secretariat to acknowledge in the final draft of the BIP-H the names of all experts (i.e. to also include non-core SC-HYD experts) involved.

These appointments strengthen SERCOM’s technical capacity and broaden representation across key disciplines. To address the under-representation of some SERCOM Members and in view of the need to factor in longer-term expert and leadership succession planning considerations, P/SERCOM will lead a review by the Management Group of available Expert Profiles. The review will consider the wider utilisation of the ‘Associate Experts’ role to include engagement opportunities in the work of the SERCOM Management Group. In addition, the current composition of SERCOM’s subsidiary bodies will be undertaken in the next trimester, to identify inactive members and ensure better geographical representation.

Action 7: Secretariat to work with SC Chairs to ensure that details of the expert composition of SERCOM’s subsidiary bodies are up to date and to identify inactive members

Action 8: Secretariat to support P/SERCOM and SERCOM MG in reviewing the increased utilisation of the ‘Associate Experts’ role, including facilitating opportunities for wider engagement in the work of the SERCOM Management Group

The Secretariat will focus on improving the completeness and accuracy of Expert Profiles, enhancing outreach to under-represented Members and disciplines, and providing clearer onboarding materials. Regular verification cycles are proposed to keep expert data up to date, alongside incentives that encourage timely profile updates. Technical improvements to the database—currently progressing under the KIMI project—will support easier submission and validation of complete information. These actions aim to strengthen participation and improve the reliability of SERCOM’s expert database.

Action 9: Secretariat to further develop onboarding materials for experts participating in SERCOM

2.5. SERCOM Gender and WMO Youth Action Plans Review & Updated Priorities

In 2025, SERCOM advanced a series of initiatives aimed at strengthening gender mainstreaming across its work. Each Standing Committee appointed a Gender Focal Point—with the exception of SC-AVI—and the Management Group endorsed the Terms of Reference (ToRs) for these roles early in the year. To support capacity development, a dedicated SERCOM Gender Actions site was launched, offering free UN gender-training resources in all UN languages.

Engagement throughout the year included participation by the SERCOM Vice-President in the UNECE side event “Re-imagining the Future of Women in Food Systems” in April 2025. A flagship online workshop on mainstreaming gender across hydrometeorological services brought together a wide global audience. The event drew 430 registered participants, featured roughly 16 speakers, and presented 30 case studies across five thematic sessions spanning health, energy, agriculture, marine and aviation services, hydrology, and disaster risk reduction. The workshop highlighted a range of cross-sector challenges, opportunities, and emerging good practices.

Looking ahead, SERCOM will prepare a publication compiling all workshop case studies for presentation at SERCOM-4. It will also introduce an information document proposing updates to the SERCOM Gender Action Plan. SERCOM-4 will provide a platform to further encourage gender-focused discussions, while communication efforts on gender mainstreaming will continue to be strengthened throughout the year.

Action: 10 Compilation/publication of SERCOM Gender workshop case studies

Action 11: Development of a SERCOM-4 information document proposing updates to the SERCOM Gender Action Plan

Adopted at Cg-Ext in October 2025, the Youth Action Plan sets out a coordinated framework for strengthening youth engagement across the Secretariat, WMO Bodies, and Members, with overall oversight provided by the Executive Council. Its implementation will begin with the first Youth Focal Point Meeting, scheduled for 26-29 January 2026 in Tokyo, Japan.

The plan defines clear expectations for WMO Bodies, calling on them to involve young people more actively in governance, programmes, and decision-making processes, and to promote genuine intergenerational collaboration across scientific and technical areas. They are also encouraged to support youth participation at national level through targeted policies, formal focal points, and new opportunities for early-career professionals.

Members are invited to nominate their own youth focal points and to include young experts within national delegations and WMO working structures. In terms of governance, the plan outlines several priorities: assessing youth representation across WMO Bodies, proposing ways to strengthen it, ensuring each constituent body nominates young experts and a dedicated Youth Focal Point, and involving youth directly in session delegations. It also calls for the establishment of a WMO Youth Network to coordinate and support implementation of the plan.

Capacity-building actions focus on creating spaces for exchange and mentorship, including youth dialogues during WMO meetings and the integration of mentorship programmes to foster professional growth and knowledge transfer. Communications and partnerships efforts will emphasize the active involvement of youth focal points in campaigns, events, and communication planning, the use of youth-friendly tools and

digital platforms, and collaboration with external partners to ensure meaningful engagement in projects.

To track progress, the plan introduces a monitoring and evaluation approach that includes incorporating youth considerations into updates of the Strategic and Operating Plans, collecting age-disaggregated data across EC Panels and constituent bodies, reporting activities through Youth Focal Points, and reviewing and refining the Youth Action Plan on a regular basis.

Action 12: Explore possible options for SERCOM Youth FP to attend Youth Focal Point Meeting, 26-29 January 2026 in Tokyo, Japan

3. SERCOM Subsidiary Bodies

3.1 Standing Committee on Services for Aviation (SC-AVI)

Ms Andrea Henderson, Chair of SC-AVI, reported that SC-AVI-4 took place on 4-6 November 2025, followed by an SC-AVI Executive Coordination Meeting on 7 November 2025. Items discussed included expected outputs and progress, updates to WMO publications, prioritization of activities, structure, composition and ToRs of the Standing Committee in light of the WMO reorganization and the anticipated reduction in Secretariat support.

All SC/AVI outputs but one are on track. Output 1.4.11 on the Gender Action Plan is currently on hold, following the withdrawal of the SC-AVI gender focal point, Ms Claudia Riberio by the PR of Argentina.

Ms Henderson informed the MG about the publication of the recommendations from the AeroMetSci-2024 conference ([link](#)), already approved by SERCOM MG in Q2 2025 after consultation with INFCOM MG and RB. She also presented proposed submissions to SERCOM-4:

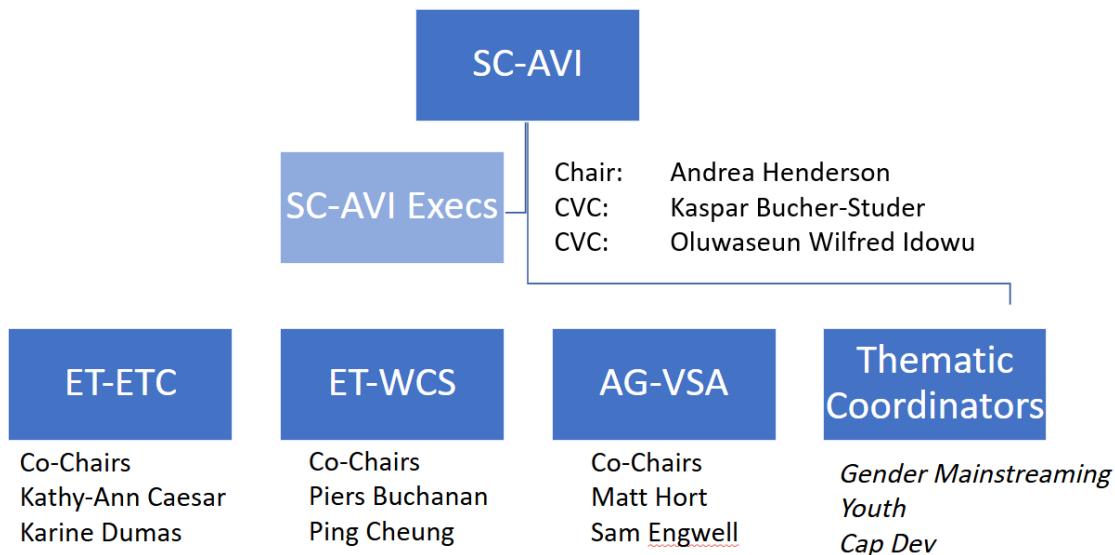
- Update to the Long-Term Plan for Aeronautical Meteorology (AeM Series No.5)
- Amendment to WMO-No. 49, Volume I
- Update to the *Guide to Competency* (WMO-No. 1205)
- Update to the *Compendium of WMO Competency Frameworks* (WMO-No. 1209)
- Update to the *Guide to Meteorological Observing and Information Distribution Systems for Aviation Weather Services* (WMO-No. 731)

She further presented the proposals for activities to be retained, reduced or rejected, where WMO technical regulations, guidance and the like, as well as the strategy for the transformation of aeronautical meteorology service delivery and communication and outreach were identified as necessary to retain with no reduction.

| AOP SO | Output description (summary) | Retain | Reduce | Reject |
|---------------|--|--------|--------|--------|
| 1.4.01 | WMO technical regulations, guidance and other resources | X | | |
| 1.4.02 | Scientific and technical advice to ICAO and other stakeholders | X | X | |
| 1.4.06 | Working arrangements / agreements with ICAO and other stakeholders | X | | |

| | | | |
|---------------|--|---|---|
| 1.4.07 | Strategy for the transformation of aero. met. service delivery | X | |
| 1.4.10 | Demonstrations and trainings showcasing service delivery good practice | X | X |
| 1.4.11 | Gender action plan (aero. met. inputs) | X | X |
| 1.4.12 | Communications and other outreach materials | X | |
| 1.4.15 | SC-AVI and subsidiary bodies work plans | X | |

Finally, the proposed revision of SC-AVI working structure was explained. SC-AVI has agreed to retain a four-body structure: SC-AVI with three subsidiary bodies (ET-ETC, ET-WCS, AG-VSA), noting that it was decided at SC-AVI-4 to dissolve the Task Team on the Long-term Plan for Aeronautical Meteorology (after the successful completion of its mandate), to update the responsibilities of leads of SC-AVI subsidiary bodies and to reduce the number of thematic coordinators.



Broader risks identified by the experts during the discussion included:

- Expert retention and replenishment (e.g. this year withdrawal of some members by their PRs), challenges in implementing balance (gender, regions, expertise)
- Experts face heavy national duties, reducing their ability to contribute
- Many experts accept posts, but do not contribute. Procedures for removing inactive members need to be highlighted to avoid inefficiencies
- Challenge to participate in meetings outside of normal working hours
- Gender focal point likely not supported by the home country
- Need to support young persons (could be first as observers)

SC-AVI tried a model with regional capacity development focal points, which however was not very successful. Closer cooperation with the activities of the regional associations should be reconsidered and further applied.

Action 13: Secretariat to highlight on SERCOM Community page the procedure to remove inactive members (ref. WMO-No.1240)

3.2 Standing Committee on Marine Meteorological and Oceanographic Services (SC-MMO)

The Standing Committee on Marine Meteorological and Oceanographic Services (SC-MMO) presented an extensive update on its activities, priorities, and challenges. The group emphasized its broad mandate within SERCOM and its collaborative relationships with IMO, IHO, and IOC, noting the benefits of this cross-cutting structure for areas such as service delivery, disaster risk reduction, and ocean-related initiatives. The committee highlighted successful engagement across the wider marine services community, including the productive SC-MMO-2 session held in Hamburg in 2025.

A major section focused on progress with the S-41X series of product specifications, which underpin interoperable marine weather and ice information within the S-100 framework. The report described strong collaboration with international partners and significant advances, particularly on S-412 Marine Weather Warnings. The committee expects S-411 and S-412 to reach first-edition documentation for SERCOM-4, while noting high expectations from the maritime sector and the need for Member readiness to generate S-100-compatible datasets. It also outlined the proposed approach to edition numbering and approval responsibilities (fast track, similar to the one used for the Manual on Codes WMO-No.306): S-412 ed. 1.0.0 would need to be approved by SERCOM (in plenary, as it contains changes related to technical specifications – see [IHO Resolution 2-2007 M3 07.10.2020 v1.0.pdf](#)); S-412 ed. 1.1.0 however could be approved by the SERCOM Management Group (revision to edition 1.0.0, normally the result of testbed by manufacturers, for which a higher approval process would delay the development process); and finally S-412 ed. 1.1.1 can be approved by SC-MMO leadership (as purely editorial change). This proposed approach is to be presented to SERCOM-4 for approval of the implementation process and its implications for Members.

The Marine Services Course was presented as a flagship capacity-building effort that has reached most WMO Regions, although the committee cautioned that limited funding and reliance on volunteers place future delivery at risk. Recent courses in Southeast Asia and French-speaking Africa demonstrated strong participation and completion rates, and additional regional requests continue to emerge. SERCOM MG was made aware that unlike for aviation, the competency framework is not mandatory, although SC-MMO suggests moving it closer to the aviation model. It was proposed to highlight the marine forecaster competency framework in the IMO Member State Audit Scheme (IMSAS).

The report noted the success of the 2nd WMO-IMO Symposium in 2024, which convened a large and diverse maritime audience and provided insights through an extreme-weather simulation exercise. Plans for follow-up regional workshops (Caribbean, Southeast Asia) and revitalization of the VOS Scheme were outlined.

Further updates included progress toward Iridium SafetyCast operationalization, the publication of income generation guidelines, strengthened collaboration on waves and storm surge activities, and the release of new WMO publications. The committee proposed retiring several SERCOM resolutions that have been completed or superseded at the next possible occasion (EC or Congress in 2027).

Key outcomes from the fourth WMO-IOC Joint Collaborative Board (JCB-4) meeting included the identification of shared priorities—particularly observations, data interoperability, resilience, and capacity building—and the intent to map service value chains to identify integration opportunities.

The committee outlined several resource and structural challenges, especially the observation-heavy focus of the Rolling Review of Requirements, the absence of mandatory marine forecaster competency regulations, and reduced Secretariat staffing. These limitations pose risks to maintaining the current level of technical support.

Looking ahead to SERCOM-4, the committee plans to propose streamlined maritime safety information standards aligned with IMO resolutions, updates to regulatory material, an S-41X implementation roadmap, storm-surge guidance updates, and RSMC

designations (further detailed information in Annex V – Proposed documents for SERCOM-4). It also presented draft priorities for 2026–2027, distinguishing between retained core activities, scaled/reduced initiatives, and items considered complete.

Regarding the proposals for activities in 2026-2027 to be retained, reduced and rejected ("refrigerated") or done, the core priorities retained as follows:

- Marine services regulatory materials including Tech Regs, Manual, Guides (1.4.03)
- Coordination with IMO, IHO, IOC/UNESCO as deemed critical partners (1.4.04)
- Marine WIPPS with designation for new non-nuclear Marine Emergency Response Centres (1.4.03)
- S-41X implementation (financial resources required to support developing members to utilise S41X reports) (1.4.04)
- SC-MMO workplan and associated meetings, including subsidiary bodies (1.4.16)

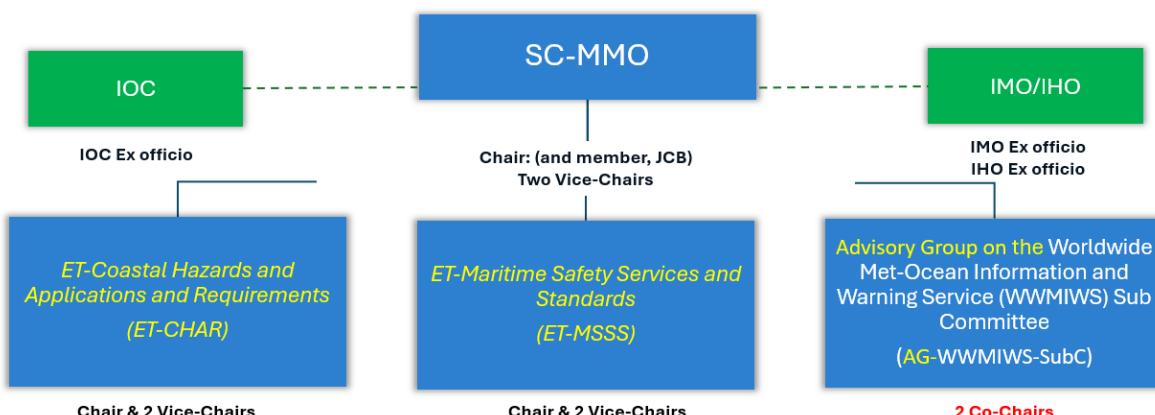
Scaled or conditional activities reduced as follows:

- Coastal Inundation Forecasting Initiative (CIFI) (1.4.05) – support on project-basis if requested, work closer with the regional associations
- Communication and outreach (1.4.14) – deemed sufficient at the moment, on hold except for the proposed S-41X video
- Marine Services Course (1.4.13) – dependant on external funding and resources, anticipated driven by work closer with the regional associations for future courses; and note the extensive work of MAR and ETR for supporting the delivery of these courses.

Rejected/Done:

- Ocean Implementation Plan (1.4.09) – already considered in the current WMO strategy
- Cost Option Guidelines (1.4.08) – published ahead of timeframe
- WMO/IMO Symposium (1.4.05) – completed and not required by the end of the cycle

Finally, the committee outlined proposed adjustments to its subsidiary-body structure, including retaining two key expert teams to address the core capacities needed (reduction to two teams, supported by focal points or Task Teams when needed) and refining the role of the WWMIWS Sub-Committee (*dropping the "Advisory Group on the" in the name, and possibly changing the name altogether to a simpler term*). This was the result of a thoughtful consolidation exercise, looking at the highest priorities but changing the focus of the ETs (e.g. removing coastal erosion).



A proposal to simplify Technical Regulations on Marine Meteorological Services was also introduced, aiming to clarify high-level obligations and harmonize links with other WMO regulatory and guidance materials.

The SERCOM Management Group was invited to note the report and take any further action it considered appropriate.

The SC-MMO is also seeking guidance on the expert approval process, especially in cases where experts were already nominated but need to “transfer” to the newly formed teams.

Action 14: Secretariat to highlight on SERCOM Community page the procedure to transfer experts from one team to another (ref. WMO-No.1240)

3.3 Advisory Group on Socioeconomic Benefits (AG-SEB)

Briefing the Management Group on the progress of the Advisory Group on Socioeconomic Benefits (AG-SEB), Ms. Nyree Pinder, Chair of the AG-SEB, opened with a short video highlighting the WMO community’s perspectives on the value of socioeconomic benefit (SEB) assessments. She reaffirmed the Advisory Group’s central role in strengthening multistakeholder engagement and noted the strong interest from high-level partners – including the World Bank, Green Climate Fund (GCF), Asian Development Bank (ADB) and the International Monetary Fund (IMF).

C/AG-SEB talked of the progress of generating the white paper that included the stakeholder engagement. The Chair proceeded to highlight achievements of the AG-SEB to date, including stakeholder interviews with NMHSs, development banks, and academic institutions that have shaped the AG-SEB’s priority output – the White Paper titled “Socioeconomic Benefits of Weather, Climate, Hydrological, Marine and related Environmental Services: The Role of WMO”. Ms. Pinder provided an update on the White Paper’s status and outlined the emerging recommendations to WMO and its Members, including recommendations on framing the value of SEB assessments, selecting appropriate methodologies, and partnership, resource and communication considerations. She further presented the recommendations and design aspirations for the development of the WMO SEB Toolbox, envisioned as a practical, user-oriented platform to help Members operationalize SEB approaches more systematically.

Looking ahead, the Chair outlined the emerging potential of AI in SEB analysis – from enhanced data-processing efficiency and advanced analytical insights to stakeholder behaviour simulations – further noting a proposal from GCF to integrate AI capabilities into the SEB Toolbox. Acknowledging concerns regarding Secretariat resource constraints following recent organizational changes, Ms. Pinder presented proposals for the retention and reduction of related activities. She proposed to retain both the completion of the White Paper in early 2026 and the continued development of the SEB Toolbox online platform, while proposing to reduce duplication across SERCOM SEB-related efforts by positioning the AG-SEB to oversee coherence. Ms. Pinder concluded by proposing the retention of the AG-SEB moving forward, emphasizing the central importance of its work for the long-term sustainability of NMHS and their services in the future.

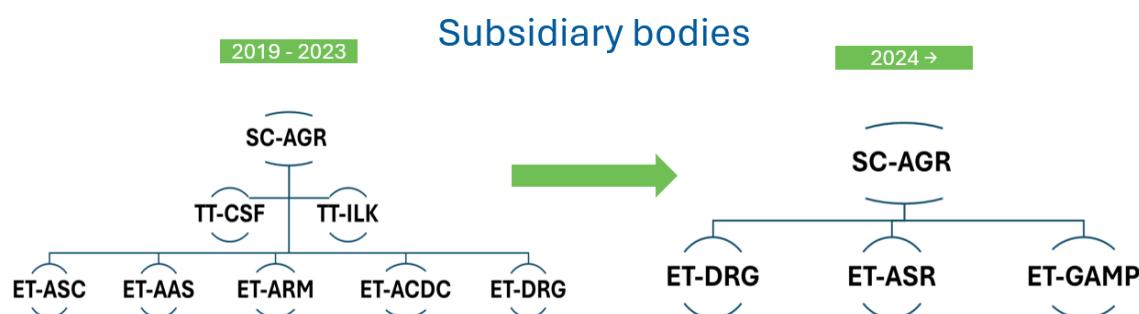
The Management Group recognised that there remain significant Secretariat and WMO funding challenges in continuing to support the work of the AG-SEB. However, given the progress already made and the importance of building on this success to deliver the necessary advice, guidance and tools to Members, the Management Group agreed that the AG-SEB should, on the basis of a wholesale review and update of its ToRS (increased regionally orientated focus), composition (to include possible RB social sciences representation) and ‘modus operandi’ (downscaled ad-hoc support by Secretariat), be retained as a subsidiary of SERCOM.

Action 15: To report to EC-80 as a follow up to Decision 12 (EC-74), to highlight how SEB considerations go far beyond the mandate of SERCOM and how SEB could contribute to resource mobilization for both the WMO Secretariat’s and Members’ activities in supporting awareness raising and advocacy at the national level

3.4 Standing Committee on Services for Agriculture (SC-AGR)

The SC-AGR Chair, Dr James Ijampi-Adamu, provided an update on progress achieved during the current intersessional period, with a focus on priority activities, restructuring of subsidiary bodies, and alignment with SERCOM and INFCOM processes. Additional progress was noted in streamlining workflows, improving coordination across regional partners, and advancing selected outputs despite operational constraints.

The Chair noted the reduction of SC-AGR structures from the 2019–2023 period into the current cycle beginning in 2024 with currently three Expert Teams. This was a reduction from five Expert Teams and two Task Teams. This restructuring reflects the need to consolidate functions and enhance agility under limited budgetary conditions. The three SC-AGR Expert Teams were set up and are meeting regularly. The Expert Team on Drought (ET-DRG) is working smoothly and is building on the outcomes from the SERCOM previous cycle. Expert Team on the Guide to Agricultural Meteorology Practices (ET-GAMP) is working well and is expected in progress more quickly with their work in 2026. The Expert Team on Agromet Standards and Regulations (ET-ASR) was renamed from the former Expert Team on Agromet Data and is working on its outcomes. This ET will need to have additional members in continue its work and this will be done in early 2026.



The Chair presented the progress made on online e-learning materials with possibility to add more should funding be available. A course on Communicating Agrometeorological Information has been created on the WMO Moodle Platform in conjunction with the WMO Education and Training Programme and a joint course on Introducing Crop Calendars for Climate Adaptation has been developed with FAO and is on the FAO e-Learning platform.

The Chair noted that WMO continues to be recognized in the drought community. The Drought Resilience +10 Conference held on Oct 2024 was a major success. SC-AGR will review the recommendations from this conference to see if there needs to be any follow-up for SERCOM. WMO and the Integrated Drought Management Programme (IDMP) was recognized at the 16th COP of the UN Convention to Combat Desertification (UNCCD) in December 2024 and will work with UNCCD on drought and aridity monitoring. WMO and IDMP will also be involved in the UNCCD meeting in Panama.

The Chair mentioned that the activities of the SC-AGR and the supporting Secretariat Unit was presented at UNFCCC COP30. The Executive Highlights of a joint WMO-FAO on extreme heat and agriculture was presented. Also, a side event on using AI for agricultural applications was also held as part of the AIM for Scale project.

The Chair then stressed the need to publish reports from previous and current SERCOM cycle. This issue has been discussed between the WMO staff and members of SC-AGR. One of the issues with the slow progress is limited WMO staff. The Chair is hoping to see the Secretariat support team grow through projects, secondments and Junior Professional Officers (JPO).

The Chair then presented the outcomes of the F2F SC-AGR meeting held in Morocco in late October 2025 which identified six high-priority activities recommended for retention.

These activities align with expected outputs defined in Resolution 3 (SERCOM-3) and include the following:

- Output A: Strengthening guidance and support for agrometeorological service delivery – i.e. revision of the Guide to Agricultural Meteorology Practices.
- Output D: Advancing drought monitoring, early warning systems, and related tools – linking with the EW4All initiative and the colleagues working on Disaster Risk Reduction (DRR)
- Output E: Developing harmonized capacity-building materials and strengthening training resources linking to regional associations and RTCs
- Output G: Review and refine the Implementation Plan for National Drought Early Warning Systems and Regional Drought Centres
- Output H: Supporting the rolling review of requirements for agrometeorology and development and alignment of regional agromet centre requirements under WIPPS.
- Output L: Supporting standardization of agrometeorological bulletins and piloting prototype digital agricultural advisories for NMHSs.

The Chair noted that several activities were merged to optimize resources amid reduced budgets and ongoing restructuring. Medium-priority activities are recommended for retention but with reduced scope. Low-priority activities are recommended for rejection. Medium and Low-priority activities include legacy tasks that no longer align with the SC-AGR's current focus or are not related to WMO core mandate.

There were several key thematic areas for strengthening agrometeorological services that were discussed on the SC-AGR which included the following:

- Agrometeorology and artificial intelligence;
- Virtual exchanges and user engagement;
- Mapping of capacity-building tools across RTCs;
- Case studies documenting impacts and good practices;
- Youth role in agromet services and gender inclusion;
- Enhancing communication through exchanges, videos, media outreach, webinars, and newsletters; and
- Developing a framework and strategy for capacity building.

The Chair concluded his report by reaffirming the SC-AGR commitment to advancing agricultural services within the framework of SERCOM priorities. The streamlined structure, clarified priorities, and cross-cutting initiatives will support improved service delivery and alignment with WMO strategic objectives.

Discussion focused on the modalities for ensuring the requirements for Agromet Centres to be included in the WIPPS Manual (WMO-No.485): understanding the amendments to the Manual will have to be endorsed by Congress in 2027, there is a need for INFCOM to issue such a recommendation based on requirements developed by SERCOM. For this purpose, a decision document supplemented by an INF will be needed for submission at SERCOM-4. In the meantime, the centre in Romania can work at national level to establish and test proposed mandatory functions (further detailed information in Annex V – Proposed documents for SERCOM-4).

SC-AGR will also explore further synergies with the regional associations, seeking also opportunities through voluntary contribution projects, in relation to training activities, which could include:

- the role of the youth in Agricultural services
- AgMet practices case studies already collected (potentially to be consolidated and showcased in a e-learning repository) based on interest demonstrated by Members
- WAMIS, to avoid the risk of phasing out of the initiative due to its refrigeration at the national level

Finally, the need for an improved dialogue and linkage with SC-CLI was underlined, especially considering the inclusion of AgMet information in regional State of Climate Reports.

3.5 Standing Committee on Climate Services (SC-CLI)

The Chair of the Standing Committee on Climate Services (SC-CLI), Prof. Qingcheng Chao, delivered an overview of progress under the Committee's 2024–2025 workplan. The update covered advancements across all Expert Teams and Task Teams, highlighted priorities for the next intersessional period, and reflected on restructuring considerations linked to broader WMO reforms and emerging technologies.

Prof. Chao reported steady progress across the Committee's subsidiary bodies. The Expert Team on Climate Information and Services (ET-CIDS) continued to strengthen CSIS implementation at regional and national levels, support RCCs and NFCS, and enhance sub-seasonal to multiannual monitoring and prediction. Several major technical deliverables are scheduled for completion by late 2025, with further CSIS and NFCS guidance planned for 2026. The Expert Team on Monitoring, Communication and Climate Variability (ET-MCVC) maintained leadership in authoritative climate monitoring and communication, producing global and regional climate reports, advancing methods for key climate indicator dashboards, and updating communication approaches while integrating AI/ML techniques. The Expert Team on Data Stewardship (ET-DDS) made significant progress on modernizing climate data governance, including an implementation roadmap for the SMM-CD, collaboration with INFCOM on DAYCLI messaging, revisions of major WMO data standards, and delivery of specialized training. The Expert Team on Capacity Development (ET-CDC) strengthened WMO's competency-based training framework, transitioned the Climate Services Checklist to electronic format, delivered regional and national training, and advanced work on a Climate Services Capacity Scorecard and revisions to WMO-No. 1247. The Task Team on National Frameworks for Climate Services (TT-NFCS) advanced stakeholder engagement, developed use cases, and enhanced collaboration with ET-CIDS on national CSIS implementation. The Task Team on Global Temperature and the 1.5°C Threshold (TT-1.5) refined WMO's method for estimating global warming, contributed the end-2024 assessment to the State of the Climate report, and prepared a scientific paper expected by end-2025, with the unified method planned for operational integration by 2026.

Turning to strategic issues, the Chair outlined four pillars guiding the restructuring of SC-CLI: organizational excellence; technical innovation; strengthened collaboration with INFCOM, the Research Board and major WMO and UN initiatives; and sustained resources and capacity. These considerations include preserving essential Expert Team functions, integrating CSIS into WIPPS, expanding producing-centre concepts for monitoring and projections, advancing impact-based and objective prediction across all timescales, and ensuring adequate expertise, multilingual training, and responsible integration of emerging technologies.

The Committee provided recommendations on activities to retain, reduce, or discontinue, noting that core functions linked to SERCOM-3 Resolution 2 should remain in place. These include NFCS implementation, climate watch and climate indices, RCC designation and support, modernization of WMO data standards, and leadership of the State of the Climate. Activities suggested for reduction relate to tools connecting climate science with adaptation and mitigation policy, and high-frequency operational monitoring of global mean surface temperature alongside communication practice assessments. No decision documents were proposed for SERCOM-4 at this stage, although this may be reconsidered if needed.

Finally, on subsidiary body structure, SC-CLI expressed a preference to maintain all five Expert Teams as distinct entities and to allow TT-1.5 to complete its work by mid-2026.

During the discussion evidence was given to the role of Impact Based Forecasting (IBF), often done in connection with the RCOFs, allowing partners to calculate possible impacts of the consensus outlooks.

The Management Group noted that some of the activities currently in the terms of reference of SC-CLI (especially in relation to data management) should be carried out under INFCOM. It also noted the absence of any references to the Expert Team on Integrated Health Services, which is now going to be open to opportunities posed by availability of Secretariat support and extrabudgetary resources. SERCOM MG therefore reserved itself the opportunity to reconsider the proposed structure and to discuss later in the week the future structure and terms of reference (see Section 5 below).

Action 16: Liaise with INFCOM to effect the transfer of climate data management activities leadership to INFCOM with responsibility for coordinating/establishing user requirements retained by SERCOM

3.6 Standing Committee on Hydrological Services (SC-HYD)

The Chair of SC-HYD, Dr Yuri Simonov, informed the MG that the Standing Committee on Hydrological Services (SC-HYD) has continued to advance its work across multiple priority areas, despite significant Secretariat staffing and budget constraints. Progress on all milestones is documented in the [SC-HYD Gantt Chart](#), with adjustments made to reflect the reduced availability of Secretariat staff.

In the area of capacity development, SC-HYD is prioritizing the urgently needed update of the Basic Instruction Package for Hydrology (BIP-H). Whereas the Basic Instruction Package for Meteorology (BIP) is contained in Appendix A of the technical regulations (WMO-No.49), the BIP-H was last published in 2003 as part of the Guidelines for the education and training of personnel in meteorology and operational hydrology (WMO-No.258). These guidelines are being revised to align with the definition of operational hydrology endorsed by Cg-18 and to incorporate developments in science, technology, and service delivery. Once finalized, it is planned to add the updated Guidelines to the Guide to the Implementation of Education and Training Standards in Meteorology and Hydrology (WMO-No. 1083). A dedicated workshop was held in Geneva in November 2025, and the revised content will contribute to updates of the WMO Technical Regulations, Volume III. Noting that this addition to WMO-No.1083 (A Tier III publication) would need to go to the forth sessions of technical commissions, further discussion will be needed at future SERCOM and INFCOM MGs meetings on the modalities of submission, as well as the possibility to include the BIP-H into Volume III of the technical regulations (WMO-No.49).

Action 17: Establish the modalities of BIP-H integration in WMO-No.49, as well as the approval process for the amendments to WMO-No.1083

One major achievement has been the strengthened engagement of WMO Members in the preparation of the State of Global Water Resources 2024. Participation and data sharing have notably increased since the report series began. In response to demand from regional associations, SC-HYD has initiated the development of regional water resources statements. In 2025, RA I and RA VI produced pilot versions, and RA II has included this work in its regional plans. Capacity-building workshops are scheduled to help countries generate national reports and implement standardized operational systems for water status monitoring.

HydroSOS has also made steady progress. The Streamflow Outlook Methodology and associated product specifications have been finalized, supporting ongoing work on data infilling techniques and blending global and regional products. HydroSOS is now active across 61 countries (including in the initial EW4All focus countries), in each WMO region, with 8 operating or semi-operating their services, 18 producing pilot products, and several others engaged through capacity development or project initiatives. A three-

phased regional training programme was successfully carried out in RA III from September to November 2025, and translation of training materials into English will enable expansion to additional regions. Governance arrangements will be clarified at HCP-8, particularly regarding approval pathways for HydroSOS deliverables.

SERCOM MG welcomed these successes but noted the need for clear publications on HydroSOS, as currently there is no formal guidance material available. These guidance materials should include also regional drivers, international frameworks and important reports that support hydrological and cryosphere services. A community of practice could also be established to facilitate the further development of HydroSOS.

SC-HYD will prepare several decision documents for SERCOM-4 (further detailed information in Annex V – Proposed documents for SERCOM-4). These include the new Flood Risk Mapping Guide, the Flood Forecasting Framework Concept Note and Implementation Roadmap, and an updated description of SC-HYD milestones to replace Decision 7 (SERCOM-3). Additional documents (C/SC-HYD's or P/SERCOM's report) will mention achieved deliverables (by then approved by the SERCOM MG) such as the guidelines on verification of hydrological forecasting (WMO-No.1364), impact-based forecasting for flood and drought guidelines (a topic highlighted as of great importance by the SERCOM MG, especially in relation to the documentation of impacts, bridging the gap with the CHE), the 2024 State of Global Water Resources report (WMO-No.1368), the launch of the Community of Practice on Flood Forecasting, and updates on HydroSOS progress and governance.

Looking ahead to 2026–2027, the SC-HYD presented a detailed prioritization of milestones based on core mandates, alignment with the Strategic Plan, implementation status, and potential risks. Cost estimates and staff requirements have been assessed, highlighting the need for both regular budget (RB) and extrabudgetary (XB) support, particularly for the Flood Forecasting Framework, HydroSOS, and capacity development activities. New milestones are proposed to be considered, including the review of Technical Regulations Volume III to ensure consistency with updates to Volume I, and the development of guidance on urban flood forecasting based on FFI-AG recommendations.

| 3R activities | Numbers | Milestones |
|---------------|---------|--|
| Retained | 23 | M1, M2, M3, M4, M5, M6, M7, M8, M9, M10, M12, M14, M15, M18, M19, M20, M21, M22, M25, M30, M32, M35 |
| Reduced | 3 | M16 (TRM), M23 (WRA/WRM), M31 (WIPPS) |
| Refrigerated | 7 | M17 (WEFE), M24 (Water Quality), M26 (Comms), M27 (AG-WCM), M33 (Policy), M34 (CC Mitigation), M36 (Marketing) |

NOTE: M11 has been merged with M1; M13 with M35; M28 to be integrated in the CAP HelpDesk; M29 concluded and delivered.

Action 18: add to the work programme Revision of WMO-No.49 Vol. III and guidance on urban flood forecasting

Finally, SC-HYD is proposing a streamlined organizational structure for the next SERCOM cycle. Instead of fixed Expert Teams, milestones will be led by core members, supported

by time-bound ad-hoc task teams as needed (the same as now, referring to "Milestones" as described in Decision 7 (SERCOM-3)). This approach reduces administrative burden while maintaining technical depth and allowing focal points from other bodies (for example, Research Board, which has recently updated the Hydrological Research Strategy and has a new Task Team established to follow up on hydrological research issues). A question was raised about the reporting line of the so-called Working Group on Digital Transformation for Hydrology and Water Resources (WG DT-HWR). It was clarified that this group is an inter-Secretariat (WMO, UNDP, ITU and UNCCD) initiative and avails itself of SC-HYD expertise, but does not report to SC-HYD. SC-HYD will look at the activities of this WG DT-HWR and report back to the VP Angela Corina who sits as SERCOM Focal Point in the JAG-AI. SERCOM MG also noted that the outcomes of this WG could feed the AI subgroup on EW4All led by ITU, WMO, UNDRR, and IFRC.

Action 19: SC-HYD experts to report back to VP Angela Corina on the main achievements and conclusions of the WG DT-HWR for her contribution to JAG-AI.

Only proposed official substructure will remain JET-CRYO (with considerations to drop the "Joint") continuing to reflect the point of view of experts from both SC-HYD and SC-CLI (and some focal points from INFCOM and RB).

Action 20: P/SERCOM to consider renaming "JET-CRYO" to "ET-CRYO", keeping balanced composition of hydrological and climatological expertise (and including relevant focal points from INFCOM and RB)

3.7 JET-CRYO

The Joint Expert Team on Cryosphere (JET-CRYO) has completed its first face-to-face meeting and produced a draft White Paper, which was shared with the SERCOM Management Group in October 2025. Comments are being incorporated, with a consolidated version expected by early 2026. The final document will be considered for inclusion in the Strategic Plan 2028–2031 and reported to EC-80 and will feed towards the shaping of the Cryosphere related priorities for Intersessional period 2028-2031, in the next Cg. The recommendations based on the white paper, will be submitted by SERCOM, INFCOM and RB through PHORS. P/SERCOM will be attending the next PHORS meeting taking place in February 2026 in New Zealand and report back to the SERCOM MG.

Action 21: P/SERCOM to report outcomes of February's EC-PHORS meeting to SERCOM MG

3.8 Standing Committee on Disaster Risk Reduction and Early Warning Services (SC-DRR)

Mr Osvaldo Moraes, Chair of the SC-DRR, briefed the SERCOM MG on the latest activities. The Standing Committee on Disaster Risk Reduction (SC-DRR) has advanced key deliverables to strengthen multi-hazard early warning systems and service delivery under the EW4All initiative. Major achievements include the completion of the new Early Warning Services section in WMO Technical Regulations (effective January 2027) and progress on the EWS Guide, IBF competencies, and CAP implementation support.

Subsidiary bodies have delivered significant outputs:

- Advisory Groups advanced tropical cyclone and severe weather forecasting standards, explored AI/ML applications, and scaled Severe Weather Forecasting Programme (SWFP) globally.

- Task Teams published WMO Business Continuity Guidelines and are developing training modules; they also finalized a global fire weather strategy integrating AI and risk management.
- It was noted that urban resilience work has been suspended due to resource constraints, but remains integrated within SC-DRR terms of reference.

Key proposals for SERCOM governance included updates to WMO-No.49, BCM training materials, WCM Strategy, SWF Guidebook, Fire Weather Strategy, and RSMC compliance reviews.

To optimize resources, SC-DRR proposes reducing subsidiary bodies from nine to six and experts by 36% for 2026–2027. Resource planning emphasizes high-impact outputs and external funding to address budget constraints.

SERCOM MG noted the resources constraints related to urban issues and noted how the urban topic should be in the long term integrated in all other activities. In the meantime, existing documents should be promoted and a dedicated WCRP team on urban matters could pick up some of the work.

MG also took note of the cross-cutting nature of IBF, with the topic being covered also by SC-HYD and SC-CLI, and suggested SC-DRR to focus on probabilistic aspects of IBF.

SERCOM MG also considered the Cataloguing Hazardous Events (CHE) initiative, highlighted as an important cross-cutting issue, which is also a priority for the regional associations and partners. As a follow up to Resolution 1 SERCOM-Ext(2025), it was reminded that SC-DRR should closely work with INFCOM to develop requirements for specialized WIPPS centres on CHE.

Moreover, P/SERCOM reminded the need to go back to EC with the proposed inclusion of geohazards (such as volcanic eruptions, possibly in close cooperation with IUGG). The MG also highlighted the potential for AI to be used in rolling out the CHE, and the need to clarify where CHE sits in the future SC-DRR. Similar questions were raised about the status of the Global Multi-hazard Alerting System (GMAS) and Multi-Hazard EWS Interoperable Environment (MIE) Frameworks and Implementation Plans, both of which have (related) EC-76 Resolutions (13 and 15 respectively) with outstanding and as yet, unresolved actions on SERCOM.

SERCOM MG reserved itself the opportunity to reconsider the proposals by SC-DRR and to discuss later in the week the future structure and terms of reference (see Section 5 below).

3.9 Flood Forecasting Initiative Advisory Group (FFI-AG)

The FFI-AG, chaired by P/SERCOM, met last time in 27 June 2025 with a consistent participation of representatives of SERCOM, INFCOM and RB, mainly to discuss about the flood forecasting framework (FFF), including:

- 1) Update on the status of Members' needs already involved in the FFGS project
- 2) FFF objectives, concept, activities and timelines
- 3) Discussion and advise possible revisions of the FFF concept and the next steps

A brief reminder on the FFGS project status was given to the SERCOM MG, and it was reminded that following a stop in February 2025, in June funding was reinstated for FFGS & EWS-F Project, restarting activities but with lengthy procedures to hire new staff, limited time, reduced scope, and no open modules agreed with the main external partner (HRC). This made evident the dependencies of the project from HRC (the developer of the FFGS, which is a proprietary software). FFI-AG confirmed the importance of Members' ownership, agreeing on the need for urgent action to ensure sustainability to FFGS, and to develop a framework for the development of future extrabudgetary projects to avoid similar sustainability issues, and rather capitalize on the available know-how and solutions freely available through WMO. In such a context, FFI-AG

welcomed the proposal to develop a Flood Forecasting Framework (FFF) to assist Members with sustainable flash flood and flood forecasting products. For this purpose, FFI-AG proposed to

- (i) Draft a Flood Forecasting Framework (FFF) Concept Note and Implementation Roadmap
- (ii) Ensure that the drafting team includes expert representation from INFCOM and the RB
- (iii) Enable the review of the draft concept note and roadmap by the MGs of SERCOM, INFCOM and the RB
- (iv) Seek endorsement of the concept note and roadmap by SERCOM-4 (further considerations on the need to escalate this concept note to EC and/or Congress to be made once a first draft will be ready)

Following discussions also with P/INFCOM, the most feasible solutions seems to be having the development of the FFF Concept Note hosted under the Task Team related to SC-HYD Milestone 10, changing its name into FFGS Sustainability Strategy to Support the FFF, to be reflected in the SERCOM-4 work programme. A lead SC-HYD core expert (VP Angela Corina), with P/INFCOM or his representative as Vice-Chair, and a Secretariat focal point to support the task team have been identified.

Action 22: SC-HYD to lead the development of the FFF under the Task Team related to Milestone 10, with significant support of INFCOM and RB focal points, for consideration by SERCOM-4

The presentation also highlighted additional achievements and progress carried out by different stakeholders in relation to FFI-AG recommendations, such as:

- 1) A Brochure on the National Capability Assessment Tool for hydrology (NCAT) finalized for publication by SC-HYD (April 2025 – still pending publication). In relation to this NCAT, SC-HYD Chair proposed to integrate in it also the planned Toolkit on FFI, originally listed as a deliverable under Milestone 13 with the purpose of including guidance for Members on Developing and operationalizing flood forecasting and early warning system using available and recommended WMO tools and guides designed to assist Members
- 2) technical strategy and work plan for global riverine flood modelling pilots has been developed under ET-OHPS/SC-WIPPS/INFCOM (Last modified April 2025, pending finalization)
- 3) SC-HYD with the support of the Global Water Partnership (GWP) launched a Community of Practice for flood forecasting - The event counted over 300 participants from 60 countries, reflecting broad global engagement from both operational and academic communities. It underscored WMO's commitment to the EW4All initiative and introduced two WMO success stories (Oct 2025)
- 4) SC-HYD also collected from Members additional case studies on socio-economic benefits for flood forecasting as a contribution to the SEB Toolbox. (May 2025)

SERCOM MG also noted that most items from previous FFI-AG sessions remain open or in progress, pending inputs from relevant SCs or developments in technical governance, such as:

- 1) need to consider the topic of urban flood forecasting
- 2) FFI-AG advised to consider linking the CoP to other initiatives such as EW4All (CoP already part of Table I in EC-78/INF 3.1(a)). SC-HYD to continue collaboration with other partners (GWP, ITU, APFM SBPs) for the inclusion of new models and platforms in the CoP
- 3) SC-DRR to cooperate with SC-HYD to follow up on Resolution 13 (EC-76) and the inclusion of hydrological aspects in GMAS
- 4) SC-DRR to liaise with SC-HYD in the development of the CAP HelpDesk, which should showcase also the case studies of CAP application to hydrological hazards.

FFI-AG also suggests to add hydrological authoritative voices to the catalogue of authorities, SC-DRR to advance the topic with SC-HYD and SC-MMO

5) SC-HYD, SC-AGR and SC-DRR to collaborate identifying synergies and avoid repetition of efforts in the further development of HelpDesks (on IFM, IDM and CAP respectively). For this purpose, SC-HYD Chair proposed that the CAP HelpDesk should look for integration with the available integrated ServiceDesk (<https://waterclimatecommunities.info/water-and-climate-service-desk>) available on floods, drought, IWRM and Agro-meteorology

All of the above would need to be accommodated as changes to the work programme in SERCOM-4. SERCOM MG noted the ad-hoc nature of FFI-AG meetings, which are convened on a non-periodic basis to address urgent issues related to flood forecasting with large participation from focal points of INFCOM and the Research Board.

Action 23: FFI-AG recommendations to be reflected in the updated work programme to be discussed at SERCOM-4

3.10 Study Group on Renewable Energy Transition (SG-RENE)

Connecting remotely, the Co-Chair of SG-RENE, Dr Alberto Troccoli, presented the progress achieved by SG-RENE, including:

- a) Publications
 - WMO Technical Document: Best Practices on Early Warning Systems for the Energy Sector and Electricity Industry (case studies from China).
 - WMO-IRENA Report: 2024 Year in Review – Climate-driven Global Renewable Energy Potential, Resources and Energy Demand.
 - WMO Implementation guidelines: National Renewable Energy Atlas for wind, solar and hydropower
- b) Technical Assistance
 - National Renewable Energy Atlas Project: New pilot countries and updated methodology; webinar and demonstration held in September.
- c) Capacity Development
 - Mozambique training (October) on renewable-energy-focused climate services.
 - Chile training with ENANDES+ (November) supporting climate-informed energy decision-making.

SERCOM MG was informed about risks foreseen for SG-RENE, notably related to:

- The need for stronger coordination with INFCOM, RB and other SCs to better streamline renewable energy considerations in the different thematic areas (weather, climate and water).
- The high demand for engaging with the private sector, limited by the Secretariat to capacity to ensure a consistent engagement (a situation which is likely to be aggravated by the ongoing Secretariat reform).
- The need for a clearer mechanism to deliver energy-related regional products through RCCs and RSMCs.
- The need for a more systematic processes required to capture and reflect Member needs through a valid knowledge management system, and possibly a stronger integration into WMO's strategic priorities.

Considering the limited resources, SG-RENE proposed to retain the following activities:

- a) Publications
 - Annual WMO-IRENA report on renewable-energy indicators.
 - IAEA-WMO Safety Guide update.
 - WMO-IEA technical report on climate and extreme-weather resilience for power systems.
 - Water-Energy-Food Nexus report for the MENA region.
- b) Technical Assistance & Global Partnership

- National Renewable Energy Atlas Project (2026–27) with AI methods.
- Project proposal for energy and nexus services on adaptation and mitigation.
- Partnership with IEC for meteorology-energy standards.
- Formalizing a Global Partnership on Renewable Energy with IRENA or IEA.
- c) Capacity Development
 - Updating the e-learning module on energy and meteorology with new case studies.
 - Assessment of NMHS and private-sector needs for climate-related energy services.
 - Regional renewable-energy training with NCM, CMA and WMO RA I.
 - Maintenance of the WMO Energy and Meteorology Portal.
 - Participation in international and regional conferences to strengthen partnerships.

SERCOM MG was reminded that SG-RENE does not have subsidiary bodies. Work will align with SERCOM's future structure and relevant cross-cutting groups. SG-RENE presented a proposed structure to streamline the SERCOM subsidiary-bodies, by consolidating to four Standing Committees, covering: Sectoral Application, Hydrology, Transportation and Disaster Risk Reduction. To ensure coherence across committees, several crosscutting groups would support harmonized guidance and ensure that common themes and methodologies are applied consistently across all SCs and related activities. SERCOM MG noted the proposal and decided to consider it further (see section 5 below).

4. Collaboration with Other Bodies

4.1 INFCOM (LTG2)

A presentation on latest INFCOM activities was delivered remotely by Mr Nir Stav, Director of the Infrastructure Department (D/I) in WMO Secretariat. He mainly reported the main topics of discussion held at the meeting that took place the previous week in Geneva among the INFCOM Officers and the Chairs of the Standing Committees under INFCOM.

The first topic shared with SERCOM MG has been in relation to the INFCOM Task Team on Climate Infrastructure. INFCOM created one year ago circa a Climate Infrastructure Task Team. This Task Team has a joint leadership (INFCOM President + GCOS Vice Chair) and has as well participation from SERCOM (SC-CLI), WCRP, and others. The focus of the groups has been on atmospheric observations (not ranging to the full climate domain), and a final report is imminent, while recommendations are already feeding into the work plan of INFCOM

Action 24: Secretariat to share with SERCOM MG the report of the Task Team on Climate Infrastructure.

Another Task Team launched one year ago by INFCOM is the Task Team on Projects, with the aim to rethink how INFCOM should interact with the extrabudgetary projects implemented by the Secretariat (beyond SOFF).

Having consulted also with Members benefitting from these projects and the relevant Project Officers in the Secretariat, core direction and recommendations of the Task Team focus on shifting from "gold standards only" (i.e. the core technical commissions' activities related to regulatory and normative material) to implementation pathways, to produce usable implementation frameworks. The development pathways should describe also incremental steps, rather than focusing only on end-state requirements. For this purpose, the final recommendation is to create shorter, project-usuable guidance instead of lengthy publications that are hard to operationalize.

The topic of the Flood Forecasting Framework was also discussed at the INFCOM MG, similar to what has been reported under section 3.9. It was underlined how the approach to the FFF (aiming at developing a framework with open, scalable, and interoperable architecture, using WMO building blocks on multi-hazard / data sharing environment, WIS/WIPPS, etc.; but not interfering with the FFGS governance, which remains responsibility of the Secretariat vis-à-vis to the donor) is fitting into the recommendations of the Task Team on projects above.

Preparation of INFCOM-4 has been at the centre of the discussion in Geneva. Even though there is not yet a documentation plan for INFCOM-4, an estimate of 50 documents is expected to be brought to INFCOM-4. Many of these documents were proposed to “approve without debate” after pre-session checks; and other we proposed to be delegated for President approval via fast-track where appropriate

D/I introduced some of the documents that might be of relevance or interest to SERCOM MG.

SC-ON:

GBON expansion roadmap + link to climate bulletins

INFCOM will produce a GBON expansion roadmap (across Earth System domains).

Concrete first step proposed: associate climate bulletins with GBON stations to counter decline in issued bulletins.

Strong tie-in with SOFF: to be GBON-compliant Members need not only sensors but data management, databases, and exchange; This would, in line with what proposed by TT-Projects, create an additional incremental step in GBON compliance, by having climate data management included in the development of projects.

Observation network design & GCOS reference networks

New guidelines on hydrological network design will be adopted, and amendments proposed to the WIGOS Manual. Decisions on GCOS surface reference / climate reference networks (next phase beyond pilot) will also be made.

Data centres / global designated data centres concept

INFCOM highlighted the gap: WMO lacks formally designated global centres for climate data collection/backup (e.g., NCEI not designated as WMO centre). Work is starting, building from Hydro data centres task team, and it is intended to broaden beyond hydrology. INFCOM will explicitly invite SERCOM to be involved in this process.

SC-IMT

Open-source software (OSS) guidance

New guidelines will be developed on: a) assessing OSS adoption risk; b) contributing to OSS; and c) endorsing public OSS registries. This will create a WMO mechanism to support OSS uptake by Members.

AI translation experiment (Manual on Codes)

With the aim of having a tailored “WMO translation tool” approach for technical materials, SC-IMT has been running a trial using aN LLM for translating the WMO Manual on Codes, which was then reviewed by experts who provided feedback in an iterative process to improve the LLM. This could be applied also to other publication.

Climate Data Management publications: simplify/prioritize requirements

INFCOM in close collaboration with SERCOM is updating WMO 1238 – High Quality Global Data Management Framework for Climate. Also, in close collaboration with SERCOM, INFCOM is developing the minimum technical specifications of a climate data management system deemed compliant with the WMO Climate Data Management System Specifications (WMO-No. 1131). SERCOM's Management Group (MG) has

recognised the complementary efforts between INFCOM and SC-CLI (ET-DDS) and has agreed to transfer some of the ET-DDS's responsibilities to INFCOM. The SERCOM role through SC-CLI is to gather user requirements and act as a bridge."

SERCOM MG clarified with D/I that the topic of observations on socio-economic impacts is currently not covered by INFCOM, even though it is reflected in the WIGOS 2050 Vision, and there is possible place for a joint SERCOM/INFCOM brainstorm on the topic.

SC-WIPPS

WIPPS strategy + AI guidance

New WIPPS strategy has been requested after extraordinary Congress, to be presented to Cg-20. AI technical guidance will need to be developed, intended to be living online guidance, updated frequently (not a static publication updated every 10 years). To produce this technical guidance, it is expected to draw from practices implemented in AI pilots (e.g., "intercomparison project" + Typhoon Committee AI initiative for tropical cyclones).

Revision of the Technical Regulations and WIPPS Manual

INFCOM is planning a revision in particular with regard to WIPPS responsibilities (for designating requirements, proposing and selecting centres, etc.), which will require close collaboration with SERCOM.

Competency framework update

INFCOM signalled also the need to update competency frameworks (forecasters/modelers, awareness of WMO system resources). However P/SERCOM flagged this as applications territory and an area where SERCOM expects to push back while supporting INFCOM ownership of data management.

Ocean prediction responsibilities

On this topic, strong disagreement surfaced at the meeting.

INFCOM floated that several ocean prediction topics might be handled by SC-WIPPS going forward.

The representative of SC-MMO strongly opposed this proposal, flagging:

- The risk of blurred mandates between WIPPS vs specialized marine service functions
- The risk to RSMC/RSMC-like specialized roles, governance clarity, IOC partnership optics

it was noted that the distribution of roles related to ocean prediction derives from [Resolution 9 Cg-18](#). Therein, whereas "Decides (2)" assigns former JCOMM functions and activities on data management and processing to INFCOM, "Decides (3)" clearly assigns JCOMM functions and activities on services, with a close connection to relevant IOC activities in early warning and services, to SERCOM.

The representative of SC-MMO identified the following ongoing activities under SC-MMO:

- Oversight of services requirements, designation criteria, and compliance of follow WIPPS activities: (red coloured may be at risk to be taken away)
- RSMC-Global Numeric Ocean Prediction (ET-MOR)
- RSMC-Numerical Ocean Wave Prediction (ET-WCHMER)
- RSMC-Global Numerical Storm Surge Prediction (ET-WCHMER)
- RSMC-Marine Meteorological Services (ET-MS/AG-WWMIWS-SubC)
- RSMC-Marine Emergency Response (ET-WCHMER)
- Update relevant Guides in support of Manual on Marine Meteorological Services

(WMO No. 558)

- Guide to Wave forecasting (WMO No. 702) (ET-WCHMER)
- Guide to Storm Surge forecasting (WMO No. 1076) (ET-WCHMER)
- Guide to Marine Emergency Response (WMO No. 1348) (ET-WCHMER) – modelling elements on trajectory

In relation to the above, she identified the following potential Impacts and Risks for transferring marine/ocean prediction responsibilities from SC-MMO/SERCOM to SC-WIPPS/INFCOM:

- RSMCs and WMO Guides should not be absorbed into WIPPS because they serve different functions within the WMO system.
- WIPPS does not produce forecasts and is not designed to replace the specialized expertise of RSMCs.
- Absorbing RSMCs or Guides into WIPPS would blur responsibilities, weaken the specialized mandate of those centres, and undermine the technical authority of the WMO guidance documents

Further detailed reasoning was provided:

- *Service orientation and operational functions:* Marine and ocean prediction activities within WIPPS should continue recognized as specialized functions supporting marine and coastal hazard warning services, rather than general system-coordination.
- *Risk of fragmented governance:* SC-MMO provides integrated oversight of marine service requirements and services delivery. Transferring responsibilities could create duplication or overlap with WIPPS functions. There's also a real risk of losing clarity on who is responsible for what, which could result in some oversight tasks not being carried out at all.
- *Potential weakening of RSMC specialized mandates:* Shifting oversight may dilute the technical authority and operational focus of RSMCs responsible for wave, storm-surge, and ocean prediction. It could also affect service delivery if the emphasis shifts more toward data and observations instead of operational service needs.
- *Uncertainty in SC-MMO's role in RSMC designation and compliance:* Our established processes for designation criteria, monitoring, and review could become unclear or inconsistently applied. This may weaken the focus on service delivery and reduce alignment with WMO regulations and guidance
- *Confusion for Members:* Lack of clarity for NMHSs creating uncertain on where responsibility lies for marine-service needs or operational issues—unless WIPPS were to absorb MAR functions at the Secretariat, which would significantly impact existing structures and create confusion on where responsibilities lie for marine related activities.
- *Diminished WMO leadership in global ocean governance:* Partner organizations—particularly IOC—may interpret the integration of marine and ocean prediction into World Weather Watch/WIPPS as a signal that WMO is stepping back from its dedicated marine/ocean mandate. This could encourage partners to develop and publish their own wave or storm-surge guidance, bypassing WMO. As the services legacy to JCOMM under Resolution 9 (Cg-18), SC-MMO should continue to exercise the WMO's leadership and responsibility for wave and storm-surge guidance.

Noting that SC-MMO hadn't had opportunity to review INFCOM proposal in advance (the presentation being shared and uploaded only the same morning) SERCOM MG concluded that more discussion would be needed on this topic

SERCOM President agreed with the concerns and required conclusion of this discussion before SERCOM-4 / INFCOM-4.

A similar concern on the clarity of mandates about hydrological prediction/forecasting was raised by the Chair of SC-HYD, for which a careful review of subsidiary bodies will be needed in INFCOM and SERCOM (the terms of reference of the technical commissions being defined by Congress). Specifically, it was reminded that SC terms of reference would need to be amended at a plenary session (of INFCOM or SERCOM), whereas for subsidiary bodies (such as ET-OHPS) the Management Group has the authority to amend the ToR. SERCOM President agreed with the concerns and required conclusion of this discussion before SERCOM-4 / INFCOM-4.

Action 25: SERCOM and INFCOM to discuss, clarify and update respective hydrology and ocean prediction responsibilities and ToRs before SERCOM-4 / INFCOM-4

4.2 Research Board and Scientific Advisory Panel

Mary Scholes, Vice-Chair of the Research Board (VC/RB) presented recent RB activities relevant to SERCOM. Regarding artificial intelligence (AI), the RB decided not to establish a new task team on AI because many of the priority activities identified in the final report of the Task Team on AI for Weather (TT-AI4Wx) are being addressed by the research programmes. The RB will engage with SERCOM and INFCOM on AI through the JAG-AI.

On the topic of hydrology, the RB endorsed the revised WMO Hydrology Research Strategy, which will be presented to EC-80 in 2026 and Cg-20 in 2027 and decided to establish a new task team to coordinate the delivery of activities under the RB's responsibility in the WMO Plan of Action for Hydrology. As this task team is stood up, it was requested that **(Action 26:) SERCOM to nominate an ex officio SERCOM representative to serve on the RB Task Team on Hydrology**

Regarding social science integration, SERCOM provided input to the Task Team on Social Science and Geophysical Science Integration final concept note, due for approval at RB Management Group on 3 December 2025. Moving forward, the RB will seek to integrate social science into its Task Team on EW4All and requested **(Action 27:) SERCOM to communicate to RB where targeted physical and social science research can improve effective multi-hazard early warnings and IBF.**

Finally, the RB will seek input from a wide range of the research sector to inform WMO strategic planning in an effort to elevate the value of research in underpinning services and infrastructure. It was therefore requested to **(Action 28:) SERCOM to provide input on research priorities to enhance services to inform RB contributions to strategic planning.**

VC/RB also highlighted relevant activities from the WMO sponsored and co-sponsored programmes. The Global Atmosphere Watch (GAW) programme is undertaking a number of science-to-services projects and contributes to SERCOM activities where atmospheric composition is relevant. The World Climate Research Programme (WCRP) is also leading many initiatives of relevance to SERCOM, such as better linking to Regional Climate Centers and Regional Climate Outlook Forums and enhancing links to UN Framework Convention on Climate Change and policy. The World Weather Research Programme (WWRP) is also actively engaging with SERCOM on numerous joint activities, including, for example, the Aviation Research Demonstration Project (AvRDP) PHASE II and the 11th session of the International Workshop on Tropical Cyclones (IWTC-11) (November 2026). WWRP is also linking its groups and projects to SERCOM subsidiary bodies where relevant. In conclusion, it was noted that more clarity on the procedures for transitioning from research to services is needed and how to ensure more visibility on the contribution to SERCOM and EW4All. **Action 29: SERCOM and RB to further explore procedures to ensure the effective transfer of relevant RB led initiatives into operational services**

Finally, the Scientific Advisory Panel (SAP) continues its work on developing recommendations to Congress on tipping points, big data and AI and will seek input from

SERCOM in the coming months on this work. SAP is also currently recruiting new early to mid-career experts to serve on the SAP and will seek P/SERCOM input on shortlisted candidates, in accordance with the SAP Terms of Reference (Resolution 15 (EC-79)) in early 2026. **Action 30: P/SERCOM to provide input on shortlisted candidates to serve on the SAP**

4.3 HMEI on behalf of Private Sector (LTG1 & LTG5)

Laura Alku, Councillor for service providers in HMEI, presented the HMEI and how its activities relate to the work of SERCOM. HMEI is a non-profit sector organization seeking to build trust by aligning public, private, and academic capabilities on initiatives and resolutions that will empower WMO Members to carry out their duty to protect and enhance the lives and livelihoods of their citizens. As an association, they support the central role of NMHSs as the authoritative voice on hydrometeorological issues. They also share HMEI members' technical expertise to ensure policies are informed and implemented with the best science, innovation, and practices. And engage with the WMO to align public, private, and academic initiatives that will empower WMO Members to achieve their objectives. HMEI has a wide membership and is governed by a General Assembly and a Governing Council. Its Secretariat is hosted in WMO HQ and is composed an executive secretary, Markus Meckelmann.

The three main HMEI activity threads currently under focus are:

- Harnessing AI as a next-generation capability for prediction and service transformation, as well as dissemination. (working with JAG-AI, advancing AI literacy, and create AI platforms for verification frameworks and benchmarking tools)
- Expanding human, institutional, and technical capability of NMHSs (e.g. on tender specifications, bonding and warranty equipment)
- Strengthening regional platforms with equitable participation (supporting community centred capacity building).
- Code of ethics developed
- HMEI experts to sit ETs

To avoid dependencies from single manufacturers, a series of standards are proposed by HMEI to meet the requirements of the NMHSs. Further dialogue can be explored in this regard to consider HMEI contribution in the SERCOM work related to regulatory material (such as the Technical Regulations or WMO Manuals). **Action 31: consider potential HMEI contribution to the revision of technical regulations**

4.4 Extra-Budgetary Projects Review (LTG1 & LTG4)

Maria Julia Chasco from the WMO Secretariat presented an overview of the Extra-budgetary project portfolio managed by the Secretariat.

Prior to that, it was reminded how this presentation would be purely informative, being the management of extrabudgetary projects a task of the Secretariat and not of technical commissions.

The WMO's extrabudgetary (XB) project portfolio continues to expand in scope, geographic reach, and alignment with global priorities such as EW4All. As of late 2025, 52 active XB projects with a value of CHF 127M are underway worldwide, complemented by 11 pre-approved projects (CHF 77M) and 48 pipeline projects worth CHF 116M. Major funding partners include climate funds, bilateral and multilateral institutions, and private foundations, contributing 41%, 40%, 10%, and 9% respectively.

Pre-approved projects highlight significant investments in the AFDB Proposal (CHF 12.9M), HydroSOS BaNe (CHF 10.9M), Drin Basin (CHF 11.8M), Lake Chad (CHF 9.5M), and Saudi Arabia (CHF 8.6M).

A central theme covered in the presentation was the movement “from guidelines to implementation.”: while WMO’s standards, technical regulations, guidelines, and manuals provide structured expertise (produced by technical commissions), the projects (managed by the Secretariat) serve as real-world testbeds, identifying practical challenges and offering feedback to technical bodies.

Key implementation examples include:

- Common Alerting Protocol (CAP): Implementation challenges (HR, tech capacity) and strong progress through tools like the CAP Composer, which increased warning issuance by 3000% among adopting countries and is now used by 55% of African Members.
- Severe Weather Forecasting Programme (SWFP): Regional programmes across RA I–V rely on guidelines and RSMC support, though awareness and recognition of RSMCs remain challenges.
- HydroSOS: Basin-scale demonstrations and training, facing data availability, forecasting skill deficits, and staff turnover issues.
- Global Framework for Climate Services (GFCS): Implementation in several countries with challenges in coordination, governance, and NMHS mandates.
- MHEWS / Impact-Based Forecasting: Gap analyses in numerous countries emphasize the need for sustainability, regional approaches, updated probabilistic guidelines, and integration of emerging technologies (e.g., AI).

Strategic planning support (NSPs) continues globally, though ownership, partner coordination, and integration with available resources require strengthening. A proposed NSP expert network would help maintain consistency and support NMHSs in aligning with evolving WMO regulations.

Notwithstanding the need to keep clearly separated the role of technical commissions from the role of the Secretariat in implementing XB projects, discussion identified needs and opportunities that could lead to synergies between SERCOM and the Secretariat teams developing/implementing extrabudgetary projects.

Improved understanding of WMO frameworks, closer collaboration between experts and project implementers, early and continuous stakeholder engagement, stronger Communities of Practice, and mainstreaming innovation are essential for advancing implementation. Ensuring that EW4All Roadmaps and all project activities remain aligned with WMO technical regulations and standards is critical for sustainable, compliant national and regional service improvements.

At the same time, it was highlighted how XB projects could be of great help in complementing the lack of resources for activities included in the work programmes of technical commissions and, particularly, of regional associations.

Communities of practices could also provide the opportunity to provide “user feedback” to the guidance material. Mindful that XB activities are purely a Secretariat responsibility, MG agreed to contribute by developing a list of activities that could be considered for possible XB project funding. The HydroSOS is also an example of this: largely implemented so far through XB funding, it could benefit (possibly through the community of practice) from the formulation of official guidance material for SERCOM consideration, development and ownership. In addition SEB guidance would be useful to better assess the impacts at the Members level of XB project implementation.

Action 32: SERCOM MG to develop a list of activities that could be considered for possible XB project funding

Action 33: Secretariat projects focal point (D/Development Partnerships and Programme Delivery) to facilitate feedback from project managers to be

provided to SERCOM SEC FPs on where Manuals, guides and guidelines could be improved

4.5 Regional Associations (LTG4)

During this session the six regional representatives sitting in SERCOM MG presented as requested for their regions:

- the current RA structure,
- the EW4All services-related priority activities, including any risks/issues achieving implementation by end of 2027
- Services-related priority needs for the period 2026-2027 and 2028-2031
- Feedback on effectiveness of MG Regional Rep model and proposals for improvement

Common comments, as detailed further in the following sections, related to issues in the implementation of CAP, and more widely of the EW4All initiative; needs for further support on topics such as AI, SEB, data availability, IBF. Hydrological modelling/monitoring was mentioned often and seems to be a gap in many regions. Moreover, another recurring comment was on the need for better clarification on the role of the regional representatives in SERCOM MG, and how they could help streamline the work between SERCOM and RAs.

Regional representatives advocated for a better alignment of regional and global structures: some are only a duplication without adding value, how to engage global experts in regional structures and how to better link both levels are two issues that will require further consideration both from SERCOM and from RAs sides. This also relates to the work plans of TCs and RAs, that should dovetail each other to ensure implementation of the Strategic Plan.

RA I

The representative of RA I, Ms Lucy Mlatila, presented RA I priorities. First is the continued implementation of the EW4ALL through the regional Action Africa Plan, Strengthening the efforts made in use of Common Alerting Protocol Standard, Providing capacity building for improved communication of Climate Services, Support on Quality Management System (QMS) to the NMHSs, implementation of the competency frameworks, Support in the uptake of digital spaces to support EWS and sustained Implementation of Impact Based Forecasting and improved products and services. The region also stressed the need for strengthened hydrological monitoring for improved flood and drought forecasting

The observed risks in implementing EW4All were presented as:

- Coordination challenges at regional and national levels – in particular the role of other institutions such as (AUC), Regional economic blocks, RCCs at regional level and mushrooming Situation Rooms at national levels
- Limitation of skilled staff, infrastructure, technical resources and finance to have sustained EWS in place and
- Limited uptake of EW information

While it observed there was need to leverage on the emerging opportunities in the region such as leveraging technology and innovation (e.g., AI, ML, AWS, digital transformation), data and information sharing, early action protocols and XB funding mechanisms to improve early Warning Systems.

The issue of “mushrooming” of situation rooms was raised by RA I, but MG considered it is an issue to be dealt with at the regional level.

Finally, the RA I representative highlighted the need to better showcase the outcomes/deliverables of SERCOM once finalized for wider distribution to Members (communication strategy needed)

Action 34: Secretariat to review SERCOM member outreach communication strategies to better showcase SERCOM activities/deliverables

RA II

Dr Kamaljit Raj, representative of RA II, informed the MG that at RA II 18(I) in April 2025, the Association adopted a revised working structure. Key changes include a new network of WMO operational centres (WIPPS, RWC/RIC, RTC) to strengthen capacity development, a Task Team on EW4All to integrate the WMO Roadmap into the RA II Operating Plan, and a Coordination Panel on Research and Innovation (CP RI) focusing on AI and emerging technologies. The sub-structure for hydrology remains under discussion, with the RA II MG and re-established Working Group on Services (WG-S) favouring a retention of the Coordination Panel on Hydrology (CP-H) for better alignment with WMO's global structure and better integration of hydrology across all RA II activities, while others advocate for going back to a dedicated Working Group on Hydrology (WG-H) to address the full hydrological value chain more holistically. RA II also updated its unique Partnership Strategy to guide collaboration with centres, sub regional bodies, and UN agencies. To distinguish the work of these ETs from the ETs under the Technical Commissions, a proposal is on the table to rename them as "Implementation and Coordination Teams (ICTs).

EW4All is a major focus. Six of the initial 30 EW4All focus countries are in RA II (Bangladesh, Cambodia, Lao PDR, Maldives, Nepal, and Tajikistan) and have completed their national EW4All Roadmaps supported by intensive cooperation among governments, UN agencies, other partners, and donors. Additional Members such as Bhutan, Kazakhstan, Kyrgyzstan, Mongolia, Myanmar, Thailand, Viet Nam, and Yemen are engaging and seeking support. The region benefits from strong support from major Members such as China, Japan and India, robust sub-regional platforms, and an active network of extra-budgetary projects and donor partnerships. However, significant challenges remain: many countries are only beginning the process; maturity measurement and coverage remain complex; there is widespread confusion about what EW4All entails; hydrology and geohazards often remain insufficiently integrated; and national ownership and sustained coordination require reinforcement. Too few in country coordinators Recommendations include extending the EW4All horizon to 2030, strengthening advocacy communication on maturity indices, improving integration with national plans, clarifying guidance for countries and partners, and enhancing in-country coordination capacities and donor coordination.

RA II services related priorities for 2025–2027 align with WMO Long Term Goal 1. They include strengthening MHEWSs and enhancing impact-based forecasting and warning services (IBFWS), improving climate services and supporting existing and emerging RCCs such as the Third Pole RCC Network, advancing hydrological services (HydroSOS, flood/drought forecasting), and expanding aviation and marine meteorological services. These are translated into so-called implementation, demonstration, and pilot projects covering areas such as CAP adoption, CHE, BCM, urban services, heat health warnings, flood hazard mapping, renewable energy services, and cryosphere monitoring. Innovation features prominently, with projects exploring AI, digital twins, and other emerging technologies are being explored for operational hydrology for hydrology and services. Pilot initiatives range from urban heat-health warnings and flood hazard mapping to renewable energy-related meteorological services.

Feedback from sub-regional consultations for the next WMO Strategic Plan highlights persistent challenges across RA II: sustainable financing, skills gaps in areas such as AI, meeting rapidly evolving user needs, retaining talent, aging observing systems and the continued need to strengthen impact-based services across all hazards.

The SERCOM MG regional representative model has proven valuable, though improvements are needed to ensure clearer definition of roles, better information flow and alignment between SERCOM and RA II bodies and work programmes/operating plans, and stronger integration of RA ETs/ICTs with SERCOM structures. Proposals

include joint planning, mapping annual meetings for better alignment, mutual invites, and strengthening feedback loops.

Additional concerns include uneven Member engagement, supporting of fragile and conflict-affected Members, data sharing (particularly hydrological), implications of rapidly evolving AI/ML technologies, engagement with the private sector, need for evidence on socioeconomic benefits of MHEWS and services, integrating gender and youth considerations, and improving knowledge management and regional resource mobilization as many Members are no longer classified as least developed. There is a need to ensure good representation of sub-regional (non-WMO) mechanisms in RA II WGs/ETs/CPs and find a way to acknowledge their work as contributing to the work and goals of WMO.

RA III

The representative of RA III, Ms Grinia Avalos, outlined several priority needs for strengthening service delivery, noting persistent challenges that limit the region's ability to translate global guidance into effective implementation. Key concerns include the uneven application of WMO resolutions and insufficient communication between SERCOM Standing Committees and Regional Expert Teams—factors that contribute to a disconnect between global developments and regional practice.

The region emphasized that Early Warnings for All (EW4All) remains its highest priority for 2026–2027. Members require clearer and more practical guidance on joining and operationalizing the initiative, as well as support to finalize the regional roadmap. Operational needs include wider adoption of CAP, strengthened IBF and Business Continuity Management, and progress on the Catalogue of Hazardous Events. Limited capacity and resources—combined with unclear expectations—pose significant risks to achieving the 2027 targets.

Looking toward 2028–2031, RA III highlighted the importance of advancing climate services and annual State of the Climate activities, promoting National Frameworks for Climate Services, consolidating SEB studies, expanding the use of AI in forecasting, and progressing HydroSOS implementation. The integration of social sciences was noted as essential to improve risk communication and the delivery of impact-based services.

To address these challenges, RA III encouraged SERCOM MG to reinforce support by ensuring dedicated space for regular regional updates in MG and SC meetings, strengthening communication between Standing Committees and regional associations—including through multilingual technical webinars—and providing clearer, step-by-step guidance for EW4All to help Members fully understand and apply the requirements of the initiative.

RA III reaffirmed its commitment to advancing SERCOM priorities and underscored that sustained progress will depend on clearer technical direction, improved communication, and targeted support to address persistent capacity gaps across the region.

RA IV

The RA IV representative, Ms Heather Smith, highlighted several structural needs affecting the region's capacity to implement WMO guidance effectively. Members noted that the uneven application of WMO resolutions, limited availability of translated technical guidelines, and low participation of smaller NMHSs in Standing Committee and Expert Team work continue to create gaps between global developments and regional implementation. Several systemic risks were identified, including assumptions that Standing Committees alone can address regional priorities, weak expert engagement in RA subsidiary bodies, and an imbalance between the global agenda and the needs of the most vulnerable Members. Additional concerns include reduced access to development funding as countries transition to higher-income classifications, as well as the impacts of WMO restructuring and limited staffing on the capacity to support both Technical Commission and regional work.

Looking toward 2028–2031, RA IV emphasized the need to strengthen regional coordination for forecasting and warning of tropical cyclones and severe weather, advance storm surge modelling, and scale up impact-based forecasting across all hazards. Expanding hydrological services—such as flash flood guidance and hydrological forecasts—was highlighted as essential for improved water resource management and flood early warnings. The region also underscored the importance of enhancing climate services through RCCs and climate outlook forums and improving decision-support services for key sectors. Additional priorities include expanding the Severe Weather Forecast Programme, strengthening cooperation with the hydrological community, and advancing regional capacity in observations, modelling, seasonal and sub-seasonal prediction, and the use of AI and machine learning, supported by improved access to education and training.

To address these challenges, RA IV encouraged SERCOM MG to reinforce support by establishing formal communication mechanisms between Standing Committees and corresponding regional bodies, ensuring multilingual technical webinars to broaden participation, and providing dedicated space for regular regional updates in all MG and SC meetings. Clearer and more structured communication channels, along with explicit accountability of Regional Representatives to their respective RA Management Groups, were highlighted as essential to improving alignment between Regional Implementation Plans, SERCOM priorities and the WMO Systematic Operating Plan.

RA V

The representative of regional association V, Mr Chris Noble, highlighted that RA V is a vast, highly diverse maritime region, facing unique vulnerabilities: tropical cyclones are the leading cause of fatalities, while warming oceans and sea level rise pose existential threats. Significant differences exist between the Southeast Asia and South Pacific sub regions, with strong sub regional mechanisms such as the Pacific Meteorological Council (PMC) providing coordination. The region's complexity and its island-dominated geography place unique demands on meteorological, hydrological, and early warning systems.

At RA V 19(I) in September 2025, the Association adopted a revised working structure. Key changes include: a new Task Team on Early Warnings for All (TT EW4All) to integrate the global WMO EW4All Roadmap into the RA V Operating Plan 2025–2027; the establishment of Research Focal Points that will collaborate with the Research Board; and the creation of a Coordination Panel on Hydrology (CP-H) to replace the former WG-H and better embed and coordinate hydrology across all RA V bodies. The RA V Working Group on Services (WG S) retains three Expert Teams (ETs) on Disaster Risk Reduction (ET-DRR), Climate Services (ET-CLI), Marine Meteorology and Oceanography (ET-MMO), and Aviation (ET-AVI) but now also includes the ET on Hydrological Services (ET-HS) and changed the name of the former ET on Multi-Hazard Early Warning Systems to ET-DRR to broaden the scope and better distinguish from the TT EW4All. While nominations for several hydrology roles were initially lacking, progress is now being made. Across all structures, RA V continues to rely heavily on strong partnerships, extrabudgetary projects, and sub-regional mechanisms such as the Pacific Meteorological Council (PMC) of SPREP, the Typhoon and Tropical Cyclone Committees, RCOFs, RTCs, RSMCs, SWFPs, ASEAN, and SPC.

EW4All implementation is a central priority. Of the initial 30 focus countries globally, five are in RA V: Fiji, Kiribati, Samoa, Solomon Islands, and Tonga. Fiji, Solomon Islands, and Tonga are close to finalizing their national EW4All Roadmaps, while Kiribati and Samoa are progressing well. A strong support ecosystem has emerged, notably the Weather Ready Pacific (WRP) Programme, which has been endorsed as a Pacific led initiative, is the primary vehicle for EW4All delivery, complemented by CREWS, SOFF, GCF, and bilateral donors. Additional countries, including Timor-Leste, Papua New Guinea, Vanuatu, and other Pacific SIDS have requested support for implementing EW4All and Pillar leads are mobilising resources for scaling up engagement. The region benefits from active UN Country Teams and coordinated efforts among Pillar Leads, though challenges

remain around project alignment, national ownership, timelines, hydrology integration, limited in-country coordinators, constrained budgets, and measurement of progress. The TT EW4All will help with monitoring progress and ensuring alignment with RA V Operating Plan.

RA V formally adopted services-related priorities for 2025–2027 align closely with WMO's Long-Term Goal 1, covering multi hazard early warning systems, climate and hydrological services, aviation and marine services. Recent regional consultations and Tropical Cyclone Committee/SWFP-Strategic Plan meetings highlight both near-term and long-term service-related needs. Immediate priorities include investments in observing networks; access to high-resolution numerical weather prediction (NWP) for weather, wave, and coastal hazards; stronger IBFWS through filling gaps in impact data and developing and multi-agency standard operating procedures (SOPs); addressing severe communication challenges to reach remote islands; and expanding training in NWP, satellite analysis, tropical cyclone forecasting, and media skills. Longer-term concerns reflect broader strategic risks: sustainable financing, retention of skilled staff, emerging technology uptake (AI/ML), rapidly evolving user needs, and aging observing systems.

Several areas remain difficult to implement, such as CAP where warning services are still developing. There is often low participation in WMO events due to resource constraints and time-zone challenges. There is a need to explore ways to formally acknowledge the contributions of sub-regional bodies such as the PMC and WRP, within the WMO governance and to priorities such as EW4All.

The SERCOM MG Regional Representative model has proven extremely useful but would benefit from clearer roles and expectations, better alignment between SERCOM work programmes and RA Operating Plans, and stronger information flows and feedback between SERCOM MG and RA V's Management Group and Working Groups. Improved engagement between the RA V Representative and WG-S leadership is planned. Finally, the region requests that SERCOM MG consider meeting timing to improve RA V participation. Proposals include greater sharing of RA activities, stronger input from RA reps into SERCOM meetings and vice versa, and improved coordination between RA working groups and SERCOM expert teams.

RA VI

Region VI highlighted the priorities for EW4All as Exchange Platform for twinning, country rollouts, improving MHEWS Capacity through Regional Training Centres. It also highlighted the plan to carry out a webinar on drought monitoring to share European best practices to strengthen national drought monitoring systems. The region will also help countries develop proactive hazard management strategies and plans.

The other priorities from RA VI included: CAP Compliance and expanding the use of MeteoAlarm to improve warning dissemination through CAP integration and regional alignment, strengthening nowcasting-in-a-Box to provide improved nowcasting capabilities in the region, to carry out hydrometeorological drills to conduct pilot exercises to test and improve the full warning value chain, and flood forecasting improvements to enhance cross-border cooperation and data sharing for flood forecasting.

The RA VI representative, Karolin Eichler, provided feedback to the MG that knowledge of the regional representative role is not clear, and approach may differ in every region, and is different for INFCOM, highlighting there could be possible conflict with the role of the VP for the regions. She also brought out the fact that ROE does not have regional coordinators for Services and Infrastructure as in the other regions.

Action 35: Secretariat to clarify the terms of reference of regional representatives and publish them in a clearer form on the community website

Action 36: SERCOM MG quarterly meetings to include a regional updates agenda item at every other meeting to improve coordination between SERCOM and RAs work programmes

CDP

On behalf of the VP representing SERCOM in the CDP, the Secretariat presented the outcomes of the 11th session of the CDP held virtually from 23 to 25 September. This provided an opportunity to clarify the roles and responsibilities of technical commissions and regional associations in the Capacity Development Programme, as well as in the Regional Programme. P/SERCOM confirmed that discussions with P/RAs and C/CDP regarding how better to clarify roles and responsibilities for the formulation and delivery of capacity development activities would continue, based on the draft CD Programme description presented at TCC-2(2025). The CD Programme description, to be further considered by CDP-12 in February 2026 and final submission to EC-80 for approval, will be the basis for future discussions on the core mandate of SERCOM and the prioritization of the SERCOM work programme in relation to capacity development activities, in which it is expected that Regional Associations will play a major contribution.

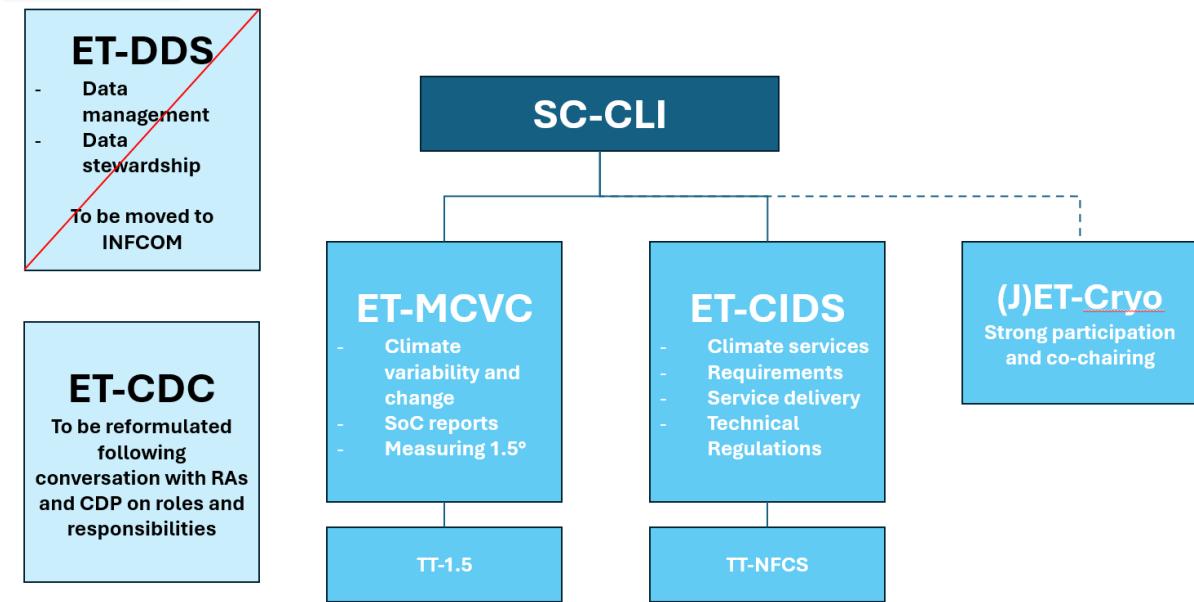
5. Future Plans

SERCOM MG considered the current SERCOM work programme (contained in Resolution 2 (SERCOM-3)) and revised it in light of three criteria:

- 1) Priority of the activity and pertinence to the WMO mandate
- 2) Status of advancement towards completion of the activity
- 3) Availability of resources (financial and staff-related) in the Secretariat to support the activity

Further to the revision of the work programme (retained, reduced, refrigerated activities, indicated respectively by highlights in white, orange or red in the table contained in Annex VI – draft revised SERCOM work programme), MG revised the structure of subsidiary bodies under SCs as presented in the previous days, and:

- Confirmed SC-AVI substructures as proposed
- Confirmed SC-MMO substructures as proposed but proposed to change AG-WWMIWS-SubC acronym into "AG-MOWS" (MOWS= Marine and Oceanographic Warning Services) for internal purposes.
- Confirmed SC-AGR substructures as proposed
- Confirmed SC-HYD (only one (J)ET-Cryo, unofficial Task Teams related to Milestones)
- Approved the SC-CLI as follows:

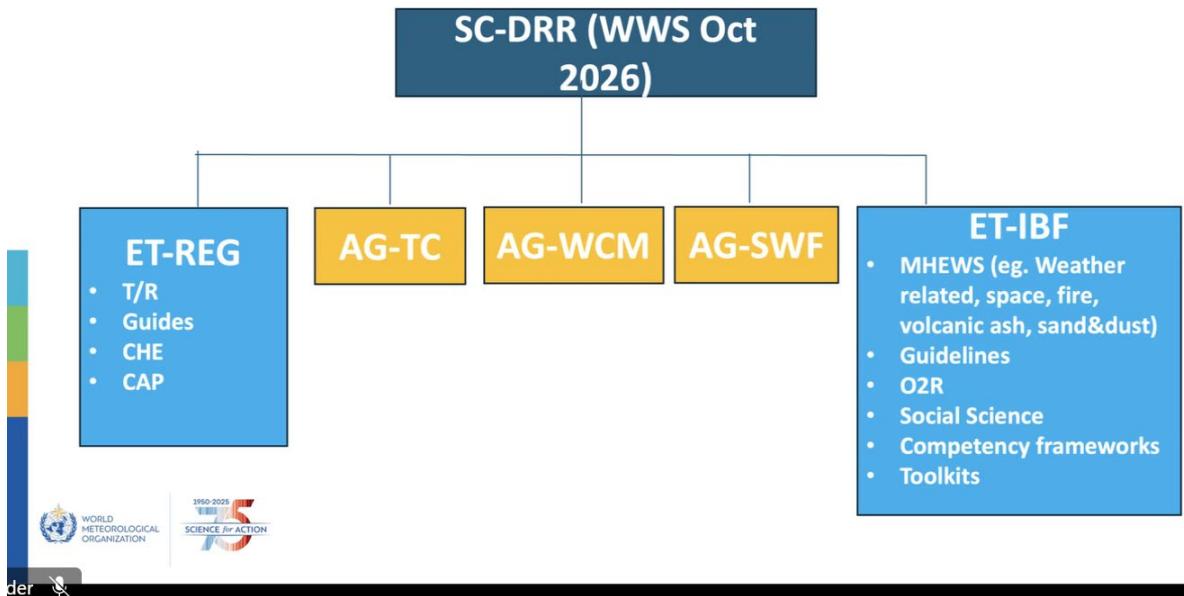


SERCOM MG agreed that ET-DDS will be transferred to INFCOM at INFCOM-4, with requirement functions retained in the ET-CIDS. In addition the MG requested the SC-CLI to undertake a review of the ToRs and activities of the ET-CDC to determine or redefine the requirement for the ET-CDC to be retained as a standalone body. This work to be led by C/SC-CLI, in close coordination with VP Sena (both in his role as VP CLI Lead and SERCOM CDP Focal Point) during Q1 and Q2 of 2026

Action 37: SC-CLI to undertake a review of the ToRs and activities of the ET-CDC to determine or redefine the requirement for the ET-CDC to be retained as a standalone body

- Recognizing the importance of the topic of integrated health services but cognisant of the fact that the composition of the ET-IHS under SC-CLI has not yet progressed, the Management Group endorsed P/SERCOM's proposal to temporarily dissolve the ET-IHS to enable him to 'start with a clean slate' in engaging with the now much better resourced WMO Health Services Secretariat to develop options for those WMO mechanisms and bodies necessary to support the delivery of the IHS Implementation Plan 2023-2033. The outcomes and proposals arising from this work will be reported to the Management Group by the end of Q2 2026.

SERCOM MG - Proposal



SC-DRR will be proposed to be renamed at SERCOM-4 as "Weather warning services". The three existing Advisory Groups will remain, and two Expert Teams will be retained: ET-REG focusing on normative and regulatory material (technical regulation) and supporting guidance (Guide to EWS, CHE, CAP); and ET-IBF focusing on MHEWS, Guidelines on IBF (including consideration on social sciences, operation to research, competency frameworks etc.). The topic of Business Continuity Management, currently tackled through a dedicated Task Team, should be considered for becoming an Advisory Group reporting directly to SERCOM MG.

Action 39: SC-DRR to consider adapting the ToRs of TT-BCM to become an AG-BCM reporting to MG.

6. Future SERCOM Meetings

SERCOM MG was reminded that clear guidance is available on the frequency of meetings of subsidiary bodies (once every two years for SCs; once every four years for ETs; possibly once every four years for TTs and AGs), and how these criteria should also be driving the establishment (or not) of a subsidiary body. Virtual meetings have to be held for each subsidiary bodies on a regular basis (e.g. quarterly, like the MG, P/SERCOM to select dates for the next sessions). SCs should virtually meet ideally quarterly, but at least every 6 months.

Action 40: Secretariat to (re)circulate the criteria for frequency of subsidiary bodies meetings and publish them on the new community space.

Due consideration should be given to optimize travel for meetings, and take the opportunity to organize back to back specific workshops to advance with the work.

The Management Group noted that SERCOM-4 will be held on the week of 19 October 2026. Proposed venue (almost confirmed) will be Abu Dhabi, UAE. SERCOM-4 will have four days of intergovernmental session, and a technical conference in the middle. For the technical conference, an idea raised by the MG was to have 6 parallel thematic sessions to elevate the interest and participation of thematic experts. This might have financial constraints for Members, which could be facilitated by extrabudgetary resources if needed.

Next face to face meeting of the Management Group will likely be October-November 2027, after Cg-20, possibly in a country in RA III. Care will be given to the dates, to avoid conflicts with other events (e.g. METP/7 is already scheduled 8-12 November)

Action 41: Secretariat (ROA) to explore possible venues for SERCOM MG 4 in Q4 2027.

7. SERCOM Technical Regulatory Framework

The morning of the last day of SERCOM MG 3 was dedicated to a workshop on the revision of technical regulatory material. Each Standing Committee presented to the MG its views and planned activities in relation to this topic, as follows:

SC-CLI – input on the Tech Regs discussion

According to Resolution 23 Congress 19, "SERCOM in close collaboration with INFCOM to draft a new section on climate services for inclusion in Part IV, Volume I of the WMO Technical Regulations (WMO-No. 49)". A draft section on climate services for inclusion in Part IV, Volume I of the WMO Technical Regulations (WMO-No. 49) has been developed and will be further considered at SERCOM-4. Furthermore, SC-CLI is also working closely with INFCOM on the Manual of the High Quality Global Data Management for Climate (WMO-No. 1238) which is part of the Regulatory Framework of WMO.

ET-MCCVC and ET-DDS together with INFCOM/ET-IM participated to the "Writeshop on strengthening WMO regulatory material in support of the State of the Climate Reporting" Geneva, Switzerland, 10 – 14 November 2025. The revised version of WMO-No. 1238 is planned to be presented during INFCOM-4.

SC-MMO – review of Marine Technical Regulations

- Submitted two documents to SERCOM-MG: Doc. 3.2.3 and Annex to Doc. 3.2.3
- SC-MMO has the mandate to review Technical Regulations covering meteorological services for the high seas, coastal waters and in support of Search and Rescue (SAR) and marine emergency response (MER) operations
- The main objective is to simplify and streamline the regulations by removing content that duplicates what is already covered in the Manual on Marine Meteorological Services (WMO-No. 558), while retaining the high-level requirements that are essential for international compliance.
- These core commitments include:
 - ensuring that Members provide appropriate maritime safety information to seafarers, with both the correct content and dissemination channels as required under SOLAS Chapter V;
 - supporting coastal authorities and communities with services that help reduce risks from coastal hazards, and that contribute to a sustainable blue economy; and
 - ensuring that warnings, forecasts and services delivered at sea and along the coast follow internationally agreed standards and dissemination systems.
- highlight the cross-links with other sections of the Technical Regulations, including Part IV on Early Warning Services, as well as the Competency Framework contained in Parts V and VI and Appendix A. These connections ensure consistency across the WMO regulatory framework.
- Review of WMO No. 558 Manual on Marine Meteorological Services and WMO No. 471 Guide to Marine Meteorological Services – both will be completely reviewed by SERCOM-5 in 2028

- Regarding competencies, the proposal is to strengthen the wording in the meteorological services section of the IMSAS (The IMO Member State Audit Scheme) questionnaire — especially around the requirements for marine meteorological forecasts. This would signal to MMS that forecasters need to meet the appropriate competencies, without making it mandatory at this stage. That step could still come later, but for now the aim is simply to make the expectations clearer.

The issue of competencies compendium has been identified as an issue to be further discussed to better reflect on the level of details required for the different disciplines.

Clearer instructions will follow, in preparation to SERCOM-4 and with the objective to have the proposed amendments agreed at Cg-20.

SC-AGR input on the Tech Regs discussion

The need to update the section on *Meteorological Services for Agriculture* has been mentioned to the SC-AGR experts at the last in-person meeting and the current version shared with them for information and review. A follow up e-mail asking for specific edits and comments will be sent with input expected in early 2026. Possible updates will focus on adjust some wording (e.g. mentioning bulletins instead of reports), updating wording in the 3 sub sections, updating references to the forecast timescales, possible mention of key hazards (like drought), adding something on communication and coproduction of agrometeorological information and overall update of the text to be more relevant to the way agrometeorological services are delivered today. The section will be still kept short, and the reference to the "how" will still be the Guide to Agricultural Meteorology Practices (GAMP).

SC-HYD input on the Tech Regs discussion

The Tech. Regs. Vol.III is to be reviewed with the aim to leave only top-level regulations ("whats"), however since there are no Manuals in hydrological services, a minimum extent of "hows" will stay in the Technical regulations Vol. III. Consistency approach is required, especially with respect to Chapter 3 "Hydrological forecasts and warnings" and Chapter 5 "Meteorological services for hydrology". Vol.III Chapter 3 is to be revised according to recent updates to Vol.I, Section 6 (checking "shall"s and "should"s, and other).

It was mentioned that it is required to keep Technical Regulations "Hydrology" either as a separate volume, or at least as a separate section (in case of joining with Vol.I) to allow for an easier consultation by hydrologists.

WIPPS Manual shall be updated with respect to Hydrological centers to clarify responsibilities and roles of SERCOM and INFCOM in terms of centers nomination, tracking, and evaluation.

There are many guides, guidelines and other materials supporting technical regulation, the Guide to hydrological practices (No. 168) being the major Guide supporting the Tech. Regs Volume III "Hydrology".

SC-AVI regulatory and guidance material review

Information on the rationale for the WMO publications are available on the Services for Aviation webpage: <https://community.wmo.int/site/knowledge-hub/programmes-and-initiatives/aviation/aviation-resources-introduction>

A full list of publications is available at: <https://community.wmo.int/site/knowledge-hub/programmes-and-initiatives/aviation/aviation-resources-technical-regulations-guidance-and-other-reference-materials>

Publications considered by experts at SC-AVI-4 are as follows:

| WMO-No. | Title [Language¹] | Last updated | Remark and recommendation |
|----------------|---|--|---|
| 49 (Vol I) | <i>General Meteorological Standards and Recommended Practices</i> [EN, FR, ES, RU, AR, ZH] | 2025 | <p>Regulatory Standards and Recommended Practices mandatory for Aeronautical Meteorological Services, with a requirement mandated by ICAO.</p> <p>An amendment to articulate a direct correspondence to the international standards, recommended practices and procedures of ICAO will be submitted to SERCOM-4 >> EC >> Cg.</p> |
| 49 (Vol II) | <i>Meteorological Service for International Air Navigation</i> [EN, FR, ES, RU, AR, ZH] | 2018 Updated in 2021 (parts I and II discontinued in 2023) | <p>Through Resolution 12 (Cg-19), the nineteenth World Meteorological Congress approved the two-stage discontinuation of the WMO <i>Technical Regulations</i> (WMO-No. 49), Volume II, <i>Meteorological Service for International Air Navigation</i>.</p> <p>Parts I and II of WMO-No. 49, Volume II, respectively, addressing the <i>Core Standards and Recommended Practices</i> and the Appendices thereon, were discontinued on 31 December 2023. Meanwhile, Part III, <i>Aeronautical Climatology</i> and Part IV, <i>Format and Preparation of Flight Documentation</i> will be discontinued when material of continuing relevance has been incorporated into the <i>Procedures for Air Navigation Services – Meteorology</i> (PANS-MET) (Doc 10157) of the International Civil Aviation Organization (ICAO) (expected November 2027)</p> |
| 732 | Guide to Services for Aviation [EN, FR, ES, RU] | 2023 | <p>Included in the Cg-19 list of mandatory publications for the nineteenth WMO financial period (2024-2027).</p> <p>A review of WMONo. 732 should occur in 2026 or 2027.</p> <p>An update, if required, should be minor. Resources permitting, an update should</p> |

¹ EN = English, FR = French, ES = Spanish, RU = Russian, AR = Arabic, ZH = Chinese.

| WMO-No. | Title [Language ¹] | Last updated | Remark and recommendation |
|---------|---|-----------------|--|
| | | | <p>be undertaken in the twentieth WMO financial period (2028-2031).</p> <p>Could be made available in AR (Arabic) and ZH (Chinese) too, if required and where resources allow.</p> |
| 731 | <p><i>Guide to Meteorological Observing and Information Distribution Systems for Aviation Weather Services</i> [EN, FR, ES, RU]</p> | 2014 | <p>Included in the Cg-19 list of mandatory publications for the nineteenth WMO financial period (2024-2027).</p> <p>A review of WMO-No. 731 is reaching maturity, with an intention to submit an updated publication to SERCOM-4 for approval. If approved, publication in English would be expected 2026-2027, with further translations to follow, resources permitting.</p> <p>Could be made available in AR (Arabic) and ZH (Chinese) too, if required and where resources allow.</p> |
| 782 | <p><i>Aerodrome Reports and Forecasts: A Users' Handbook to the Codes</i> [EN, FR, ES, RU]</p> | 2025 | <p>A review of WMONo. 782 should occur in 2026 or 2027.</p> <p>An update, if required, should be minor, mainly to align WMONo. 782 with Amendment 83 to ICAO Annex 3 and Amendment 1 to PANS-MET (intended applicability in November 2027).</p> <p>Given the expected timing of SCAVI-5 and SERCOM-5, in late2027 and early-2028 respectively, it may not be possible for WMO to publish an update to WMO-No. 782 until mid-2028 at the earliest.</p> <p>Could be made available in AR (Arabic) and ZH (Chinese) too, if required and where resources allow.</p> |
| 904 | <p><i>Guide to Aeronautical Meteorological Services Cost</i></p> | 2023 | <p>Included in the Cg-19 list of mandatory publications for the nineteenth WMO financial period (2024-2027).</p> |

| WMO-No. | Title [Language ¹] | Last updated | Remark and recommendation |
|---------|---|-----------------|---|
| | <p><i>Recovery: Principles and Guidance</i></p> <p>[EN, FR, ES, RU]</p> | | <p>A review of WMO-No. 904 should occur in 2026 or 2027.</p> <p>An update, if required, should be minor. However, an expansion of guidance relating to the cost recovery of multinational services, for example, could result in a moderate update.</p> <p>Resources permitting, an update should be undertaken in the twentieth WMO financial period (2028-2031).</p> <p>Could be made available in AR (Arabic) and ZH (Chinese) too, if required.</p> |
| 930 | <p><i>Compendium on Tropical Meteorology for Aviation Purposes</i></p> <p>[EN only]</p> | 2020 | <p>Scoping exercise review completed in 2024 revealed that a minor update of WMO-No. 930 was required and that the update was of a low priority.</p> <p>Resources permitting, an update should be undertaken in the twentieth WMO financial period (2028-2031).</p> <p>Consideration should be given as to whether this should be transferred to an AeM Series publication.</p> |
| 1038 | <p><i>Weather Forecasting for Soaring Flight</i></p> <p>[EN only]</p> | 2009 | <p>Originally prepared by Organisation Scientifique et Technique Internationale du Vol à Voile (OSTIV).</p> <p>OSTIV confirmed in 2024 that, from their perspective, there is no immediate urgency to update of WMO-No. 1038.</p> <p>OSTIV considers that the core of the publication, including the quasi-timeless scientific basis, is still valid and well-received within the soaring flight community.</p> <p>SERCOM-MG recognises that it's out of date, but no further action will be taken.</p> |

| WMO-No. | Title [Language ¹] | Last updated | Remark and recommendation |
|---------|---|--------------|--|
| | | | |
| 1100 | <p><i>Guide to the Implementation of Quality Management Systems for National Meteorological and Hydrological Services and Other Relevant Service Providers*</i></p> <p>[EN, FR, ES, RU, AR, ZH]</p> | 2017 | <p>Included in the Cg-19 list of mandatory publications for the nineteenth WMO financial period (2024-2027).</p> <p>Scoping exercise review completed in 2024 revealed that a generally minor but in places moderate update of WMO-No. 1100 was required and that the update was of a high priority.</p> <p>Owing to a delay in ISO's publication of new QM standards (ISO 9001), a review and update of WMO No. 1100 should, resources permitting, be completed in 2026 or 2027. Publication would then be in 2028 at the earliest.</p> <p>It is worthwhile to note that necessary consultation would have to take place with other WMO bodies that have a vested interest in QMS, such as SC-MMO (Marine) and SC-CLI (Climate).</p> |
| 1205 | <p><i>Guide to Competency</i></p> <p>[EN, FR, ES, RU, AR, ZH]</p> | 2018 | <p>Necessary for the implementation of the AMP Competency Standards.</p> <p>A proposed update has been developed to offer guidance to national meteorological and hydrological services of WMO Members on how to handle situations where their personnel performing operational duties are assessed to be "not yet competent".</p> <p>The proposed update underwent an initial round of consultation with WMO's Education and Training (ETR) Office and Capacity Development Panel (CDP) in August and September 2025. A further round of consultation is to be expected once the proposal has been reviewed at SC-AVI-4. Thereafter, and subject to sufficient maturity, the proposal will be submitted to SERCOM-4 in October 2026 for endorsement.</p> |

| WMO-No. | Title [Language ¹] | Last updated | Remark and recommendation |
|------------------|--|-----------------|--|
| | | | |
| 1209 | <p><i>Compendium of WMO Competency Frameworks</i></p> <p>[EN only]</p> | 2019 | <p>Proposed update to introduce a new competency framework for volcanic ash advisory centre (VAAC) forecasters.</p> <p>Between June and August 2025, the proposal underwent consultation with WMO's Education and Training (ETR) Office and Capacity Development Panel (CDP), which resulted in generally minor improvements. The proposal has been reviewed at and approved by SC-AVI-4 and will be submitted to SERCOM-4 in October 2026 for endorsement.</p> <p>This publication is of concern to SC-AVI:</p> <ul style="list-style-type: none"> • Document control issues – not clear when each competency framework was updated. This is a significant issue for QMS. • Template inconsistencies – competencies for different service areas vary in structure and level of detail. • Aviation gets lost among other frameworks for which there is no connected SARP. • Having this publication in EN only is problematic from a Standards point-of-view, given the Guide to Competency and the TRs are available in all languages, but the second-level competency descriptions are not. |
| AeM SERIES No. 3 | <p><i>Aviation Hazards</i></p> <p>[EN only]</p> | 2018 | <p>Scoping exercise review completed in 2024 revealed that a minor to moderate update of AeM SERIES No. 3 was required and that the update was of a medium priority.</p> <p>There may be a need, for example, to introduce new guidance on space weather, sand/dust storms and wildfire smoke. Does not include volcanic ash. There may also be a need to introduce</p> |

| WMO-No. | Title [Language ¹] | Last updated | Remark and recommendation |
|-------------------|--|--------------|--|
| | | | <p>further information for each aviation hazards on effects of climate change.</p> <p>A review and update of AeM SERIES No. 3 should, resources permitting, be completed in 2026 or 2027. Publication would then be in 2028 at the earliest.</p> |
| AeM SERIES No. 9 | <p><i>Compendium of Findings on the Effects of Climate Change on Weather Hazards and Analysis of the Impacts of Climate Change on Aviation Operations</i></p> <p>[EN only]</p> | 2025 [new] | <p>2025 was the first edition of AeM SERIES No. 9.</p> <p>Resources permitting, an update should be undertaken in the twentieth WMO financial period (2028-2031).</p> |
| AeM SERIES No. 10 | <p><i>Proceedings of the 2024 WMO Aeronautical Meteorology Scientific Conference</i></p> <p>[EN only]</p> | 2025 [new] | <p>This document presents the Proceedings of the 2024 WMO Aeronautical Meteorology Scientific Conference held in Geneva, Switzerland from 21 to 25 October 2024. It includes abstracts of all presentations of the three conference sessions, a summary of each panel discussion and a set of recommendations to guide domestic, regional and/or global strategies on scientific and technological advancement in support of meteorological service for international civil aviation.</p> |

SC-CLI and SC-DRR still under review with outcomes still pending.

8. Any Other Business

The Secretariat reform was identified as an issue of concern by the SERCOM MG, in light of the uncertainties related to the support to be provided to the different subsidiary bodies and the still unclear hierarchy of command chains for the Secretariat Focal points.

Concerns were particularly highlighted about the Secretariat support for SC-MMO and SC-AVI, which will from 2026 be supported by a single Unit.

It was noted however also the opportunities for better integration and coordination between INFCOM and SERCOM posed by the creation of a single hydrological Division, or of the creation of a single position of Technical Coordinator for both INFCOM and SERCOM.

SERCOM MG expressed its appreciation and gratitude for those Secretariat colleagues that have served SERCOM since 2020, and that will be separated from the Secretariat at the end of 2025, wishing them all the best for their future endeavours.

9. Summary of Meeting Outcomes and Review of Actions

SERCOM MG revised the draft meeting report and agreed on the following Action Items:

| Action No. (Agenda item) | Action | Responsible (support needed) | By |
|-----------------------------|--|--|--|
| 1 (2.2) | P/SERCOM to review the implications of sub-regional consultation results on the Strategic and Operating Plans for 2028–2031 given that SERCOM, together with INFCOM and RB, is expected to contribute technical priorities and requirements early in 2026, ahead of PAC and Executive Council discussions. | P/SERCOM | TCC/PAC Feb & Apr 2026 EC 2026 |
| 2 (2.3) | Secretariat to focus on finalizing the publications listed in Annex III Publications pending finalization | Secretariat | Q1/Q2 2026 |
| 3 (2.3) | P/SERCOM to use the outcomes of the SERCOM MG 3 meeting to inform/contribute to the work of the EC Task Force on the Review of 2024-27 Strategic Priorities to prepare proposals for prioritization (or deferral) of components of the Strategic and Operating Plans (Resolution 2 EC-Ext(2025). | P/SERCOM | Q1 2026 |
| 4 (2.3) | P/SERCOM to consult with regional associations and Capacity Development Panel about the roles and responsibilities for cross-cutting topics (Capacity Development, QMS, Business Continuity Management, Socio-Economic Benefits, etc.) to enable the delivery of updated SERCOM work programme proposals at SERCOM-4 | P/SERCOM | July 2026 (for inclusion in SERCOM-4 documentation plan) |
| 5 (2.3) | Additions to the SERCOM work programme <ul style="list-style-type: none"> - development of the Guide on Early Warning Services and related training material to include elements related to IBF, CHE, CAP and the urban environment | <ul style="list-style-type: none"> - SC-DRR - All SCs - FP AI - FP Youth - P/SERCOM - SC-DRR - SC-AGR | July 2026 (for inclusion in SERCOM-4 documentation plan) March 2026 (for EC-80) |

| Action No. (Agenda item) | Action | Responsible (support needed) | By |
|-----------------------------|--|---|----|
| | <ul style="list-style-type: none"> - revision of other technical regulations to ensure alignment with the proposed EWS-TR amendments - provision of AI application-specific updates and service requirements to the WMO Joint Advisory Group on AI (see also Annex IV) - supporting the implementation of the Youth Action Plan - development of a proposal to EC-80 for the inclusion of geophysical hazards (earthquakes and volcanic eruptions) in the Hazardous Events list (Res. 1 SERCOM-Ext(2025) and Dec. 2 (EC-79)) - assisting INFCOM in the development of requirements for cataloguing hazardous events (CHE) by WIPPS Designated Centres (Res. 1 SERCOM-Ext(2025) and Dec. 2 (EC-79)) - assisting INFCOM in the development of requirements for the establishment of a Regional Agricultural Meteorology Centre (Recommendation 1 (RA VI-19) and Dec. 2 (EC-79)) - investigation of guidance material requirements and possible community of practice support for HydroSOS (see section 3.6) - each application area to consider the convening of a major technical conference for their respective thematic area within the overarching planning and budgeting | <ul style="list-style-type: none"> - All SCs | |

| Action No. (Agenda item) | Action | Responsible (support needed) | By |
|-----------------------------|--|---------------------------------|---|
| | process for the next financial period (2028-31) | | |
| 6 (2.4) | Secretariat to acknowledge in the final draft of the BIP-H the names of all experts (i.e. to also include non-core SC-HYD experts) involved. | Secretariat | July 2026 (for inclusion in SERCOM-4 documentation plan) |
| 7 (2.4) | Secretariat to work with SC Chairs to ensure that details of the expert composition of SERCOM's subsidiary bodies are up to date and to identify inactive members | Secretariat C/SCs | Q1-2 2026 |
| 8 (2.4) | Secretariat to support P/SERCOM and SERCOM MG in reviewing the increased utilisation of the 'Associate Experts' role, including facilitating opportunities for wider engagement in the work of the SERCOM Management Group | Secretariat P/SERCOM SERCOM MG | Q1-2 2026 |
| 9 (2.4) | Secretariat to further develop onboarding materials for experts participating in SERCOM | Secretariat | Q1-2 2026 |
| 10 (2.5) | Compilation/publication of SERCOM Gender workshop case studies | Gender FP | July 2026 (for inclusion in SERCOM-4 documentation plan – not as a document, but to be reflected in the relevant report) |
| 11 (2.5) | Development of a SERCOM-4 information document proposing updates to the SERCOM Gender Action Plan | Gender FP | July 2026 (for inclusion in SERCOM-4 documentation plan) |
| 12 (2.5) | Explore possible options for SERCOM Youth FP to attend Youth Focal Point Meeting, 26-29 January 2026 in Tokyo, Japan | FP Youth | Jan 2026 |
| 13 (3.1) | Secretariat to highlight on SERCOM Community page the procedure to remove inactive members (ref. WMO-No.1240) | Secretariat | Q1-2 2026 |

| Action No. (Agenda item) | Action | Responsible (support needed) | By |
|-----------------------------|--|---|---|
| 14 (3.2) | Secretariat to highlight on SERCOM Community page the procedure to transfer experts from one team to another (ref. WMO-No.1240) | Secretariat | Q1-2 2026 |
| 15 (3.3) | Report to EC-80 as a follow up to Decision 12 (EC-74), to highlight how SEB considerations go far beyond the mandate of SERCOM and how SEB could contribute to resource mobilization for both the WMO Secretariat's and Members' activities in supporting awareness raising and advocacy at the national level | P/SERCOM | March 2026 (for EC-80) |
| 16 (3.5) | Liaise with INFCOM to effect the transfer of climate data management activities leadership to INFCOM with responsibility for coordinating/establishing user requirements retained by SERCOM | SC-CLI, P/SERCOM (INFCOM) | August 2026 (for inclusion in INFCOM-4 documentation plan) |
| 17 (3.6) | Establish the modalities of BIP-H integration in WMO-No.49, as well as the approval process for the amendments to WMO-No.1083 | Secretariat SC-HYD | July 2026 (for inclusion in SERCOM-4 documentation plan) |
| 18 (3.6) | Add to the work programme Revision of WMO-No.49 Vol.III and guidance on urban flood forecasting | SC-HYD | July 2026 (for inclusion in SERCOM-4 documentation plan) |
| 19 (3.6) | SC-HYD experts to report back to VP Angela Corina on the main achievements and conclusions of the WG DT-HWR for her contribution to JAG-AI. | SC-HYD | ASAP |
| 20 (3.6) | Consider renaming "JET-CRYO" to "ET-CRYO", keeping balanced composition of hydrological and climatological expertise (and including relevant focal points from INFCOM and RB) | P/SERCOM | Q1-Q2 2026 |
| 21 (3.7) | P/SERCOM to report outcomes of February's EC-PHORS meeting to SERCOM MG | P/SERCOM | Q1 2026 |
| 22 (3.9) | SC-HYD to lead the development of the FFF under the Task Team related to Milestone 10, with large participation of INFCOM and RB | VP-SERCOM Angela (with SC-HYD and in collaboration with INFCOM and RB) | July 2026 (for inclusion in SERCOM-4 documentation plan) |

| Action No. (Agenda item) | Action | Responsible (support needed) | By |
|-----------------------------|---|---|--|
| | focal points, for consideration by SERCOM-4 | | |
| 23 (3.9) | FFI-AG recommendations to be reflected in the updated work programme to be discussed at SERCOM-4 (e.g. clarifying the future of GMAS, consolidating HelpDesks) | Secretariat with support from SC-HYD, SC-AGR and SC-DRR | July 2026 (for inclusion in SERCOM-4 documentation plan) |
| 24 (4.1) | Secretariat to share with SERCOM MG the report of the Task Team on Climate Infrastructure. | Secretariat | Q1 2026 |
| 25 (4.1) | SERCOM and INFCOM to discuss, clarify and update respective hydrology and ocean prediction responsibilities and ToRS before SERCOM-4 / INFCOM-4 | SC-MMO SERCOM MG (INFCOM MG) | Q1-Q2 2026 |
| 26 (4.2) | SERCOM to nominate an ex officio SERCOM representative to serve on the RB Task Team for WMO Hydrology Research. | P/SERCOM, MG, SC-HYD (RB) | Q1-Q2 2026 |
| 27 (4.2) | SERCOM to communicate to the RB where targeted physical and social science research can improve effective multi-hazard early warnings and IBF. | SC-DRR, (RB) | Q1-Q2 2026 |
| 28 (4.2) | SERCOM to provide input on research priorities to enhance services to inform RB contributions to strategic planning | SERCOM VPs (RB) | TCC/PAC 2026 |
| 29 (4.2) | SERCOM and RB to further explore procedures to ensure the effective of relevant RB led initiatives into operational services | SERCOM VPs (RB) | TCC/PAC 2026 |
| 30 (4.2) | P/SERCOM to provide input on shortlisted candidates to serve on the SAP | P/SERCOM | ASAP |
| 31 (4.3) | Consider potential HMEI contribution to the revision of technical regulations | SERCOM MG | Q1-Q2 2026 |
| 32 (4.4) | SERCOM MG to develop a list of activities that could be considered for possible XB project funding | SERCOM MG | Q1-Q2 2026 |
| 33 (4.4) | Secretariat projects focal point (D/Development Partnerships and Programme Delivery) to facilitate feedback from project managers to be delivered to SERCOM SEC | Secretariat | Q1-Q2 2026 |

| Action No. (Agenda item) | Action | Responsible (support needed) | By |
|-----------------------------|---|---------------------------------|------------|
| | FPs on where Manuals, guides and guidelines could be improved | | |
| 34 (4.5) | Secretariat to review SERCOM member outreach communication strategies to better showcase SERCOM activities/deliverables | Secretariat | Q1-Q2 2026 |
| 35 (4.5) | Secretariat to clarify the terms of reference of regional representatives and publish them in a clearer form on the community website | Secretariat | Q1-Q2 2026 |
| 36 (4.5) | SERCOM MG quarterly meetings to include a regional updates agenda item at every other meeting to improve coordination between SERCOM and RAs work programmes | SERCOM MG | Q1 2026 |
| 37 (5) | SC-CLI to undertake a review of the ToRs and activities of the ET-CDC to determine or redefine the requirement for the ET-CDC to be retained as a standalone body | SC-CLI | Q1-Q2 2026 |
| 38 (5) | Options for the necessary structures to support the delivery of the Integrated Health Services Plan to be presented to SERCOM MG by end of Q4 2026. | P/SERCOM | Q1-Q2 2026 |
| 39 (5) | SC-DRR to consider adapting the ToR of TT-BCM to become an AG-BCM reporting to MG. | SC-DRR SERCOM-MG | Q1-Q2 2026 |
| 40 (6) | Secretariat to (re)circulate the criteria for frequency of subsidiary bodies meetings and publish them on the new community space. | Secretariat | Q1-Q2 2026 |
| 41 (6) | Secretariat (ROA) to explore possible venues for SERCOM MG 4 in Q4 2027. | Secretariat | Q1-Q2 2026 |

10. Close of Meeting

The meeting closed at 12:30 on Friday 5 December 2025.

Annex I: Tentative Agenda

Annex II: List of Participants

| | Name | Role |
|---|-------------------------|----------------------------|
| 1 | Ian Lisk | President SERCOM |
| 2 | Angela Corina | Vice President SERCOM |
| 3 | Ardhasena Sopaheluwakan | Vice President SERCOM |
| 4 | James Ijampy Adamu | Chair SC-AGR |
| 5 | Andrea Henderson | Chair SC-AVI |
| 6 | Qingchen Chao | Chair SC-CLI |
| 7 | Osvaldo Moraes | Chair SC-DRR |
| 8 | Yuri Simonov | Chair SC-HYD |
| 9 | Justyna Wodziczko | Member SC-MMO |
| 10 | Nyree Pinder | Chair AG-SEB |
| 11 | Elena Mateescu | Vice Chair SC-AGR |
| 12 | Lucy Mtilatila | Acting RA I Representative |
| 13 | Kamaljit Ray | RA II Representative |
| 14 | Grinia Avalos | RA III Representative |
| 15 | Heather Smith | RA IV Representative |
| 16 | Chris Noble | RA V Representative |
| 17 | Karolin Eichler | RA VI Representative |
| 18 | Mary Scholes | RB Representative |
| 19 | Iulia Munteanu | Observer |
| 20 | Sandika Daya | Board Chairperson SAWS |
| 21 | Jonas Mphepya | Observer |
| 22 | Rudzani Malala | Observer |
| 23 | Zoleka Manona | Observer |
| 24 | Bafentse Sengane | Observer |
| 25 | Prudy Matsebula | Observer |
| 26 | Johan Stander | WMO Secretariat |
| 27 | Giacomo Teruggi | WMO Secretariat |
| 28 | Barbara Tapia | WMO Secretariat |
| 29 | Jochen Luther | WMO Secretariat |
| 30 | Zablon Shilenje | WMO Secretariat |
| 31 | Catherine Bezzola | WMO Secretariat |
| Connected remotely for specific agenda items: | | |

| | | |
|----|--------------------|----------------------------------|
| 32 | Alberto Troccoli | Co-Chair SG-RENE |
| 33 | Nir Stav | WMO Secretariat (on INFCOM) |
| 34 | Laura Alku | HMEI representative |
| 35 | Maria Julia Chasco | WMO Secretariat (on XB projects) |

Annex III : Publications pending finalization

The information showcased in the table below has been obtained considering the reports

- SERCOM-2 (2022)
- Cg-19 (2023)
- SERCOM-3 (2024)
- EC-79 (2025)

Relevant reports by P/SERCOM or C/SCs were considered.

Achievements therein contained were then cross-checked with:

- e-library (to check if the finalized publication has been published or not)
- list of mandatory publications, as presented at Cg-18 ad Cg-19

| Status as of 16 November 2025 | | | |
|-------------------------------|-----------|-----------------|---------------|
| | Published | Being processed | Not Published |
| AGR | 4 | | 15 |
| AVI | 10 | | |
| CLI | 15 | 3 | 18 |
| DRR | 5 | 1 | 1 |
| HYD | 11 | 1 | 3 |
| MMO | 6 | 1 | 4 |
| ENE/RENE | 2 | 1 | |
| URB | 2 | | 1 |
| HEA | 2 | | 2 |

"NP" indicates that the publication, even if indicated as at advanced stage of development, has not yet been published

In green publications on which the relevant SC/SG worked and finalized the publication

In lighter green publications currently undergoing the publication process by DPMU

In yellow items that would need clarification from the relevant Secretariat Focal Point

| WMO -No. | Title | by SC | Res/Dec/comments | Year Published | in Res 81 Cg-18 - Mandatory publications ? | in Res 47 Cg-19 - Mandatory publications ? |
|-----------------|--|--------------|-------------------------|-----------------------|---|---|
| 1284 | Drought and Water Scarcity | AGR | | 2022 | | |
| NP | (d) Guidance on applications of Weather and Climate Forecasts for Agriculture including Numerical Weather Prediction (NWP) and coupling of weather / climate models with agricultural models (ET-AAS); | AGR | Announced in 2022 | | | |
| NP | (f) Guidance on developing complete agroclimatic data series (ET-ARM). | AGR | Announced in 2022 | | | |
| 1340 | Quantifying the impacts of particulate matter on crop yield: A synthesis of current knowledge (ET-ASC); | AGR | | 2023 | | |
| 1341 | Guidance document on the impacts of air pollution on crop damage (ET-ASC); | AGR | | 2023 | | |
| NP | SERCOM 1 Output (d1): Guidance on animal/plant pest/disease applications modelling and early warning systems (ET-AAS); | AGR | Announced in 2024 | | | |
| NP | SERCOM 1 Output (d2): Guidance on weather-based crop calendars (ET-AAS) | AGR | Announced in 2024 | | | |
| NP | SERCOM 1 Output (f): Global Database on agricultural flux tower sites (ET-ASC) | AGR | Announced in 2024 | | | |

| WMO -No. | Title | by SC | Res/Dec/comment | Year Published | in Res 81 Cg-18 - Mandatory publications ? | in Res 47 Cg-19 - Mandatory publications ? |
|-----------------|--|--------------|---|-----------------------|---|---|
| NP | SERCOM 1 Output (g): A framework and standards for a Global Drought Indicator (initial concept note was approved by the Executive Council and Cg-19, with Draft Implementation Plan on National Drought Early Warning Services (EWS) to be submitted as a separate Doc at SERCOM-3) (ET-DRG) | AGR | Announced in 2024 | | | |
| NP | SERCOM 1 Output (h): Report on the status of drought -monitoring systems, outlooks, impacts, assessment of possible agricultural yield losses due to drought and preparedness in the WMO Regions (ET-DRG) | AGR | 1355 contributes to it Announced in 2024 | | | |
| NP | SERCOM 1 Output (i): Guidance and case studies on communicating drought aspects (ET-DRG) | AGR | Announced in 2024 | | | |
| NP | SERCOM 1 Output (k): Tools and methodologies to complete time series for agrometeorological applications: Review and recommendations (ET-ARM) | AGR | Announced in 2024 | | | |
| NP | SERCOM 1 Output (l): Guidance and case studies on sub-seasonal to seasonal forecasts for applications in agriculture (ET-ARM); | AGR | Announced in 2024 | | | |

| WMO -No. | Title | by SC | Res/Dec/comments | Year Published | in Res 81 Cg-18 - Mandatory publications ? | in Res 47 Cg-19 - Mandatory publications ? |
|----------|--|-------|----------------------------|----------------|--|--|
| NP | SERCOM 1 Output (m): Estimation of crop and livestock losses per extreme weather event (excluding drought) (ET-ARM) | AGR | Announced in 2024 | | | |
| NP | SERCOM 1 Output (s): Guidance on effective agrometeorological communication (ETACDC); | AGR | Announced in 2024 | | | |
| 1355 | Baseline Assessment of Drought Impact Monitoring | AGR | | 2025 | | |
| NP | Guidelines on Roving Seminars (ET-ACDC); | AGR | Announced in 2022 and 2024 | | | |
| NP | (e) Guidance on applications of NWP and Sub-Seasonal to Seasonal and Multi-Year Forecasts for Agriculture in developing climate risk insurance products and coupling of weather/climate models with agricultural bio-economic models (ET-AAS); | AGR | Announced in 2022 and 2024 | | | |
| 134 | GAMP | AGR | Announced in 2022 | NP | Y | Y |
| 732 | Guide to the Practices for Meteorological Offices Serving Aviation | AVI | | 2022 | | Y |
| 782 | Aerodrome reports | AVI | | 2022 | | |
| AeM No.6 | Outcomes of the 2020 Survey on the Impacts of Climate Change and Variability on Aviation | AVI | | 2022 | | |
| AeM No.7 | Outcomes of the 2021 Global Survey on Gender Equality in Aeronautical Meteorology | AVI | | 2022 | | |

| WMO -No. | Title | by SC | Res/Dec/comments | Year Publishe d | in Res 81 Cg-18 - Mandatory publications ? | in Res 47 Cg-19 - Mandatory publications ? |
|---------------------|---|--------------|--|--------------------------------|---|---|
| 904 | Guide to Aeronautical Meteorological Services Cost Recovery: Principles and Guidance | AVI | | 2023 | Y | Y |
| 930 | Compendium Tropical Meteorology for Aviation Purposes | AVI | | 2023 | | |
| AeM No.8 | Proceedings of the Eighth International Workshop on Volcanic Ash | AVI | | 2023 | | |
| AeM No.10 | Proceedings of the 2024 WMO Aeronautical Meteorology Scientific Conference | AVI | | 2025 | | |
| AeM No.9 | Compendium of Findings on the Effects of Climate Change on Weather Hazards and Analysis of the Impacts of Climate Change on Aviation Operations | AVI | | 2025 | | |
| 49 | Tech Regs Vol. I-II-III | AVI-HYD-DRR | Vol. I 2023, Vol. III 2021, Vol. I on EWS coming | 2025-2022 | Y | Y |
| 1287 | Developing the Climate Science Information for Climate Action | CLI | | 2022 | | |
| 1288 | Guidance on Communicating Climate Science and Services | CLI | | 2022 | | |
| 1290 | WMO Annual Statement on the State of the Global Climate in 2021 | CLI | | 2022 | Y | |
| 1296 | Centennial Observing Stations: State of Recognition Report – 2021 | CLI | | 2022 | | |

| WMO -No. | Title | by SC | Res/Dec/comments | Year Published | in Res 81 Cg-18 - Mandatory publications ? | in Res 47 Cg-19 - Mandatory publications ? |
|-----------------|---|--------------|--|-----------------------|---|---|
| 1299 | WMO Guidelines on Implementation of Climate Watches | CLI | | 2022 | | |
| 1301 | 2022 State of Climate Services - Energy | CLI | Dec 11 SERCOM-2 | 2022 | Y | |
| NP | WMO Annual State of Regional Climate Reports | CLI | Published yearly across many regions (mainly led by RAs with SC-CLI contribution). Announced in 2022 | | | Y |
| NP | WMO Decadal Statement (2011–2020) | CLI | FOLLOW UP TO 1103? Announced in 2022 | | | |
| NP | Guidance on Communication of Key Messages | CLI | Announced in 2022 | | | |
| NP | Modernization of the State of the Climate Monitoring: Discussion Paper on Baselines; | CLI | Announced in 2022 | | | |
| NP | Concept and Methodology of the Decadal Report 2011–2020 | CLI | Announced in 2022 | | | |
| NP | Guidelines on Regional Climate Outlook Forums (RCOFs) and Regional Climate Forums Operation | CLI | (by ET-CIDS) Announced in 2022 | | | |

| WMO -No. | Title | by SC | Res/Dec/comments | Year Publishe d | in Res 81 Cg-18 - Mandatory publications ? | in Res 47 Cg-19 - Mandatory publications ? |
|---------------------|--|--------------|-----------------------------------|--------------------------------|---|---|
| NP | Guidance on the use and interpretation of climate change information for evolving the role of WMO Regional Climate Outlook Forums and Regional Climate Centres | CLI | (by ET-CIDS) Announced in 2022 | | | |
| NP | Guidance on climate services requirements for objective regional seasonal climate forecasts and related standard procedures | CLI | Announced in 2022 | | | |
| NP | Guidance on technical specifications of Climate Services Toolkit data and tools | CLI | (by ET-CIDS) Announced in 2022 | | | |
| NP | Roadmap on Implementation of Quality Management System in Climate Services | CLI | Announced in 2022 | | | |
| 1246 | Guidance on Operational Practices for Objective Seasonal Forecasting | CLI | Announced in 2023 | 2020 | | |
| 1285 | Guidelines for the Assessment of Competencies for Provision of Climate Services | CLI | | 2023 | | |
| 1298 | Step-by-step Guidelines for the Elaboration of Regional State of the Climate Reports | CLI | | 2023 | | |
| 1310 | Guidelines on the Definition and Characterization of Extreme Weather and Climate Events | CLI | | 2023 | | |
| 1312 | Best practices net zero energy transition | CLI | Dec 11 SERCOM-2 | 2023 | | |
| 1316 | State of the Global Climate 2022 | CLI | | 2023 | Y | |
| 1347 | State of the Global Climate 2023 | CLI | | 2024 | | Y |

| | | | | | | |
|-----------------|---|--------------|--|-----------------------|---|---|
| NP | Guidelines on calibration of sub-seasonal to seasonal prediction | CLI | (by ET-CIDS) Announced in 2024 | | | |
| WMO -No. | Title | by SC | Res/Dec/comments | Year Published | in Res 81 Cg-18 - Mandatory publications ? | in Res 47 Cg-19 - Mandatory publications ? |
| NP | Guidelines on the use and interpretation of climate change projection | CLI | Announced in 2024 | | | |
| NP | Guidelines for tailoring climate information for decision making | CLI | (by ET-CIDS) Announced in 2024 | | | |
| NP | Guidelines to Climate Risk Management | CLI | (by ET-CIDS) under publication, announced in 2024 | | | |
| NP | Guidelines on establishment and operations of National Climate Outlook Forums/ National Climate Forums | CLI | (by ET-CIDS) under publication, announced in 2024 | | | |
| 1368 | State of the Global Climate 2024 | CLI | | 2025 | | Y |
| NP | Guidance on the use of Climatological Standard Normals and other baselines in monitoring the state of the climate | CLI | Dec 6 SERCOM-2 LINKED TO 1203? Announced in 2022 and 2024 | | | |
| NP | Guidelines for the establishment and operation of Regional Climate Centres | CLI | (by ET-CIDS) Announced in 2022-2024, could be under finalization as WMO-No.1329? | | | |
| 100 | Guide Climatological practices | CLI | Announced in 2022, published only in English in 2023 (other languages still available in the 2018 edition) | 2023 | Y | Y |

| | | | | | | |
|----------|---|--------------|---|-----------------------|---|---|
| 1221 | Guidelines on Quality Management in Climate Services | CLI | mandatory publication, not listed in any report | NP | | Y |
| NP | Guidelines on CSIS Regional Implementation | CLI | ET-CIDS (Complete) Announced in 2022 | | | |
| NP | CSIS Technical Reference | CLI | ET-CIDS Announced in 2020 | | | |
| NP | CLINO 1981-2010 and 1991-2020 | CLI | under publication, mandatory publication | | Y | Y |
| WMO -No. | Title | by SC | Res/Dec/comments | Year Published | in Res 81 Cg-18 - Mandatory publications ? | in Res 47 Cg-19 - Mandatory publications ? |
| 1150 | MHEWS part II | DRR | | 2022 | | |
| 1339 | WMO Guide for National Meteorological and Hydrological Services in Support of National Multi-hazard Early Warning Systems, Procedures, Coordination Mechanisms and Services | DRR | | 2023 | | |
| 1337 | The WMO Strategy for Service Delivery | DRR | announced in 2024 | | Y | Y |
| 1361 | Business Continuity Management Guidelines for WMO Members | DRR | | 2025 | | |

| 1377 | Guidance for Implementation of the WMO Cataloguing of Hazardous Weather, Climate, Water and Related Environmental Events | DRR | Res 1 SERCOM-Ext | 2025 | | |
|-------------|--|-----------|---|----------------|--|--|
| 834 | Guide to Public Weather Services Practices | DRR | mandatory publication, not listed in any report | NP | Y | Y |
| with IREN A | 2022 Year in Review: Climate-driven Global Renewable Energy Potential Resources and Energy Demand | ENE | | 2023 | | |
| NP | Good practices for early warning systems in the energy sector | ENE | under publication, announced in 2024 | | | |
| with IREN A | 2023 Year in Review: Climate-driven Global Renewable Energy Potential Resources and Energy Demand | ENE/REN E | Announced in 2025 | | | |
| 1335 | 2023 State of Climate Services Health | HEA | | 2023 | | Y |
| WMO -No. | Title | by SC | Res/Dec/comments | Year Published | in Res 81 Cg-18 - Mandatory publications ? | in Res 47 Cg-19 - Mandatory publications ? |
| NP | Update of WHO-WMO Heat Health Warning System Guidance | HEA | Announced in 2024 | | | |
| NP | Handbook on Heat Indices | HEA | Announced in 2024 | | | |
| with WHO | Climate Change and Workplace Heat Stress | HEA | | 2025 | | |
| 1274 | SHP | HYD | | 2022 | | |
| 1286 | Ass. Guide | HYD | | 2022 | | |
| 1308 | State of Global Water Resources 2021 | HYD | | 2022 | Y | |

| WMO -No. | Title | by SC | Res/Dec/comments | Year Published | in Res 81 Cg-18 - Mandatory publications ? | |
|-------------|---|-------|------------------------|-------------------|--|---|
| | | | | | in Res 47 Cg-19 - Mandatory publications ? | |
| 385 | International Glossary for Hydrology | HYD | Announced in 2024 | NP | | Y |
| 1003 | Guidelines on the role, operation and management of NHS | HYD | Announced in 2022-2024 | NP | Y | |
| 574 | Sea ice | MMO | Dec 5 SERCOM-2 | 2022 | | |
| 1293 | CIFI | MMO | | 2022 | | |
| 471 | Guide to MMS | MMO | | 2023 | Y | |
| 558 | Manual MMS | MMO | | 2023 | Y | Y |

| | <u>Manual on the High-quality Global Data Management Framework for Climate</u> | MMO | NP - last edition from 2023, not including revisions expected in 2025 edition? | 2023 | | |
|---|---|--------------|--|-----------------------|---|---|
| 1238 | | MMO | Dec 10 SERCOM-2 | 2024 | | Y |
| 1348 | MER | MMO | | 2025 | | Y |
| <u>MMO Series No. 7</u> | <u>The 11th Coordinated Ocean Wave Climate Project Workshop</u> | MMO | | | | |
| 9 | Shipping | MMO | Announced in 2022 | NP | Y | Y |
| 259 | <u>WMO Sea-Ice Nomenclature</u> | MMO | NP - revisions expected in 2025 edition? Announced in 2024 | NP | | |
| WMO -No. | Title | by SC | Res/Dec/comments | Year Published | in Res 81 Cg-18 - Mandatory publications ? | in Res 47 Cg-19 - Mandatory publications ? |
| 781 | Guide to the Applications of Marine Climatology | MMO | mandatory publication, not listed in any report | NP | | Y |
| 1076 | <u>Guide to Storm Surge Forecasting</u> | MMO | Announced in 2024 | NP | Y | Y |
| 1234 | <u>Guidance on Integrated Urban Hydrometeorological, Climate and Environment Services</u> | URB | vol. I 2019, vol.II 2022 | 2022 | Y | Y |
| NP | Summary and recommendations of the workshop on integration of urban-related activities in WMO | URB | Dec 15 SERCOM-2 | 2022 | | |

| | | | | | | |
|------|---|-----|---------------------------------------|-----------|---|---|
| 1313 | Good practices on high resolution modelling for Integrated Urban Services | URB | Dec 14 SERCOM-2 | 2023 | | |
| 1100 | <u>Guide to the implementation of a QMS for NMHSs</u> | | mandatory publication - managed by MS | NP | Y | Y |

Annex IV: Outcomes on Artificial Intelligence from the Standing Committees, AGs, SCs

SERCOM MG discussed on potential impact of AI-based capabilities on WMO services. For this purpose, each Standing Committee presented some key points (listed in the table below) during their presentations. The different points have been regrouped for ease of reference in this section of the report, for future consideration by the JAG-AI.

Artificial Intelligence (AI) is transforming service delivery across multiple sectors by enhancing forecasting accuracy, operational efficiency, decision support, and user engagement. While AI offers significant opportunities, governance, verification, and capacity building remain critical to ensure reliability and ethical implementation.

Strategic Considerations agreed by SERCOM MG:

- **AI is a tool, not a solution:** Requires human oversight and verification.
- **Governance & Standards:** Ensure transparency, explainability, and compliance.
- **Capacity Building:** Invest in training and skill development.
- **Partnerships:** Engage private sector and research institutions for innovation.
- **Risk Management:** Address quality assurance and ethical concerns.

Key Takeaways

- AI enhances forecasting, decision support, and user engagement across sectors.
- Human oversight, governance, and verification are non-negotiable.
- Capacity building and partnerships are critical for successful integration.
- Ethical and standardized implementation is essential to avoid risks.

| SC/AG/SG | Implication of AI |
|----------|---|
| SC AVI | <ul style="list-style-type: none">• Strengthened observation data assimilation and forecast output analysis, incl. auto-generated and tailored MET forecasts• Improved alerting based on pre-configured thresholds to support real-time weather monitoring• Adaptations to skills-set, duties and responsibilities ("job evolution")• Improved strategic and pre-tactical MET decision support to aviation users• Enhanced tactical MET decision support to aviation users, including real-time hazard detect-and-avoid• Greater integration (data fusion) of MET information with ATM/flight-and-flow information (FMS, EFB apps.)• Improved post-event re-analysis (replay and analysis tools)• Enhanced training activities, including simulations, using more realistic weather scenarios ("play books")• Improved quality control procedures and processes |

| SC/AG/SG | <ul style="list-style-type: none"> • Implication of AI |
|----------|--|
| SC MMO | <ul style="list-style-type: none"> • Enhanced Forecasting & Prediction: AI enables faster, higher-resolution, and more localized marine forecasts and storm surge warnings – benefit wind propulsion for decarbonization purpose • Operational Efficiency and inclusive communication: To address dynamic product format requirements (text & graphics), NLP and generative AI allow multilingual, user-tailored marine warnings and automated bulletins. • Smart Decision Support for Maritime Operations: AI improves ship routing, port logistics, and risk-based decision tools through real-time services – already advanced by private sectors (WNI, StormGeo etc.) • Harmonization among international standards: AI ensure services providers follow IMO/IHO/WMO standards in harmonized way • Training and Capacity Development: AI empowered training to the great extent, not limited to marine. • Empowered the end-users: Marine Autonomous Ships and AI supported decisions redefined the user requirements • Ensure consistencies of warnings in international/coastal waters • Point of attention: how to apply quality assurance (QA) of AI in a skills-based environment |
| AG-SEB | <ul style="list-style-type: none"> • Consider AI guidelines for integrating AI into SEB production • Rapidly process and integrate complex datasets (weather and climate data, economic and social metrics) • Detect patterns and trends to inform economic models and social narratives. • Model behaviour of communities or responders under different hazard scenarios - enhancing stakeholder engagement. • Development of an SEB-dedicated AI chatbot, integrated into the SEB Toolbox, that allows users to input their available resources and receive tailored recommendations on suitable approaches |
| SC-AGR | <ul style="list-style-type: none"> • AI-enhanced / ML forecasting: Downscaled climate–crop–yield prediction using hybrid physical–AI models • AI-driven impact forecasting: Linking weather, crop conditions, socio-economic, and market impacts for AA. • Intelligent advisories / chatbots: Multilingual, voice-enabled, farmer tailored and profiled, two-way interaction for farmers. Can also be used to supplement gaps in the data • Smart observation networks: AI for quality control, gap-filling, and anomaly detection in agromet data from satellite data, loss and damage monitoring • Already involved in AI project (AIM 4 Scale) - Bangladesh, Chile, Ethiopia, Kenya & Nigeria (10 more in 2026) • Build capacity through e-learning, RTC training including case studies and good practices |

| SC/AG/SG | <ul style="list-style-type: none"> Implication of AI |
|---------------|--|
| | <ul style="list-style-type: none"> • Hackathons on AI-in-agromet – call for startups, private sector or other institutions to develop solutions • Encourage pilot implementations in NMHSs to test operational integration • Ensure NMHSs are involved • Ensure verification of AI tools and not to use outside the scope of verification. Careful attention is required to ensure transparency, data quality, and to avoid unintended consequences • AI is a Tool NOT the solution: AI tools complement rather than replace expert judgment and NMHS involvement |
| SC-CLI | <ul style="list-style-type: none"> • AI-enhanced / ML forecasting: Pilot AI for data rescue and climate prediction within RCC and facilitate uptake of products through Regional Climate forums. • Develop and endorse AI guidelines for climate services operations • Ensure NMHSs are involved and supportive: need for strong engagement by NMHSs, clear governance structures, and safeguards to ensure that AI is integrated responsibly and effectively with this equitable usage across all regions |
| SC-HYD | <ul style="list-style-type: none"> • Significant Impact of AI-based Capabilities on the Hydrology Sector: AI-based technologies are transforming hydrological forecasting and water resources management along the whole value chain. Opportunities of collaboration between NMHSs and private sector (also constituting a risk on missed QA) • AI Pilot Studies on flood forecasting (SERCOM/INFCOM/RB) • <u>Working Group on Digital Transformation for Hydrology and Water Resources (WG DT-HWR)</u> collects case studies covering AI as well as other emerging technologies in hydrology and has published corresponding reports. Co-organized the workshop on <u>Human-centered AI for disaster management: Empowering communities through standards</u>, during AI for Good Global Summit 2025. The RA VI Scientific Forum with a dedicated AI Session was mentioned in this regard. |
| SC-DRR | <ul style="list-style-type: none"> • Combining atmospheric/marine/hydrology forecasts with impacts to support IBF approaches • AI agents to assist with multilingual products where needed • AI data analysis agents (dealing with big data sets, data integration, EPS, etc) • LLM supporting tailored products delivery • AI monitoring of CAP implementation, supporting the HelpDesk • Competency management for operational staff (and decision makers) |
| FFI-AG | <ul style="list-style-type: none"> • AI to be used support the Tropical Cyclone forecasting |

| | |
|-----------------|--|
| SC/AG/SG | <ul style="list-style-type: none"> • Implication of AI |
| SG-RENE | <ul style="list-style-type: none"> • Enhancing prediction skill through hybrid ML-NWP approaches for wind, solar, hydro and demand forecasting • Enabling automated processing of large datasets for renewable-resource assessment and atlas development • Strengthening impact-based early warning systems for energy resilience through improved hazard recognition and risk mapping • Creating new needs for governance, explainability, standardization and cross-committee coordination within SERCOM • Exploring opportunities for partnerships with AI specialist to enhance RE sources management and penetration |

Annex V: Proposed documents for SERCOM-4

NOTE: For SERCOM-4, deadline for finalization of documents is late July 2026. This to allow one month for finalization/internal approval/translation of the documents and for publication on the website ONE MONTH prior to the beginning of the session.

The list is a preliminary draft and would need further consideration prior to the development of the documentation plan. In *Italic* are indicated the tentative type of decision document needed for each topic.

SC-AVI

- WMO-No.49, Volume I amendment (General meteorological Standard and Recommended Practices (SARPs), Make reference to ICAO Annex 3 and PANS-MET given discont. of TR Vol. II) *Recommendation to Cg-20*
- WMO-No 731 update (Met. observing and information systems, Last updated 2014, Update prepared by ET-ETC) *Resolution*
- WMO-No. 1205 update (Guide to Competency, Update prepared by ET-ETC (new section to address "not yet competent")) *Resolution*
- WMO-No.1209 update (Compendium of WMO Competency F/works, Update prepared by ET-ETC (new section to address VAAC forecaster competencies)) – *further considerations on this to be held by Q2 2026, in relation to the wider discussion on regulatory status of AMF 2nd level competences, currently 'only' in 1209.*
- AeM Series No.5 update – *Decision, but activities to be reflected as appropriate in the revised work programme's resolution*
- Specific AVI Matters (TORs update) *Resolution on updated ToR of SERCOM subsidiary bodies*

SC-MMO

- Streamlining maritime safety information standards:
 - Concept note for new chapter structure of WMO Nos. 558 & 471 *Decision*
 - Issuing/Preparation Services changes in WWMIWS *Decision*
 - Update to WMO No. 9 Vol D information for shipping (*Need to check the Tier to which this publication is belonging and see at which level the approval resides*)
- S-41X implementation strategy/roadmap paper *Recommendation to EC (see WMO 508 para 4.3)*
- Update to Guide on Storm Surge Forecasting (WMO No. 1076) *Resolution*
- RSMC application/designation *Recommendations to EC/Congress (previous INFCOM MG needed to avoid loops of rejection)*
 - RSMC-MER: Norway & INCOIS; *Recommendation to EC/Congress (previous INFCOM MG needed to avoid loops of rejection)*
 - RMSC-GNSSP: TBD; *Recommendation to EC/Congress (previous INFCOM MG needed to avoid loops of rejection)*

- RSMC-GNOP: TBC; *Recommendation to EC/Congress (previous INFCOM MG needed to avoid loops of rejection)*
- Consolidated Marine services resolutions *EC Recommendation to Cg (directly in 2027)*
- Update to the SC-MMO ToRs and revised OpPlan *Resolution on the updated ToR of SERCOM subsidiary bodies and Resolution on the updated SERCOM work programme*

SC-AGR

- Requirements for regional Agromet centres – linked to WIPPS (First SERCOM then INFCOM) – ET-ASR to work on this (NB take note of INFCOM dates also and how to get through both SERCOM and INFCOM) - *Decision+INF (for INFCOM to take up)*
- Others to be considered if necessary - Agromet bulletin standards - *further discussion needed at Secretariat level – to be considered for inclusion in WMO-No.49?*

SC-CLI

- Updated WMO Manual on high-quality global data management framework for climate and the technical regulations (WMO No. 49) – *Recommendation (further discussion needed at Secretariat level and with INFCOM)*

SC-HYD

- Flood Risk Mapping Guide - *Resolution*
- Flood Forecasting Framework (FFF) Concept Note and Implementation - Roadmap as recommended by [FFI-AG Q2 2025](#) – *Recommendation (to be agreed with INFCOM MG)*
- Updated description of SC-HYD Milestones - *Decision (replacing Dec 7. SERCOM-3)*
- Amendments to Tech.Reg. (Including BIP-H potentially) to Cg.20 - *Recommendation (to be agreed with INFCOM MG)*

SC-DRR

- Updates to WMO 49, part IV section 5, Part V, and Part VI, Part VII – *Recommendation to Congress*
- Proposed updates to WMO Data Policy based on review of the emerging data requirements for risk- and impact-based warning and decision support systems. - *Recommendation to Congress*
- Proposed updates to WIPPS Manual , 2.2.2.6 and 2.2.2.7 in particular *Recommendation to Congress*
- Guide on EWS tech reg implementation – *Resolution*

Other

- Delegation of authority for Tier IV publication - *Decision*

- Consider “thematic” resolutions embedding as much as possible decisions/resolutions from the same SC
- Publication compiling all Gender workshop case studies for presentation at SERCOM-4
- Information document proposing updates to the SERCOM Gender Action Plan

Annex VI: Revised SERCOM work programme

(based on Annex to Resolution 2 (SERCOM-3), revised by SERCOM MG on 4 December 2025)

Link: [SERCOM-3-d05-1-WORK-PROGRAMME-FOR-THE-NEXT-PERIOD-approved en 22December2025.pdf](#)