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47th Session of the WCRP
Joint Scientific Committee (JSC-47)
(online 27-29th April 2026)

Actions and Decisions

Actions (including from JSC-closed session):

JSC47-1	Secretariat to discuss with WMO Development Partnerships and Legal if there is a way of simplifying due diligence procedure which many felt was too onerous	Secretariat (ASAP)
JSC47-2	Form a WCRP Fundraising TT	JSC leadership and secretariat (ASAP)
JSC47-3	WCRP Secretariat comms team to discuss with the IPOs on the shared database vs Airtable request sent to IPOs.	Secretariat (once new P3 in place)
JSC47-4	GSITT leadership and secretariat to look at regional distributions for SSG membership	Secretariat and GSIITT leadership (in advance of JSC47b)
JSC47-5	H/WCRP Sec. to send email reminding JSC they have until the end of the month (31 May) to put their names forward for the position of JSC Officer and for Chair and Vice Chair. If no-one puts their name forward for Chair or Vice-Chair Tim and Cristina are happy to serve another 2-year term.	H/WCRP and JSC (ASAP)
JSC47-6	Discussion to be held with Academy leadership on future priorities for the Academy	JSC leadership, Anna S and Kendra G, secretariat, and Academy leads (in advance of JSC47b)
JSC47-7	Secretariat to work with CMIP IPO and chairs, Tim and Cristina to take forward two possible MoU on (i) Governance, sustainability and lack of formal agreement between WCRP/CMIP and the ESGF (ii) Need for a more structured relationship with the Integrated Assessment Modelling Consortium (IAMC), the governing body for the IAM community	Secretariat, JSC leadership, and CMIP (before JSC47b)
JSC47-8	Regarding the concern in the community that publication review processes are moving too slowly to accommodate the tight timeline from CMIP data publication to IPCC AR7 submission deadlines WCRP leadership and secretariat to discuss with CMIP leadership the form of such a potential statement and to take action appropriately.	Secretariat, JSC leadership, and CMIP leadership/IPO (before JSC47b)
JSC47-9	Science Strategy Task Team, to consider the development of a collaboration and communication strategy alongside identifying the strategic priorities in undertaking a	JSC leadership, Task Team members, and

	systematic assessment of LHAs and Core Projects to identify achievements, gaps, overlaps, and synergies.	secretariat (before JSC 47b)

Decisions (including from JSC-closed session; noting that the details of the decisions involving membership changes will be communicated by the WCRP secretariat to core activities directly):

JSC47-10	APARC nominations were approved. The JSC acknowledged APARC's efforts to recruit members from the Global South; however, it recommends taking a more proactive approach throughout the year to further strengthen representation.
JSC47-11	CLIVAR nominations were approved. The JSC also approved the new CLIVAR ToRs for its memberships.
JSC47-12	For GEWEX the WCRP secretariat will follow up on GEWEX chair (Xubin Zeng) extension since this may not be needed until next year. For the two new members it was felt that there was a lack of Global South representation and so there needed to be further discussion on these. The JSC noted that GEWEX had improved its gender distribution.
JSC47-13	RIfS new co-chair approved. The JSC recommended that RIfS consider how to improve its geographical balance in future membership nominations.
JSC47-14	CliC request for an extension of one if its members was approved. The JSC noted that CliC would send nominations for the new co-chair(s) within the next few months to the JSC.
JSC47-15	Request from ESMO regarding feedback on SSG members who do not have affiliation or are from private sector: Detailed guidance will be included in the revised membership guidelines, to include e.g. SSG members to be scientifically active, due diligence when needed and members needing to declare any conflicts of interest.
JSC47-16	Tim, Cristina and Amadou all agree to serve for another term on the JSC.
JSC47-17	JSC confirms no change to 2026 budget. JSC discussed and confirmed a new version of the 2027 budget taking into account additional income from NZ and increase in Reserve from earlier estimate.
JSC47-18	JSC approves a community planning workshop for writing the next WCRP strategic plan in association with JSC meeting, contingent on additional funds or in-kind support being raised.

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1. Introduction

This report is a summary of the main outcomes from the 47th Session of the World Climate Research Programme (WCRP) Joint Scientific Committee (JSC-47), which took place virtually over three 3-hour sessions between the 27th and 29th of April 2026. This report does not reflect all the discussions that took place during the session. For more detailed reports, detailed presentations, and agenda please refer to the JSC-47 webpage[1]. All Actions and Decisions are listed at the start of this report, noting that Actions/Decisions from the JSC-only meeting (which included an additional two sessions online) are also included.

2. JSC opening

Tim Naish (JSC Chair), Cristina Stan (JSC vice-Chair), and Mike Sparrow (Head WCRP Secretariat) welcomed participants to the open session of the 47th meeting of the WCRP Joint Scientific Committee (JSC) Meeting. This JSC focuses on the future priorities of WCRP, with a view to the next WCRP Strategic and Implementation cycle (2029 onwards). It highlights our fund-raising efforts on a number of fronts and outlines some guidelines how WCRP activities should interact with private entities. Summary reports were given by our core activities, which are key to what WCRP is and does now and in the future.

3. Future priorities for WCRP

3.1 Introduction

Tim and Cristina introduced this item with reference to the draft White Paper[2]. The white paper draws on the latest scientific directions, priorities, and gaps following consultation with the WCRP Leadership and the wider community, reports, partner strategies, and the WCRP Science and Implementation Plan (2025) to provide a vision and starting point for WCRP's science strategy and directions beyond 2028.

The current WCRP structure was briefly recalled, with Lighthouse Activities highlighted as the agile, fast-moving components addressing emerging priorities, and Core Projects described as the backbone of scientific development, including both fundamental research and the translation of science into usable information. The need for greater agility was stressed, noting that WCRP is now operating in a more resource-constrained environment while facing increasing demands for relevant climate information.

WCRP's role within the broader World Climate Programme was also outlined, alongside the Global Climate Observing System (GCOS), the World Climate Services Programme, and the World Adaptation Science Programme (WASP). WASP, hosted within UNEP, was highlighted as a key partner supporting the translation and application of science into policy and practice, complementing WCRP's role in knowledge generation and offering opportunities for closer collaboration going forward.

The emerging science strategy highlights key research directions, including Earth system dynamics, water and hydrological extremes, the cryosphere, AI/ML applications,

[1] https://www.wcrp-climate.org/jsc47-agenda
[2] https://www.wcrp-climate.org/documents/JSC/JSC47/Reports/WCRP_WhitePaper.pdf

extreme and compound events, the carbon cycle, and improved regional climate information, alongside key considerations such as the changing geopolitical and funding landscape, the need to improve regional and local prediction quality, and maintaining a balance between fundamental and applied science. Strong emphasis was placed on Global South inclusion and ensuring outputs are not only scientifically robust but usable, while aligning with external partners without duplication and identifying priority areas and potential structural changes to enhance impact and efficiency. Cross-cutting themes include digital infrastructure and open science, regional relevance and climate justice, advances in modelling (CMIP7+), and strengthened observational strategies and partnerships.

In the discussion, concerns were raised about potential gaps in prioritization, particularly the representation of atmospheric science. It was clarified that the White Paper is an initial framing, and that further input to close gaps is expected. The importance of maintaining strong fundamental science alongside increasing demand for applied outputs was emphasized, with a caution against shifting too far away from core scientific understanding. The role of the biosphere in the climate system was also highlighted as an area requiring stronger integration. Finally, it was noted that expectations on climate science are increasing, with growing demands for precision and clearer characterization of uncertainty, as users are already relying on this information for decision-making.

3.2 Overview of budget situation

Mike provided an overview of the current budget situation, highlighting significant funding cuts, notably the loss of the US grant, alongside reduced contributions from other sources, including WMO. He outlined the 2026 budget and noted that projections for 2027 remain uncertain. The WCRP reserve, used to supplement the 2026 budget, will not be sufficient to do so to the same extent in 2027, making the financial situation more constrained. An indicative view of the 2027 budget was presented, with final decisions taken at the JSC-only session.

In the discussion, several items of feedback were received e.g., it was noted that the JSC budget appeared disproportionately high compared to budget allocations for the Core Projects. Tim Naish acknowledged this concern and agreed that it required further examination. It was also noted that the JSC had not yet collectively reviewed this in detail, and that any adjustments needed to be considered carefully and strategically by the full JSC. During the JSC-only session this was taken into account and an increase made to the allocations for core activities (in the time between the open and JSC-only session it also transpired that the WCRP reserve was ~260k higher than the conservative estimate presented).

3.3 Views from the World Meteorological Organization (WMO)

Véronique Bouchet (WMO Senior Director) summarized WMO's perspectives on WCRP priorities in the context of the forthcoming WMO Strategic Plan (2028–2033), currently under development. She highlighted key drivers including rapid advances in AI/ML, persistent disparities among Member States, increasing environmental risks, and evolving geopolitical dynamics alongside growing engagement with the private sector.

She emphasized that WMO is embedding research more closely into service delivery to support its Long-Term Goals, while maintaining the central role of climate research. She described the recent restructuring as aligning climate activities more closely with

climate information services, advancing the research-to-delivery continuum through initiatives such as the IPCC and the State of the Climate Reports. Ongoing budget uncertainties were noted, with Member States guiding priorities, and WMO expressed openness to engaging with the JSC to ensure alignment with WCRP priorities.

3.4 Views from the Intergovernmental Oceanographic Commission of UNESCO (IOC-UNESCO)

Karen Evans (Head of Ocean Science Section, IOC-UNESCO) summarized IOC-UNESCO's views on WCRP priorities, noting that IOC's mandate is driven by Member State agreements such as the SDGs, the Paris Agreement, and global biodiversity frameworks. She highlighted capacity development- particularly for Small Island Developing States and least developed countries as a key priority, alongside core areas including ocean observations (in collaboration with GCOS and GOOS), scientific assessments, and the development of science-based tools and services such as early warning systems and decision-support products.

She also emphasized alignment with WCRP White Paper priorities, particularly in delivering actionable information, promoting regional equity, strengthening capacity building, and advancing digital infrastructure. She further noted that geopolitical challenges are impacting IOC's budget, leading to exploration of alternative funding sources, including private sector and philanthropic engagement. Melissa Hart added that several Ocean Teacher Global Academy trainings are featured in the WCRP Academy catalogue, highlighting ongoing collaboration in capacity development.

3.5 Views from the International Science Council (ISC)

Vanessa McBride (Science Director, ISC) presented ISC's views, echoing WMO and IOC on the challenging geopolitical context and the need for stronger, more creative partnerships. She outlined ISC's role and structure, noting its global network of scientific bodies and its central role in setting up the international science agenda.

ISC can support WCRP's future science direction through science diplomacy, fundraising, access to a broad expert network across fundamental applied science and strengthened training and capacity development (including Early and Mid-Career Researcher (EMCR) support). Emphasis was placed on co-design, transdisciplinary collaboration, and better alignment to avoid duplication, while identifying priority areas and new opportunities. Key areas of synergy include integrating social science perspectives, collaboration on AI/ML, and joint engagement in international initiatives (e.g. IPY-5, COP processes). Gaps noted in the White Paper include climate communication and research/monitoring of the global commons.

In the general discussion strong appreciation was expressed for co-sponsor support and the critical role of the scientific community, largely contributed through external funding and voluntary effort, highlighting the need to retain and better align this community. WMO, ISC and IOC emphasised the high value and reach of WCRP science, its reliance on global in-kind contributions, and its role in underpinning international science agendas. Opportunities for stronger collaboration, particularly in fundraising, were noted. Concerns were raised about the funding landscape, especially the very low success rates for interdisciplinary and transdisciplinary research, with limited funding pools identified as a systemic issue already recognised by ISC.

4. Finance and fund-raising

4.1 WCRP's future approach to resource mobilization

Tim provided an overview of WCRP's efforts on resource mobilization, including the development of a fundraising strategy targeting philanthropy, foundations, the private sector, and partnerships, with initial discussions underway with the Wellcome Trust, for example. He also highlighted plans to establish a dedicated Task Team on fundraising, alongside the existing three Task Teams, and to convene a JSC fundraising workshop. A JSC fundraising strategy meeting is planned in Geneva (18–19 June), ahead of London Climate Week, to further define the scope of these efforts.

In response to a question regarding lessons learned from New York Climate Week, Tim noted that there were valuable takeaways, particularly the importance of early and coordinated preparation with partners. Tim also made the point that improving WCRP's visibility is a vital part of successful resource mobilisation.

4.2 Update on London Climate Action Week and the Climate Champions concept

Mike provided an update on WCRP's engagement with the finance sector, noting that this is a relatively new area of work involving a small group collaborating with external partners. He highlighted ongoing efforts linked to London Climate Action Week, including discussions with UNEP Finance, Wellcome, and the City of London, as well as the development of a finance pitch deck for fundraising, with a focus on CMIP and CORDEX. He also introduced the concept of "Climate Champions," aimed at recognizing distinguished financial supporters of climate science, being developed in parallel with the WMO Global Commons to avoid overlap. He acknowledged that while these initiatives show strong potential, they remain complex to implement.

In the discussion, questions were raised about coordination with WMO, management of private sector engagement, and safeguards against undue influence. Tim noted that protocols and WMO due diligence processes will help guide engagement and funding transparency. The need for better tracking of funding efforts, including a shared database of funders and outreach activities was highlighted, as was the suggestion to leverage existing networks and examples of successful private funding across WCRP projects.

4.3 Terms of Reference for engagement with private sector

Hindumathi Palanisamy (WCRP Secretariat) summarized discussions between the WCRP Secretariat and WMO on engagement with the private sector, emphasizing that all such interactions must follow WMO's due diligence (DD) procedures developed in coordination with WMO's legal and partnerships teams. The terms of reference presented highlighted that all activities are required to conduct preliminary checks with the Secretariat before initiating the formal DD process, submit a one-page summary to the JSC for information, and obtain DD clearance based on reputational risk. It was stressed that no engagement should take place prior to clearance, and that these requirements apply to all entities, including private companies and philanthropic foundations.

In the discussion, questions were raised about timelines, access to guidance documents, and the need for transparency, including maintaining a list of cleared

organizations. It was clarified that any activity linked to WCRP must undergo the DD process, even if funding is routed through external institutions or subcontracting arrangements.

Suggestions included focusing private support on specific activities (e.g. event funding) and improving coordination and visibility of funding efforts, while acknowledging the need for clearer protocols and strategic alignment.

The WCRP Secretariat agreed to investigate simplifying the procedure for at least smaller levels of funding.

5. Task Teams update

5.1 Global South Inclusion Task Team

Anna Sörensson (co-chair of the Task Team) highlighted activities of the WCRP Global South[3] Inclusion Task Team, which is tasked to generate recommendations to the JSC on improving Global South Participation in WCRP. It involves mixed methods studies on barriers and enablers to meaningful participation of Global South (GS) scientists in WCRP. This includes distribution of a survey to WCRP contacts, a number of interviews, and several workshops being planned.

Anna introduced the new Task Team co-chair, Kendra Gonzales (JSC Member), and Julietta Canneva, an intern helping with the work. Anna highlighted that achieving sufficient response rates across all regions, career stages and WCRP activities was a challenge for the survey. The suggestion was made to use the International Project Office email list and the IPO email contacts to ask them to help distribute the survey.

Over the next year the GSITT would complete the mixed-methods study on barriers and enablers to meaningful participation of Global South scientists in WCRP and would aim to provide its final recommendations and presentation at JSC48.

See their presentation for further details.

5.2 Task Team on Future Priorities

Tim introduced the "Science Strategy – Direction and Future Priorities" Task Team, issuing a final call for membership. Short-term (one-year) task team will identify gaps, define priorities, consult partners, and produce recommendations to inform the next strategic plan.

5.3 Sea Level Task Team

Tim highlighted the "Sea Level Rise – Projections, Impacts and Adaptation" Task Team and issued a final call for additional members. He noted the growing UN-level focus on sea level rise impacts and the need for improved data products and information. The Task Team will undertake a stocktake, and report to the JSC. An abstract has been submitted to the AGU Chapman Conference on regional-scale impacts.

[3] The Global South countries are characterized by a greater vulnerability to climate change and variability, coupled with having less influence on global decisions and less representation in international climate science.

In the discussion, it was noted that ongoing UNFCCC SBSTA work mapping research needs could inform the Task Team's priorities. Links to IPCC AR7 were also highlighted, with early outputs expected to inform authors. The importance of interdisciplinary approaches, including connections to mitigation and adaptation efforts, and relevant external initiatives such as UNEP-led work on climate overshoot were also noted.

5.4 Artificial Intelligence (AI) and Machine Learning (ML) Task Team

Cristina highlighted the "Machine Learning/Artificial Intelligence – Innovations & Applications in Climate Science" Task Team and asked WCRP activities to provide potential additional members. From the white paper she highlighted that future research priorities could (or should) include: (i) physics-informed and hybrid modeling; (ii) foundation models for climate, democratization and capacity building; (iii) trustworthy and explainable AI. She continued to remind attendees of the objectives and foci of the task team, noting that deliverables could include:

- Stocktake Summary Note: Short mapping of ongoing AI/ML activities, use cases, gaps and overlaps.
- Recommendations to JSC: Brief report outlining priority areas, good practices, suggested pilot activities and capacity building needs for AI/ML in WCRP.
- Advisory Note to WMO RB and other relevant co-sponsor activities: Focused recommendations on integrating AI/ML into climate research and projections in coherence with weather and hydrology initiatives.
- Knowledge sharing Outputs: One or more concise briefings (e.g. webinar, 2–4 page status brief summary) for WCRP

6. WCRP Core Activities

6.1 Safe Landing Climates Lighthouse Activity (SLC)

Steve Sherwood (SLC co-chair) started by highlighting that SLC aims to answer two key questions[4]:

- What potential high-impact climate hazards, surprises or irreversible changes should society be genuinely worried about and how can the associated risks be usefully quantified and communicated?
- What do achievable, internally consistent and safe pathways to a future climate look like that also meet broader human needs, and how can we identify them?

He presented SLC's Research Themes covering high risk events, the perturbed carbon cycle, water resources, sea level rise, and safe landing pathways. The highly anticipated Tipping Points Assessment on "High impact climate events, tipping points and irreversible regional impacts: how robust is our understanding?" will be submitted to Reviews of Geophysics mid-year. The Transient Climate Response to cumulative Emissions (TCRE) and Zero Emissions Commitments (ZEC) Assessment (joint with ESMO) will be submitted before the end of the current year. There are a number of other continuing activities, for example he continuation of the Global Economic Risk activity with industry partners, but SLCs are looking for ideas for future work, otherwise are open to sunsetting in 2027.

[4] Sherwood et al., Earth's Future, 2024

See their presentation for further details.

6.2 Global Precipitation Experiment Lighthouse Activity (GPEX)

Annalisa Cherchi and Robert (Jeff) Trapp (GPEX co-chairs) presented GPEX, highlighting various activities including the outcomes of the Kyoto workshop in March, which enabled GPEX to consolidate its governance, align Working Group priorities, and define a clear roadmap and action plan for 2026–2027. A Major outcome of the workshop was the 2028–2030 timeframe identified for the Years of Precipitation. This will serve as a flagship global coordination framework linking field campaigns, observations, modelling, and applications across regions and communities.

The four GPEX Working Groups will focus on:

- *WG 1 Coordinated Field Campaigns*. Example activity: Engage with scientists and funding agencies to identify potential projects for each high impact precipitation systems across the globe.

- *WG 2 Precipitation-Relevant Databases*. Example activity: Contribute to the systematic evaluation of precipitation relevant datasets as well as aid the establishment and/or expansion of global and regional precipitation data.

- *WG 3 Precipitation Modeling, Prediction, and Process Understanding*. Example activity: Coordinate multi-scale precipitation analysis and forecasts, and support the establishment of multi-model databases, along with common evaluation metrics.

- *WG 4 National/Regional Activities and Capacity WG Development*. Example activity: Work with other projects to make precipitation datasets available for resource-challenged scientists, for example in the Global South.

The Data Resource Hub was highlighted for visibility, accessibility and alignment of existing datasets. The question was asked about data sharing. Jeff answered that the requirement to share data would be included in any GPEX endorsement procedure.

Over the next year, GPEX will move into a focused development and coordination phase, building on the outcomes of the Kyoto workshop and SSG discussions to advance the implementation of the GPEX Science Plan and prepare for the WCRP Years of Precipitation (2028–2030).

See their presentation for further details.

6.3 Climate and Cryosphere Core Project (CliC)

Ed Hanna (CliC co-chair) presented an overview of the Climate and Cryosphere (CliC) Core Project, highlighting its key research priorities coordinated through 14 working groups. He noted major achievements, including the successful CliC Open Science Conference in Wellington with strong participation and sponsorship, collaborations such as the Scientific Committee on Antarctic Research (SCAR) INStabilities and Thresholds in ANTarctica (INSTANT) Research Programme, and contributions to major initiatives like the Sea Ice Outlook, NOAA's Arctic Report Card, Glacier Model

Intercomparison Project (GlacierMIP), Polar CORDEX, and mountain cryosphere research. These activities are informing broader efforts, including IPCC assessments and WCRP status outputs.

Looking ahead, CliC plans to strengthen linkages with other WCRP projects (e.g., GEWEX, ANDEX, MRI), establish a new permafrost working group, and continue contributing to IPCC AR7. GlacierMIP is advancing global-scale projections, with potential IPO funding discussions underway. Key issues include JSC approval of the new strategic plan[5] and leadership renewal, while Helene Hewitt (CMIP) also highlighted the importance of aligning with updated climate scenarios and emerging research priorities.

See their presentation and report for further details.

6.4 Climate and Ocean Variability, Predictability and Change Core Project (CLIVAR)

Gokhan Danabasoglu (CLIVAR co-chair) presented an update on the CLIVAR Core Project. He noted that the IPO Director announcement is expected soon. He highlighted key activities, including the Pan-CLIVAR meeting in Bali, new joint efforts with OMDP/RIfS and CORDEX on regional ocean modelling, and contributions to ocean observing systems and initiatives such as marine heatwaves with GOOS. CLIVAR also continues to support capacity building, education, and training. Emerging priorities for the new science plan include AI/ML applications, regime shifts and tipping points, climate extremes, improved integration of models and observations, and strengthening societally relevant science.

Looking ahead, CLIVAR plans to develop a new Science and Implementation Plan (2027/2028), alongside activities such as an Open Science Conference, summer schools, webinars, and enhanced communications. Key challenges include limited funding affecting staffing, reduced effectiveness of virtual engagement, and difficulties in launching new initiatives without phasing out existing ones. The need for stronger coordination with UN Decade activities was also highlighted.

See their presentation for further details.

6.5 Global Energy and Water Exchanges Core Project (GEWEX), including the Monsoons Office

Jason Evans (GEWEX co-chair) provided an overview of the GEWEX Core Project, noting its structure of four panels overseeing around 40 active projects. He highlighted key activities, including GASS[6] initiatives such as ECOMIP and km-scale modelling (DYAMOND), GDAP[7]'s work on improving precipitation products (GPCP), GLASS[8] projects like SoilWAT, and upcoming GHP[9] activities in Central Asia. Monsoon-related work was also emphasized, including the 8th WMO International Workshop on Monsoons

[5] Note that the CliC Strategic Plan was formally approved by the JSC after the Open JSC session
[6] https://www.gewex.org/panels/global-atmospheric-system-studies-panel/
[7] https://www.gewex.org/panels/gewex-data-and-analysis-panel/
[8] https://www.gewex.org/panels/global-landatmosphere-system-study-panel/glass-projects/
[9] https://www.gewex.org/panels/gewex-hydroclimatology-panel/

in India and associated publications. A key issue raised was the need to ensure continuity of Earth observation missions, particularly for radiation and precipitation, with a letter endorsed and shared with relevant agencies.

Looking ahead, GEWEX plans to expand engagement with the private sector, while navigating WMO processes, and advance panel activities, including a reorganization of GLASS and upcoming Pan-GEWEX conferences. The GEWEX IPO would be jointly supported by NASA and ESA going forward. Challenges include sustaining diversified support for the IPO, limitations of virtual meetings, and gaps in regional representation, particularly in Africa. Suggestions included exploring country-based contributions to support activities.

See their presentation for further details.

6.6 Regional Information for Society Core Project (RIfS) and the Global Extremes Platform (GEP)

Bruce Hewitson (RIfS co-chair) provided an overview of RIfS, highlighting its focus on bridging climate science and decision-making, with strong regional engagement, particularly in Africa. Key priorities include defining and developing robust, actionable climate information (in collaboration with CMIP), advancing context-transferable knowledge, and addressing communication and climate literacy challenges.

Recent developments include a stronger focus on climate literacy, upcoming pan-RIfS and regional workshops (including on climate overshoot), and ongoing work to revise the RIfS science plan with broader community input. An issue raised was the need for clear WCRP guidance on governance, particularly regarding an absent co-chair, alongside ongoing efforts to formalise the relationship with CORDEX.

The Global Extremes Platform (GEP) is advancing work on operational event attribution (including a mapping survey and paper), launching an annual assessment of weather and climate extremes (working closely with WMO), and strengthening coordination through an ECR-led network. Additional efforts include collaboration with WMO on extremes indices and development of a global data portal.

See their presentation for further details.

6.7 Earth System Modelling and Observations Core Project (ESMO)

Baylor Fox-Kemper (ESMO co-chair) provided an overview of ESMO, including its structure and recent updates, with the Working Group on Coupled Modelling (WGCM) revisited to include the coordination of a new forum on 'Frontiers in Earth System Modelling', a new Working Group on Observations for Researching Climate (WGORC) and a newly established Subseasonal to Seasonal Panel (S2SP), building on the work of WGSIP. New task teams on regional reanalysis and emulators are underway, alongside the transition of the Rapid Evaluation Framework into a formal ESMO panel.

Key activities include ongoing Working Group on Numerical Experimentation (WGNE) work (Blue Book 2026 call, Systematic Errors Workshop), expansion of prediction across timescales through the S2SP and decadal prediction efforts, and the launch of a new WGCM forum on "Frontiers in Earth System Modelling" to support model development discussions. WGORC is advancing scoping activities, work on observational

uncertainties, and contributions to the GCOS implementation plan, while Obs4MIPs continues to strengthen data standards and workflows.

A need for potential alignment between GPEX and WGORC on data guidelines was noted and is already in progress.

See their presentation for further details.

6.8 Coupled Model Intercomparison Project (CMIP) Flagship activity with ESMO

John Dunne (CMIP co-chair) presented CMIP and the WCRP-ESMO Infrastructure Panel (WIP). Key highlights included the preparation and initiation of the first CMIP7 simulations and the launch of the CMIP7 Assessment Fast Track-ready Rapid Evaluation Framework (REF), dashboard, and best practice for use guidance. CMIP's Fresh Eyes[10] on CMIP has proven very successful with several ongoing projects. John noted the successful fundraising for REF development, CMIP 2026 sponsorship, C3S tender to support historical forcings extensions and two new large scale Horizon Europe projects (FUTURA and ENES-RISE) with substantial CMIP contributions, plus the continued huge in-kind contribution from national funders of modelling centres, infrastructure and forcing dataset providers.

Four key questions emerged during the CMIP7 planning process, which the current generation of Earth System Models could address through multi-model ensemble simulations: Patterns of sea surface change, Changing Weather, the Water-carbon-climate nexus, and Tipping Points.

CMIP highlighted the need for a formal agreement between WCRP/CMIP and the ESGF as well as the need for a more structured relationship with the Integrated Assessment Modelling Consortium (IAMC), the governing body for the IAM community. Both these were discussed further and agreed on during the JSC-only session. There was also a concern in the community that publication review processes are moving too slowly to accommodate the tight timeline from CMIP data publication to IPCC AR7 submission deadlines. The JSC agreed to work with the CMIP leadership to issue a statement to the wider community to recognise this need.

Finally, John highlighted the main challenges around (i) the rapidly evolving needs for CMIP infrastructure i.e. is a different infrastructure required to deliver sustained mode data and products and what collaborations should be investigated? (ii) Inclusion and capacity building and (iii) Moving from research to delivery structure and governance for sustained mode.

See their presentation and report for further details.

6.9 My Climate Risk Lighthouse Activity (MCR)

Regina Rodrigues (MCR co-chair) presented the My Climate Risk Lighthouse activity. Regina reminded participants of MCR's main goal, which is to develop and mainstream a bottom-up approach to climate risk, starting from the decision context and scale, bringing in knowledge from across the breadth of the WCRP. The main challenge in MCR

[10] CMIP's early career leadership group: See https://fresh-eyes.wcrp-cmip.org/

is how to develop robust methodologies that do this in a way that empowers local communities and can challenge the apparent 'objectivity' of top-down approaches[11].

MCR works mostly virtually via its network of regional hubs[12] and via its three Working Groups (Education, Early Career Researchers, and Philosophy). Several activities of MCR were highlighted, including a workshop on loss and damage from wildfires, a workshop on 'opening up' Earth observations for Adaptation and a web resource on "Educator's Guide to Climate Science and Colonialism[13]"

MCR laid out plans for several workshops, webinars, and publications as well as a survey of the MCR community on bottom-up approaches in climate science. The just-concluded MCR General Assembly was used to begin discussions around the future of MCR. General Assembly participants were quite disappointed at the prospect of sunsetting, as some of the hubs have only recently joined and are still ramping up their engagement. It was noted that the regional hub model and bottom-up approach are key strengths that should be preserved and that the MCR structure has proven to be effective in entraining new voices from the Global South and from social sciences and humanities. It was suggested that MCR prepare a 'lessons learned (for WCRP)' document in this respect. The comment was made that when MCR eventually did sunset RIfS would be a natural home, though working closely with the WCRP Academy.

See their presentation and report for further details.

6.10 Atmospheric Processes and their Role in Climate Core Project (APARC)

Stephanie Evan (APARC co-chair) started by highlighting a number of activities, including the Hunga-Tonga Ha'apai volcanic eruption impacts report[14] and several workshops held over the last year. APARC have been working on stratospheric aerosols forcings for CMIP7 as well as leading on the request focused on additional atmospheric dynamical variables (DynVarMIP) for CMIP7.

APARC will be holding its General Assembly on 12-16 October 2026 in Pune, India, with an ECR event on the 11th of October. Future priorities include input to the UNEP/WMO Scientific Assessment of Ozone Depletion Report, refining APARC's activity structure, strengthening connections with other WCRP and WMO activities as well as IGAC and expanding APARC research to better integrate tropospheric processes.

APARC discussed its fund-raising activities, including with the European Cooperation in Science and Technology (COST). Finally, Stephanie stated that APARC builds on long-standing activities and strong community foundations, while evolving its scope towards broader atmospheric processes. In response to a question, she highlighted that to ensure activities are sustained and enhanced we need to work with partners such as GARP, IGARC, WMO, particularly for training the next generation.

See their presentation and report for further details.

[11] cf. Rodrigues & Shepherd 2022 PNAS Nexus
[12] https://www.wcrp-climate.org/mcr-hubs
[13] https://www.mcreducationworkinggroup.org/cl-sc-colonialism
[14] https://aparc-climate.org/publications/aparc-report-no-11/

6.11 WCRP Academy

Melissa Hart and Chris Lennard (Academy co-chairs) jointly presented the WCRP Academy, reminding attendees that the Academy's Mission is to equip current and future climate scientists with the knowledge, skills and attributes required to tackle the world's most pressing and challenging climate research questions.

The Academy has two phases of development: 1. Inward facing: consolidation and register of WCRP training activities; guidance and support for WCRP training activities; community building, and 2. Outward facing: consolidation of training opportunities from external providers; identifying training gaps and facilitating new training; address global inequities.

Several activities were highlighted including a WCRP leadership development workshop and many regional events. The Academy has a strong focus on future leadership development[15] and has, for example, started a WCRP leadership webinar series. Flagship activities of the WCRP Future Leaders Programme include i) Academy Scholars, ii) a knowledge exchange initiate, and iii) a Climate leaders' summit. The Academy is also trying to secure additional resources to develop climate leadership training modules.

See their presentation and report for further details.

6.12 Digital Earth Lighthouse Activity (DE)

Andrew Gettelman (DE co-chair) presented an overview of the Digital Earth Lighthouse Activity (DE), highlighting its three working groups and recent restructuring, including new members and evolving scope. Progress was reported from the 2025 km-scale modelling hackathon, which is moving towards a more coordinated global–regional modelling effort, with multiple scientific outputs underway and plans for a broader, more inclusive hackathon in 2027.

The working groups focus on km-scale modelling, hybrid coupled modelling and data fusion (including AI/ML) and extending Earth system modelling to human systems beyond the physical domain. While progress is being made, challenges remain, including limited traction in some areas (e.g. km-scale coordination with WGNE) and ongoing work to better define priorities for the "beyond physical" component.

Future directions include advancing km-scale modelling, strengthening AI/ML integration, and refining the role of human systems. Potential synergies were noted, including links between DE km-scale modelling and GPEX.

The comment was made that it would be great to have stronger links between DE and CMIP especially given the WCRP white paper linking CMIP to km-scale modelling.

See their presentation and report for further details.

6.13 Explaining and Predicting Earth System Change Lighthouse Activity (EPESC)

Kirsten Findell (EPESC co-chair) presented the Explaining and Predicting Earth System Change (EPESC) Lighthouse activity, structured around three themes: integrating

[15] wcrp-academy.org/wcrp-future-leaders-programme/

models and observations, advancing attribution and prediction using large ensembles, and improving understanding of climate hazards and extremes. A key highlight was the joint EPESC–LEADER meeting (Busan, 2025), which resulted in a BAMS summary paper and a planned special issue, alongside an active webinar series.

Under the theme of confronting models with observations, EPESC is strengthening links across different communities. There are close scientific connections with APARC, particularly around reanalysis and process understanding, while engagement with GOOS relates to observational datasets, especially ocean heat content. In parallel, work on model–observation discrepancies are being advanced through dedicated efforts focusing on best practices and improved diagnostics. Related work also examines the impact of data gaps, showing that ocean heat content estimates depend not only on data volume but also on the spatial distribution of observations.

The second theme focuses on attribution and prediction using large ensembles, highlighting that models can respond differently to the same forcing and underlining the need for observational constraints. Early results suggest that future changes may be underestimated if models are taken at face value.

The third theme addresses climate hazards and extremes, including predictability, impacts, and actionable information. A key activity is the development of a common event attribution framework, in coordination with the WCRP (RIfS) Global Extremes Platform, to improve consistency and comparability across studies.

Overall, EPESC is strengthening cross-WCRP linkages (notably with APARC, GOOS and GEP) and progressing towards more coordinated and operational approaches to attribution and prediction, while recognising that further work is needed to fully realise this vision within the current timeframe.

See their presentation for further details.

6.14 Research on Climate Intervention Lighthouse Activity (R-CI)

Daniele Visioni(R-CI co-chair) provided an update on the Research on Climate Intervention Lighthouse Activity (R-CI), highlighting key activities such as the DEGREES Global Forum on Solar Radiation Management (SRM) in Cape Town, engagement at EGU, the WMO-UNEP consultative workshop on SRM[16] in Geneva, and a joint webinar series with APARC that saw strong participation from early career researchers. He also noted involvement in the IPCC AR7 scoping and follow-up meetings.

Looking ahead, plans include a joint SLC–R-CI webinar series and a potential in-person community workshop and SSG meeting later in the year. It was suggested that clearer articulation of objectives between SRM and CDR communities is needed, along with addressing capacity-building limitations.

See their presentation for further details

[16] See: https://wedocs.unep.org/items/7d650341-cce5-4d3c-ba68-4f500acfa6e4

6.15 Coordinated Regional Downscaling Experiment (CORDEX) Flagship activity with RIfS

Melissa Bukovsky (CORDEX co-chair) presented the CORDEX flagship activity. Key highlights included formation of a new Task Team on protocol and infrastructure for CORDEX-CMIP7, many workshops and activities in the different CORDEX domains, and the establishment of a new CORDEX International Project Office at ESA and the University of Cape Town.

CORDEX are currently working on a special issue "15 years of CORDEX: Achievements, progress and challenges"[17] and are planning a workshop on Coordinated Regional Projection Research and Synthesis and are key to the pan-RIfS workshop on Climate Research Frontiers for Regional Decision Contexts. A new CORDEX Science and Strategic Plan is under development. CODEX are dealing with several issues, including around data infrastructure e.g., gaps in publishing and hosting, ESGF participation, and archive continuity, whilst working on cross-WCRP coordination e.g., with AI and ML. Active collaborations between MCR and CORDEX were noted e.g. the Hub in SE Asia and the CORDEX activity in the region.

See their presentation for further details.

7. Final Discussion session for Open JSC session

7.1 Revisiting prioritization of WCRP activities

Tim and Cristina led a discussion on revisiting the prioritization of WCRP activities, drawing on the meeting presentations. Emphasis was placed on strengthening collaboration across activities, improving structured communication, and considering the transition or sunsetting of LHAs. It was agreed that these aspects should be taken forward within the Science Strategy Task Team, including the development of a collaboration and communication strategy. Participants also highlighted the value of a Task Team on strategic priorities in undertaking a systematic assessment of LHAs and Core Projects to identify achievements, gaps, overlaps, and synergies.

The discussion also addressed broader structural challenges within WCRP, including the need to enhance inclusion of the Global South and improve coordination across activities. Participants noted that better integration of efforts and clearer articulation of priorities would support a more cohesive programme. It was further suggested that engagement across projects and with external partners should be strengthened, including aligning scientific activities with emerging needs and opportunities.

Funding constraints were a major concern, highlighting the need for stronger resource mobilization strategies and clearer value propositions for funders. The importance of tailoring messaging to governments, the private sector, and foundations, alongside maintaining links to societally relevant outcomes was highlighted. Suggestions included exploring government funding, defining minimum operational budgets, and improving coordination of fundraising efforts across WCRP activities.

[17] https://latitude.plos.org/2025/03/plos-climate-review-series-15-years-of-cordex/

7.2 WCRP Comms e.g., WCRP Slide Deck, Workspace, database

Carlos Montoya (WCRP Secretariat) gave a short presentation on some WCRP comms issues, including the very useful WCRP Impact Slide deck, and encouraged WCRP activities to continue to work with the WCRP secretariat to keep this updated.

7.3 Next JSC meetings (JSC47b in the last quarter of the year; and JSC48 in 2027)

Mike highlighted that the next full JSC meeting (JSC48) would normally be in person, but taking into account the current financial situation this may need to be hybrid or virtual. Further discussions during the JSC-only meetings proposed having this in association with a WCRP prioritisation and strategy meeting, for which external funds would be raised if possible. To note that a JSC-only meeting (JSC47b) will also be held in the last quarter of this year.

Tim and Cristina closed the open session of the WCRP JSC meeting and thanked everyone for a useful meeting.