January 2026

WCRP

ESMO Brief

The newsletter of the ESMO Project

Welcome to the Third Issue of the ESMO Brief

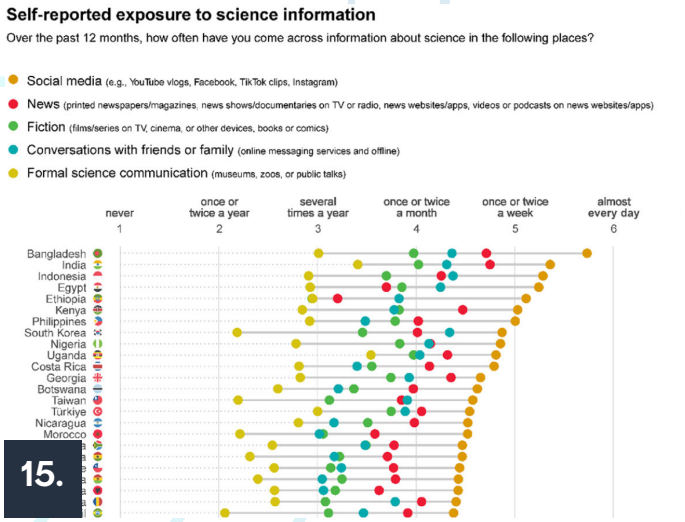
Welcome to this new issue of the ESMO newsletter. With 2026 now underway, the community is clearly in motion, strengthening coordination across WCRP activities, sharpening our scientific priorities, and building the partnerships and infrastructure needed to deliver robust, actionable climate information.

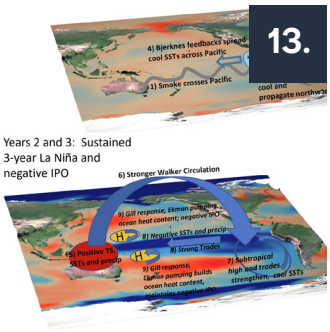
This issue opens with community-building highlights, including the ESMO SSG and WGORC kick-off meeting in Reading and an inspiring update from the APARC AI4Climate School in Senegal, where capacity building and student-led innovation are helping expand the next generation of expertise. Several items in this newsletter reflect the growing momentum around data, prediction, and evaluation: a review of the webinar series on data-driven climate prediction from subseasonal to interdecadal timescales, new work on optimal placement of meteorological stations, and the newly available WGNE Blue Book 2025.

Finally, you'll find opportunities to get involved, including a call for new members for the WCRP ESMO Infrastructure Panel, as well as upcoming meetings and current calls—most notably the abstract submission call for the S2S2D Conference 2026.

We hope this issue helps you stay connected, informed, and engaged—and we look forward to your continued contributions to the ESMO community. A big thank you to all the contributors for their continued engagement and time.

The ESMO Editorial Team





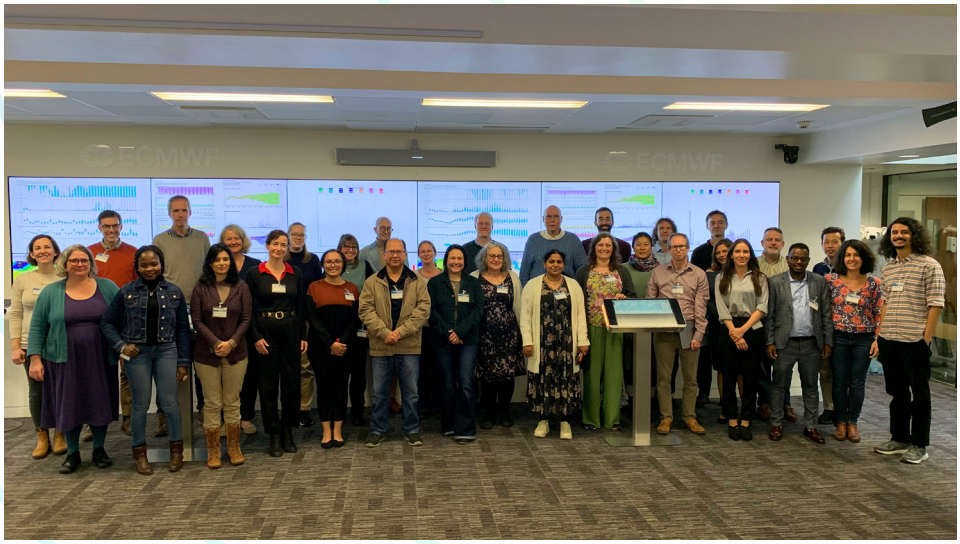
In this issue:

Meeting Report

1. ESMO SSG and WGORC Kick-Off Meeting in Reading, UK

By Bimochan Niraula

In December, ESMO convened a major week-long scientific meeting bringing together its Scientific Steering Group (SSG) and the newly established Working Group on Observations for Researching Climate (WGORC). Held from 8-12 December in Reading, UK, with the help of our kind hosts at ECMWF, the meeting was a huge success and helped reinforce ESMO's agenda on strengthening links between climate modelling and observations.



All the participants of the ESMO-WGORC plenary, which took place on 9-10 December 2025, in the Weather Room at ECMWF Reading.

The week featured a mix of joint sessions between the two panels, and breakout sessions for each, alongside two days of open plenary sessions. The dedicated SSG and WGORC sessions were used to identify priorities, discuss data and infrastructure needs, and define concrete next steps for collaborative work across ESMO partners. As the kick-off meeting for WGORC, it was fundamental in bringing together all the panel members in person for the first time and helping set clear directions for WGORC's activities in the coming years.

Group picture of the WGORC Panel, convening in person for the first time since its establishment earlier this year.

Alongside the SSG and WGORC meetings, there were also two days of open plenary talks, organised into eight 1.5-hour sessions such as model-observation-AI interface, reanalyses, climate services and extremes, high-resolution modelling, data stewardship and, advances in observing systems and more. These talks featured experts from around the world and each session ended with a round of long discussion. The open format enabled broad participation, both in person and online, fostering exchange across communities and strengthening connections between modelling and observational science. The entire week was considered a success by all participants and reinvigorated the science and community spirit of ESMO.

You can check out the programme of the plenary sessions on the ESMO website. The plenary report will be online by the end of January.

Capacity Building

2. AI4Climate at AIMS Senegal: Capacity Building, Collaboration, and Student-Led Innovation

By Maria J. Molina

From 24-28 November 2025, I had the privilege to travel to the African Institute for Mathematical Sciences (AIMS) in Mbour, Senegal, to serve as an in-person lecturer at the Joint APARC/WCRP Workshop and Training School on AI for Climate and Weather Forecasting (AI4Climate). This was my first visit to the African continent, and the experience was both professionally energizing and personally meaningful.

AI4Climate was designed as a five-day workshop and training school combining lectures with hands-on coding sessions, with an emphasis on capacity building tailored to the needs of Global South countries. A key strength of the program was its bottom-up approach: participants brought their own perspectives, questions, and datasets, and the activities were structured to support the adaptation of AI methods to locally relevant climate and weather challenges. I also learned a great deal through these discussions, especially by engaging with student datasets and applications that were new to me.

My contributions focused on AI methods for weather and climate applications, along with interactive exercises to help participants move from concepts to implementation. In one set of hands-on activities, we explored classification and regression approaches for severe convective storms, including applications of convolutional neural networks (CNNs) for image- and climate-related data. In another session, we worked through a graph neural network (GNN) application using a student's home weather-station dataset, which was an especially compelling example of how locally sourced observations can be paired with modern machine learning tools.

Maria J. Molina at the African Institute for Mathematical Sciences (AIMS) in Mbour, Senegal (taken 27 November 2025).

One of the highlights of the week was seeing participants apply the methods from the hands-on sessions to their own problems. Students developed mini-projects throughout the school and presented them at the end of the workshop, showcasing both technical progress and thoughtful framing around real-world applications. It was particularly rewarding to see one group build from my starter code and implement a multi-task approach for their project. I was also struck by the level of engagement throughout the week; participants asked insightful questions, raised strong points of discussion during panels, and created a genuinely collaborative learning environment.

Equally encouraging is what has continued since the school: participants have stayed in touch and begun collaborating on graduate research leveraging AI for weather and climate applications, including work relevant to Africa. I left AIMS optimistic about

what this community can build together and grateful to have been part of an effort that aligns technical training with meaningful, regionally grounded impact.

More information on the school's objectives, themes and organization can be found on the school's website.

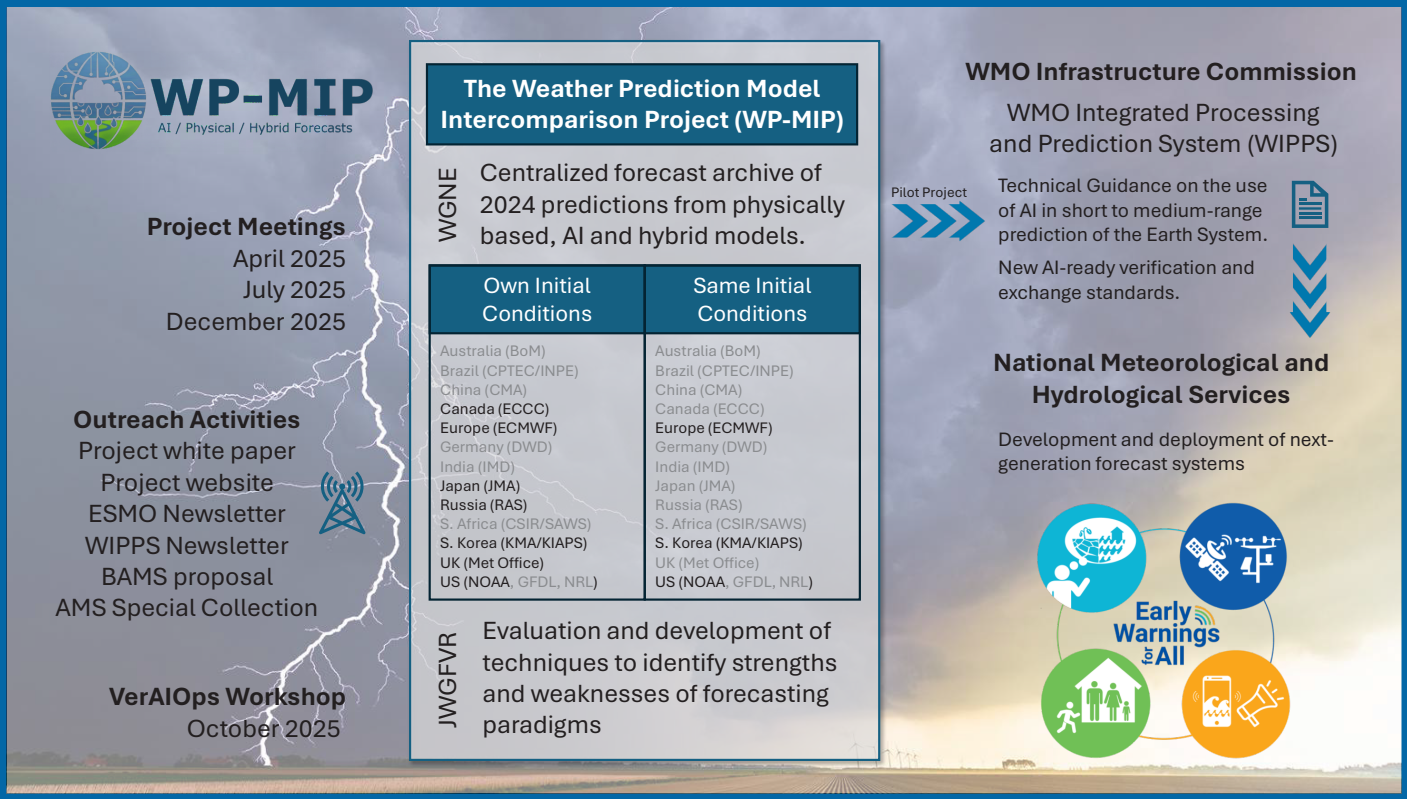
Participants engaged at the Joint APARC/WCRP AI4Climate Workshop and Training School at AIMS in Mbour, Senegal (taken 25 November 2025, Maria J. Molina).

3. WP-MIP Updates

Activities within the Weather Prediction Model Intercomparison Project (WP-MIP) are moving ahead steadily. The community has continued to coordinate and align next steps through recent touchpoints, including the JWGFVR workshop in October (20-24 October 2025, Montreal) and a follow-up virtual project call in December (11 December 2025) to review progress, tools and support, and coordination of verification activities.

Project activities are expected to ramp up quickly this year, as the new WIPPS Pilot Project status means that WP-MIP research will directly inform the ongoing drafting of WMO guidance on operationalization of AI-based weather prediction systems.

Learn more about WP-MIP and how to get involved via the project webpage.



Coming Soon

4. WGCM Forum Launch at the CMIP Community Workshop 2026

By Bimochan Niraula

In March 2026, WGCM will launch a new community activity, the WGCM Forum: Frontiers in Earth System Modelling, aimed at broadening engagement across the rapidly expanding global modelling landscape. The Forum will be officially launched on 11 March in Kyoto, Japan, as part of the CMIP Community Workshop.

The initiative responds to the evolving role of WGCM and climate modelling in recent years. While WGCM has historically served as a forum for representatives from a limited number of modelling centres, the sharp growth in centres worldwide has made the traditional working-group format increasingly restrictive. The new Forum is designed to provide an inclusive platform where a wide range of modelling centres can participate directly. Under this model, the WGCM panel will act as a focused steering body, guiding the Forum's activities and pursuing longer-term, targeted projects, while the Forum itself will serve as an open space for exchange, coordination, and idea generation across centres. The Forum is expected to meet approximately once per year, co-located with major scientific events to minimise additional costs and overhead.

WGCM
Working Group on Coupled Modelling

The launch event in Kyoto will take the form of a 3.5-hour interactive World Café session, combining short introductory presentations with facilitated, rotating discussions. This format is intended to encourage open dialogue, capture diverse perspectives, and synthesise community priorities for the Forum's future activities. If you are participating in the CMIP Community Workshop and would like to represent a modelling center or research institute in the forum launch, please get in touch directly with the ESMO IPO.

Attend CMIP26 Virtually

Virtual participation is now open for the **CMIP Community Workshop 2026**, offered both to ensure more equal access for scientists and to respond to the high demand for attendance.

The workshop will bring together a diverse community of Earth system scientists, partners, and stakeholders to discuss the latest advances in Earth system and coupled modelling. It will explore updated forcings and early results from CMIP7 simulations (including new experimental designs and MIPs), while also spotlighting the growing observation-modelling interface, strategies to streamline the climate information chain, and opportunities to build global partnerships for sustained, high-quality climate information.

Virtual registration is open to anyone and closes on **31 January 2026** - please visit the registration page to sign up and to check fee waiver eligibility and conditions.

Meeting Report

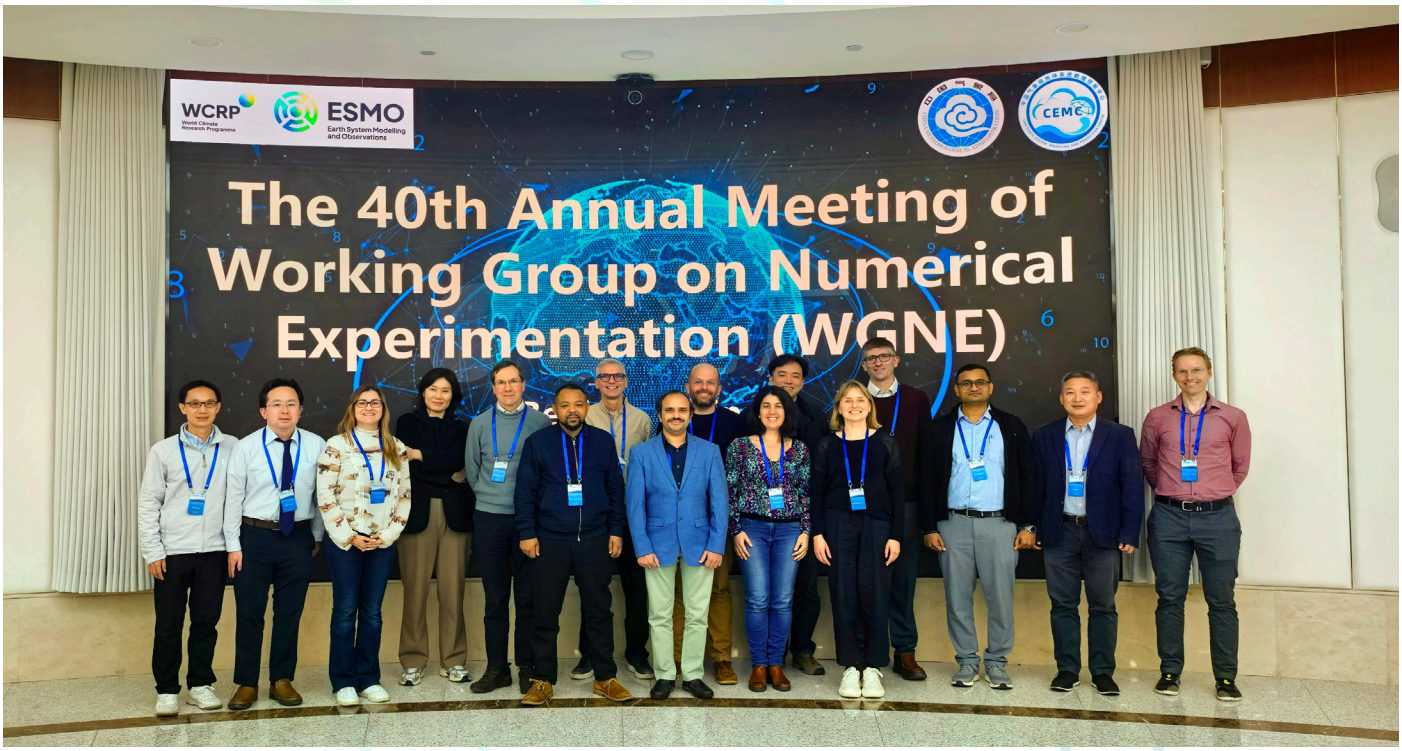
5. The 40th Annual Meeting of the Working Group on Numerical Experimentation

By Tim Graham and Ariane Frassoni

In November, members of WGNE met in Beijing for the 40th annual meeting, kindly hosted by the Chinese Meteorological Agency (CMA) Center for Earth System Modelling and Prediction (CEMC). Recognising the significant anniversary, the opening afternoon included an overview of the history of WGNE and three invited talks from former co-chairs giving their highlights from their time as members as well as their ideas for future activities.

The remainder of the week included our regular updates from all members on operational modelling, planned upgrades and research at their own centers; updates on WGNE activities and updates from partner working groups. This year we also had dedicated sessions on km scale modelling and machine learning with updates from both WGNE members and invited speakers in both sessions. Finally, a short session of the meeting was reserved for the meeting hosts to show case research taking place at their institution. This included impressive talks on a new CMA reanalysis; the development of a km-scale ocean model; C-coupler 3; and the use of AI for data assimilation.

Thanks to the ESMO IPO for all their effort in organising the meeting and the group excursion to the Forbidden City. Also thanks to Xingliang and his colleagues from CMA for being such excellent hosts.



The WGNE Panel and the hosts at the CMA venue in Beijing, China. On the top picture: a tea tasting experience for the WGNE40 participants.

Meeting Report

6. Scoping high-resolution climate reanalysis at the UK Climate Reanalysis Workshop

By Claire Macintosh

A meeting on the design of a high-resolution reanalysis for the British and Irish Isles was held in Reading, UK, on 4-6 November 2025, organized by the UK National Climate Science Partnership. The initiative is motivated by a clear scientific and societal need: improving our ability to represent a changing climate baseline, including extremes and associated risks, in ways that can better inform local-scale policy and planning decisions.

Discussions focused on several core design questions, including the temporal duration of the reanalysis, priorities for data rescue and digitisation, the optimal spatial domain and target resolution, and the choice of boundary conditions. Participants also explored how observational requirements will vary depending on the methodological pathway, whether data assimilation, dynamical downscaling, or machine-learning-based approaches are pursued. While all approaches were considered, the workshop placed particular emphasis on practical next steps for data rescue and on strengthening observations of key variables, notably surface pressure, wind, and precipitation.

Looking ahead, a short discussion paper is in preparation, with a more comprehensive scientific white paper expected around March 2026. ESMO and WGORC were represented at the meeting by Amy Doherty, Claire Macintosh, and Indira Rani, contributing to the cross-community exchange needed to shape a robust, user-relevant regional reanalysis.

7. Call for New Members: WCRP ESMO Infrastructure Panel

WIP
WCRP ESMO Infrastructure Panel

The World Climate Research Programme (WCRP) Earth System Modelling and Observations (ESMO) Infrastructure Panel (WIP) is a panel of the Scientific Steering Group (SSG) of the ESMO Core Project.

The WIP is charged with coordinating and promoting a robust and sustainable global data infrastructure in support of the development, dissemination, and evaluation of Global and Regional Climate Model Intercomparison Project (MIP) data through the Coupled Model Intercomparison Project (CMIP) and other WCRP and community modelling activities as resources are available. This coordination role includes interaction with infrastructure delivery partners, most notably the Earth System Grid Federation (ESGF), ensuring that the technical requirements of infrastructure contributors to meet CMIP project infrastructure delivery are met.

The WIP is seeking new members to help address these and the many other challenges in preparing the infrastructure for CMIP7, and beyond, and offer new insight and fresh thinking.

This call invites the community to nominate candidates (including self-nomination) who have well demonstrated skills and experience in any of the following:

- Cloud computing infrastructure
- Lossy compression
- User experience and interface development
- Standardisation tools e.g., CMOR, pycmor, XIOS
- Support for machine learning models
- Applications for other topics within the WIP's remit may also be considered

For further information and to apply please see full call on the CMIP website.

Deadline for applications is **08:00 UTC, Friday 30th January 2026**.

8. Webinar Series Review: Data-Driven Climate Prediction from Subseasonal to Interdecadal Timescales

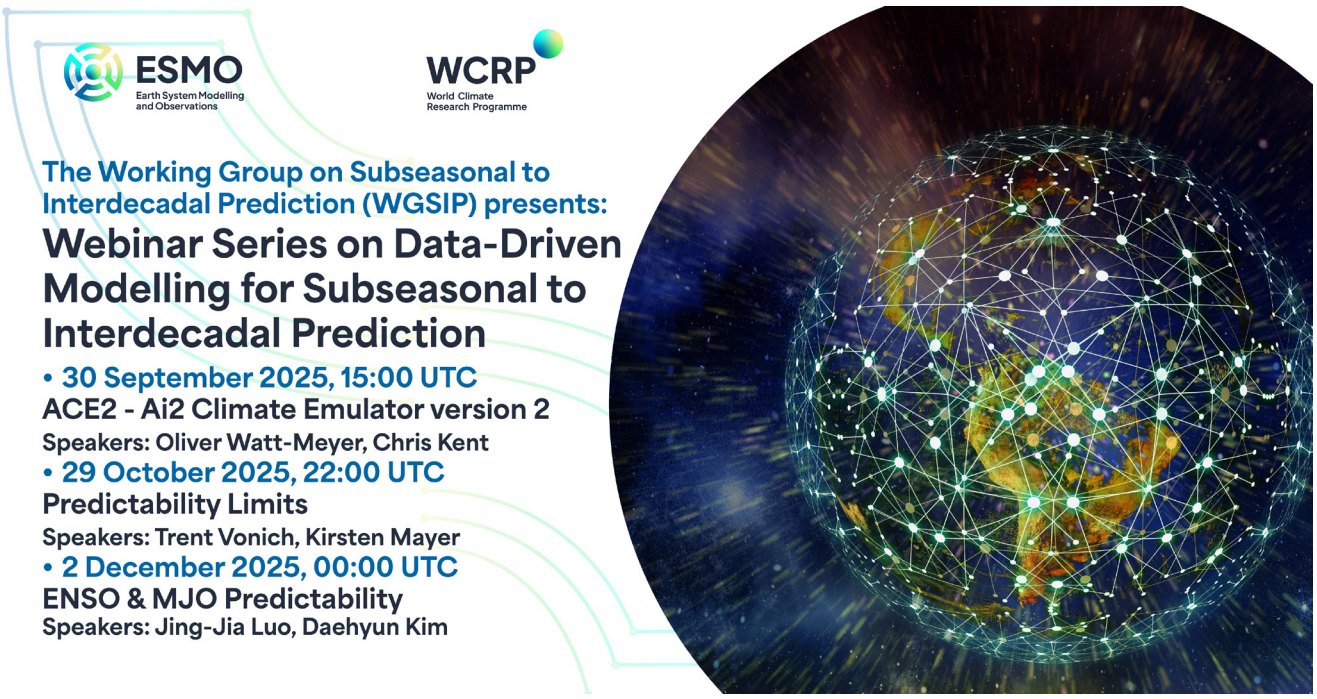
The webinar series Exploring Data-Driven Climate Prediction from Subseasonal to Interdecadal Timescales, organised by the Working Group on Subseasonal to Interdecadal Predictions (WGSIP), concluded successfully at the beginning of December 2025. Launched in the final quarter of the year, the series provided a dedicated forum for the growing international community working at the intersection of subseasonal to interdecadal prediction, artificial intelligence, and machine learning.

Across three well-attended online events, the series brought together researchers to exchange perspectives on recent advances in data-driven and hybrid approaches to climate prediction. The discussions highlighted how AI and ML methods are increasingly reshaping subseasonal-to-interdecadal forecasting, offering new opportunities for higher-resolution, more efficient, and more frequently updated predictions, while also underscoring persistent scientific challenges. Topics ranged from predictability limits and physical consistency to the representation of key climate phenomena such as ENSO and the Madden-Julian Oscillation.

Each one-hour session featured two invited speakers who presented current research and methodological developments, followed by lively question-and-answer periods that fostered open dialogue across institutions and career stages. Themes included community-led initiatives such as ACE2, fundamental limits of predictability, and the role of data-driven approaches in understanding coupled climate variability. The webinars were hosted by members of the WGSIP community and attracted participants from across the globe, reinforcing the strong interest in collaborative approaches to advancing S2I prediction science.

The positive response and active engagement throughout the series confirmed the value of this format as a space for knowledge sharing and community building. Based on this momentum and feedback from participants, WGSIP is planning to continue the webinar series in 2026, with the aim of further strengthening collaboration and sustaining discussion on emerging challenges and opportunities in data-driven climate prediction.

Further information on future editions of the series will be announced in due course.



Science Insights

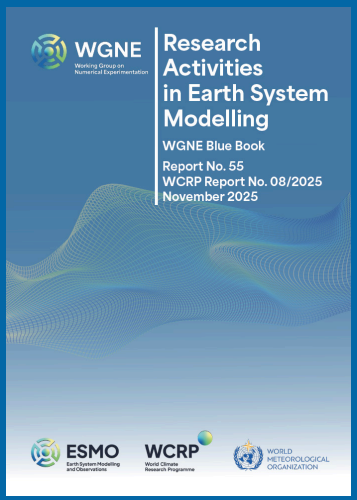
9. Enhancing climate observation and prediction through optimal placement of meteorological stations across diverse elevations

By Haftu Abrha Mengesha

Enhancing climate observation and prediction through the strategic placement of meteorological stations is especially crucial in areas with highly diverse topography, such as mountainous highlands. Most meteorological stations are located in towns and cities, while large parts of these diverse topography have few or no stations. In these landscapes, steep slopes, deep valleys, plateaus, and rugged mountain ranges create significant microclimatic variability. Yet meteorological coverage often remains limited due to financial and infrastructural constraints, particularly in the Global South. This scarcity of data affects accurate monitoring and prediction of weather and climate, which is critical for agriculture, water management, disaster preparedness, ecosystem conservation, and other sectors. By optimizing the placement of stations across multiple elevation zones, from lowland valleys to highland mountains, researchers can capture the full range of weather and climatic data, including rainfall, temperature, humidity and wind patterns. Collecting such comprehensive data improves the accuracy of climate models and predictions, enabling more reliable predictions of extreme weather events such as droughts, wildfire, floods, and storms. Optimized station placement also supports evidence-based decision-making, helping communities, policymakers, and scientists anticipate and respond effectively to climate variability. In areas vulnerable to climate change, this approach strengthens resilience, guides adaptation strategies, and contributes to sustainable development and the well-being of both people and ecosystems.

10. WGNE Blue Book 2025 now available on Zenodo

The WGNE Blue Book publication is an attempt to foster an early interchange of information among scientists developing numerical models for the purpose of climate simulation and for forecasting on various timescales.



The 2025 edition of the Working Group on Numerical Experimentation (WGNE) Blue Book "Research activities in Earth System Modelling. Report No. 55 / WCRP Report No. 08/2025," now available online.

This year's edition showcases cutting-edge contributions from the international community on numerical experimentation and Earth system modelling, a testament to WGNE's ongoing role in fostering collaboration, innovation and progress in our modelling efforts.

A big thank you to everyone who contributed to this edition: your efforts help drive progress in numerical experimentation and Earth system modelling and strengthen the community behind it.

You can download this year's edition from our Community page on Zenodo.

Meeting Report

11. Open Workshop on Understanding and Predicting Annual to Multi-Decadal Climate Variations

In Bologna, Italy, on 18-20 November 2025, a workshop jointly organized by the Horizon Europe projects ASPECT, EXPECT, and I4C, together with the WCRP's Decadal Climate Prediction Project (DCPP) and EPESC groups, brought together more than 100 researchers and practitioners to advance understanding of climate prediction across multiple forecast horizons. The meeting focused on climate variations on annual to multi-decadal timescales (1-30 years) and on the growing need for reliable predictions that can support decision-making.

While large-ensemble prediction systems with demonstrated skill are now produced operationally by several centers worldwide, the workshop underscored that key gaps remain in understanding the origins, drivers, and limits of predictability. A central theme throughout was the need for integrated attribution and prediction: improving confidence in forecasts by clarifying what drives forecast signals and by assessing model fidelity in representing relevant processes, particularly those shaping regional climate extremes.

The workshop welcomed contributions spanning skill assessments; the roles of external forcing and internal variability; mechanisms underpinning predictability; prediction and predictability of extremes; and advances in post-processing, initialization, and modelling. Studies applying explainable AI and machine learning approaches were also featured, reflecting the community's interest in methods that can both enhance forecast performance and illuminate physical drivers.

The programme benefited from strong engagement from the organizing communities. Representatives of ASPECT, EXPECT, I4C, DCPP, and EPESC contributed through a mix of presentations and posters. The scientific discussions were structured around four main pillars:

- Understanding and attributing historical climate variations and extremes
- Forecast evaluation (extremes, anomalies, trends, and "windows of opportunity")
- New methods in prediction (modelling, initialization, AI/ML, and post-processing)
- Mechanisms underlying predictability and their representation in forecast systems

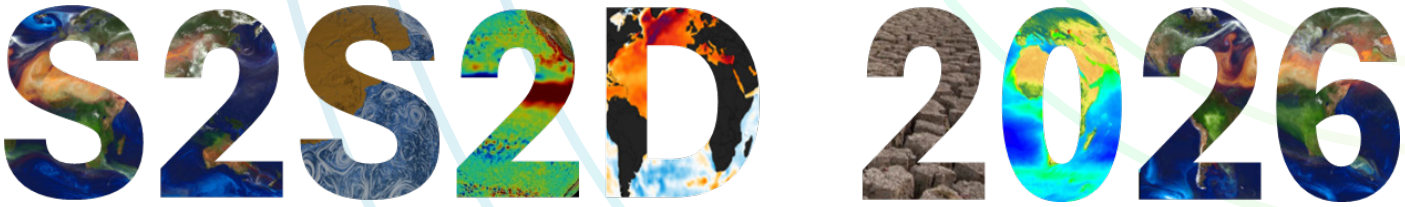
A key highlight on Friday was a hybrid meeting of the DCPP Panel, which advanced coordination for the next phase of community decadal prediction efforts. The Panel made important decisions related to the protocol for CMIP7, providing timely guidance for upcoming experiments and intercomparison activities.

Overall, the workshop strengthened cross-project exchange and opened new opportunities for closer collaboration on improving the scientific basis, and practical credibility, of predictions of regional climate variability and extremes. Attendees expressed high satisfaction with the quality of the workshop and associated organization by the host institution (CMCC).

To learn more, read also the summary from the EXPECT Project on their website (picture by Panos Athanasiadis, CMCC)

Save the Date

12. Abstract submission call for the S2S2D Conference 2026 now open



The S2S2D Conference 2026: Advancing climate predictions from weeks to decades to benefit society will take place from 7 to 11 September 2026 in Reading, UK. This event will bring together researchers, operational providers and users working across subseasonal to decadal timescales, providing a platform to discuss the latest advances in prediction science and climate services.

Please submit your abstracts using the following link: https://app.oxfordabstracts.com/stages/80577/submitter

The deadline to submit your abstract is **15 February 2026.**

Conference focus

The conference will provide a forum to exchange knowledge along the full chain from prediction science to services. The scientific programme will include sessions on:

- Climate Services Across Timescales
- Predictability and Prediction Skill
- Physics-based Prediction Systems
- Machine Learning Methods in S2S/S2D

For more detailed descriptions of each session and the science themes, check the events page.

Further details

Full details on the conference, including objectives, programme, abstract submission instructions, and registration timeline are available on the event website.

The event is open to participants at all career stages, with particular encouragement for early-career researchers and colleagues from the Global South to participate. Limited travel funding is available for these participants.

We warmly invite you to submit an abstract and we look forward to seeing you in Reading in September 2026!

The event is supported by WCRP and has been endorsed by the World Weather Research Programme (WWRP) of the World Meteorological Organization (WMO). The conference is sponsored by Climateurope2 and Spark Climate.

WCRP World Climate Research Programme

WWRP World Weather Research Programme

World Meteorological Organization

1950-2025 75 Science for Action

Climateurope2

SPARK Climate Solutions

Paper Highlights

13. A new forcing that can affect seasonal to decadal variability in the tropical Pacific

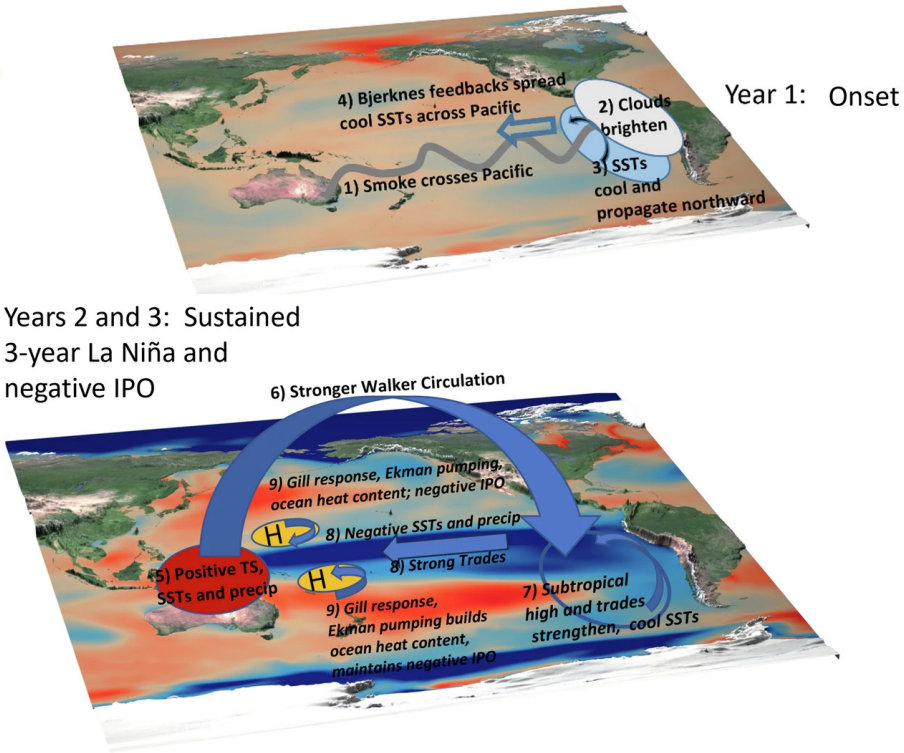
By Gerald A. Meehl

The huge amounts of smoke produced by the disastrous 2019-2020 Australian bushfires revealed the importance of a previously unrecognized forcing that affected the onset of a La Niña event in 2020 (Fasullo et al., 2023) and resulted in processes that sustained that "triple-dip La Niña" over the next several years with significant impacts worldwide (Meehl et al. 2025).

Initialized Earth system model hindcasts with E3SMv2 and CESM2 with and without the effects of the smoke showed Bjerknes feedback, first triggered by the Australian bushfire smoke, sustained the triple-dip La Niña conditions through an intensified anomalous Walker Circulation that connected strengthened precipitation and ascent in the western Pacific with anomalous subsidence, an invigorated South Pacific High, stronger Trades, and cooler SSTs across the tropical Pacific. Understanding this newly discovered role of wildfire smoke points to mechanisms involved with the onset and duration of the multi-year La Niña with implications for processes that likely contributed to prolonging the recent negative phase of the Interdecadal Pacific Oscillation (IPO) in the tropical Pacific.

Paper References:
Fasullo, J.T., N. Rosenbloom, and R. Buchholz, 2023: A multiyear tropical Pacific cooling response to recent Australian wildfires in CESM2. *Sci. Adv.* 9, eadg1213.

Meehl, G.A., J. Fasullo, S. Glanville, A. Capotondi, J.M. Arblaster, A. Hu, and N. Rosenbloom, 2025: 2019-2020 Australian bushfire smoke, multi-year La Niña, and implications for the Interdecadal Pacific Oscillation (IPO), *npj Climate and Atmospheric Science,* https://doi.org/10.1038/s41612-025-01204-8.



Coupled interactions for triple-dip La Niña triggered by Australian wildfire smoke in 2019-2020.
Top: year 1 onset; 1) wildfire smoke crosses the Pacific where it reaches the eastern Pacific, 2) brightens clouds there that 3) reflect more solar radiation to cool SSTs that propagate into the equatorial eastern Pacific where 4) Bjerknes feedbacks spread the negative SST anomalies westward; Bottom: in years 2 and 3, Bjerknes feedbacks spread negative SST anomalies across the Pacific and contribute to 5) increasing SSTs and precipitation over the Maritime Continent and northern Australia. The consequent enhanced vertical motion there then produces stronger upper level outflow, 6) a stronger anomalous Walker Circulation with enhanced upper level convergence over the eastern subtropical Pacific and 7) a stronger subtropical high and stronger trade winds to maintain cool SSTs.

Science Highlights

14. Long-term Changes of Surface Total Alkalinity and its Driving Mechanisms in the North Indian Ocean

By Kunal Chakraborty

The long-term changes in surface total alkalinity (TA) in the North Indian Ocean (NIO) have been studied by developing a Machine Learning (ML) based data product (INCOIS_TA), using ship-based observations collected from different sources during 1978-2019 and a reanalysis data product. This product was then compared with recently developed global ML-based data products to evaluate the improvements achieved in our region-specific version.

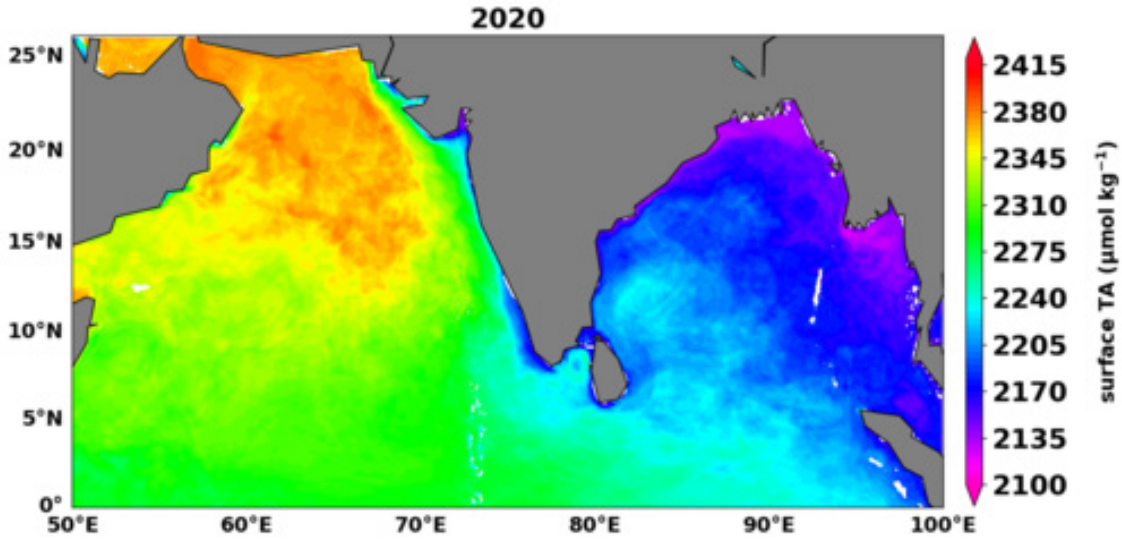
INCOIS_TA demonstrates superior statistical performance (exhibiting lower RMSE and higher correlation) compared to other existing global surface TA products (CMEMS_TA, SODA_TA, ESPER_LIR, ESPER_NN) and is also the first to be available at a high resolution (1/12°). The associated total uncertainty (consisting of model uncertainty, representation uncertainty, measurement uncertainty, and input uncertainty) maps are also provided.

In this study, we identified three sub-regions within the NIO that exhibit significantly increasing TA trends: south of 7°N (0.81±0.38 µmol kg-1 yr-1), the southeastern coast of the Arabian Sea (1.16±0.42 µmol kg-1 yr-1), and the southwestern region of the Bay of Bengal (0.47±0.26 µmol kg-1 yr-1). In these regions, the rise in TA is primarily driven by increasing surface salinity.

Outside these sub-regions, climate change-induced warming enhances stratification and weakens vertical mixing, leading to an expected decline in TA. However, atmospheric nutrient deposition has resulted in negligible changes in productivity, which may in turn cause only a minor decrease in TA. Removal of the salinity effect from surface TA (normalized TA) indicates that the Arabian Sea is more conducive to calcification than the Bay of Bengal.

Further, ENSO was found to be the primary driver of interannual variability in surface TA in the Arabian Sea, whereas both IOD and ENSO exert an equal influence on the interannual variability of surface TA in the Bay of Bengal.

The INCOIS_TA data product is expected to play a critical role in validating and quantifying uncertainties in global numerical and ML-based biogeochemical models for the NIO ecosystem. It can also be used to bias-correct Coupled Model Intercomparison Project (CMIP) global models for the two major ecosystems of the Indian Ocean. These bias-corrected CMIP models could then be applied to project future surface TA trends in the NIO under various scenarios.



The data product described in the paper is available here:

https://las.incois.gov.in/

https://www.ncei.noaa.gov/archive/accession/0307789

Paper Highlights

15. How people encounter and engage with science information

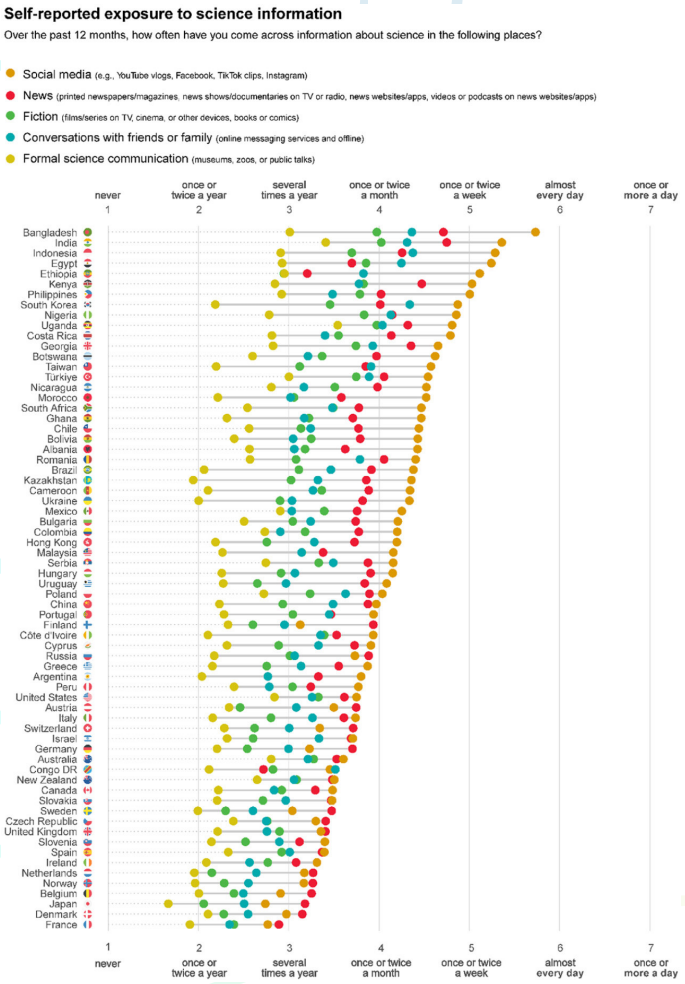
By Sara Pasqualetto

New cross-country research is mapping people's "science information diets," i.e. how they learn about science and how they discuss scientific topics with others, and it finds clear differences by region, wealth, and political context.

Drawing on the TISP database compiled by Mede, Cologna and colleagues (2025), the study examines how often people encounter science-related information, which channels they use, and what shapes their willingness to engage with and speak up about science. One key result is that respondents in specific regions like South East Asian and African countries report higher exposure to science communication than those in many Western countries. The same pattern appears considering economic frameworks: low-GDP countries show higher rates of science-related information exposure overall.

Across countries, social media is the most common place where people come across science communication. This trend is especially strong in South East Asia and Africa, where alternative sources such as newspapers, museums, or other paid and in-person options can be less accessible or more expensive for individuals. In Scandinavian and German-speaking countries, by contrast, science information diets still privilege traditional media, including newspapers and TV programmes.

The analysis also highlights the role of social and political contexts. Limited scientific freedom is associated with lower engagement with science-related information. On public discussion, the researchers observe a tentative relationship between collectivist value systems and lower outspokenness on scientific topics, while pointing out the limits of classifying countries neatly as "collectivist" or "individualist." Participation in protests about science-related matters appears tied more to political impacts than to judgments about the science itself.



Average reported frequency of exposure to science information (Mede, Cologna et al. 2025)

Notably, people with lower scientific knowledge report sharing opinions about science more often. The authors argue the findings could inform scientific literacy policies and strengthen fact-checking approaches on social media, where science information is most frequently encountered, and inform actions to strengthen scientific media literacy that are regionally, when not country-relevant.

The paper was published in *Science Communication: Mede, N. G., Cologna, V., Berger, S., C. Besley, J., Brick, C., Joubert, M., W. Maibach, E., Mihelj, S., Oreskes, N., S. Schäfer, M., van der Linden, S., Abdul Aziz, N. I., Abdulsalam, S., Abu Shamsi, N., Aczel, B., Adinugroho, I., Alabrese, E., Aldoh, A., … Alfano, M. (2025). Public Communication about Science in 68 Countries: Global Evidence on How People Encounter and Engage with Information about Science. Science Communication, 0(0). https://doi.org/10.1177/10755470251376615*

15. Upcoming meetings and conferences

As part of our commitment to keeping the Earth system modelling and observations community informed, we've compiled a list of key meetings and conferences scheduled in the coming months. Whether your focus is on numerical modelling, data assimilation, observational techniques, or interdisciplinary approaches, these gatherings provide platforms to engage with peers, discuss emerging challenges, and contribute to shaping the future of our field.

Explore the list below to identify the events that align with your interests and mark your calendars for a productive and inspiring year ahead!

February 2026

09-12 February 2026: Climate and Cryosphere Open Science Conference – Wellington, New Zealand

23-27 February 2026: WCRP School on Climate Prediction Across Timescales - Buenos Aires, Argentina

23-27 February 2026: WWRP Weather and Society Conference 2026 - Online

March 2026

09-13 March 2026: CMIP Community Workshop 2026 - Kyoto, Japan

11 March 2026: WGCM Forum Launch: Frontiers in Earth System Modelling (at CMIP Community Workshop)

April 2026

13-17 April 2026: 5th ECMWF-ESA Machine Learning Workshop - Bologna, Italy

May 2026

03-08 May 2026: EGU General Assembly 2026 - Vienna, Austria

July 2026

06-09 July 2026: Pan-GLASS Meeting - Stuttgart, Germany

September 2026

07-11 September 2026: S2S2D Conference 2026: Advancing Climate Predictions from Weeks to Decades to Benefit Society - Reading, UK

October 2026

12-16 October 2026: APARC General Assembly 2026 - Pune, India

26-30 October 2026: 2nd Workshop on Organisation and Maintenance of Tropical Convection and the Madden Julian Oscillation - Trieste, Italy

February 2027

(Exact dates TBD): WGNE workshop on systematic errors in weather and climate models 2027 - Pune, India

= ESMO session planned or event (co-)organized by ESMO

About ESMO
The Earth System Modelling and Observations (ESMO) core project coordinates, advances, and facilitates all modelling, data assimilation and observational activities within WCRP. Website: **wcrp-esmo.org**

Editing and design
Sara Pasqualetto (ESMO IPO).

Cover image credits: Gerd Altmann from Pixabay

Publication policy
The ESMO Newsletter is published twice a year and features updates and contributions from members of the ESMO panels and projects. Articles are also welcome from external people, as long as pertinent and of interest to the ESMO project and its objectives. For questions on editing, distribution and subscription to the newsletter, please contact Sara Pasqualetto at pasqualetto@dkrz.de.
The ESMO Newsletter is not peer-reviewed.

NOTE
The designations employed and the presentation of material in this publication do not imply the expression of any opinion status of any whatsoever on the part of the Secretariat of the World Meteorological Organization concerning the legal country, territory, city or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Editorial note: This report has been produced without editorial revision by the WCRP secretariat. It is not an official WMO publication and its distribution in this form does not imply endorsement by the Organization of the ideas expressed.

ESMO WCRP