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## IN THIS ISSUE

letter from the CSP secretariat .....	2	recent publications .....	7
partner updates .....	3	upcoming events .....	9
		about CSP .....	12

**Dear reader,**

we are pleased to present a new issue of the CSP newsletter.

You will find various information on partner activities, recent publications and upcoming events.

**We invite the community to join the discussion on the future of the CSP, which we would like to initiate in an open format, online in early Spring 2022 - keep an eye out for the announcement!**

In case you are not yet a subscriber, we invite you to visit  
[https://www.gerics.de/network/secretariats/CSP\\_Newsletter/index.php.en](https://www.gerics.de/network/secretariats/CSP_Newsletter/index.php.en)  
for subscription.

Enjoy reading!

A few weeks ago, the 26th Conference of the Parties of the United Nations Framework Convention on Climate Change (UNFCCC), COP26, took place in Glasgow. Even if the pledges made are not enough to limit global warming below +2°C compared to pre-industrial levels, it seems that this goal could still be reachable. The outcomes of the negotiations include a comparatively clear pressure to end fossil fuels. For the first time, it explicitly entered the final document, six years after the Paris Agreement.

Looking back over the last two and a half decades, it becomes clear that, although the process of inching towards aims that are far ahead is exhausting and long-term, nevertheless progress is being made.

The perception of science in the realm of climate politics and the related processes, institutions and bodies seems to have changed in recent years, and thus the role of science is reinforced. More than before, the “natural”, inherent quality of science to create information, knowledge and understanding is appreciated as a crucial, necessary contribution to address the climate crisis. The importance of science for decision-making might have gained more weight through the Covid-19 pandemic, which delivered a harsh lesson in terms of facing unknown natural, in this case biological, risks for human health, and in result for societies as a whole. Understanding a phenomenon, the related risks and the consequences provides means to cope with a problem; science delivers this understanding. For the field of climate change and in the light of increasing climatic risks, the role of science thus becomes more than clear. Global warming leads to more frequent and extreme climatic hazards in every region of the world, which will increase even more in the future. To adapt to the unavoidable changes and to prepare for the related risks as good as possible – this is where, above process understanding of underlying mechanisms and best possible projections, science can contribute.

The topic of adaptation has gained increased attention at COP26, thereby also strengthening former tendencies. Until around a decade ago, mitigating climate change, i.e. reducing emissions of greenhouse gases, was the focus of the policy and public spaces. However, nowadays, the effects of climate change are much less abstract, less distant in time

and space. Climate change is observable already today, and it affects people’s lives and wellbeing globally. This has been confirmed by every new report of the Intergovernmental Panel on Climate Change. Therefore, the urgent need to act on and to prepare for such impacts is increasingly addressed on all levels. An important aspect of adaptation is that its implementation in developing countries should be supported by more capable societies, especially in the light of ethical considerations with regard to the polluter-pays principle.

As outcomes of the COP26, the shifts and changes in perception of science and of adaptation led to an explicit call by the UNFCCC towards the scientific community to continue and foster the provision of science to society. Knowledge-based, informed decisions increase societies’ resilience to climate related risks and hazards. In regards to adaptation, the expectations towards COP26 were, e.g., accelerated action. The outcomes of the conference at least partly fulfilled this hope, through new funds explicitly addressing adaptation goals. However, it is clear that more work needs to be done in terms of planning, but more importantly on the implementation of adaptation to face the risk of the current level of warming.

Looking back, the seemingly Sisyphean work does make a difference. The scientific community is asked to continue to increase the understanding of current and future climatic risks; it is however crucial to digest scientific results into usable information. This can best be achieved when products are generated in a cooperative process, applying principles such as inter- and transdisciplinarity, co-development and a systemic view. Their contributions, for example, to the public health and the food and agricultural sectors or for urban areas can provide pivotal support for societies to adapt to climatic changes and at the same time mitigate climate change by developing to a carbon neutral life style. First steps into a new era! Coming to close, I wish you and your families relaxing holidays and all the best for the coming year - stay healthy.

*Daniela Jacob*

Director of Climate Service Center Germany (GERICS)

**Blue-Action: Arctic impact on weather and climate - The major European research project, investigating the effect of a changing Arctic on weather and climate, is coming to an end after five years of successful work**

The Multi-annual to Decadal Climate Predictability in the North Atlantic-Arctic Sector workshop has been a collaboration between the projects Blue-Action, ROADMAP, the Bjerknes Climate Prediction Unit, the CLIVAR Climate Dynamics Panel, the CLIVAR Atlantic Region Panel and the CLIVAR Northern Oceans Region Panel.

The workshop was the final event for the H2020 Blue-Action project and a contribution to the EU Climate Modelling Cluster.

The goal of the workshop was to foster scientific exchanges and collaborations on multi-annual to decadal climate predictability, including research on:

- Climate predictability from interannual to multi-decadal timescales and our understanding of the associated physical processes and their representation by models,
- Improvement of dynamical prediction systems, and
- The increasing need for actionable information dependent on skillful climate predictions.

The session Nr. 3 was dedicated in particular to Application and Services, with also one breakout session focusing on this topic.

The proceedings contain the abstracts of presentations and posters and point at presentations and posters published in Zenodo in open access.

Blue-Action project office. (2021). Proceedings of the Workshop: Multi-annual to Decadal Climate Predictability in the North Atlantic-Arctic Sector. Zenodo. <https://doi.org/10.5281/zenodo.5793263>



**Climate Coffees**

Blue-Action, in partnership with the European Climate Research Alliance (ECRA), invited researchers from across the climate science community to join us for a new series of regular online knowledge exchange events. This was an exciting opportunity for you to network and disseminate your recent results, peer-to-peer.

ClimateCoffees are short (30-40 min), relaxed meetings for scientists to share ideas, discuss methods and communicate new results.

Are you interested in giving a talk in the next sessions, or hearing more?

**More details:** <https://blue-action.eu/training/climate-coffees>

<http://ecra-climate.eu/13-publications/218-climate-coffee>

### Time for Tea

Met Office scientists are working closely together with the China Meteorological Administration, the Yunnan University of Finance and Economics, and tea businesses and farmers in Yunnan province to provide actionable climate information for decision making. The tea industry in this region represents an important source of income for women and vulnerable communities, as well as being fundamental to global tea trade.



Photo: Shaojuan Li

The project has so far identified statistical predictive relationships between key climate indicators and tea quality and price across the year, and has identified Spring drought as the primary concern for decision-makers as this represents when the highest quality tea is at critical growth stage. Spring 2013 represents an important year in the memories of tea farmers in Yunnan, and drawing on narratives familiar to, and of significant relevance to decision makers will be a fundamental part of climate service co-development and delivery. Another important element of the service will be use of appropriate social media channels and communication for-

mats such as cartoons and animation to allow content to be directly tailored to the preferences of decision makers.

Challenges remain around identifying sources of skill in the seasonal forecast to enable decision making at key points in the tea growing cycle, and encountering the complex meteorology and topography in a region without dense observation networks. However, the first steps to co-developing a climate service for the tea industry in China have been taken, with strong engagement from potential users making a promising start. This work is funded by UK Government Newton Fund.

### The Met Office's Climate Services Week

The Met Office (UK) is hosting its 2nd Climate Services Week from 28th Feb – 4th March 2022. This will be a week of hybrid-designed activities, running with some element both online and at the Met Office Headquarters in Exeter. It aims to create new and inviting spaces to share, discuss, learn and create around the topic of climate services, and will include key-not talks, panel webinars, games, competitions, hackathon, early careers event, pod casts and more! A key theme this year is 'success through partnership' and we invite anyone with an interest in climate services to be involved. More details including how to register for the event will be available from January 2022 and will be shared via the Climate Services Partnership and at <https://www.metoffice.gov.uk/>.

## Climate services at the 26<sup>th</sup> Conference of the Parties (COP26, 31<sup>st</sup> November - 12<sup>th</sup> October 2021)

### GERICS at the COP26

After a year of delay, the 26th Conference of Parties (COP26) was held in November, in Glasgow, under the United Nations Framework Convention on Climate Change (UNFCCC). The Climate Service Center Germany (GERICS) has been observer to the UNFCCC since 2018. This allows GERICS staff members to be present at the conference to keep an eye on the negotiations, the side-events, and to exchange with decision-makers, to understand the latest needs and directions for the development of climate services.



During COP26, more than ever in the history of the UN climate change conferences, the pivotal role of science and science-based decisions became evident. Climate science is increasingly uncontested, and a shift is noticeable towards how to deliver on climate actions based on the latest science. This increases the growing need to bring science closer to society. Climate services offer a great opportunity to ensure reaching the mitigation needs while simultaneously enabling effective adaptation to the unprecedented challenges humanity is facing and will further face in the future.



An institution of Helmholtz-Zentrum Geesthacht

The recent article by GERICS shares some take-aways and key lessons for climate services from the COP26, explicitly highlighting the themes: health, urban areas, oceans, infrastructure investments, and food & land-use.

The article, published in Open Access Government, can be read online here: <https://www.openaccess-government.org/science-for-climate-services-and-action-reflections-on-the-cop26/125208/>



Photos: Tania Guillén Bolaños

## partner updates

### CSP partner activities

**The Web Atlas of Net-Zero-2050, Cluster I of the Helmholtz Climate Initiative, was launched on November 17, 2021.**

The Web Atlas is a platform for digital knowledge transfer. It functions as a showcase for the research contributions of ten Helmholtz Centres that were part of *Net-Zero-2050*, Cluster I of the *Helmholtz Climate Initiative*.



It presents their results in a clear and understandable way and answers the question: Which technical and nature-based options as well as political decisions can support Germany in becoming CO<sub>2</sub>-neutral?

**NETTO-NULL**  
Pfade zur Klimaneutralität 2050



The target groups include the interested professional public, environmental policy at federal to regional level and municipal, technical experts. It is available in German and English.

**More details:** <https://atlas.netto-null.org>.

## selection of the latest publications from the CSP community

**Title: Coordination of Europe's climate-related knowledge base: Networking and collaborating through interactive events, social media and focussed groups**

**Authors:** C. Hewitt, Bessembinder, J., Buonocore, M., Dunbar, T., Garrett, N., Kotova, L., New, S., Newton, P., Parfitt, R., Buontempo, C., Doblaser, F., Guglielmo, F., Jacob, D., Kjellström, E., Krzic, A., Martins, H., Pietrosanti, A., & Terrado, M.

**Summary:** Knowledge of the climate is essential to manage climate-related risks. Underpinning this knowledge is a huge range of climate research and climate service activities. There has been a marked expansion of such activities and while the numerous and diverse funding streams, activities and organizations involved means that climate service development is relatively well resourced in places, there is a risk that the landscape becomes fragmented, duplicative, confusing, and inefficient. To mitigate this, the European Commission established the Climateurope project to bring coordination to Europe's climate-related knowledge base. Climateurope created a managed network to share knowledge, improve synergies and reduce fragmentation among the stakeholders. As the network evolved, we proactively strove for equality, diversity and inclusion, for example for gender, under-represented regions, and under-represented stakeholder groups. Climateurope explored and adopted innovative approaches to engaging the network members, including face-to-face networking events (Festivals), virtual networking events (Webstivals and webinars), use of arts, social media, expert groups, publications, and an active website. The mix and integration of the traditional communications, such as website, publications and expert groups, with more innovative and varied approaches, such as the Festivals, Webstivals, social media and arts, proved popular and successful in making the network active and attractive. We describe how the network and collaboration was established and managed, and we offer some recommendations for others based on our experiences, including consideration of equal-

ity, diversity and inclusion, consider strategies for growing, managing and sustaining the network, and consider a mix of virtual and physical networking events.

**Link for more information:** <https://doi.org/10.1016/j.cliser.2021.100264>

**Title: Climate services for managing societal risks and opportunities**

**Authors:** C. Hewitt & Stone, R.

**Summary:** The Earth's climate and changes to it impact our lives, well-being and economy in numerous ways, some positive and some negative. Managing the risks that arise from changes in the climate over the coming months, years and decades is one of the most pressing challenges that society faces, but there are also some opportunities. The provision and use of climate information in decision-making (i.e. climate services) are central to managing the risks and opportunities. In this article we describe the seemingly complex climate service landscape, the actors in it, what the services are used for, and what next, to help stimulate further action to enable society to reduce risks and realise benefits, particularly timely as the world looks ahead to build a green recovery from the COVID-19 pandemic on the path to net zero emissions. Through a consideration of the value chain for climate services, we emphasise the importance of dialogue and collaboration between those developing, providing and using climate information in decision-making, and stress that a climate service is only worth delivering if it is going to be used by someone to influence an outcome. Co-production can be highly useful for enabling the dialogue and collaborating across the value chain, helping create services based on credible, salient and legitimate knowledge.

**Link for more information:** <https://doi.org/10.1016/j.cliser.2021.100240>

## selection of the latest publications from the CSP community

**Title: Recommendations for Future Research Priorities for Climate Modeling and Climate Services**

**Authors:** C. Hewitt, Guglielmo, F., Joussaume, S., Bessembinder, J., Christel, I., Doblas-Reyes, F. J., Djurdjevic, V., Garrett, N., Kjellström, E., Krzic, A., Costa, M. M., & St. Clair, A. L.

**Summary:** Climate observations, research, and models are used extensively to help understand key processes underlying changes to the climate on a range of time scales from months to decades, and to investigate and describe possible longer-term future climates.

The knowledge generated serves as a scientific basis for climate services that are provided with the aim of tailoring information for decision-makers and policy-makers. Climate models and climate services are crucial elements for supporting policy and other societal actions to mitigate and adapt to climate change, and for making society better prepared and more resilient to climate-related risks.

We present recommendations for future research topics for climate modeling and for climate services. These recommendations were produced by a group of experts in climate modeling and climate services, selected based on their individual leadership roles or participation in international activities. The recommendations were reached through extensive analysis, consideration and discussion of current and desired research capabilities, and wider engagement and refinement of the recommendations was achieved through a targeted workshop of initial recommendations and an open meeting at the European Geosciences Union General Assembly.

The findings emphasize how research and innovation activities in the fields of climate modeling and climate services can contribute to improving climate knowledge and information with saliency for users in order to enhance capacity to transition to a sustainable and resilient society.

The findings are relevant worldwide but are deliberately intended to influence the European Commission's next major multi-annual framework program of research and innovation over the period 2021–27.

**Link/DOI:** <https://doi.org/10.1175/BAMS-D-20-0103.1>

**Title: Resilience through climate services**

**Authors:** A. M. Stewart Ibarra, Hewitt, C., Winarto, Y.T., Walker, S., Keener, V.W., Bayala, J., Christel, I., Bloomfield, H., Halsnæs, K., Jacob, D., Brasseur, G.P., Haigh, T., van den Hurk, B.

**Summary:** Climate services can provide valuable information that can help society to enhance resilience, survive, and even prosper in the face of climate risk. However, priorities might differ across sectors, regions, and scales. This Voices asks: what are the priorities to advance and deliver climate services for resilience and preparedness?

**Link/DOI:** <https://doi.org/10.1016/j.oneear.2021.08.002>

**Title: Science for Climate Services and Action – Reflections on the COP26**

**Authors:** T. Guillén B., Langendijk, G.S., Celliers, L., Sonntag, S., Martín, A.

**Summary:** A reflection on the implications of COP26 outcomes for climate services and the critical role of science in the UNFCCC process prepared by colleagues of the Climate Service Center Germany (GERICS).

**Link:** <https://www.openaccessgovernment.org/science-for-climate-services-and-action-reflections-on-the-cop26/125208/>

## upcoming events in the climate and climate services community

### **The Met Office's Climate Services Week 28 February – 4 March 2022 Exeter, UK**

The Met Office (UK) is hosting its 2nd Climate Services Week from 28th Feb – 4th March 2022. This will be a week of hybrid-designed activities, running with some element both online and at the Met Office Headquarters in Exeter. It aims to create new and inviting spaces to share, discuss, learn and create around the topic of climate services, and will include key-note talks, panel webinars, games, competitions, hackathon, early careers event, pod casts and more! A key theme this year is 'success through partnership' and we invite anyone with an interest in climate services to be involved. More details including how to register for the event will be available from January 2022 and will be shared via the Climate Services Partnership and at [metoffice.gov.uk](mailto:metoffice.gov.uk).

**More details:** <https://www.metoffice.gov.uk/services/research-consulting/climate-service>

### **4th European Climate Research Alliance (ECRA) General Assembly 2022 8 - 9 March 2022 Brussels, BE**

The European Climate Research Alliance (ECRA) is an association of leading European research institutions. ECRA's objective is to bring together, expand and optimise expertise in climate research through a bottom-up approach. The initiative is a platform for joint research planning by sharing existing national research capacities and infrastructures. ECRA acts as a unified voice for climate research in Europe.

ECRA celebrates its 10 year anniversary and we invite you to our fourth General Assembly on two days, 8-9 March 2022 in Brussels. The themes will be extreme events, Climate Change, and how the risks coming with them can be understood by science, communicated between scientists and deci-

on-makers; in order to manage the risk.

For the first day (afternoon and evening), we will have high-level keynotes and panel discussion.

The second day will include three parts:

- Climate Processes and Research Needs - or: "What do we know?"
- Risk management - or: "What do we need?"
- Communicating uncertainties - or: "How can we put things together?"

**More details:** <http://ecra-climate.eu/activities-events/ecra-general-assemblies/195-ecra-ga22>

### **European Geosciences Union (EGU) General Assembly 2022 3 - 8 April 2022 Vienna, Austria**

The EGU General Assembly 2022 will bring together geoscientists from all over the world for one meeting covering all disciplines of the Earth, planetary, and space sciences. The EGU aims to provide a forum where scientists, especially early career scientists, can present their work and discuss their ideas with experts in all fields of geoscience.

The last two General Assemblies, Sharing Geoscience Online in 2020 and vEGU21: Gather Online, were organized as virtual meetings due to the Covid-related restrictions. In 2022, the EGU aims to provide an on-site experience again for those attending in-person, while at the same time introducing new concepts to include virtual attendees as much as possible. The EGU General Assembly 2022 (EGU22) will be a conference with a virtual component where everybody is welcome, in person or online! We plan for the format of the conference to be flexible, giving us the opportunity to more easily adapt to the uncertain global context.

**More details:** <https://www.egu22.eu/>

## upcoming events in the climate and climate services community

### The Fourteenth International Conference on Climate Change: Impacts & Responses

7 - 8 April 2022

Vancouver, Canada

The *Fourteenth International Conference on Climate Change: Impacts & Responses* is brought together by a common concern for the science of, and social responses to, climate change. We seek to build an epistemic community where we can make linkages across disciplinary, geographic, and cultural boundaries. We invite proposals addressing one of the following themes or special focus:

- Theme 1: The nature of evidence
- Theme 2: Assessing impacts in diverse ecosystems
- Theme 3: Human impacts and responsibility
- Theme 4: Technical, political and social responses

The 2022 conference has the special focus *Responding to Climate Change as Emergency: Governing the Climate Emergency*

**More details:** <https://on-climate.com/2022-conference>

### 3rd international Conference Climate change & Water: Extremes

31 May - 2 June 2022

Tours, France

The international symposium Climate change & Water 2022 under the theme of extremes will be held on May 31 and June 1 and 2, 2022, in Tours in the Centre-Val de Loire region of France.

This international conference is open to the academic world and to socio-economic partners concerned by the variability of the water cycle and adaptation to extreme events.

**More details:** <https://www.emetsoc.org/events/event/climate-change-water-extremes/>

### Sustainability Research & Innovation Congress 2022

20 - 24 June 2022

Pretoria, South Africa

The Sustainability Research & Innovation Congress is a series of gatherings that unite global research leaders, experts, industries and innovators to inspire action and promote a sustainability transformation.

A joint initiative of Future Earth and the Belmont Forum, the SRI Congress is a space of dedicated advocacy for sustainability scholarship and innovation, transdisciplinary and cross-sectoral collaboration and action.

An important objective of SRI2022 is to amplify the voice of sustainability science and innovation in the Global South, specifically for the African continent, through raising awareness and propelling discussions about sustainable priorities for Africa. Africa has much to offer to the global discussion on sustainability, and SRI2022, together with its host Future Africa, will provide a critical platform for collaboration with local, African and international partners.

**More details:** <https://sri2022.org/>

## upcoming events in the climate and climate services community

### Nature-based solutions in a changing climate 2022

5 - 7 July 2022

University of Oxford, UK

We are bringing together leading researchers from the social and natural sciences, engineering and economics with policymakers, civil society actors and business leaders to discuss the potential of Nature-based Solutions (NbS) to meet societal goals in a warming world. We will draw together the current state of the interdisciplinary evidence for the socioeconomic and ecological effectiveness of NbS, and explore the social, technical, ethical, ecological, governance and financial challenges around scaling them up. As well as highlighting avenues for further research, we will aim to generate guidelines on the design and implementation of NbS targeting decision-makers in business and government. Outcomes will be synthesised in policy briefs, a special issue, and made available to a wide audience through a creative outreach campaign.

**More details:** <https://www.naturebasedsolutions-oxford.org/home/>

### Sea Level 2022

12 - 16 July

Singapore

The conference will provide an opportunity to share the present status and future of climate-related sea-level research with a strong focus on the application of sea-level science for adaptation and stakeholder needs. Given the critical need for risk assessment and coastal adaptation, it will include direct participation by a global cross-section of both leading sea level researchers and adaptation practitioners.

The conference will feature a robust conversation between these communities to inform efforts to bridge science and society at this critical moment, including consideration of the new structure of WCRP.

**More details:** <https://www.sealevelconference.org/>

### Global Futures 2022:

Shaping Tomorrow, Today

11 - 16 September 2022

Washington, D.C., USA

Global Futures 2022: Shaping Tomorrow, Today is a space for a broad global stakeholder community to interrogate the trajectory of our planet and the role of global society in shaping it by asking “which global future(s) do we want, and can there be any consensus getting there?”

The conference, co-convened by the Julie Ann Wrigley Global Futures Laboratory™ at Arizona State University and the Earth League, will be outcome-oriented and will enable participants to integrate and synthesize knowledge from multiple frameworks and perspectives.

The main purpose of Global Futures 2022 is to define strategies and immediate action required to fundamentally alter how we manage the planet in ways that achieve sustained habitability. The conference format will foster an open dialogue with diverse perspectives on feasible, immediate action towards the transitions needed to avoid irreparable harm to the earth system, including humankind.

**More details:** <https://globalfuturesconference.org/>

### 27th session of the Conference of the Parties (COP 27)

7 - 18 November 2022

Sharm el-Sheikh, South Sinai, Egypt

The 27th session of the Conference of the Parties (COP 27) to the UNFCCC will take place in Sharm El-Sheikh, Egypt.

COP 27 was originally expected to take place from 8-20 November 2021. Due to the COVID-19 pandemic, COP 26 was rescheduled from November 2020 to November 2021. As a result, COP 27 will take place from 7-18 November 2022.

**More details:** <https://sdg.iisd.org/events/2021-un-climate-change-conference-unfccc-cop-27/>



The Climate Services Partnership (CSP) is a platform for knowledge sharing and collaboration to advance climate service capabilities worldwide. CSP members are climate information users, providers, donors, and researchers; though they represent diverse interests, all are actively engaged with climate services through their own programmes and activities. Partners collaborate to develop and improve climate services; they also learn from each other by sharing resources and experiences. The CSP creates a venue to generate new knowledge, establish best practices, and promote a resilient, sustainable, and climate-smart future. More information is also available on our website: [www.climate-services.org](http://www.climate-services.org).

The CSP newsletter is a publication meant to keep all informed of the latest updates of the partnership community. We rely on you for news of your activities, upcoming events, and recent publications.

Editorial board: Tanja Blome, Daniela Jacob, María Máñez Costa, Irene Fischer-Bruns (all GERICS)



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