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Welcome to the CSP quarterly newsletter October 2016 edition!

Welcome to 2016's autumn CSP newsletter! As ever, we have critical events, new projects and exciting developments in the world of climate services unfolding around us. In this latest newsletter you can read special features from John H. Matthews from the Alliance for Global Water Adaptation on his insights on the role of climate adaptation in water management, as well as read about the first framework for climate services in the Pacific Islands, in a conversation with Philip Malsale from the Vanuatu Meteorology and Geo-Hazards Department.

You will also hear about the Red Cross Red Crescent's role in working cooperatively to "prevent, prepare for, and respond to climate-related disaster" across the Indian Ocean Regional, the new regional focuses of the Joint USA/Canada Quarterly Climate Outlooks and the launch of Climate Services for Resilient Development Partnership programme website.

Make sure you don't forget to participate in the SECTEUR project survey, as part of C3S, on page 8!

As always, we have a selection of recent topical publications and relevant upcoming events for you to check out too. Enjoy reading!

1.5°C: commitment and challenges

letter from the CSP Secretariat

The last few months have seen the world begin to consider what trying to actualise the highly ambitious Paris Agreement, reached last year at COP21, might actually mean in reality.

In response to our political leaders signing a climate deal that surpassed even the most optimistic bystanders, jubilations were global, if cautious. Now the dust has settled, the reality of the scale of the challenge has begun to sink in. In the months following this historical COP, two things have become apparent. Firstly, the size of challenge ahead cannot be underestimated, especially if we are to take seriously the infamous part that commits to “pursue efforts to limit the temperature increase to 1.5°C”. Secondly, it is clear that our knowledge of what a 1.5°C world actually entails and what needs to be done to ensure we stick to such a temperature rise it is severely lacking.

In response to the latter great knowledge gap, a meeting was held in Oxford over 20-22 September (2016), titled “1.5 Degrees: Meeting the challenges of the Paris Agreement”. The aim was to bring together researchers, policy makers, businesses and members of civil society to consider these great questions, focusing on the nature, impacts, benefits and most crucially the challenges of meeting the challenges brought with the Paris Agreement. This scientific gathering brought together brilliant minds that gave much needed light to what a 1.5°C world might look like, including addressing climate extremes, and human to biodiversity impacts of 1.5°C. Other trickier questions were addressed such as the moral implications of such a temperature rise, and the financing of such a target. This meeting made important headway in beginning to uncover the scientific understandings of 1.5°C warming, and the different social, economic and political framings of the issue.

However, what clearly remains the greyest area, and what is undoubtedly our greatest challenge: how do we actualise the terms of the Paris Agreement, remains the million dollar question. What do we need to do in practical terms to stick to 2°C, or even 1.5°C, in terms of policy and action? And is our time frame to implement proportionate steps forward, as of which yet remain undetermined, sufficient? Few conferences, meetings of minds or analyses have yet begun to offer a comprehensive or adequate response to these questions. And the reason for this is simple.

The questions are huge, and there is still a great amount of research to be done.

These questions come not long after an analysis led by IIASA showed that individual country pledges for greenhouse gas emission reduction submitted for COP21, overshoot both the 1.5°C and 2°C goals agreed to in the very same conference. And in fact, the entire carbon budget for limiting warming to below 2°C might be used up by 2030. Furthermore, without additional action and advanced technologies a temperature rise of 2°C could be reached as soon as 2050, according to a new report titled *The Truth about Climate Change* (authored by six top climate scientists and Liliانا Hisas of the Universal Ecological Fund (FEU-US), see [here](#)).

However, despite these vast unknowns and bleak scientific analyses, we do see positive movements taking

place around us. In a surprise move, EU heads of states voted on 4 October (2016) for the European Union to ratify the Paris Agreement. This follows of the back of the United States and China, the world’s largest emitters, joining the accord. 75 nations have now ratified the Agreement, far succeeding the 55

needed for the accord enter into force. Steps by nation states towards making the voluntary Paris Agreement an obligation are taking place far faster than expected.

It is almost a year since COP21, and as we edge towards the next Conference of Parties (COP22), being held in Marrakesh, Morocco this November, these big questions of if we are serious about the commitments made in the Paris Agreement and how we might realise them, are become increasingly relevant.

"Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C"

*Paris Agreement, Conference of the Parties 21 (COP21)
UNFCCC, Paris, 11 December, 2015*

Daniela Jacob

Director of Climate Service Center Germany (GERICS)

Data, Insight, Action: Mainstreaming Climate Adaptation for Water Management

a conversation with John H. Matthews, Alliance for Global Water Adaptation

After a decade of work on climate adaptation, I have come to believe that climate data — while undeniably important for quantitative applications — is not by itself sufficient to achieve effective adaptation, and it is far from enough to see effective mainstream adaptation within and across institutions.

For the past six years, the Alliance for Global Water Adaptation (AGWA) has focused on the intersection of climate change and water resources management. Climate data for the water cycle is notoriously difficult to resolve historically without the framing of long time series, while climate models have shown persistent gaps in how they can project forward with enough confidence given existing management decision making processes.

While part of the challenge comes from the complexity of the water cycle itself, longevity of water infrastructure is also an issue: these investments can easily last decades, even centuries. Engineers don't want to over- or underdesign, and decision makers don't want to over- or underspend.

The evidence of ineffective decisions is increasingly widespread: the Hoover Dam's 35 m "bathtub ring," the empty Kariba and Glen Canyon dams, the need to update, reevaluate, and modify many water management systems globally. This has been seen even with structures that are only a few years old. These systems provide the energy that drives economies, as well as the insulating assets from floods and droughts, providing clean water and sanitation, irrigating agriculture, and sustaining ecosystems. The implications for middle and low income countries are stark, with the potential for inefficient investments, underdevelopment, deteriorating ecosystems, and ultimately even catastrophic failure.

As a result, AGWA has worked to develop decision support systems that work with, rather than against, uncertainty. We use so-called bottom-up methodologies (such as decision scaling and adaptation pathways to define system limits and to engage stakeholders and decision makers to create performance metrics) that reflect their definitions of success and failure, expressed through the language of water and climate. Climate data are important, of course, but they come later in the decision making process: helping to translate risk into risk tolerance, sorting through the efficacy of proposed solutions. As a network, we first described these assumptions in Beyond Downscaling in 2014 (<http://alliance4water.org/Beyond/beyond.html>).

Developed in the context of a transboundary multi-stakeholder management challenge within the North American Great Lakes, decision scaling engages decision makers and stakeholders to negotiate tradeoffs — converting data into insight, and fostering a shared vision for management success. Given the large and persistent uncertainties

associated with most projected data, adaptation pathways provides a framework beyond decision scaling for making flexible and adaptive management a consistent outcome. Decision makers can navigate institutional and infrastructure decision constraints as uncertainties resolve, reducing the likelihood of regretful investments.

Both decision scaling and adaptation pathways were developed around 2009 as one-off and project-specific applications: they were boutique approaches to climate adaptation. Within AGWA, however, we recognised that these methods should be scaled up and mainstreamed. In theory, separate teams working on the same problem should be able to reach similar solutions — a transition from insight to action. As a result, AGWA has worked to support three distinct efforts in recent years:

1. In 2015, the World Bank launched a bottom-up approach to assessing and resolving climate risks in water investments that integrates these methodologies within the existing decision making processes of staff and clients: <https://openknowledge.worldbank.org/handle/10986/22544>
2. In early 2016, a team supported by the US National Science Foundation and the National Socio-Environmental Synthesis Center (SESYNC) published a method in Nature Climate Change for optimising aquatic ecosystem and water infrastructure benefits in a shifting climate called EEDS: Eco-Engineering Decision Scaling: <http://agwaguide.org/EEDS/>.
3. Finally, in November 2016 with support from Deltares, the US Army Corps of Engineers, the Rijkswaterstaat, University of Massachusetts, Amherst, and many other groups. ICIWaRM Press will publish CRIDA: Collaborative Risk Informed Decision Analysis. CRIDA is a stepwise synthesis of decision scaling and adaptation pathways that builds on widespread water management planning and decision making processes: <http://agwaguide.org/CRIDA/>

AGWA is now in the process of shifting to building a global community of practice based on these methodologies, addressing: How can they be refined and applied to new challenges and audiences? As a global network for climate change and water professionals, we invite you to join with us in the process.



Vanuatu Creates the First Framework for Climate Services in the Pacific Islands

a conversation with Philip Malsale,
Vanuatu Meteorology and Geo-Hazards Department

The Republic of Vanuatu has created its Framework for Climate Services, making it the first Pacific Island nation to reach this milestone. The successful provision of climate information and services is a challenge for many Pacific Island nations, which may be hindered by social, financial and infrastructure issues. Vanuatu faces such realities, compounded by resource constraints, significant geographic isolation between and within its more than 80 islands, and over 80% of its population living in rural areas.

In the face of such challenges, the Vanuatu Framework for Climate Services (VFCS) was recently finalised, marking a critical step in helping Vanuatu's people to manage and adapt to climate variability and change through sustainable and accessible climate services meeting world-class standards.

Climate services provide climate information to assist individuals and organisations in decision-making. These services are particularly important for Vanuatu, which can be significantly impacted when climactic conditions deviate from the norm. For example, sea level rise can result in increased coastal erosion, storm inundation and salt-water contamination of groundwater in the country, while increased sea temperatures can heighten the intensity of tropical cyclones and lengthen the cyclone season. The development of VFCS involved over 100 participants from Vanuatu's communities, provincial governments, government sectors and non-government organisations. Discussions focused on assessing the relevance, reliability and content of the current climate information services provided by the Vanuatu Meteorology and Geo-Hazards Department (VMGD) and mechanisms to foster

greater integration and dissemination of information to the "last mile" – the most remote and rural island communities in Vanuatu.

Guided by the Global Framework for Climate Services (GFCS), VFCS also examines existing linkages with global, regional and national frameworks, strategic plans and policies. A list of 18 recommended actions is provided, as well as a Roadmap for Strengthening Climate Services, which includes suggested prioritisation, timeframe and indicative costs associated with the recommendations.

During the official launch of the VFCS, Mr. David Gibson, Director of VMGD and Permanent Representative of Vanuatu to the World Meteorological Organization (WMO), stressed the importance of the framework in guiding their engagement with stakeholders. The First Political Advisor to the Ministry of Climate Change, Environment, Energy, Meteorology and Disaster Management, Mr. Clifford Bice, acknowledged the support Vanuatu received from its partners to bring the VFCS to fruition.

The Framework was prepared by the National Institute of Water & Atmospheric Research Ltd (NIWA) in consultation with the VMGD, with financing from the Climate Investment Funds through the Asian Development Bank (ADB) Strategic Fund, administration by the Regional Technical Support Mechanism (RTSM) at the Secretariat of the Pacific Regional Environment Programme (SPREP), and support from the WHO and regional partners.

To read more, please see here: <http://www.nab.vu/news/national-framework-climate-services-launched>



Photo: Philip Malsale
Vanuatu Meteorology and Geo-Hazards Department

Joint USA/Canada Quarterly Climate Outlook

NOAA/NESDIS/NCEI Regional Climate Services Directors (RCSDs)

Since 2012, the NOAA/NESDIS/NCEI Regional Climate Services Directors (RCSDs) have been issuing Quarterly Climate Outlooks. These Outlooks are typically two page PDF documents that describe weather and climate highlights and impacts during the previous three month period, and a climate forecast for the coming three month season, focussing on a specific region. The Outlooks are created every March, June, September and December. The Outlook for Alaska beginning with the June 2016 version, is now a Joint Outlook, issued with coordination and input from northwestern Canada. The Outlook includes all of Alaska, and the Canadian provinces of the Yukon, Northwest Territories, and northern British Columbia. The development of the new basemaps as well as the design and content of the Joint Outlook have been in development since January 2016. The product of this labour, guided by the joint US/Canada bi-lateral agreement, is a seamless, highly coordinated Outlook. Link to the June 2016 Joint Outlook:

<https://www.drought.gov/drought/file/867/download?token=zbHwHvhz>

Launch of Climate Services for Resilient Development Partnership Programme Website

Climate Services for Resilient Development

CSRD is pleased to announce the launch of its programme website (www.cs4rd.org). The initial edition of the site provides information on the background, membership, objectives, and activities of the partnership to date – further to what was summarised briefly in the previous (July, 2016) edition of this newsletter. Viewers can explore CSRD's regional and country-based programs, as well as its broader work in promoting global knowledge exchange, knowledge development and collaboration in climate services for resilient development – where we seek active engagement with the CSP community. The site offers a means for viewers to offer comments and questions for CSRD, as well as to express interest in exploring collaborations. We invite all of the CSP community to visit our site and provide feedback, we want to hear from you!

At the current time CSRD is actively planning and beginning to implement climate services development programs in the Andean, South Asia, and east Africa regions, with emphasis on the countries of Colombia, Bangladesh, and Ethiopia. Beyond this, CSRD is developing plans on broader programs supporting innovation and knowledge exchange. In the coming months CSRD will be exploring the feasibility of hosting a competition on innovative approaches to flood forecasting

amenable to use for early warning and response systems, in settings where risks are high but both data and capacities to support sophisticated forecasting systems are low. Also, CSRD is planning to introduce a technical exchange program, to accelerate transfer and uptake of climate services tools and innovations in developing country settings throughout the world. As these programmes are further developed and implemented we look forward to engaging the CSP community, and reporting on results and findings.



Map: New Joint Quarterly Climate Outlooks Basemap

2016 Climate Knowledge Brokers Workshop

Climate Knowledge Brokers (CKB)

The CKB Workshop, which was held at the US National Renewable Energy Laboratory in Golden, Colorado at the end of last month (20–22 September, 2016), was hailed a great success. The U.S. Dept. of Energy's National Renewable Energy Laboratory (NREL) hosted the event, which was held at its facility in Golden, Colorado.

Designed as a fully interactive workshop, participants were invited to consider developments affecting climate knowledge brokering; contribute to future development of CKB activities including capacity building for knowledge brokers and the Climate Knowledge Grid concept, and to help provide networking opportunities and peer support to climate knowledge brokers, (e.g. through 'knowledge sharing clinics'). To further facilitate participation, participants were invited to volunteer as a 'patient' in a 'knowledge sharing clinic'; an intensive, facilitated peer support exercise that offered the opportunity to present a specific current challenge or issue, and receive support, suggestions and advice from other participants acting as doctors.

A report summarising the event is being drawn up and will be published on the CKB Website when it is finished. To view the videos of the panel session at the Outreach Event, the interview with Hunter Lovins and Bill Becker and several presentations, see the youtube playlist put together by Martin Voelker of the Colorado Renewable Energy Society ([here](#)). This workshop was made possible with the support of REEEP and the Climate and Development Knowledge Network (CDKN).

Updates from Red Cross/Red Crescent Climate Center

Red Cross/Red Crescent Climate Center

A major recent highlight was the signing in La Réunion in August by the Red Cross Red Crescent Indian Ocean Regional Intervention Platform – known by its French acronym 'PIROI' – and the Climate Centre of an agreement to work together to "prevent, prepare for, and respond to climate-related disaster".

PIROI, set up in 1999 and led by the French Red Cross, groups National Societies and branches of (alphabetically) Comoros, Madagascar, Mauritius, Mayotte, Mozambique, La Réunion, Seychelles and Tanzania, as well as the The International Federation of Red Cross and Red Crescent Societies (IFRC) and International Committee of the Red Cross (ICRC). The south-west Indian Ocean group and the Climate Centre are to collaborate on joint activities and share research data in a bid to increase humanitarian effectiveness in the face of disasters and rising climate risk.

The Red Cross Red Crescent participated in European Development Days (EDD) in Brussels in June by running a stand from the Livelihoods Resource Centre, hosted by the Spanish Red Cross in Madrid, and through the Climate Centre's participation in the 'Resilience on the Ground Lab'. Europe's premier forum on development, EDD welcomes thousands of development stakeholders, practitioners and advocates for presentations, panel discussions and informal debates.

The Climate Centre was 53rd out of 100 in the absolute rankings and seventh in the world by efficiency in the latest 'Climate Think Tank Rankings' from the International Center for Climate Governance – a global assessment of the "most cutting-edge institutions working in the field of climate change economics and policy". Recent operational experience from forecast-based financing humanitarian distributions in Africa and Asia was showcased by the Climate Centre at the 2016 Global Flood Partnership Conference, hosted by the Joint Research Centre of the European Commission in Ispra, northern Italy (over 29 June - 1 July, 2016).

The Climate Centre's Mozambique-based Technical Adviser Flavio Monjane told participants: "We were able to use this meeting of flood modellers and other specialists to unpack the ideas and practical implementation of forecast-based financing, and explore research and operational priorities.



At the first major international conference on the science behind the 1.5°C climate ambition agreed at COP 21 in Paris, held in the English university city of Oxford in September, Climate Centre Director Maarten van Aalst said: “The key point going forward is the relationship between science, policy and practice. “To understand how to manage human impacts, the traditional approach of starting with climate models then running impact models, then looking at how to adapt, will not work,” he said. “It’s about taking decisions now amid rising risks and uncertainties, focusing our efforts on the most vulnerable and building resilience, while also rapidly reducing emissions to avoid future risks getting out of hand.”

TK climate story Vanuatu 2016
Vanuatu Meteorological and Geo-Hazards Department

The Vanuatu Meteorological and Geo-Hazards Department (VMGD) is looking after the Traditional Knowledge project (TK) in Vanuatu. The project started in 2013 with the partnership of Vanuatu Cultural Centre (VKS) Vanuatu Red Cross Society (VRCS) and GIZ. There are four pilot sites in Vanuatu, they are Ureparapara Island in Torba province, Melekula Island in Malampa province, Pentecost Island on Penama Province and Tanna Island in Tefea Province. The TK team in Vanuatu has recently completed one of its monitoring visits to the pilot site on the island of Ureparapara from 26th June to 8th July. During the site visit, the TK team collected the traditional weather and climate indicators based on observations of stars and moon phases. Apart from collecting information on Ureparapara Island, the TK team conducted a monitoring training for the Vanuatu Rainfall Network (VRN) on the how TK Monitoring Forms provide updates to the communities on climate products such as the Vanuatu Climate Update (VCU) Vanuatu Cyclone Tracking Map



TK Survey Interview (by TKV)

and updates on the status of ENSO. The visit was also part of the ongoing community engagement work between the Vanuatu Meteorology Services and its stakeholders to raise awareness on the importance of climate traditional knowledge and the project. The TK project is a priority of the Vanuatu Meteorological and Geo-Hazards Department as it offers an opportunity to integrate traditional knowledge with the scientific knowledge. It provides a clear and easy to understand format that can be communicated back to the communities around Vanuatu and also serves as a method to safeguard the traditional weather and climate indicators of Vanuatu. The TK team from VMGD spent one week and a half at the site before travelling safely back to Port Vila. More can be read here: <https://www.pacificclimatechange.net/news/vanuatu-traditional-knowledge-project>



TK TC Map Awareness (by TKV)



EU-wide survey to understand user requirements of climate information and impact indicators

EU Copernicus Climate Change Service (C3S)

The SECTEUR project— Sector Engagement for the Copernicus Climate Change Service: Translating European User Requirements— is an EU Copernicus Climate Change Service (C3S) project, funded by the European Centre for Medium-range Weather Forecasts (ECMWF) on behalf of Copernicus.

C3S provides free climate information to help society and business sectors improve their planning and decision-making for climate adaptation and mitigation. SECTEUR works with private and public sector organisations to understand their requirements for climate data, aiming to deliver better-tailored information to support decision-making. The project is also conducting a gap and market analysis to help understand additional information needs and the economic potential of such information.

As part of the project, all current or potential users of climate information / impact indicators are encouraged to complete an EU-wide online survey. The research is particularly interested in those currently working within the sectors of agriculture and forestry, coastal areas, health, transport infrastructure, insurance and tourism. The survey is available in English, French, Spanish, German and Russian.

The project is engaging directly with private and public organisations across Europe to better understand user requirements of climate information / impact indicators and identify gaps in the current provision of this information. The research will inform the C3S and the provision of free climate information to support better-informed planning and decision-making for climate adaptation and mitigation. This is an opportunity for you to help shape this service according to your climate information needs. All responses should be in before November, will be kept anonymous and confidential.

Link to the survey to add your say: <https://www.snapsurveys.com/wh/s.asp?k=147375952271>

2016 Understanding Risk Forum

Global Facility for Disaster Reduction and Recovery (GFDRR), part of the World Bank Group.

From May 16-20, 2016 over 650 members of the Understanding Risk (UR) Community attended the fourth global forum in Venice, Italy. The five days were filled with over 50 sessions, including training events, workshops, technical sessions and plenaries. Topics included, but were by no means limited to: Assessing vulnerable communities; compounding events; decision-making under uncertainty; economics of risk; insurance and infrastructure; multi-hazard risk models and risk communication. With representation and contribution from 100 countries and over 350 organizations, the fourth forum was the most global yet.

Understanding Risk (UR) is an open and global community of over 6,500 experts and practitioners interested and active in disaster risk identification. UR community members share knowledge and experience, collaborate, and discuss innovation and best practice in

risk assessment. UR is the preeminent platform for collaboration, knowledge sharing, and innovation in identifying and assessing disaster risk. The community convenes every two years at UR Forums. Highlights of the event can be seen here: <https://www.youtube.com/watch?v=5DI1YKA8bZY>

**SECTEUR project
to out more:**

For further information on SECTEUR visit <http://climate.copernicus.eu/secteur>

Or email secteur@the-iea.org

For queries about the survey please contact Dr Meghan Alexander (University of Leeds, UK) at M.Alexander@leeds.ac.uk

Climate service warnings: cautions about commercializing climate science for adaptation in the developing world

Author(s): Webber, S. & Donner, S.

Summary: This article examines the increasing emphasis amongst climate scientists and development professionals on providing 'climate services' in order to inform adaptation decisions in vulnerable countries. The climate service business model hopes to provide 'on demand' and 'actionable' information products that are useful for policy makers. Drawing from literature across the natural and social sciences, the paper outlines potential benefits and limits of this model in providing climate information and products, as well as recommendations for improving climate services. It argues that a shift away from the commercialised model of climate services may be necessary to ensure the creation, and consistent delivery, of products that practitioners in the developing world are able to employ when making adaptation decisions.

Link: <http://onlinelibrary.wiley.com/doi/10.1002/wcc.424/abstract>

Intensification of landfalling typhoons over the northwest Pacific since the late 1970s

Author(s): Mei, W. & Xie, S.

Summary: Intensity changes in landfalling typhoons are of great concern to East and Southeast Asian countries. Regional changes in typhoon intensity, however, are poorly known owing to inconsistencies among different data sets. Here, cluster analysis is applied to bias-corrected data and show that, over the past 37 years, typhoons that strike East and Southeast Asia have intensified by 12–15%, with the proportion of storms of categories 4 and 5 having doubled or even tripled. In contrast, typhoons that stay over the open ocean have experienced only modest changes. These regional changes are consistent between operational data sets. To identify the physical mechanisms, intensity changes are decomposed into contributions from intensification rate and intensification duration. It was found that the increased intensity of landfalling typhoons is due to strengthened intensification rates, which in turn are tied to locally enhanced ocean surface warming on the rim of East and Southeast Asia. The projected ocean surface warming pattern under increasing greenhouse gas forcing suggests that typhoons striking eastern mainland China, Taiwan, Korea and Japan will intensify further. Given disproportionate damages by intense typhoons, this represents a heightened threat to people and properties in the region.

Link: <http://www.nature.com/ngeo/journal/vaop/ncurrent/full/ngeo2792.html>

Action-based flood forecasting for triggering humanitarian action

Author(s): Coughlan de Perez, E., van den Hurk, B., et al.

Summary: Many flood disaster impacts could be avoided by preventative action; however, early action is not guaranteed. This article demonstrates the design of a new system of forecast-based financing, which automatically triggers action when a flood forecast arrives, before a potential disaster. "Action triggers" are established for northern Uganda based on a global flood forecasting system, verifying these forecasts and assessing the uncertainties inherent in setting a trigger in a data-scarce location.

Link: <http://www.hydrol-earth-syst-sci.net/20/3549/2016/hess-20-3549-2016.pdf>

Assessing recent trends in high-latitude Southern Hemisphere surface climate

Author(s): Jones, J. M., Gille, S. T., et al.

Summary: Understanding the causes of recent climatic trends and variability in the high-latitude Southern Hemisphere is hampered by a short instrumental record. Here, recent atmosphere, surface ocean and sea-ice observations in this region are analysed and their trends assessed in the context of palaeoclimate records and climate model simulations. Over the 36-year satellite era, significant linear trends in annual mean sea-ice extent, surface temperature and sea-level pressure are superimposed on large interannual to decadal variability. Most observed trends, however, are not unusual when compared with Antarctic palaeoclimate records of the past two centuries. With the exception of the positive trend in the Southern Annular Mode, climate model simulations that include anthropogenic forcing are not compatible with the observed trends. This suggests that natural variability overwhelms the forced response in the observations, but the models may not fully represent this natural variability or may overestimate the magnitude of the forced response.

Link: <http://www.nature.com/nclimate/journal/v6/n10/full/nclimate3103.html>

Climate governance and the Paris Agreement

Author(s): J. Hovi & T. Skodvin (Editors)

Summary: This thematic issue of *Politics and Governance* serves as a Festschrift in honour of Professor Dr. Philos. Arild Underdal on his 70th birthday. In this editorial, a synopsis of each of the ten contributions to the Festschrift is provided, which focuses on climate governance in general and the 2015 Paris Agreement in particular. The guest editors also summarise a few of Professor Underdal's many academic merits and achievements.

Link: <http://www.cogitatiopress.com/ojs/index.php/politicsandgovernance/issue/view/49>

A 5°C Arctic in a 2°C World: challenges and recommendations for immediate action**Author(s):** Schlosser, P., Pфирman S., et al.

Summary: The Columbia Climate Center, in partnership with World Wildlife Fund, Woods Hole Research Center, and Arctic 21, held a workshop titled A 5°C Arctic in a 2°C World over July 20-21, 2016. The workshop was co-sponsored by the International Arctic Research Center (University of Alaska Fairbanks), the Arctic Institute of North America (Canada), the MEOPAR Network (Marine Environmental Observation, Prediction, and Response), and the Future Ocean Excellence Cluster. The goal of the workshop was to advance thinking on the science and policy implications of the temperature change in the context of the 1.5 to <2°C warming expected for the globe, as discussed during COP21, at Paris in 2015. For the Arctic, such an increase means an anticipated increase of roughly 3.5 to 5°C. An international group of 41 experts shared perspectives on the regional and global impacts of an up to +5°C Arctic, examined the feasibility of actively lowering Arctic temperatures, and considered realistic timescales associated with such interventions. The group also discussed the science and the political and governance actions required for alternative Arctic futures.

Link: http://climate.columbia.edu/files/2016/09/5C_Arctic_brochure_NEW_highres.pdf

Predicting and mitigating future biodiversity loss using long-term ecological proxies**Author(s):** Fordham, D. A., Akçakaya, H. R., et al.

Summary: Uses of long-term ecological proxies in strategies for mitigating future biodiversity loss are too limited in scope. Recent advances in geochronological dating, palaeoclimate reconstructions and molecular techniques for inferring population dynamics offer exciting new prospects for using retrospective knowledge to better forecast and manage ecological outcomes in the face of global change. Opportunities include using fossils, genes and computational models to identify ecological traits that caused species to be differentially prone to regional and range-wide extinction, test if threatened-species assessment approaches work and locate habitats that support stable ecosystems in the face of shifting climates. These long-term retrospective analyses will improve efforts to predict the likely effects of future climate and other environmental change on biodiversity, and target conservation management resources most effectively.

Link: <http://www.nature.com/nclimate/journal/v6/n10/full/nclimate3086.html>

Groundwater vulnerability on small islands**Author(s):** Holding, S., Allen, D. M., et al.

Summary: The majority of naturally occurring freshwater on small islands is groundwater, which is primarily recharged by precipitation. Recharge rates are therefore likely to be impacted by climate change. Freshwater resources on small islands are particularly vulnerable to climate change because they are limited in size and easily compromised. Here available aquifer system characteristics and water-use data are compiled for 43 small island developing states distributed worldwide, based on local expert knowledge, publications and regional data sets. Current vulnerability was assessed by evaluating the recharge volume per capita. For future vulnerability, climate change projections were used to estimate changes in aquifer recharge. It was found that 44% of islands are in a state of water stress, and while recharge is projected to increase by as much as 117% on 12 islands situated in the western Pacific and Indian Ocean, recharge is projected to decrease by up to 58% on the remaining 31 islands. Of great concern is the lack of enacted groundwater protection legislation for many of the small island developing states identified as highly vulnerable to current and future conditions. Recharge indicators, shown alongside the state of legal groundwater protections, provide a global picture of groundwater supply vulnerability under current and future climate change conditions.

Link: <http://www.nature.com/nclimate/journal/vaop/ncurrent/full/nclimate3128.html>

The Vulnerability, Impacts, Adaptation and Climate Services Advisory Board (VIACS AB v1.0) contribution to CMIP6**Author(s):** Ruane, A. C., Teichmann, C., et al.

Summary: This paper describes the motivation for the creation of the Vulnerability, Impacts, Adaptation and Climate Services (VIACS) Advisory Board for the Sixth Phase of the Coupled Model Intercomparison Project (CMIP6), its initial activities, and its plans to serve as a bridge between climate change applications experts and climate modellers. The climate change application community comprises researchers and other specialists who use climate information (alongside socioeconomic and other environmental information) to analyse vulnerability, impacts, and adaptation of natural systems and society in relation to past, ongoing, and projected future climate change. Much of this activity is directed toward the co-development of information needed by decision-makers for managing projected risks. CMIP6 provides a unique opportunity to facilitate a two-way dialog between climate modellers and VIACS experts who are looking to apply CMIP6 results for a wide array of research and climate services objectives. The VIACS Advisory Board convenes leaders of major impact sectors, international programs, and climate services to solicit community feedback that increases the applications relevance of the CMIP6-Endorsed Model

Intercomparison Projects (MIPs). As an illustration of its potential, the VIACS community provided CMIP6 leadership with a list of prioritised climate model variables and MIP experiments of the greatest interest to the climate model applications community, indicating the applicability and societal relevance of climate model simulation outputs. The VIACS Advisory Board also recommended an impacts version of Obs4MIPs and indicated user needs for the gridding and processing of model output.

Link: <http://www.geosci-model-dev.net/9/3493/2016/>

Climate change impact modelling needs to include cross-sectoral interactions.

Author(s): Harrison P. A., Dunford, R. W., et al.

Summary: Climate change impact assessments often apply models of individual sectors such as agriculture, forestry and water use without considering interactions between these sectors. This is likely to lead to misrepresentation of impacts, and consequently to poor decisions about climate adaptation. However, no published research assesses the differences between impacts simulated by single-sector and integrated models. Here 14 indicators are compared, derived from a set of impact models run within single-sector and integrated frameworks across a range of climate and socio-economic scenarios in Europe. It shows that single-sector studies misrepresent the spatial pattern, direction and magnitude of most impacts because they omit the complex interdependencies within human and environmental systems. The discrepancies are particularly pronounced for indicators such as food production and water exploitation, which are highly influenced by other sectors through changes in demand, land suitability and resource competition. Furthermore, the discrepancies are greater under different socio-economic scenarios than different climate scenarios, and at the sub-regional rather than Europe-wide scale.

Link: <http://www.nature.com/nclimate/journal/v6/n9/full/nclimate3039.html>

All hands on deck: polycentric governance for climate change insurance

Author(s): Spreng, C. P., Sovacool, B. K., & Spreng, D.

Summary: In this essay, it is argued that it is possible to significantly complement and improve our collective response to climate change by harnessing the combined capacities of key actors across the public and private sector. The concepts of liability, market mechanisms, preferential market access, and polycentric governance are applied, towards a new type of climate change insurance for CO₂. The quest to apply insurance principles to climate change dates back multiple decades. But ideas for employing the industry's ability to help avoid or minimise and, if necessary, compensate for uncertain costs in the future at scale, across national boundaries, and as part of a broader regime, seem to be lacking. An approach is proposed that complements and combines ongoing efforts within a polycentric governance structure to reduce CO₂ emissions, increase

resilience to and compensate damages from climate change on a global scale.

Link: <http://link.springer.com/article/10.1007/s10584-016-1777-z>

Humanity on the move: unlocking the transformative power of cities

Author(s): German Advisory Council on Global Change (WBGU)

Summary: The momentum of urbanisation and its impacts are so massive that we must face up to this trend. In view of the existing cognitive, technical, economic and institutional path dependencies, a policy of business as usual – i.e. an unstructured, quasi-automatic urbanisation – would lead to a non-sustainable 'world cities society'. Only if cities and urban societies are sufficiently empowered can they make use of the opportunities for sustainability and successfully follow the urban transformation pathways. The success or failure of the Great Transformation will be decided in the cities. The WBGU discusses the relevant conditions for the success of this transformation in this report.

Link: <http://www.wbgu.de/en/flagship-reports/fr-2016-urbanization/>

Similar estimates of temperature impacts on global wheat yield by three independent methods

Author(s): Liu, B., Asseng, S., et al

Summary: The potential impact of global temperature change on global crop yield has recently been assessed with different methods. Here it is shown that grid-based and point-based simulations and statistical regressions (from historic records), without deliberate adaptation or CO₂ fertilisation effects, produce similar estimates of temperature impact on wheat yields at global and national scales. With a 1 °C global temperature increase, global wheat yield is projected to decline between 4.1% and 6.4%. Projected relative temperature impacts from different methods were similar for major wheat-producing countries China, India, USA and France, but less so for Russia. Point-based and grid-based simulations, and to some extent the statistical regressions, were consistent in projecting that warmer regions are likely to suffer more yield loss with increasing temperature than cooler regions. By forming a multi-method ensemble, it was possible to quantify 'method uncertainty' in addition to model uncertainty. This significantly improves confidence in estimates of climate impacts on global food security.

Link: <http://www.nature.com/nclimate/journal/vaop/ncurrent/full/nclimate31115.html>

upcoming events

in the climate and climate services community

Fifth International Conference on Climate Change Adaptation 2016

Dates: 15-16 October, 2016

Lead Organisation(s): Unique Conferences Canada & International Center for Research & Development

Location: Toronto, Canada

Overview: The Fifth International Conference on Climate Change Adaptation 2016 (CCA 2016) will take place under the theme, 'Challenges and Issues in Adaptation'. The event aims to provide a platform for participants to build relationships, learn about best practices and foster research collaborations on adaptation. CCA 2016 sessions will include: adaptation services; land and water; resource efficiency; developing a bio-economy; greenhouse gas (GHG) monitoring; making transitions happen; sustainable cities and people; and the built environment.

Link: <http://www.globalclimate.info/wp-content/uploads/2014/08/Brochure-for-CCA-2016.pdf>

44th Session of the IPCC

Dates: 17-20 October, 2016

Lead Organisation(s): Intergovernmental Panel on Climate Change (IPCC)

Location: Bangkok, Thailand

Overview: The 44th session of the IPCC is the second session during 2017. The IPCC is currently in its Sixth Assessment cycle. During this cycle, the Panel will produce three Special Reports, a Methodology Report on national greenhouse gas inventories and the Sixth Assessment Report (AR6). The 43rd Session of the IPCC held in April 2016 agreed that the AR6 Synthesis Report would be finalised in 2022 in time for the first United Nations Framework Convention on Climate Change (UNFCCC) global stocktake when countries will review progress towards their goal of keeping global warming to well below 2 °C while pursuing efforts to limit it to 1.5 °C. The three Working Group contributions to AR6 will be finalised in 2021. Work on the process which will produce AR6 outlines will begin with a call for nomination of experts to scope the report in October 2016.

Link: <http://www.ipcc.ch/>

Italian Society for Climate Sciences – IV Annual Conference

Dates: 19-20 October, 2016

Lead Organisation(s): Italian Society for Climate Sciences (SISC)

Location: Cagliari, Italy

Overview: The conference, entitled "Climate challenges and solutions under the 2°C target", is organized by SISC in cooperation with other Italian Institutions and aims to foster the scientific debate among scientists, policy and decision makers (Italians and foreigners), NGOs members and other stakeholders whose activities are focused on climate change, as well as its relationships with the environment and socio-economic systems, opportunities and solutions helping in respecting the recent Paris agreement.

Contact: sisc.conference@sisclima.it

Link: <http://www.sisclima.it/conferenza-annuale-2016/>

Fifth Asia-Pacific Climate Change Adaptation Forum

Dates: 17-19 October, 2016

Lead Organisation(s): Asia Pacific Adaptation Network (APAN)

Location: Colombo, Sri Lanka

Overview: The Fifth Asia-Pacific Climate Change Adaptation Forum will convene under the theme 'Adapting and Living below 2°C: Bridging the Gaps in Policy & Policy & Practice'. Gaining from the momentum since the first event in 2010 and more recently with the previous 2014 edition in Kuala Lumpur, the 5th APAN Forum will bring together policymakers, scientists, donors, youth, and representatives from over 50 countries. For 2016, the theme "Adapting and Living below 2°C" will explore platforms and concrete pathways for even greater partnerships by governments, civil society and business. With the growing interest and with the recognition of adaptation not only as a development imperative but as an existential one as well, we are looking forward to welcoming more than 800 participants who will be looking towards meaningful outcomes during the event. The Ministry of Mahaweli Development and Environment of the Government of Sri Lanka will be hosting this year's Forum at the historic Bandaranaike Memorial International Conference Hall in Colombo, Sri Lanka.

Link: <http://www.asiapacificadapt.net/adaptationforum/>

CLIPC Dissemination and Evaluation Workshop

Dates: 20 October, 2016

Lead Organisation(s): Climate Information Platform for Copernicus (CLIPC)

Location: Brussels, Belgium

Overview: At this workshop the final CLIPC Climate information portal will be presented and the different features tested by participants in various breakout sessions. The usefulness and future opportunities of the climate information portal and the impact indicator toolbox will be discussed. Broadening the discussion in a session with a panel of key people in European climate research and policy and the audience, the workshop will then move to challenges for the next generation climate services and define the steps required to further improve climate data access and use. Both users and providers of climate and impact data are encouraged to participate.

Registration: <http://tinyurl.com/CLIPCworkshopRegister>

Link: <http://www.clipc.eu/content/content.php?htm=108>

UNFCCC COP22**Dates:** 7-18 November, 2016**Lead Organisation(s):** United Nations Framework Convention on Climate Change (UNFCCC)**Location:** Marrakesh, Morocco**Overview:** During the twenty-second session of the Conference of the Parties (COP 22) and the twelfth session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP 12), parties will begin preparations for entry into force of the Paris Agreement.**Link:** <http://unfccc.int/2860.php>**Workshop: Communicating Climate Change - Making Evidence Accessible****Dates:** 10-11 November, 2016**Lead Organisation(s):** School of Psychology, University of East Anglia**Location:** London, United Kingdom**Overview:** How can scientific and technical evidence about climate change be made more accessible to diverse audiences to support their decision-making?

This two-day interdisciplinary workshop in London, organised by the School of Psychology, University of East Anglia, will bring together expertise from the cognitive science, psychology, climate science and policy-making communities, with the goal of improving accessibility to climate science evidence. Up-to-date understandings surrounding the presentation of complex scientific information for decision-making, such as data presented in graphs and maps, and through language, will be presented and discussed. Future research goals and opportunities for collaboration will also be explored.

Link: <http://climatesciencecognition.com/>**Symposium on “Fostering the Use of Rainwater for Food Security, Integrated Landscape Restoration and Climate Resilience and Poverty”****Dates:** 21-22 February, 2017**Lead Organisation(s):** Hamburg University of Applied Sciences (HAW)**Location:** Hamburg, Germany

Overview: The Symposium will showcase cost-effective experiences from research, field projects and best-practices on the use of rainwater for irrigated and rainfed small-scale agriculture, integrated landscape restoration and climate resilience, and poverty alleviation in sub-Saharan Africa. These experiences may also be useful for implementation in other arid and semi-arid areas globally, with a special emphasis on the ACP Group of States. This Symposium will be a truly interdisciplinary event, mobilising international scholars and practitioners undertaking research and/or executing rainwater-smart projects in the African continent. Expressions of interest to attend the event, consisting initially of a 200 words abstract, containing the names and all contact details of the authors should be sent to Josep de la Trincheria at: JosepMaria.DeTrincheriaGomez@haw-hamburg.de by 30th October 2016.

World Symposium on Climate Change Communication**Dates:** 22-24 February, 2016**Lead Organisation(s):** Research and Transfer Centre, Hamburg University of Applied Sciences (HAW), Manchester Metropolitan University, University of Manchester & the International Climate Change Information Programme (ICCIP).**Location:** Manchester, United Kingdom**Overview:** One of the problems caused by the fact that climate change is a global issue, is that many people do not believe it is related to them. Yet, most impacts of climate change are local in nature. The sooner people realise that climate change is a matter that affects them and – as such – needs to be taken seriously, the more rapidly the required mitigation and adaptation measures may be implemented. So how do we best communicate this?

This is the problem the World Symposium on Climate Change is seeking to solve. The Symposium will be a truly interdisciplinary event, mobilising scholars, social movements, practitioners and members of governmental agencies who undertake research and/or execute projects on climate change communication across the world.

Deadline for abstracts: 30 October, 2016.

Deadline for registration: 10 January, 2017.

Link: <https://www.haw-hamburg.de/en/ftz-als/events/communication/registration.html>**International Conference on Climate Services5 (ICCS5)****Dates:** 27 February – 3 March, 2017**Lead Organisation(s):** Climate Service Partnership (CSP) via the CSP Secretariat based at the Climate Service Center Germany (GERICS) and the International Research Institute for Climate and Society (IRI)**Location:** Cape Town, South Africa**Overview:** We are pleased to announce that the upcoming ICCS5 will be held in Spring 2017, in Cape Town, with the help of local organisers, the University of Cape Town (UCT) and the Climate System Analysis Group (CSAG).

The conference theme will be on Innovation and Capacity Building and will be held over three days, with an additional day either before or after scheduled for side meetings. The complementary topics look to address the evolving information needs - innovation in climate services-, and on the requisite (education, infrastructure, institutional capacity, etc.) in order to support the growth of responsible and effective climate services capacity building. ICCS5 will include particular focus on activities and persistent challenges in Africa and developing nations in general. The conference will look to inform robust decision making, policy, and risk management in the short, medium and long terms. With this in mind, the timing of this event is key, with the birth of the new generation of Sustainable Development Goals having high importance in Africa, the scoping of IPCC's AR6, and the evolving foci of new initiatives. For sustainability to be realised, education in the context of maturing the intellectual understanding is absolutely crucial.

More important information on the conference, such as registration, the agenda, and participation, will come in due time. Please hold these dates in your diary in the mean time! We would appreciate it if you would circulate this announcement with your relevant networks.

Link: <http://www.climate-services.org/iccs/iccs5/>

Cross community workshop on Extreme Events and Environments from Climate to Society (E³S)

Dates: 14-16 February, 2016

Lead Organisation(s): Future Earth

Location: Berlin, Germany

Overview: The goal of this cross-community/co-design workshop is to identify and elaborate the scientific questions and associated research agendas which are scientifically challenging and of high societal relevance, in line with the goals of Future Earth.

To this end we called for proposals for targeted co-design workshop sessions (call for proposals can be downloaded [here](#)), which are organised independently of each other and happen in parallel. The workshop sessions have been selected by the E³S steering committee.

The commitment of each session is to generate a 1-2 page document that will form the foundation of a research strategy and help to prepare call for proposals by funding organisations on Future Earth related research. Hence the workshop sessions are charged with strategic leadership. Workshop sessions were held in small groups of renowned experts and stakeholders, with the active participation of early career researchers, who were independently nominated and are selected by the E³S steering committee (more about E³S Early Career Grants can be found [here](#)).

Link: <http://www.e3s-future-earth.eu/index.php/ConferencesEvents/ConferencesAmpEvents>

Climateurope Festival 2017

Dates: 5-7 April, 2017

Lead Organisation(s): Climateurope

Location: Valencia, Spain

Overview: Climateurope's mission is to support the exchange of knowledge and cultivate efforts for climate change adaptation and mitigation informed by science. The Climateurope Festival 2017 offers a varied two and a half day programme of lectures, discussions, networking and performances to explore the state-of-the-art of climate information, and its uses and value in decision-making at both the European and national levels. A key Festival objective will be to discuss the advantages and challenges that climate services face with the water sector, natural reserve, and agriculture and food security. Transforming climate information through services for societal and commercial success is of top importance. The Festival will allow a broad general audience to become involved and familiarise themselves with scientific based decisions. Through discussions, debates, art works, interactive discoveries as a market place and musical performances,

the Climateurope Festival takes science out of the labs and presents it to a wide audience. The Festival's contents will provide a bridge between science and action for climate change. The Festival is open for researchers, suppliers, users and funders all over Europe. Further information coming up soon.

Link: <http://www.climateurope.eu/events-climateurope/festival/about-climateurope-festival-2017/>

3rd European Climate Change Adaptation Conference (ECCA)

Dates: 5-9 June, 2017

Lead Organisation(s): European Climate Change Adaptation Conference (ECCA)

Location: Glasgow, UK

Overview: The theme of ECCA 2017 is 'Our Climate Ready Future'. The vision is that this conference will inspire and enable people to work together to discover and deliver positive climate adaptation solutions that can strengthen society, revitalise local economies and enhance the environment. The event will bring together the people who will deliver action on the ground – from business, industry, NGOs, local government and communities – to share knowledge, ideas and experience with researchers and policymakers. Set in the cultural city of Glasgow, at the heart of a city-region that is putting climate adaptation and climate justice at the core of decision-making, ECCA 2017 offers a unique opportunity to visit many innovative local adaptation projects and share experience of how climate adaptation can work in practice.

Link: <http://eccca2017.eu/conference/>

World Symposium on Climate Change Impacts and Adaptation Strategies to Coastal Communities

Date(s): 5-7 July, 2017

Lead Organisation(s): International Climate Change Information Programme (ICCIPI)

Summary: As part of its climate outreach scheme, the International Climate Change Information Programme (ICCIPI) is running a series of Symposia tackling a variety of issues related to climate change adaptation, round the world (www.iccip.net). As part of these series, there is a call for papers for the "World Symposium on Climate Change Impacts and Adaptation Strategies to Coastal Communities", to be held in Samoa, South Pacific, in July 2017.

According to the IPCC AR5, coastal zones are highly vulnerable to climate change and climate-driven impacts may be further exacerbated by other human-induced pressures. These impacts are particularly acute in the developing countries and island States in the Pacific, Caribbean, Latin America and Asian region, since they have limited access to the funding and technologies needed to allow them to be more resilient and recover from the damages caused by hurricanes, floods and other extreme events. The aims of the Symposium are:

i. to discuss the influences of, the damages and the threats posed by climate change to estuaries and coastal communities;

ii. to introduce approaches, methods, initiatives and projects which demonstrate how coastal communities can successfully meet the challenges climate change poses to them. Here, an emphasis will be on the latest research, but also on infrastructure projects, demonstrations on the use of technologies and natural and artificial means to reduce the impacts of extreme events and sea level rise to coastal communities;

iii. to introduce funding schemes and mechanisms which can finance climate change adaptation in coastal areas and

iv. to network the participants, disseminate examples of best practice and foster collaboration in this very important field.

Last but not least, a further aim of the event will be to document and disseminate the wealth of experiences available today. To this purpose, the book "Climate Change Impacts and Adaptation Strategies in Coastal Communities" will be published, with all accepted papers. This will be a further volume of the award-winning book series "Climate Change Management" published by Springer, which since its creation in 2008 has become the world's leading peer-reviewed book series on climate change management.

Deadline for abstracts: 20 December, 2016.

Deadline for full papers: 20 March, 2016.

Link: <https://www.haw-hamburg.de/en/ftz-als/events/coastal2017.html>

Regional sea level changes and coastal impacts international conference

Dates: 10-14 July, 2017

Lead Organisation(s): World Climate Research Programme

Location: New York, USA

Overview: The conference will serve as a basis for a new assessment of the state-of-the-art on regional sea level research that will be an important input to the next IPCC assessment. A major outcome from the conference will therefore be an evaluation of the current state of sea level science, an outline of future research requirements for improving our understanding of sea level rise and variability and a description of the observational requirements (both experimental and sustained systematic observations). The outcomes will be published in multiple forms, including an agenda setting peer-reviewed paper specifying the information on coastal sea level change required by coastal communities for adaptation and decision making purposes.

Link: <http://sealevel2017.org>

Climate Services journal

The second edition of the Climate Services journal will also be available very shortly!

Keep your eyes peeled for it on the website:

<http://www.journals.elsevier.com/climate-services/>

We encourage all members of the climate services community to submit their contributions to the journal!

about CSP

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.

The CSP newsletter is a quarterly 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: April Humble, Daniela Jacob, María Máñez Costa, Irene Fischer-Bruns (all GERICS)



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