Climate Services Partnership

IN THIS ISSUE

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 programs 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 has been quarterly publication meant to keep all informed of the latest updates of the partnership community. Due to a number of transitions, we will unfortunately suspend the distribution of future newsletters until further notice.

Editorial board: Cathy Vaughan (IRI), Steve Zebiak (IRI)

csp in transition

an editorial from the csp secretariat

This will be the last in the series of CSP newsletters, which have appeared quarterly over the past two years. Production of the newsletter, along with other functions of the CSP Secretariat will, at least for now, be discontinued, as the sources of support are concluding and new ones are not in place.This certainly presents a challenge to the continuation of CSP, but I'd like to suggest that we view the current developments more in terms of transitions than endings.In any case, this seems an appropriate moment to reflect on the origins and the accomplishments of CSP, as well as possibilities continuing its work in other forms.

CSP was created as an outcome of the first International Conference on Climate Services.The framing document for ICCS1 laid out the motivations, in terms of the opportunity to more effectively connect diverse actors, share knowledge and resources, and build new collaborations that advance the knowledge and practice of climate services. These notions were ratified by the ICCS1 assembly, incorporated into the CSP, and have remained central to the CSP ever since.

The work of CSP has had several dimensions. Perhaps most significantly, CSP has convened a broad audience of stakeholders in the yearly ICCS conferences. Bringing together researchers, service providers, users, and funders of climate services, the ICCSs have provided an interdisciplinary forum for networking, sharing of ideas, the identification of gaps and priorities, and the establishment of new collaborations. In our recent polling of the CSP membership, the annual conferences rate as the most highly valued activity of the partnership.

Another priority has been knowledge capture. Through case studies, in-depth assessments, and a variety of surveys, a great deal has been documented about existing climate service programs, results, challenges, and lessons learned; we've also learned about the process of inquiry and evaluation.

CSP has sponsored working groups, bringing partners together to pursue important topics such as evaluation, economic valuation, ethics, and research priorities. These have resulted in the production of resources of interest and use to the community at large. Finally, CSP has supported continuing communications of various sorts to keep members informed and in touch. Some of you have expressed appreciation for the sense of community fostered in this way.

There has been strong support for CSP work in each of these areas. The question is: What aspects of this work could and should be sustained going forward, and how? It is useful to reflect on CSP's current organization, in relation to the current challenges. As is well known to our members, CSP was organized in an open, informal, and independent manner. This was deliberate, allowing the partnership to be inclusive and responsive to the expressed interests and needs of members. CSP's sponsorship, however, has come from organizations, principally the U.S. Agency for International Development. But what we have heard clearly from both existing and prospective institutional sponsors is that it is difficult to provide sustained support for an activity unless it is structured and managed in way that directly supports their own institutional mission, priorities and program deliverables. In this, we sense a mismatch between organizational model and business model that underscores the current challenges, but also suggests some new possibilities.

Considering the member-centric work that has been valued in CSP, we can recognize much in common with what professional associations generally do. But their business model is different, with primary revenues deriving from membership dues, conference fees, and especially journal /publication subscriptions. In exchange for dues, associations offer extensive member benefits/ resources (educational resources, information services, certification, job services, etc). Is a model like this viable for the climate services community? Is it needed, or wanted? That's up to the community to decide, but this would seem to be one pathway to build on the professional community dimension of CSP's work.

Other aspects of CSP work – for example that of the Working Groups – might well be organized as projects within major climate services programs, supporting those programs' specific needs. With the further development of the Global Framework for Climate Services, various national and regional climate services initiatives, and climate-related development programs, we can expect demands for building knowledge on good practice in climate services design, implementation, technology, assessment/evaluation and the like to grow steadily. As it suits their needs, these programs may offer effective means to support expert groups, knowledge management, standards and guidelines, training and consultation services, among other functions in the knowledge arena.

In my view, the motivations behind CSP are as applicable today as they were at CSP's founding, despite the considerable evolution of the climate services landscape. CSP has played a particularly valuable role in creating an open and inclusive arena for stakeholders, fostering cross-disciplinary exchange, and emphasizing ideas and knowledge around climate services. I hope that these elements can be preserved in the evolving climate services agenda. There are no doubt many options for advancing CSP's valued work in different ways, and hopefully our community will find the right ones and pursue them to good ends.

Finally, let me close by saying that, for us in the Secretariat, it has been a pleasure to support this Partnership over the past three years. We look forward to remaining in touch, and continuing to work with many of you wherever our paths meet in the new landscape of climate services.

engaging climate service customers

Susanne Schuck-Zöller, Climate Service Center 2.0

An international workshop held in Hamburg on 10th and 11th of March addressed approaches to interacting with customers and partner practitioners in the area of climate services. The workshop, the result of a recommendation made in last years general assembly of the European Climate Service Partnership (ECSP), was organized by the Climate Service Center 2.0 / Helmholtz-Zentrum Geesthacht and was directly dedicated to this European section of the larger international partnership. About 40 participants from different sectors and very different areas within Europe exchanged experience on how to approach customers or partners for cooperation. What are the challenges climate services have to cope with and which pathways or issues turned out to be successful in initializing common projects or products?

Different working groups looked at different sectors and countries, afterwards reporting in the plenary session. In the wrapping up session moderated by Daniela Jacob, acting director of Climate Service Center 2.0, some conclusions could be drawn: Contrary to the expectations, few differences between the countries were found. Even the sectors seemed quite similar in what climate services need as a basic requirement in a successful approach. The main common requirement was identified as: open trustful communication that makes all partners feel on a par with one another. If this can be achieved it will be much easier to find a common language, exchange the different expectations and find a common and transparent way to handle uncertainties regarding climate change information.

As for transparency it requires open communication and the discussion of all steps of the cooperation process and the extent of participation. Of course, methods, outcomes, and problems of the research part have to be spoken about in-depth and openly. All those requirements are, at the same time, conditions and were once more confirmed to be important quality criteria of good transdisciplinary research and cooperation between scientists and practitioners.

Participants discussed at length the importance of web portals in delivering data directly to customers. Most agreed that data provision via web portals only makes sense if it is accompanied by individual consultancy. Otherwise the risk of the data being interpreted in the wrong way is deemed to be quite high. So these data portals, above all, are supporting the frontier institutions that close the gap between science and practice. These translator institutions should prepare the data for customers' usage. The exchange of ideas on this issue explicitly did not refer to portals that serve as visualization instruments or navigators to other websites or information

Last but not least, barriers and difficulties in finding the right person to address in the company, institution or adminstrative body were discussed. On the one hand it seems crucial to know the right actor to contact. Which procedure is suitable? Approaching the operational level or the managerial as a first contact? Experiences and estimations differed considerably in this question. It was even discussed if it is better to approach associations than single enterprises. On the other hand, climate services have to consider which issue might be the appropriate door-opener to this particular actor at that precise moment. In the end, everybody agreed that sound preparation and research on the potential customer or partner pays off. Some climate service institutions even had made use of special agencies for this purpose.

To better learn about the value of climate services Adrian Hines, head of Applied Climate Science at MetOffice, UK, took an action to pull together some information on how people are evaluating the impact of their climate service work in Europe. He started to gather examples of impact assessment for work that is underway or has been completed. Firstly, it seems to be important to get a picture of the type of evaluation that is currently being undertaken in the community, then secondly to consider how we might build on this towards the goal of undertaking some assessment of socio-economic impact of climate services.

More in-depth outcomes of the workshop are being concluded in a forthcoming publication. Furthermore, they will be presented at the next annual meeting of the European Climate Service Partnership.

A working group discusses transport, logistics and line-bound infrastructures at the meeting in Hamburg.

Climate services highlighted at Advancing Climate-Resilient Development Symposium

Jamie Carson, USAID's Climate Change Resilient Development Project

Climate Services took the spotlight Thursday, March 19, during the U.S. Agency for International Development's Advancing Climate-Resilient Development Symposium in Washington, D.C.

During the past four years, the United States Agency for International Development has supported a project to research and implement climate-resilient development around the world. The project, Climate Change Resilient Development (CCRD), is based in Washington, D.C., and recently co-hosted, with the USAID Global Climate Change (GCC) Office, the USAID Advancing Climate-Resilient Development Symposium March 16-19, in which nearly 350 people participated online and in-person at various locations across the city. The Symposium brought together climate change adaptation and international development experts and decision-makers to: 1) share lessons learned from USAID's CCRD project, 2) exchange adaptation-related approaches and experiences, and 3) identify new ways to advance climate-resilient development around the world.

The various sessions on climate services covered leadership perspectives of climate services and technical and economic assessments of climate services, which included presentations about disaster risk reduction, evaluation and decision support, national meteorological services, monitoring tools, multidisciplinary teams, and more. A significant body of work presented in the Symposium was developed under the auspices of the Climate Services Partnership.

For example, Climate Change Resilient Development Chief of Party Glen Anderson presented on the development of a book covering how to design, implement, and communicate a socio-economic benefits study covering meteorological and hydrological services, "Valuing Weather and Climate: Economic Assessment of Meteorological and Hydrological Services." The book has been produced by a consortium of ten authors and led by an editing team from USAID, World Bank, and World Meteorological Organization, and will be released at the World Congress of WMO in May 2015.

Other presentations focused on the community of practice and specific outputs of CSP's evaluation working group.

In addition, Glenroy Brown, Jamaica Meteorological Service Meteorologist, presented on the Jamaica Met, and the process of developing a bottom-up approach to Climate Services. The met service held farmer forum sessions to identify what kind of services were needed, and learned that most identify early warning for drought and real-time weather forecasts as important.

Jenny Frankel-Reed, USAID Senior Climate Change Specialist, shared about the joint program between NASA and USAID – SERVIR – with a goal of connecting space to the village level through sharing satellite information with decision-makers to improve capacity of understanding as well as access to information.

To view all climate services presentations from Thursday, March 19, visit http://www.ccrdproject.com/acrd-symposium/tune-in.

Other Symposium Sessions

Besides the Climate Services Day at the Carnegie Endowment for International Peace, the remainder of the Symposium included themed events focusing on the Climate-Resilient Development (CRD) Framework and Annexes, the global Adaptation Partnership (AP), the High Mountains Adaptation Partnership (HiMAP), urban climate resilience and Climate Resilient Infrastructure Services (CRIS). CCRD has managed projects including AP Workshops in Thailand, Costa Rica, and Nepal; glacial lake management and local adaptation planning in Nepal and Peru (HiMAP); CRIS in the Dominican Republic, Peru and Mozambique, urban planning processes in Macedonia, and the Climate Impacts Decision Support Tool in Vietnam (urban); and climate services-related reports, partnerships, and country assessments in Mali and Senegal (Climate Services).

Climate Change Resilient Development

The CCRD project, implemented by Engility Corporation/ International Resources Group with a consortium of 11 partners, supported USAID in the development of the framework and a suite of technical annexes. CCRD also applied the CRD Framework in activities with partners at the regional (West Africa), national (Jamaica and Tanzania), sectoral (sector in Kazakhstan wheat), and a series of local urban and high mountain settings.

The centerpiece of USAID's efforts to encourage its Missions and partners to mainstream climate into development planning and implementation is the Climate-Resilient Development (CRD) Framework (PDF) — released to the public in April 2014. The CRD Framework, developed within CCRD, is a "development-first" approach organized into five stages – Scope, Assess, Design, Implement and Manage, and Evaluate and Adjust.

Resources

USAID's Global Climate Change Office has an array of climate change adaptation reports, factsheets, and videos to assist the climate and development community. Visit the USAID Development Experience Clearninghouse (DEC), or the Climate Change Resilient Development Project Library. If you would like to receive CCRD project updates including an email with resources from the Symposium, please subscribe online. The USAID Symposium was

Glen Anderson, USAID Climate Change Resilient Development Chief of Party, Engility Corporation, presents during Climate Services Day at the USAID Advancing Climate-Resilient Development Symposium. Other panelists at the session "Technical and Economic Assessments of Climate Services" include, from left, Walter Baethgen, International Research Institute for Climate and Society (IRI), moderator; Edward Carr and Sheila Onzere, University of South Carolina; and Catherine Vaughan, IRI.

community spotlight
a conversation with Alberto Troccoli

Alberto Troccoli is the head of the weather & energy unit at the Commonwealth Scientific & Industrial Research Organization; he is on the steering committees for the International Conference on Climate & Meteorology and the World Energy & Meteorology Council.

Can you tell me a little about the International Conference on Energy and Meteorology? How have these conferences evolved over time? What are you expecting from the upcoming meeting in Boulder?
The biennial International Conference on Energy & Meteorology (ICEM), now at its third edition, started from the aspiration to more effectively link the energy sector to the weather and climate community. Through activities preceding the inaugural ICEM in 2011, we were becoming increasingly aware that weather and climate information is critical to a very wide range of energy industry activities, and not only with respect to renewable energy generation. From the managing of oil and gas energy supply, to the understanding and estimation of energy demand, to the assessment of meteorological impacts on extraction, transportation, transmission and distribution, meteorological information was demonstrably a key input to energy sector decision-making. In the early days it was a challenge to engage with the energy experts; meteorologists were a bit like lone wolves! Through increased communication, awareness-raising and targeted scientific work, the connection between energy practitioners and meteorologists has been evolving into a much more collaborative interaction. ICEM 2015 will have new targeted sessions for a more active participation, including the use of Twitter before and during the conference, a competitive team game, and more! Thus, aside from interacting with world experts and listening to fascinating talks, the focus of ICEM 2015 is to further cement this interaction and take it to the next level.

What about the World Energy and Meteorology Council? What do you envision there?
Well, the World Energy and Meteorology Council (WEMC) is exactly what the next level would be! We are envisaging a kind of professional association, which would bring together the energy industry and the meteorological communities in a more systematic way. WEMC would act at different levels, as a think-tank, as a resource mobilization body, as a community of practice, as a contributor to weather and climate services, and as an outreach provider, the latter first and foremost via the continuation of the ICEMs. It would also offer a physical space where specialists in the two areas can meet and work together for prolonged periods. But if I had to summarize all these aspects, I'd say that WEMC aspires to be a catalyst between energy and meteorology so as to enable improved sustainability, resilience and efficiency of energy systems under ever changing weather and climate. And WEMC will be officially launched during ICEM 2015!

What do you see as the biggest challenges in bringing these communities together? And why are these initiatives important at this point in time?
As alluded to before, the biggest challenges have to do with an appropriate engagement, mainly via communications from meteorologists to energy practitioners. I think meteorologists can do much more on two inter-linked directions: i) science/product developments should be more directly relevant to the energy industry and ii) the awareness-raising of the state-of-the-science and the communicated potential for meteorology to provide solutions to the energy industry should be more prominent. Without underestimating the role of other similar meetings, I think ICEMs have provided a great platform for these two issues to be tackled in a constructive and passionate way. But with an ever-changing climate and the rapid expansion of renewable energies, this conversation needs to be solidified. WEMC will therefore provide a natural channel for this conversation to happen in a more effective way.

"From the managing of oil and gas energy supply, to the estimation of energy demand, to the assessment of meteorological impacts on extraction, transportation, transmission and distribution, meteorological information is a key input to energy sector decision-making."

How can these initiatives link with other climate and/or weather service related activities or initiatives within the energy sector?
I believe a key to the success of WEMC is to connect with existing initiatives, while of course demonstrating uniqueness. Thus, while the space between energy and meteorology is burgeoning and so WEMC is well positioned to provide the unique role of catalyst I mentioned before, there is a large number of activities WEMC is connecting with. Perhaps first and foremost is the Global Framework for Climate Services, specifically with the energy exemplar that is being developed as we speak, and which I think will provide an institutionalized foundation and communication channel between energy and meteorology (mainly on the climate-side of meteorology). Then, it is very critical to link with similar efforts in the energy industry such as the World Business Council for Sustainable Development, the World Energy Council, the Global Sustainability Electricity Partnership, the International Energy Agency, and many others. So, as you can see, WEMC is very busy creating and strengthening all these links while lifting itself off the ground towards unexplored and exciting horizons!

OLE introduces experimental lightning forecast and dengue early warning information

Latin American Observatory for Extreme Events (OLE)

As part of the Latin American Observatory, the Center for Scientific Modeling of Zulia University (Venezuela) is introducing an experimental seasonal forecast for lightning activity in North Western South America on April 10th, the first one of its kind. The Observatory is also starting a new collaboration with the Upstate New York Medical University to start and experimental early warning system for dengue epidemics in coastal Ecuador, as a continuation of recent t work in the subject. More information is found: (http://iri.columbia.edu/news/new-information-on-climate-drivers-of-dengue-fever/).

CACOF virtual forum

Comité Regional de Recursos Hidráulicos (CRRH)

With NOAA's recent El Niño Advisory on March 5th, the Central American Climate Outlook Forum (CACOF), coordinated by the Comité Regional de Recursos Hidráulicos (CRRH), had a virtual forum to analyze the most updated climate information available by different sources. After paying special attention to their locally run statistical models and using a new forecast approach developed by the IRI that involves the Standardized Precipitation Index (SPI), the CACOF immediately produced an Extraordinary Bulletin (in Spanish) as guidance for the region's decision-makers in agriculture, food security, water management and hydroelectric generation. More information is available on the CRRH website: www.recursoshidricos.org

New interdisciplinary climate research with and for society in northeast Bangladesh

University of Bergen's Center for the Study of the Sciences and the Humanities/Uni Research Climate and partners

TRACKS stands for: Transforming Climate Knowledge with and for Society. It is an interdisciplinary project funded by the Norwegian Research Council with project partners in Bangladesh, Hawaii and Norway. TRACKS works with stakeholders in northeast Bangladesh, and has three main aspirations: (1) understand climate variability in northeast Bangladesh and its impacts on communities; (2) mobilize climate knowledge in support of community-based adaptation; and (3) increase capacity within northeast Bangladesh to engage with different forms of knowledge in support of adaptive actions.

To meet these aspirations, TRACKS initiated a truly interdisciplinary project where natural and social scientists work along side each other. Natural scientists were involved in designing the narrative interview framework and also joined social scientists in the field to carry out pilot surveys. Some of respondents in the survey were asked to be a part of the TRACKS "extended peer community." TRACKS researchers will interact with this community throughout the project in order to continuously assess the utility of different forms of climate knowledge. Through this interaction, TRACKS aims to build a framework where local people truly have a say in how climate research and services are designed and carried out for their region.
Read more about the surveys, the workshops, our partners and view informational videos on the project web page at www.projecttracks.net.

CCAFS engages in training workshops, participates in Climate-Smart Agriculture conference

CGIAR Research Program on Climate Change, Agriculture, and Food Security (CCAFS)

CCAFS has been hard at work this quarter. There has been a great deal of movement on the GFCS Climate Services Adaptation Programme in Africa, with CCAFS serving as a major implementer. Two 'Training of Intermediaries' workshops were conducted in the pilot sites of Tanzania, Kiteto and Longido, in October 2014 and February 2015, respectively. In addition, baseline needs-assessment surveys were conducted in both of the target countries, Tanzania (Kiteto, Longido) and Malawi (Lilongwe, Zomba, Nsanje) in October 2014. ICT-Rural Radio Stakeholders' Workshops for Malawi and Tanzania will be held this April. Several publications are expected in the next few months. For more information on CCAFS' work in Tanzania and Malawi, check the following blog stories and associated links at the bottom of each: http://ccafs.cgiar.org/blog/farmer-responsive-climate-services-built-tanzania-and-malawi#.VQxsh47F9yR; http://ccafs.cgiar.org/blog/new-capacity-produce-and-communicate-climate-information-services-built-tanzania#.VQnQq47F9yT.

CCAFS team members also attended the Climate-Smart Agriculture 2015 Global Science Conference on March 16-18 in Montpellier, France, to share good practices and present CCAFS' work on climate information services in relation to marginalized groups, with a specific focus on gender. Information on this presentation can be found at: http://ccafs.cgiar.org/closing-gender-gap#.VQxqII7F9yQ. For more information on CCAFS' work in scaling up CIS, please visit: http://www.slideshare.net/cgiarclimate/scaling-up-climate-information-services.

CCAFS team members also attended a one-day seminar in Paris on "Closing the gender gap in farming under climate change" and Alexa Jay, CCAFS team member, gave a presentation on using climate information to close gender gaps. For information on the seminar, please visit: http://ccafs.cgiar.org/closing-gender-gap#.VQxvvY7F9yR.

In other news, CCAFS hosted a panel discussion in January on index insurance. The discussion was titled, "Insuring the Future of Farmers under Climate Change." You can listen to the discussion at the following link: http://ccafs.cgiar.org/panel-discussion-insuring-future-farmers-under-climate-change#.VQxq-I7F9yQ

Year-long dialogue ends with publication on connections between environment and health
Wellcome Trust, Meteos, and partners
The Wellcome Trust winds up a twelve-month dialogue which brought together experts from academia, NGOs, social enterprise, business and government to analyze trends impacting human health and the environment, along with their solutions. *Vital Connections: Science, Society and Sustaining Health* explores how the growing human population is placing severe pressure on food, water, climate and biodiversity systems. It reviews how advances in health over the past seventy years are threatened by rising obesity, infectious diseases, respiratory diseases and immune dysfunctions – many of which are linked to environmental deterioration. The report explores how recent and extraordinary scientific and technological advances – and 'Big Data' in particular – must be used to prevent further decline in human health. For public health goals to be met, global financial, political, social efforts need to be redirected in ways that address environmental impacts on health. More information is available at: http://www.meteos.co.uk/resources/vital-connections-science-society-and-sustaining-health/

USAID hosts Advancing Climate-Resilient Development Symposium
United States Agency for International Development
With nearly 350 people participating online and in-person, USAID's Global Climate Change (GCC) Office hosted the Advancing Climate-Resilient Development Symposium in Washington, D.C., March 16-19. This Symposium brought together climate change adaptation and international development experts and decision-makers to: 1) share lessons learned from USAID's Climate Change Resilient Development (CCRD) project; 2) exchange adaptation-related approaches and experiences; and 3) identify new ways to advance climate-resilient development around the world.

Attendees of the Symposium included a range of U.S. government agency staff, international development practitioners, NGOs, and international speakers from countries such as Costa Rica, Macedonia, Peru, and Vietnam.

USAID's Climate-Resilient Development Framework, developed under the CCRD project, was discussed during the Symposium launch Monday, March 16, at the Wilson Center where a number of presenters reviewed the Framework and its various sectoral annexes. Following Monday's sessions, the remainder of the Symposium includes themed events focusing on the global Adaptation Partnership (AP), the High Mountains Adaptation Partnership (HiMAP), urban climate resilience, and climate services. CCRD projects have included AP Workshops in Thailand, Costa Rica, and Nepal; glacial lake management and local adaptation planning in Nepal and Peru (HiMAP); Climate Resilient Infrastructure Services in the Dominican Republic, Peru and Mozambique, and the Climate Impacts Decision Support Tool in Vietnam (urban); and climate services-related reports, partnerships, and country assessments in Mali and Senegal (Climate Services).

Symposium sessions were hosted at the Wilson Center, United States Department of State, Cosmos Club, and Carnegie Endowment for International Peace. To access resources from the CCRD project, visit www.ccrdproject.com. If you would like to receive an email with resources from the Symposium, please subscribe for CCRD project updates at http://www.ccrdproject.com/subscribe.

Exchange visit to facilitate south-south collaboration on agricultural climate services
Uruguayan Ministry of Agriculture, Livestock & Fisheries
During the first week of March, the Uruguayan Ministry of Agriculture hosted representatives from Jamaica's Agricultural Climate Services Working Group in Montevideo. The exchange visit allowed for both groups to discuss recent advances and persistent challenges in the development and use of climate information at the national and local levels. Plans for future collaborative work are underway.

IEDRO begins work with UZHYDROMET
International Environmental Data Rescue Organization (IEDRO)
IEDRO has begun work with the national meteorological service of Uzbekistan (UZHYDROMET) on a project to image mage approximately 15,000,000 pages of historic hydrometeorological data. The project is administered through the World Meteorological Organization and funded by the Korean Meteorological Agency. Once the data are imaged, IEDRO work with UZHYDROMET to build keying software so that the imaging workstations can be transformed into digitizing workstations.

In other data rescue news, IEDRO's Executive Director Rick Crouthamel, D.Sc. has been named to the WMO Commission on Climatology's Expert Team on Data Rescue. Dr. Crouthamel and especially several of IEDRO's volunteers have made significant contributions to the planning and development of the WMO International Data Rescue Portal which will eventually list all hydrometeorological data rescue activities on a country by country basis. Hopefully this will be unveiled at WMO Congress.

IEDRO celebrates its 10th anniversary April 12, 2015 with the issuance of the 2014 IEDRO Annual Report. More information on IEDRO's work is available online: http://iedro.org.

Title: Collecting statistical methods for the analysis of climate data as service for adaptation projects
Authors: B. Hennemuth, S. Bender, K. Bülow, N. Dreier, P. Hoffmann, E. Keup-Thiel and C. Mudersbach
Summary: The development of adaptation measures to climate change relies on data from climate models or impact models. In order to analyze these large data sets or an ensemble of these data sets, the use of statistical methods is required. In this paper, the methodological approach to collecting, structuring and publishing the methods, which have been used or developed by former or present adaptation initiatives, is described. The intention is to communicate achieved knowledge and thus support future users. A key component is the participation of users in the development process. Main elements of the approach are standardized, template-based descriptions of the methods including the specific applications, references, and method assessment. All contributions have been quality checked, sorted, and placed in a larger context. The result is a report on statistical methods which is freely available as printed or online version. Examples of how to use the methods are presented in this paper and are also included in the brochure.
Link: http://www.scirp.org/journal/PaperInformation.aspx?paperID=54361#.VQ9DYhDF8lk

Title: A European roadmap for climate services
Summary: In June 2014 the European Commission (EC), established an expert group with the task of proposing a research and innovation roadmap for climate services that could be used for the definition of future actions promoted by the EC — mainly through Horizon 2020, but also the European Earth Observation Programme: Copernicus, and the European Institute of Innovation and Technology(EIT) climate-knowledge and innovation communities (Climate-KIC) — as well as by other transnational, national and regional programmes. The expert group analyzed the evolution of climate services in Europe and worldwide, assessed the output of European Union (EU) funded projects in the field and other relevant documents, carried out — with the help of EC services — a dedicated stakeholder consultation and held several discussion sessions that led to the elaboration of the present report.
Link: http://ec.europa.eu/research/index.cfm?&eventcode=552E851C-E1C6-AFE7-C9A99A92D4104F7E&pg=events

Title: Climate services for marine applications in Europe
Authors: R. Weisse, P. Bisling, L. Gaslikova, B. Geyer, N. Groll, N. Hortamani, V. Matthias, M. Maneke, I. Meinke, E. Meyer, F. Schwichtenberg, F. Stempinski, F. Wiese, and K. Wöckner-Kluwe
Summary: The term “climate services” is commonly used to refer to the generation of climate information, their transformation according to user needs and the subsequent use of the information in decision making processes. More generally, the concept also involves contextualization of information and knowledge. In the following a series of examples from the marine sector is described covering the generation, transformation and the use of climate information in decision making processes while contextualization is not considered. Examples comprise applications from naval architecture, offshore wind and more generally renewable energies, shipping emissions, and tidal basin water exchange and eutrophication levels. Based on the analysis of these examples it is concluded that reliable climate information in data sparse regions is urgently needed, that for many applications historical climate information may be as or even more important as future long-term projections, and that the specific needs of different sectors substantially depend on their planning horizons.
Link: http://link.springer.com/article/10.1186%2Fs40322-015-0029-0

Title: The shifting epistemologies of vulnerability in climate services for development: the case of Mali's agrometeorological advisory programme
Authors: E. Carr and K. Owusu-Daaku
Summary: The field of climate services for development is growing rapidly, presented by donors and implementers as an opportunity to address the needs of the global poor, whether informing agricultural decision making in rural communities, facilitating disaster preparedness or promoting public health. To realize this potential, however, CSD projects must understand the information needs of their intended users. This raises a critical epistemological challenge for CSD: how can we know who is vulnerable to the impacts of climate variability and change, and why are they vulnerable to particular impacts? In this paper, we consider both the epistemological tension arising over the construction of vulnerability that emerges at the intersection of the physical and social science communities within CSD and a second, less-discussed epistemological stress surrounding how user identities are understood within the social science community engaged in CSD-related research and implementation. We illustrate these tensions through the example of a climate services programme that delivers agrometeorological advice to farmers in Mali, demonstrating the ramifications of these epistemological issues for the design and delivery of services that further development and adaptation goals.
Link: http://onlinelibrary.wiley.com/doi/10.1111/area.12179/abstract

Title: Climate change and vector-borne diseases: what are the implications for public health research and policy?
Authors: D. Campbell-Lendrum, L. Manga, M. Bagayoko, and J. Sommerfeld
Summary: Vector-borne diseases continue to contribute significantly to the global burden of disease, and cause epidemics that disrupt health

security and cause wider socioeconomic impacts around the world. All are sensitive in different ways to weather and climate conditions, so that the ongoing trends of increasing temperature and more variable weather threaten to undermine recent global progress against these diseases. Here, we review the current state of the global public health effort to address this challenge, and outline related initiatives by the World Health Organization (WHO) and its partners. The WHO and partner agencies are working through a range of programmes to (i) ensure political support and financial investment in preventive and curative interventions to bring down current disease burdens; (ii) promote a comprehensive approach to climate risk management; (iii) support applied research, through definition of global and regional research agendas, and targeted research initiatives on priority diseases and population groups.
Links: http://rstb.royalsocietypublishing.org/content/370/1665/20130552

Title: Seasonal climate forecasts for medium-term electricity demand forecasting
Authors: M. De Felice, A. Alessandri, and F. Catalano
Summary: Air temperature is an effective predictor for electricity demand, especially during hot periods where the need of electric air conditioning can be high. This paper presents for the first time an assessment of the use of seasonal climate forecasts of temperature for medium-term electricity demand prediction. The retrospective seasonal climate forecasts provided by ECWMF (European Centre for Medium-Range Weather Forecasts) are used to forecast the June–July Italian electricity demand for the period 1990–2007.This work is a significant progress in understanding the relationship between temperature and electricity demand. It is shown that much of the predictable electricity demand anomaly over Italy is connected with so-called heat-waves (i.e. long lasting positive temperature anomalies) over Europe.
Link: http://www.sciencedirect.com/science/article/pii/S030626191401071X

Title: Using climate information to achieve long-term development objectives for African ports
Authors: G. Woolhouse and D. Lumbroso
Summary: Long-lived infrastructure is inherently exposed to climate risks through its longevity, irreversibility and high initial capital cost.1 Major transport infrastructure is often designed for a lifetime measured in many decades and may be operational in a future climate that will be significantly different to the historical climate commonly used for planning and design. This policy brief focuses on port infrastructure in sub-Saharan Africa. It investigates the climate change risks, the use of climate services in decision-making and makes recommendations for actions to enhance the resilience of port infrastructure. It summarizes a more comprehensive paper2 prepared to support the scoping phase of the Future Climate for Africa (FCFA) program for the ports sector.
Links: http://cdkn.org/wp-content/uploads/2014/12/FCFA_PolicyBrief_PORTS_WEB.pdf

Title: A framework for the science contribution in climate adaptation: Experiences from science-policy processes in the Andes
Authors: C. Huggel, M. Scheel, F. Albrecht, N. Andres, P. Calanca, C. Jurl, N. Kabarov, D. Mira-Salama, M. Rohrer, N. Salzman, Y. Silva, E. Silvestre, L. Vincuña, M. Zappa
Summary: As significant impacts of climate change are increasingly considered unavoidable, adaptation has become a policy priority. It is generally agreed that science is important for the adaptation process but specific guidance on how and to what degree science should contribute and be embedded in this process is still limited. During this process a framework for the science contribution in climate adaptation has been developed; it consists of three stages, including (1) the framing and problem definition, (2) the scientific assessment of climate, impacts, vulnerabilities and risks, and (3) the evaluation of adaptation options and their implementation.
Links: http://www.sciencedirect.com/science/article/pii/S1462901114002202

Title: Usable climate knowledge for adaptive and co-managed water governance
Author: M.C. Lemos
Summary: This review examines what drives the production of usable knowledge and how it intersects with emerging integrated and adaptive governance frameworks to respond to complex environmental change, especially climate change. It finds that although our understanding of challenges and opportunities for the production of usable science for water governance has significantly advanced, evidence of how it builds (or not) adaptive capacity of water systems is mixed in the few empirical cases examined in the literature. This is particularly true in relation to how knowledge use interacts with other determinants of adaptive capacity, particularly stakeholder engagement, learning and power distribution in participatory governance. In this context, the emergence of new approaches that actively manage the boundary between knowledge production and use is promising.
Link: http://www.sciencedirect.com/science/article/pii/S1877343514000608

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Link: http://www.sciencedirect.com/science/article/pii/S1877343514000608

Title: Agricultural Advisors as Climate Information Intermediaries: Exploring Differences in Capacity to Communicate Climate
Authors: T. Haigh, L Wright Morton, M.C Lemos, C. Knutson, L. Stalker Prokopy, Y. JiaLo, and J. Angel
Summary: Agricultural advisors have been shown to play important roles as information intermediaries between scientists and farmers, brokering, translating, and adding value to agronomic and economic information of use in agricultural management decision making. Yet little is known about the readiness of different types of agricultural advisors to use weather and climate information to help their clients manage risk under increasing climate uncertainty. More than 1700 agricultural advisors in four midwestern states (Nebraska, Indiana, Iowa, and Michigan) completed a web-based survey during the spring of 2012 about their use of weather and climate information, public or private sector employment, and roles as information intermediaries in three advising specializations: agronomic, conservation, and financial. Key findings reveal that advisors who specialize in providing agronomic information are positively inclined toward acting as weather and climate information intermediaries, based on influence and willingness to use climate information in providing many types of operational and tactical advice. Advisors who provide conservation advice appear to be considering weather and climate information when providing tactical and strategic land-use advice, but advisors who provide financial advice seem less inclined to act as climate information intermediaries.
Link: http://journals.ametsoc.org/doi/abs/10.1175/WCAS-D-14-00015.1

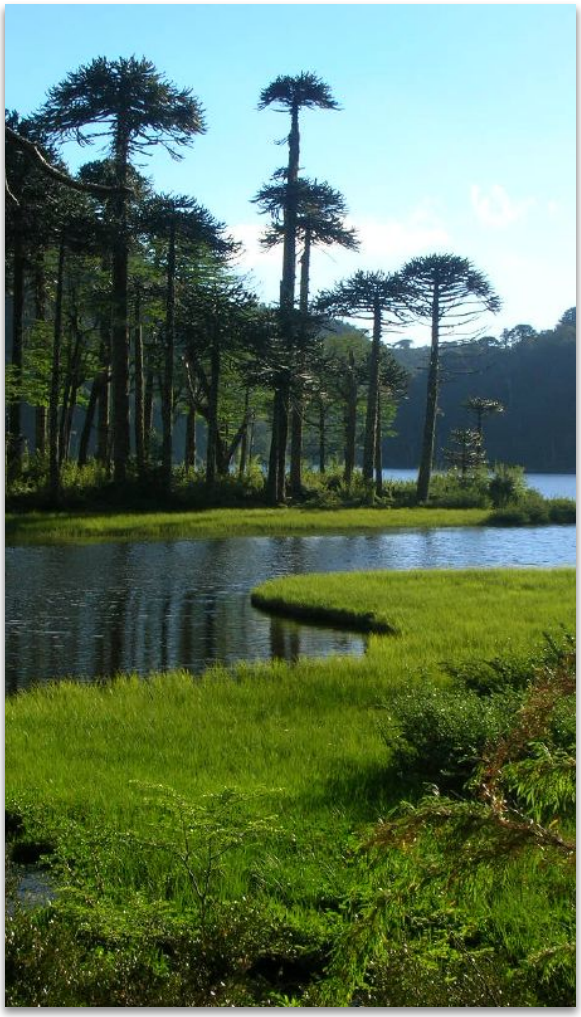
Title: Extension's role in disseminating information about climate change to agricultural stakeholders in the United States
Authors: L.S. Prokopy, J.S. Carlton, J.G. Arbuckle, T. Haigh, M.C. Lemos, A.S. Mase, N. Babin, M. Dunn, J. Andresen, J. Angel, C. Hart, R. Power
Summary: The U.S. Cooperative Extension Service was created 100 years ago to serve as a boundary or interface organization between science generated at the nation's land grant universities and rural communities. Evidence from surveys of farmers suggests that they are more likely to go to private retailers and consultants for information than extension. This paper explores the role that extension can play in facilitating climate change adaptation in agriculture using data from a survey of agricultural advisors in Indiana, Iowa, Michigan and Nebraska and a survey of extension educators in the 12 state North Central Region. Evidence from these surveys shows that a majority of extension educators believe that climate change is happening and that they should help farmers prepare. It also shows that private agricultural advisors trust extension as a source of information about climate change. This suggests that extension needs to continue to foster its relationship with private information providers because working through them will be the best way to ultimately reach farmers with climate change information.
Link: http://link.springer.com/article/10.1007%2Fs10584-015-1339-9

Title: Potential effects of perfect seasonal climate forecasting on agricultural markets, welfare and land use: A case study of Spain
Authors: H.S. Choi, U.A. Schneider, L. Rasche, J. Cui, E. Schmidt, and H. Held
Summary: This paper use a coupled climate-crop-economy modeling system to analyze the value of climate information (VOI) in Spain for the domestic agricultural sector and for international agricultural markets. Climate variability in Spain is represented by the observed variability over a 30 year history. Averaged over the simulated climate states, the global benefits of Spanish climate forecasts range between 61 and 189 million US$ per year. Agricultural consumers in Spain gain between 0.8 and 2.9 percent and Spanish farm revenues increase between 1.9 and 7.0 percent. If Spanish farmers consider crop mix choices outside historical bounds (proactive reaction) their revenues are notably higher than otherwise (conservative reaction). Finally, climate forecasting promotes a more efficient use of agricultural resources. The agricultural efficiency increase due to climate forecasts translates into welfare-neutral land savings of 2 percent in Spain.
Link: http://www.sciencedirect.com/science/article/pii/S0308521X14001395

Title: The role of regional climate projections in managing complex socio-ecological systems
Authors: J.D. Daron, K. Sutherland, C. Jack, B. Hewitson
Summary: Climate is one of many factors to be considered in adapting systems to environmental and societal change and often it is not the most important factor. Moreover, given considerable model inadequacies, irreducible uncertainties, and poor accessibility to model output, we may legitimately ask whether or not regional climate projections ought to have a central role in guiding climate change adaptation decisions. This question is addressed by analysing the value of regional downscaled climate model output in the management of complex socio-ecological systems (SESs) vulnerable to climate change. We demonstrate, using the example of the Dwesa–Cwebe region in South Africa, that the management of such systems under changing environmental and socio-economic conditions requires a nuanced and holistic approach that addresses cross-scale system interdependencies and incorporates "complexity thinking". We argue that the persistent focus on increasing precision and skill in regional climate projections is misguided and does not adequately address the needs of society. However, this does not imply that decision makers should exclude current and future generations of regional climate projections in their management processes.
Link: http://link.springer.com/article/10.1007/s10113-014-0631-y

Title: Integrating indigenous knowledge with scientific seasonal forecasts for climate risk management in Lushoto District in Tanzania
Authors: H. Mahoo, W. Mbungu I. Yonah, J. Recha, M. Radeny P. Kimeli, J. Kinyangi
Summary: Progress has been made in providing climate services in Tanzania but there are significant gaps with regard to downscaled location specific forecasts, as well as generating timely, reliable and user friendly information. A majority of the farmers have been using indigenous knowledge (IK) forecasts to predict weather through observing the behavior of large animals, birds, plants, insects, and the solar system. IK is not often documented and is mainly sustained from one generation to another through oral history and local expertise, creating a wide inter-generational gap between its custodians and the young people. This study identifies and documents existing IK in weather forecasting in Lushoto district, northern Tanzania, and aims at promoting the integration of IK and scientific weather forecasting for climate risk management. To improve accuracy, systematic documentation of IK and establishment of a framework for integrating IK and TMA weather forecasting is needed. There is also a need to establish an information dissemination network and entrench weather forecasting within the District Agricultural Development Programmes.
Link: https://cgspace.cgiar.org/handle/10568/56996

Title: Dealing with uncertainty: integrating local and scientific knowledge of the climate and weather
Authors: D. Kniveton, E. Visman, A. Tall, M. Diop, R. Ewbank, E. Njroge and L. Pearson
Summary: While climate science has made great progress in the projection of weather and climate information, it's uptake by local communities remains largely elusive. This paper describes two innovative approaches that strengthen understanding between the providers and users of weather and climate information and support-appropriate application: (1) knowledge timelines, which compare different sources and levels of uncertainty in community and scientific weather and climate information; and (2) participatory downscaling, which supports users to translate national and regional information into a range of outcomes at the local level. Results from piloting these approaches among flood-prone communities in Senegal and drought-prone farmers in Kenya highlight the importance of co-producing "user-useful" climate information.
Link: http://onlinelibrary.wiley.com/doi/10.1111/disa.12108/full



upcoming events
in the climate services community

General Assembly of the European Geosciences Union
Date: 12-17 April, 2015
Location: Vienna, Austria
About: The EGU General Assembly 2015 will bring together geoscientists from all over the world to one meeting covering all disciplines of the Earth, planetary and space sciences. The EGU aims to provide a forum where scientists, especially early career researchers, can present their work and discuss their ideas with experts in all fields of geoscience.
Link: http://www.egu2015.eu/

GLACINDA: Stakeholder Workshop on Identifying Climate Information Needs
Date: 8-10 April, 2015
Location: New Delhi, India
About: Within the frame work of GLACINDIA project a one day stakeholder workshop will be organized combined with two day training course from 8th to 10th April 2015 at Jawaharlal Nehru University (JNU), New Delhi, India. The workshop is a good opportunity for policy makers dealing with climate change and adaptation in various sectors to get the latest information about the project activities and to interact with experts from these fields in order to tailor the dissemination of the project results towards their needs and expectations.
Link: http://www.climate-service-center.de/058047/index_0058047.html.en

European Climate Change Adaptation Conference (ECCA)
Date: 12-14 May, 2015
Location: Copenhagen, Denmark
About: The ECCA is an initiative of a number of major European research projects and other stakeholders. The conference will cover a broad range of issues related to climate change adaptation and follows international adaptation conferences in Australia (Gold Coast, Queensland) in 2010 and in the United States (Tucson, Arizona) in 2012. This European conference will place a greater emphasis on understanding and assessing adaptation in action under the theme "Integrating climate adaptation action in science, policy, practice and business."
Link: http://www.ecca2015.eu/

EUPORIAS Climate Services Masterclass: Energy, tourism, & agriculture in a changing climate
Date: 18-22 May, 2015
Location: Bolzano, Italy
About: Climate service development requires a new framework for the interaction between users and providers, subverting the standard top-down approach from academia to application. The EUPORIAS masterclass wants to be the first step in the direction of co-production, where new prototypes can be developed and a new protocol for interaction could be explain and presented in a hands-on fashion. The masterclass is directed to junior members of both the climate/met and user communities, with the ambition of developing a common language, protocol for interaction, and familiarity.
Link: http://euporias.eu/event/masterclass

17th session of the World Meteorological Congress
Date: May 25-June 12, 2015
Location: Geneva, Switzerland
About: Among other things, the tentative work plan for this session of the WMO Congress includes a report from the IBCS, sessions on open data policies, WIGOS, the socioeconomic impact of meteorological and hydrological services, and a holistic approach to service provision.
Link: https://sites.google.com/a/wmo.int/cg-17/

Climate Knowledge Brokers
Date: June 23-24, 2015
Location: Copenhagen, Denmark
About: The CKB is an emerging alliance of global, regional and national knowledge brokers specializing in climate and development information. It brings together a diverse set of information players, from international organizations to research institutes, NGOs and good practice networks, and covers the full breadth of climate related themes. The focus is primarily on online initiatives and those that play an explicit knowledge brokerage role, rather than being simply institutional websites.
Link: http://us6.campaign-archive2.com/?u=5e28a4a81fddc5e14be8c097c&id=15eeafde7f

3rd International Conference Energy & Meteorology (ICEM): Next Generation Meteorological Practices in the Energy Sector
Date: June 23-26, 2015
Location: Boulder, Colorado, United States
About: As with the International Conference Energy & Meteorology (ICEM) 2011 (http://www.icem2011.org/) and ICEM 2013 (http://www.icem2013.org), the objective of ICEM 2015 is to provide a dedicated forum where scientists, engineers, economists, policy makers, and other specialists and practitioners involved in research or implementation activities at the intersection between weather, climate and energy can discuss recent research findings and emerging practices ranging from operational activities to long-term investment planning and to policy making.
Link: http://icem2015.org

School on Modeling Tools and Capacity Building in Climate & Public Health
Date: 20-31 July, 2015
Location: Rio de Janeiro, Brazil
About: This workshop aims to introduce several tools that can be used to access, visualize and analyze these datasets, and to show how such data can be extracted and converted into a format suitable to input into health early warning systems. Participants will be given a range of lectures from experts in the fields of: fundamentals of environmental and public health interactions; use of observational, model and forecast climate data; remote sensing as a tool to manage environmental data; exploratory data analysis; time and space statistical modeling. Scientists and students from countries which are members of the United Nations, UNESCO or IAEA may attend.
Link: http://indico.ictp.it/event/a14271/