

CORECLIMAX 2nd Capacity Building Workshop, 10 October 2014, Prague

Summary

The second Capacity Building workshop (Deliverable D6.66) was organized as a side event at the 14th EMS Annual Meeting & 10th European Conference on Applied Climatology (ECAC), 06 – 10 October 2014, Prague, Czech Republic: “SM3: CORECLIMAX Capacity Building Workshop - Climate Services: Products and tools to make choices (public)” on Friday the 10th of October.

Website: <http://meetingorganizer.copernicus.org/EMS2014/session/16964>

The objective(s) were to provide guidance and expertise by training people on the use of climate information and its associated uncertainty, and to provide generic tools to build the bridge between the climate information and the users' need. Feedback was obtained from an on-line survey on potentially interesting case examples which led to the following program:

- 08:30 – 09:10 Lecture: Which data is out there? - Bob Su
- 09:10 – 09:50 Lecture: Re-analyses products and data assimilation for Climate Services - David Tan
- 09:50 – 10:30 Lecture: Which data are suitable for your application? - Support tools & info to make choices - Viju John
- 10:30 – 11:00 *Coffee break*
- 11:00 – 12:30 Case studies / examples simultaneously (two times two)
 - Combining and utilizing data sets in a storm-related climate service - P. Jokinen
 - Extreme El Nino events: What's the price? - I. Barmpadimos
 - Waiting for the rain: Drought frequency in France – I. Barmpadimos
 - Climate scenarios at the local scale – Albert Klein-Tank
- 12:30 – 13:00 Wrap-up; reporting from different groups

The idea was that some 50 participants could participate.

Announcements were distributed in the existing network of the consortium members as well as on the projects and EMS/ECAC websites and in the Conference program. An application form was set-up (at <http://www.coreclimax.eu/?q=WorkshopCCBWCSApplication>) where interested participants could apply and a total of 53 applications were received. The idea was to guarantee 40 available seats and fill another 10 on the spot. Therefore the first 40 people were sent an invitation letter and were asked to register (to guarantee their seat and laptop, but also to guarantee the installation of specific software needed during the workshop). Since not all invitees responded in due time all 53 participants were issued the invitation letter after which a total of 13 participants went through the registration process. We changed the approach towards filling the remaining seats on the spot and as such removing in the program announcement the need for registration. Finally a total of 20 participants, of which 12 from outside the project consortium, took part in the workshop (see appendix for details).

Input for the case examples was received from Pauli Jokinen (FMI), Iakovos Barmpadimos (SCOR Global Risk Center) and Albert Klein-Tank (KNMI). Existing programming code supplied by the case presenters was translated into one universal language (Matlab) by Joris Timmermans to ensure participants had to deal with only one language and to facilitate the use of standard windows-based laptops.

Feedback

The following feedback was received from participants:

Where do you come from, what kind of work you do, which data do you use and what do you expect from this workshop?

Cerfacs, Toulouse, France. Providing downscaled data to users, developing a statistical downscaling methodology, working on data distribution infrastructure. European surface observations, global and European reanalyses. Get more information on how the reanalyses are produced, along with their strengths and weaknesses.

SMHI, NMS, information about data and data services and examples of tools. I wanted to learn a bit about User oriented WS s too, from my Project's point of view.

NERSC, Bergen, Norway, as a climate research scientist. I use a broad range of in-situ, reanalysis, satellite and model data in my work. I attended the workshop because I was curious to learn more about CORE CLIMAX activities and outcomes as I am coordinator on the GAIA-CLIM project.

I work in the Zurich Branch of SCOR Global P&C as a Cat Risk Analyst. I use climate data to derive quantitative or qualitative estimates of the risk of various atmospheric hazards in various areas. These analyses are used by decision-makers in the company to decide whether to accept or not reinsurance deals and at what price. I expect to get a better overview of what data are available and what limitations they have.

What are the main strengths and weaknesses in earth observation and reanalysis data products from the view point of your work? How aware are you of their uncertainties and limitations? What kind of improvement in these data (earth observation and re-analysis) would you need?

Strengths: gridded, high quality, large number of observations. Weaknesses: limited spatial resolution, non-homogeneous, limited time period, limitations on access and use (license). We are aware of limitations due to the change in the observing system. Longer time period, higher spatial resolution, open access.

Not so much aware of these; I think it remains to be shown (as outcome of ERA-CLIM2 and UERRA etc.)

Strengths are global coverage, timeliness, accessibility and usability. Weaknesses, which also pertain to in-situ data are the lack of absolute traceability and the lack therefore of robust uncertainty quantification, and the issues with the steep learning curve of data discovery.

Nowadays there are various climate datasets which offer very good spatial and temporal coverage compared. Limitations of the data include biases in a temporal sense and across different regions. Although reanalysis data partly address the bias issue by using a single model, inhomogeneity due to the observations used in the reanalysis are still present. These issues are often not sufficiently documented in the documentation accompanying the datasets or in related peer-review publications. As a user I feel I am less aware of data limitations than data producers.

Are you (or your organization) providing climate services/climate change services and involved or planning to be involved in Copernicus Climate Services?

I am involved in the FP7 CLIPC project.

Yes, but I am not involved in that.

We will be coordinators of GAIA-CLIM. We already undertake some services to industry which would likely post facto be defined as climate services although most of these activities pre-date or are served under a distinct set of auspices from climate services.

We rather use Climate Services instead of providing. We have helped in the latest Core Climax workshop. We do not have plans to be involved in Copernicus Climate Services but in principle we are open for collaboration.

What are the areas that will need attention to make a more effective Climate Service in your opinion? In what aspects is there a lack of capacity currently, and how could this lack be addressed?

Interoperable data portals, with standardized data formats and services. All surface observations available, not just a small subset (e.g. E-OBS).

I think tools and good portals to show and access the data are largely missing, together with the QA information.

Education, stakeholder communication and bridging academia to users in a sustained manner are the key challenges.

Do you have any other specific feedback?

Pity that so few "Users" were there.

The tools were really neat, but probably more useful for a more applied audience than that at EMS which tends to be academia rather than end-users. It would be illuminating to see what a crowd made up more of practitioners rather than academics made of the tools.

As noted in the session I believe that we should beware that with maturity matrix and other tools we ensure a user does not fall into the trap of treating the observations as deterministic 'truth' and assuming they should use just one estimate for their application because it will always be an approximation to the truth and therefore in some limit 'incorrect'. Users need to make informed decisions based upon an appropriate spread of estimates. In the same way that users looking at climate models now tend to look at the whole CMIP-n archive and not one model. There is still a misconception, even in the scientific literature, that the observations are to be treated deterministically and we should actively aim to disabuse this notion.

Related is that these tools shut down innovation because funders say we have a mature product so why should we fund a new player (this is not purely anecdotal I have seen this happen on both NOAA and NASA panels in the US).

We need to promote users using uncertainty information appropriately be that through better use of uncertainties on individual products or explicit encouragement of use of a set of appropriate analyses to explore structural uncertainty in the estimates.

Appendix. List of workshop participants

Name	Surname	Gender	Affiliation	E-Mail
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