COST Action ES1102

Final VALUE Meeting - Minutes

Budapest, 23-25 Nov 2015

It was decided to include all relevant MC issues in the overall meeting.

Monday, 23 Nov

Brief WG reports
Overall state of the action (Douglas Maraun)

- VALUE membership has not changed since last MC meeting

- As this was the last VALUE meeting, no formal decisions have been drawn.

WG1 (Ole Roessler)
WG2 (Sven Kotlarski)
WG3 (Martin Widmann)
WG4 (Douglas Maraun on behalf of Elke Hertig)
WG5 (Joanna Wibig)

Science presentations (available from www.value-cost.eu/node/1449):
User needs (Ole Roessler)
Data sets and issues (Sven Kotlarski)
Method inventory (Martin Widmann)
Validation framework (Douglas Maraun)
Validation results (Jose Gutierrez)

Presentation on recent developments
CORDEX, EURO-CORDEX, CORDEX-ESD, WCRP discussions at the VALUE meeting in Graz
(Douglas Maraun)

Tuesday, 24 Nov

Plenary discussion of paper skeletons and co-authorships
The following papers are in preparation (this list will be continually updated on http://www.value-cost.eu/node/1478):

Editorial
Chris and Eleni

Introduction
VALUE Steering Group

User needs

Ole, Pedro, Rita C., Andreas, Douglas, Frank, Heike, Hideki, Mandy, Rasmus, Paul, Christian

Observational uncertainty

Sven, Adam, Pedro, Rita C., Olle, Thomas, Christian, Gabriella, Peter, Constantin, Sixto, Jose

Sensitivity of gridded data to station density

Sixto, Jose, Douglas, Pedro, Rita C., Adam, Jesus, Bartosz, Sven

Overall validation

Jose and VALUE contributors

Temporal validation

Radan, Douglas, Judit, Pedro, Andreas, Rita P., Maria, Jose, Martin D., Martin W.

Spatial validation

Martin W., Andreas, Rita C., Thomas, Joanna, Douglas, Radan, Maria, Christian, Bartosz, Joaquín

Extreme events

Elke, Douglas, Mathieu, Pedro, Joanna, Ileana, Rita P., Ana, Judit

Multi-variate validation

Renate, Douglas, Sixto, Rita C., Christian, Martin D., Thomas, Bartosz, Rita P., Olle, Judit

Process-based validation

Douglas, Radan, Pedro, Rita C., Swen, Sven, Rita P., Judit, Elke

Grid/station-scale comparison

Joanna, Sven, Douglas, Pedro, Jose, Adam, Bartosz, Rita P., Petr, Judit

Sub-daily downscaling

Joanna, Rita C., Petr, Valentina, Martin D., Christian O., Abdelkader, Bartosz

This list is preliminary. Final decisions based on a fair balance between participation in VALUE and credits by co-authorships, and actual contributions will be drawn by the first authors. The content of the individual papers has been aligned, in particular that for temporal variability and extreme events. **Deadline for the final drafts is 31. March 2016**. The results will be presented at the EGU general assembly in Vienna, April 2016, in the downscaling session.

In addition to these papers directed mainly to the scientific community, a synthesis paper summarizing the major results of the special issue for stakeholders is planned. This paper will be submitted to a Climate Service journal.

Breakout discussions
individual papers, discussion of paper structure, selection of results.

Discussion of data format
station data in CORDEX (e.g., for flagship pilot studies). Jose responsible for development.

Wednesday, 25 Nov

Future of VALUE

1. The idea is to transfer the community shaped by VALUE into the EURO-CORDEX initiative. Douglas will bring this idea forward at the EURO-CORDEX general assembly in Hamburg, Jan. 2016.

2. In addition, the VALUE community is planning to join forces with the global climate modelling and observational community to submit a COST Action on the emerging field of climate information distillation.

3. To complement these networking activities, a WCRP frontier project proposal is planned.

Ideas for climate information distillation COST Action
Scientific Issues
- reduction of ensemble size
- what is robust information? (across all sources of information inc. scenarios, and robust against future insight)
- what are unknown unknowns?
- what type of information do we need/want?
- what is relevant information? (with respect to vulnerability)
- what is the target sector?
- what are the decision making processes using the information?
- how to combine existing ensembles with frontier knowledge?
- link between ensemble spread and true uncertainty?
- what is the spatial resolution of a model ensemble?
- what does it depend on?
- which processes cause this uncertainty?
- what is a contradiction?
- how to assess statistically whether information is contradictory?
- understanding of apparent contradictions, attributing contradictions?
- combining dynamical and statistical knowledge
- contradictions between different ensemble generations/global and regional models/...
- what is the role of internal variability/thermodynamic processes/dynamic processes/land feedbacks
- added value for climate change information
- which sources are suitable for which problem? Scale? Aspect...?

- How to translate complex climate information to users? Visualisation?
- Use of storylines? Use with other information, e.g., from ensembles
- How to do science with bad data/missing data...? (delib. decrease station number etc...)
- cross country data issues

Important issues to remember
- how to handle "laymen" climate service providers?
- what is new? what is covered by relevant communities? Framing: what is our contribution for which community? Separation from/links to other communities? Selling points! Focus on aspects which are not covered yet!
- what is the big problem? Is there something bigger than distillation?
- becoming expert in a promising niche to improve chances in future calls. Include in COST proposal!

Communities to be involved
- climate services
- intermediary organisations
- boundary organisation (TEC)
- GCM modellers (Johann Jungclaus, Mat Collins?)
- atmospheric sciences (Ted Shepherd)
- climate in general (Reto Knutti)
- downscalers
- risk modellers (Dave Stainforth)
- IAV community
- engineers
- specific decision makers
- impact modellers (Christel, Trnka)
- Copernicus
- Communication scientists
- Social scientists, economists (Suraje Dessai)
- statisticians (Richard)
- remember: ClimSave, Paula Harrison, Oxford

Possible deliverables
- guidelines for using data, including recipe/decision tree incl. specific example, typical mistakes, successful examples from literature
- training school for users
- concept for training courses to educate climate service providers? Maybe better for/with COPERNICUS? Maybe overly naïve?
- guidelines for (education of) climate consultants
- suite of visualisation tools
- clarifying language / glossary
- structure of the problem
- guidelines of model information to be provided
- developing uncertainty/contradiction attribution methods/concepts

Ideas for World Climate Research Programme (WCRP) frontier project

What makes a good target region for an (EU) project?
Science questions?
- vulnerability, (big impact, extreme events)
- distillation problem (e.g., contradicting evidence)
- one specific problem
- good data coverage (flagship requirement)
- available IAV partners
- cover different EU countries
- multiple sectors/systems affected
- contradicting demands
- geographically: similar target regions, big catchment, metropolitan area, coastal regions

Interesting target regions
- Alps: inner alpine dry valleys,
- Mountains: Sierra Nevada
- Mediterranean

Specific region for VALUE FPS
- Pyrenees, Ebro Valley, Barcelona

Science issues
- permafrost
- water availability
- flash floods
- drought, heatwaves
- water management
- ecology
- tourism
- regional environmental modelling
- regional couple ocean/atmosphere *(other flagship project)*
- combining statistical and dynamical models
- statistical emulators of state-of-the-art CP RCMs
- statistical analysis of ocean-land-atmosphere interactions
- comparison with state-of-the-art CP RCMs
- added value

Target IAV communities?
- ecologists incl. forestry
- water managers
- tourist managers (incl. skiing)
- agriculture
- energy
- regional administration
- infrastructure

Climate phenomena
- storm track (winter) (for frontier project)
- **convection, moisture recycling**
- **surface atmosphere (soil moisture, land-use, ocean)**
- **thermal driven circulation (sea breeze, mountain breeze, foehn)**
- warm spells in spring (snow melt), winter (snow fall)
- heat waves

VALUE partners
- Douglas Maraun, Univ. of Graz
- Jose Gutierrez, Univ. of Cantabria
- Pedro Soares, Rita Cardoso, Univ. of Lisbon
- Christian Pagé, CERFACS
- Martin Widmann, Univ. of Birmingham

Possible partners outside VALUE
- OPCC (climate observation network for Pyrenees)
- Vicente Serrano, Institute of Pyreneean Studies in Spain
- Ileana Bladé, David Pino (U Barcelona)
- Paco Doblas-Reyes
- Manola Brunet (Tarragona)
- Jesús Abaurrea (U Zaragoza)
- Marianna Milano (U Lausanne)
- Jesús Fernández (U Cantabria)
- Cathy Hohenegger (MPI-M Hamburg)
- WRF community within EURO-CORDEX
- Eleni Katragkou
- Samuel Somot
- Claas Teichmann, Diana Rechid (?)
- Sonia Seneviratne
- Valery Masson (Meteo France)
- Laprise, DiLuca (added value)
- Frank D´Amico (Pau U, ecology)

(Douglas Maraun)