

MedCORDEX-Baltic Earth workshop on  
Regional Climate System Modelling for the European Sea Regions

Minutes of the Round Table on  
**Challenges and opportunities for Regional Earth System modelling**  
(15th March 2018)

***Complexity of modelling systems***

Modelling systems are becoming more complex and it is difficult for the modelling groups to have expertise on all the elements of the systems. Even big groups feel limited too.

An option could be to aggregate the efforts of the different groups to contribute in the development of big systems. However, it has been noted that some systems are difficult to port to other places (e.g. CNRM system, while ICTP is more prepared to be ported).

***Documentation***

Additionally it has been mentioned that increasing complexity should be accompanied by good documentation.

Meier - Baltic Earth is on its way to improve the documentation

Brauch - There is a communication forum for Baltic Earth

Cahill - We could follow the ROMS example

It has also been proposed to join efforts so both communities (Mediterranean and Baltic) contribute to the same discussion forum, so we don't create too many small initiatives.

(On 16th March M. Reckermann has sent the information to join the Baltic Earth forum, <http://caom.forumieren.de>)

***Model diversity and ensembles configuration***

It has been pointed out that diversity of modelling systems is desirable, but the minimum size of the ensembles is not well determined.

Brauch has mentioned the method followed at DWD to reduce the size of RCMs ensembles.

In Baltic Earth it has been shown that a weighted small ensemble produce similar results to a large ensemble.

Somot suggests to keep all the models that are not clearly outliers, in order to maintain diversity as much as possible.

***Funding***

Few words have been said about funding. There is a lack of calls that can fit our approach, so we have to "sell" impact studies, and then, in that framework, to develop models.

Macías has explained that at EU level funding is linked to the needs of DG policies. E.g. DG needs evaluations of freshwater resources, ocean food, ... Thus, it is recommended to focus the scientific studies (or proposals) to impacts that are meaningful to DG policy evaluation.

In H2020 there will be an interest on coastal cities. We can show the importance of RCMs for that and the importance of a new generation of Earth System Models. It has been suggested that we start lobbying to get a call with an appropriate title where we could fit.

### **White Paper**

It has been proposed to write a white paper on common challenges for regional modelling. M. Meier starts the coordination.

It has been mentioned to include impacts on that paper, to review the added value of RCMs, and the use of RCMs to climate change adaptation (e.g. through impacts).