

International Workshop on "Numerical Climate Coalition Models: A Modelling Comparison Exercise"

January 24th-25th, 2013

FEEM, Island of San Giorgio Maggiore, Venice, Italy

About the workshop

The workshop aims at discussing results from a comparison exercise using state-of-the art numerical climate coalition models.

Accordingly, the workshop will be structured along the following objectives:

1. Provide an overview of findings from the modeling comparison. In particular, which robust strategies can be identified in view of the current stalemate of international climate policy negotiations?
2. Enhance the understanding of existing coalition models. How do differences in model structure and calibration of key parameters such as mitigation costs and damages explain different outcomes?
3. Identify results that are robust or diverging across models. Are there outcomes e.g. regarding size, composition and welfare ranking of coalitions that are robust across models? Are there characteristic patterns of coalition formation and strategic choices of major players such as USA, China, and Europe?
4. Identify gaps in research. Which questions are particularly relevant given the current state of international climate policy negotiations? How may a climate coalition model comparison exercise move the community beyond the current state of literature?

Numerical models are used to explore climate coalition formation in an empirically based cost-benefit structure. Two topics where these numerical models give particularly valuable insights beyond those from their analytical counterparts are (i) the impact of asymmetry, i.e. the regional heterogeneity observed across the world, and (ii) quantitative estimates (of the order-of-magnitudes), in particular when trade-offs leave the net effects on, say, coalition stability or free-riding incentives ambiguous.

For these questions, both the mechanics and the calibration of the models are of central importance, but the uncertainties are large. It is hence an asset of this comparison exercise to use multiple models: this will make uncertainty more transparent, help to identify robust results, and enable learning from the differences.

International Workshop on "Numerical Climate Coalition Models: A Modelling Comparison Exercise"
January, 24th - 25th, 2013 - FEEM, Island of San Giorgio Maggiore, Venice, Italy

Thursday, January 24th, 2013

08:45 – 09:15 *Breakfast*

09:15 – 09:30 **Welcome Address**

Carlo Carraro and Valentina Bosetti

09:30 – 12:30 **Working SESSION 1 - Discussion of existing material**

Chair: Valentina Bosetti

09:30 – 11:00 Manuscript section 1: model characterization - *Kai Lessmann*

Open Discussion

11:00 – 11:30 *Coffee break*

11:30 – 13:00 Manuscript section 3: transfers - *Kai Lessmann*

Open Discussion

13:00 – 14:00 *Lunch*

14:00 – 18:30 **Working SESSION 2 - Kick off for drivers of stability scenarios**

Chair: Kai Lessmann

Presentations on the drivers-of-stability scenarios (comparable cost/benefit variations, or heterogeneity variation). The idea is to enable everybody to run the scenarios after the workshop. Each modeling team presents on their attempt/results of implementing these scenarios (see study protocol 3.0)

14:00 – 14:30 Potentially Internal Stability - *Hans Peter*

14:30 – 15:00 Equivalent Parameter Variation in MICA - *Ulrike Kornek*

15:00 – 15:30 Heterogeneity variation in MICA - *Ulrike Kornek*

15:30 – 16:00 *Coffee break*

16:00 – 16:30 How to do Equivalent Parameter Variation in WITCH - *Johannes Emmerling*

16:30 – 17:00 Equivalent Parameter Variation in CWS – *Johan Eyckmans*

17:00 – 17:30 Equivalent Parameter Variation in STACO – *Hans Peter Weikard*

17:30 – 18:30 Discussion on Hands-on help to run the agreed drivers-of-stability scenarios

19:30 *Social dinner*

International Workshop on "Numerical Climate Coalition Models: A Modelling Comparison Exercise"
January, 24th - 25th, 2013 - FEEM, Island of San Giorgio Maggiore, Venice, Italy

Friday, January 25th, 2013

09:00 – 09:30 *Breakfast*

09:30 – 12:30 **Working SESSION 3**

Chair: Ulrike Kornek

09:30 – 10:15 Presentation on NTU/TU - *Henry Tulkens*

10:15 – 11:00 Discussion of technical and modeling issues that need to be clarified

11:00 – 11:30 *Coffee break*

11:30 – 13:00 Discussion of paper outline, content, key figures, division of labor

13:00 – 14:00 *Lunch*

List of Participants

Valentina BOSETTI, FEEM and Bocconi University, Italy, valentina.bosetti@feem.it

Thierry BRÉCHET, Université Catholique de Louvain, Belgium, thierry.brechet@uclouvain.be

Carlo CARRARO, Ca' Foscari University of Venice, FEEM and CMCC, Italy, carlo.carraro@feem.it

Sergio CURRARINI, Ca' Foscari University of Venice and FEEM, Italy, s.currarini@unive.it

Johannes EMMERLING, FEEM, Italy, johannes.emmerling@feem.it

Johan EYCKMANS, Université Catholique de Louvain, Belgium, Johan.Eyckmans@econ.kuleuven.be

Melanie HEUGUES, FEEM, Italy, melanie.heugues@feem.it

Ulrike KORNEK, PIK, Germany, kornek@pik-potsdam.de

Kai LESSMANN, PIK, Germany, lessmann@pik-potsdam.de

Massimo TAVONI, FEEM and CMCC, Italy, massimo.tavoni@feem.it

Henry TULKENS, Université Catholique de Louvain, Belgium, henry.tulkens@uclouvain.be

Hans-Peter WEIKARD, Wageningen University, The Netherlands, Hans-Peter.Weikard@wur.nl

Zili YANG, Binghamton University, US, zlyang@binghamton.edu