

# NEWS

From 7 to 10 July 2015, an international scientific conference entitled “*Our Common Future under Climate Change*” will be held in Paris (UNESCO) in the run up to COP 21, the Conference of the Parties to the United Nations Framework Convention on Climate Change, hosted by France next December. (Find out more at: <http://www.commonfuture-paris2015.org>). In the same context, the CMA is jointly organizing an MPDD Chair side event on **10 July 2015** with the BECI (*Berkeley Energy and Climate Institute*) of the University of California, Berkeley. This conference will take place at MINES ParisTech from 9 am to 5 pm on the topic, “*Innovations in Decarbonization*”. The event has been accredited with an official “COP 21” label symbolizing institutional support from the ministerial steering committee presided by Ségolène Royal, French Minister for Ecology, Sustainable Development and Energy, which distinguishes initiatives that contribute to the momentum of COP 21. The morning of that day will feature presentations by advanced Master’s OSE students (CMA/MINES ParisTech), whose work this year has focused on the subject. Their concrete proposals for decarbonization highlight the fact that tackling the challenge at regional, sectorial and individual levels can bring pertinent, swift results. The following session, led by Nadia Maïzi (CMA), will feature a panel of experts - *the Carnegie Institute at Stanford, Mercator Research Institute from Berlin, IIASA, Melbourne’s Commonwealth Scientific and Industrial Research Organization, University of California, Berkeley* – to discuss the state of R&D and scientific and technical questions for implementing decarbonization solutions. To wrap up, the afternoon session, also led by Nadia Maïzi, will center

# CHAIRE News

The Modeling for Sustainable Development Chair newsletter



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**Overview of  
Chair day 2015  
the challenges  
ahead for COP 21  
News  
Publications**

**contents**



# NEWS

on the progress made by prospective models in their multi-scale versions and improving the plausibility of the long-term scenarios that they identify. Reconciling different scales (temporal, spatial, social) requires removing significant methodological obstacles, and these will be examined during the three afternoon sub-sessions with the aim of understanding:

- The political implications from global to local, with Daniel Kammen (University of California, Berkeley), Markus Blesl (IER Stuttgart)
- The impact of phenomena that follow different dynamics (several decades versus a few seconds) with presentations by Vincent Mazauric (Schneider Electric), Asami Miketa (IRENA) and Edi Assoumou (CMA/MINES ParisTech)
- The crucial role of individuals (for whom the future must be acceptable and desirable, in other words compatible with aspirations and behavior) with François Briens (CMA/MINES ParisTech), Jean-Michel Cayla (EDF) and Jean-François Mercure (University of Cambridge).

Coming soon:

**15 & 16 June 2015**, Paris – Towards an equitable low carbon development: a science policy dialog for COP21.  
**24 September 2015**, Sophia Antipolis - MPDD Chair / Advanced OSE Master's (CMA-MINES ParisTech) event  
**13 October 2015**, Paris – MPDD Chair / EDF event on the importance of long-term prospective for companies  
**22 & 23 October 2015**, Sophia Antipolis – CMA is jointly organizing the bi-annual international workshop of the International Energy Agency's Energy Technology System Analysis Program (ETSAP) with a session devoted to the work of the MPDD Chair.

## OVERVIEW of chair day 2015

### the challenges ahead for COP 21

Centered on a highly topical theme, this year's Modeling for Sustainable Development Chair Day illustrated the Chair's close involvement in issues concerning the highly awaited COP 21. The event took place on 2 March 2015 at MINES ParisTech with the theme "COP 21 and climate negotiations through prospective models". During the morning, young researchers working with the Chair made six contributions resulting from their prospective modeling on the theme, "Uses, Resources, Transition and International". They thus highlighted the role played by prospective modeling tools (IMACLIM-R and MARKAL-TIMES) in climate and energy issues. François Briens (CMA), who kicked off the presentations, gave a prospective take on the environment and climate in terms of re-politicizing the issue of "needs" and social change, as suggested by De-growth movements. Next, Florian Leblanc (CIRED) described how the IMACLIM-R prospective model was used to analyze the recent steep drop in oil prices. Then followed an approach based on the Monte Carlo method, which complements TIMES decision-aid tools, described by Paul Hugues (CMA), whose thesis centered on studying the economic integration of biofuels. Vincent Viguié (CIRED) presented his study of the impact of property taxes on urban spread. The last two presentations were by Sébastien Postic (CMA), who questioned the energy sector in Latin America in the context of climate negotiations,

and Meriem Hamdi-Cherif (CIRED), who looked at the sustainable development of transport in China. At the end of the morning, a round table featuring the Chair's directors, Nadia Maïzi (CMA) and Jean-Charles Hourcade (CIRED), and their partners, Mourad Ayouz (EDF), Vincent Mazauric (Schneider Electric), Christian Copin (GRTgaz), Isabelle Vincent (Ademe) and Gilles Croquette (DGEC), discussed "The role of prospective modeling in climate debates and corporate strategy choices". As well as justifying their interest and motivation in taking part in the Chair, all spoke of the importance of prospective modeling in the strategic thinking process. As an example, for GRTgaz, a new MPDD Chair partner, prospective modeling is a way of anticipating the future energy mix and should therefore be considered when drawing up long-term contracts; for ADEME, it evaluates the key decisive factors to make a hoped-for result concrete. During the afternoon, Nadia Maïzi and Jean-Charles Hourcade investigated "The technical and economic fundamentals of COP 21 in a tense situation" via, respectively, a regional breakdown of the 2°C target seen through technico-economic models, and a discussion on the advantages of cooperating on fair access to development and INDCs (Intended Nationality Determined Contributions). At the end of these presentations, Paul Watkinson, who heads the climate negotiation team at the department of European and international affairs for the French Ministry of Ecology, Sustainable Development and Energy, spoke of the challenges of preparing the forthcoming COP 21. Considering the different national

commitments, such as a GHG emissions peak for China in 2030, the European Union's proposal to reduce its emissions by 40% by 2030, and the United States' proposed reduction of 26% to 28% by 2025, spontaneous targets will be insufficient to reach 2°C. He said that these commitments will therefore have to be modified a posteriori. It also appears essential to foster interplay between all those involved: towns, private sector, communities, transport, agriculture, etc. Ultimately, the crucial point is to reach an agreement that is both legally binding and acceptable for all countries, including the United States, India and China. The final session of the day tackled the issue of a Green Climate Fund and looked at how to fund the energy transition, a subject developed by Michel Aglietta of the CEPII and Etienne Espagne from France Stratégie. They advocated low carbon investments and monetary funding with the aim of boosting growth in Europe. To make up the losses accumulated by Europe since 2008, and break away from self-maintained low growth, they said it was necessary to transform the growth system through ambitious, coordinated policies including an efficient European investment program on a major scale. This program, in line with the European Council's 20/20/20 commitments to the "energy climate" package, could give industrial coherence to the growth momentum. One way to kick start investments could be to apply a social value of carbon (SVC), which would redefine the carbon market and generate a policy to buy back carbon

assets guaranteed at this value. The credibility of the measure should however be based on reliable certification and a consolidated public guarantee. Lastly, Romain Morel of CDC Climat addressed the question of the Green Climate Fund. This fund receives private or public donations and redistributes them to development banks and developing countries to be invested in "green" projects. The Green Fund should therefore be considered as a policy tool designed to convince developing countries to make a greater commitment to environmental missions and help them do so.

# publications

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