BIRA-IASB - CLIMATE SESSION

Date and time Friday 11 September, 14:00-16:30
Location WebEx (link will be communicated to all participants)

PROGRAMME

14:00 – 14:15 **Welcome and introduction to this series of climate lectures**
by Dr. Martine De Mazière (BIRA-IASB)

14:15 – 15:00 **"Climate from a geologist's perspective"**
by Prof. Manuel Sintubin (Professor of Geodynamics, KULeuven)

15:00 – 15:45 **"From climate models to climate services"**
by Prof. Piet Termonia (Royal Meteorological Institute)

15:45 – 16:30 **"Belgian climate policy"**
by Mr. Peter Wittoeck (Climate Change Service, FPS Health)

See next pages for more detailed information.

CLIMATE FROM A GEOLOGIST'S PERSPECTIVE

Abstract

'Climate change is of all times', a classical phrase often heard when climate deniers try to trivialize the current anthropogenic global warming. Of course, this statement is a truism as a cow. But does it have any relevance in the current climate debate? Yes and no!

No, because the anthropogenic global warming is unprecedented in Earth's history. From an earthly perspective this anthropogenic disturbance may indeed only be one of the many disrupting events Planet Earth has endured during its 4.5 billion year turbulent history. And Planet Earth will definitively overcome this disruptive event. The question, though, is how humanity will cope with it. Will it be able to adapt? Or will humanity perish in a self-inflicted mass extinction?

Yes, because 'the past is the key to the future', a leading principle of any geologist. Climate disruptions, from hothouse events to Snowball Earth events, are common in Earth's history. Understanding these events helps us to image how our future world could look like, how we can adapt to a warmer world, and how we can mitigate the worst effects of this warmer world. Planet Earth indeed learns us that one thing has become inevitable: 'we boldly go where no man has ever gone before'! The world of the next centuries will be a warmer world, full of unpredictable climate vagaries, that humanity has never experienced, in particular during the last ten thousand years during which we were pampered with remarkable climate stability. The only difference with past disruptive climate events is that we as species have control on how that future climate will look like the coming centuries and millennia. Will it be a mild greenhouse world or will it be a scorching hothouse world … it's up to us!

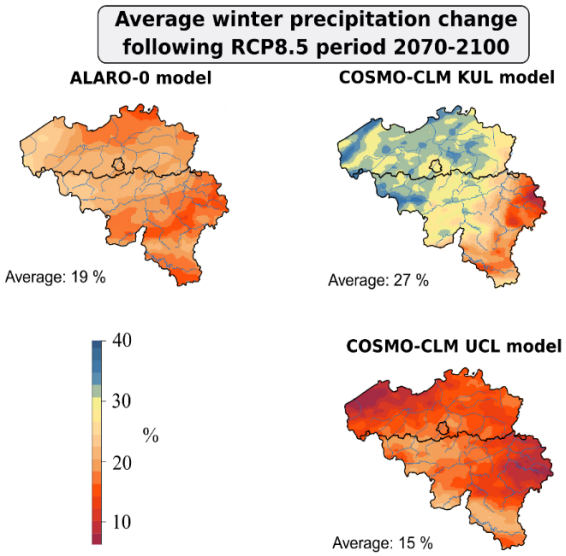
About the speaker

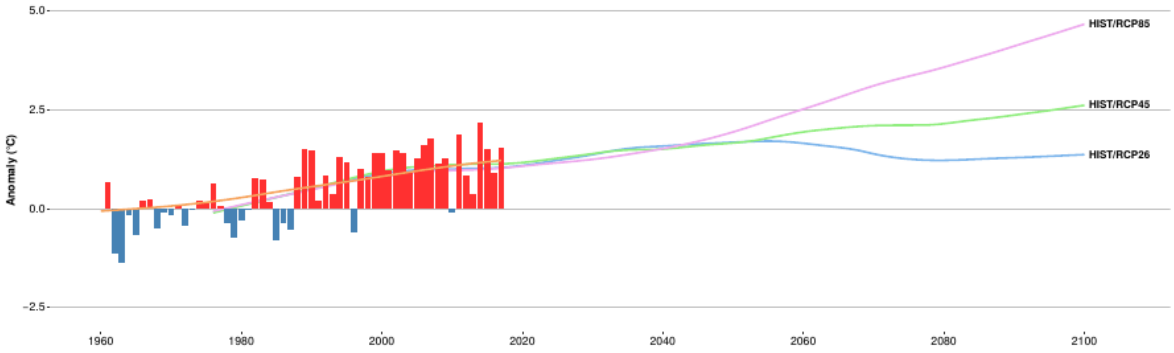
Professor **Manuel Sintubin** is Professor of Geodynamics at the KULeuven. In the current climate debate a geologist's position is often not really 'main stream'. This is because geologists have a peculiar tendency to look at the current climate issues our global society are facing, from an Earthly perspective. Two key elements influence that geologist's perspective. On the one hand, geologists start from a global Earth System perspective, in which humans are considered as a geological force interacting with the other forces that control the global Earth System. Also in the past, the biosphere has brought about unseen changes in the Earth's climate. On the other hand, geologists have a *'sea of time'*, because we realize more than others that Planet Earth doesn't work on human timescales, in particular with respect to the climate feedbacks. Geologists are used to think in millions of years. A century, let alone some decennia, is just a blink of an eye for a geologist. In this respect, a geologist tend to think about our future world in the centuries to come, rather that the shortsighted perspective of this century.

FROM CLIMATE MODELS TO CLIMATE SERVICES

Abstract

Knowledge about climate change is based on numerical models that simulate the atmospheric dynamics of the Earth system. In this talk the role of climate models within the context of the IPCC will be explained. It will be shown how this has been applied to the Belgian level in a former research project called CORDEX.be. In this project the Belgian modeling community joined forces to compute a small ensemble of high-resolution regional climate models (RCMs). The data generated by the RCMs were used to force more detailed local impact models. The methods to deal with the scientific uncertainties will be discussed. In particular, it will be shown how one can derive significant climate signals and climate information. In a second part of this talk the notion of climate services will be explained.





About the speaker

Professor **Piet Termonia** obtained his PhD in theoretical physics in 1997. Since 1999 he works at the Royal Meteorological Institute of Belgium (RMI) where he specialized in numerical weather prediction (NWP) and climate modeling. He carries out research in several domains of atmospheric modeling. Currently he is the Head of the Scientific Service Meteorological and Climatological Research of the RMI. He has led the CORDEX.be project that produced high-resolution climate scenarios for Belgium. He leads the ALADIN NWP consortium as the ALADIN Program Manager. He is a part-time professor at Ghent University, where he is one of the founders of the postgraduate program Weather and Climate Modeling. He teaches climatology, dynamic meteorology and atmospheric modeling and supervises several PhD students.

BELGIAN CLIMATE POLICY

About the speaker

Mr. **Peter Wittoeck** (°1966) holds the position of Head of the Climate Change Department of the Belgian Federal Public Service Health, Food Chain Safety and Environment, where he has been employed since 1996.

He holds a degree in industrial engineering (Industrial Engineering College CTL Ghent, Belgium) and environmental management (Ghent University, Belgium) and has been working on subnational, national, European and international environmental policy since the beginning of his career in 1990, in various capacities.

These include serving as environment officer with the Provincial Government of West-Flanders, scientific advisor with the Social and Economic Council of Flanders (SERV) and researcher at the Institute for the Study Center for Technology, Energy and Environment (STEM, University of Antwerp) and the Faculty of Law of the Ghent University, before joining the federal civil service of Belgium in 1996.

Since 2003, Mr. Wittoeck serves as head of a dedicated team of about 25 climate policy experts, civil servants committed to preparing and implementing Belgian, European and international climate policy, in close dialogue with all other actors in the field.

Among other responsibilities he has in that capacity, he chairs the Belgian Coordination Working Group on Greenhouse effect of the Coordination Committee for International Environmental Policy (CCIM-CCPIE), where the federal and regional governments of Belgium prepare common positions for the international climate negotiations.

He has been heading the Belgian delegations to the UNFCCC negotiations for about 15 years and represents Belgium in the Working Group for International Environment Issues (Climate Change) of the Council (Environment) of the European Union.