
Climate Change, the Science Policy Interface and Coastal Zone Management

Event

[Dinner Dialogue](#)

Date

5 July 2011

Speaker

Michael K. Orbach
Hans von Storch

How should coastal zones be managed to best adapt to the impacts of climate change, such as sea level rise? What is the severity of the threats involved, and what are the decisions and tradeoffs that must be made? How should the scientific community navigate the interface between science and policy? These questions and more were examined at an Ecologic International Riverside Chat that brought together Michael K. Orbach and Hans von Storch on 5 July 2011 in Berlin.

The Riverside Chat focused on the issue of coastal zone management in the face of climate change, as well as the role of climate sciences in policy-making and society. It was held under the auspices of the US Embassy in Berlin and framed by the project [Regional Adaptation Strategies for the German Baltic Sea Coast](#) (RADOST). The event convened an international and transdisciplinary audience, and took place as part of RADOST's international outreach module. Hans von Storch is Director of the [Institute of Coastal Research of the Helmholtz Center Geestacht](#) and Professor at the [Meteorological Institute of the University of Hamburg](#). Michael K. Orbach is [Professor of the Practice of Marine Affairs and Policy](#), and Director of the Duke University Marine Laboratory at Duke University's Nicholas School of the Environment. The event was visualized by French artist Pascall Venot.

Hans von Storch made initial remarks on the subject of "post-normal science", where "facts are uncertain, values in dispute, stakes high and decisions urgent".

He noted an apparent decoupling of public opinion in recent years from the growing consensus within the scientific community that climate change is occurring and, at least partly, anthropogenic in nature. He stated the belief that this was connected to a failure in communications from the scientific community regarding the public's questions on climate change. Compounding this are multiple competing knowledge claims on climate change, including a culturally constructed understanding largely created by the media. For the scientific community to communicate better, enhanced understanding of the various existing claims is needed, as is a clearer identification of the areas where disagreements exist and an increased focus on whether scientific information conveyed to the public is understandable. In conclusion, he contended that scientizing politics and politicizing science

is highly problematic, in that it necessarily involves the imposition of value judgments.

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Michael K. Orbach agreed with Dr. von Storch on the issue of scientizing politics, noting that science cannot state what "should be", as such assertions are inherently grounded in value judgments. Dr. Orbach then focused on the particular issue of sea level rise, noting projections that global mean sea level would increase by a range of 1-2m over the next century. Historical greenhouse gas emissions mean the world is locked into experiencing this permanent change of state, and consequently coastal communities will be forced to adapt. The problem, Dr. Orbach contended, is that such a change is unprecedented in the history of built human environments, and that existing legal edifices are based upon a static sea level. The essential decision that mankind will face will be whether to defend or abandon coastal communities. Navigating these decisions will be hugely challenging, given involve conflicting values and tradeoffs. As humans value coasts in different ways around the world (as reflected in law and policy frameworks), this process will necessitate difficult decision making, long term planning, and significantly enhanced facilitation capacities.

A lively discussion ensued, encompassing a wide arrange of topics. The "unsustainable" practices of the scientific community with regards to communicating scientific information on climate change to the public were examined, including the need to avoid sensationalizing the issue so as to maintain the public trust. Furthermore, it was noted that climate change needs to be addressed within the full array of challenges and stresses facing the planet, including demographic shifts and development issues. Differing opinions were also raised on the challenge inherent in adapting to 1-2m of sea level rise, as well as the timeline over which such adaptation should be implemented. Some expressed the need to begin adaptation immediately, citing the expectation that large tracts of property will need to be abandoned. Others preferred waiting to observe the severity of sea level rise while conducting extensive research and stakeholder consultations in the interim. The responsibility of the media in its capacity in shaping the cultural construction of climate change was also raised, as was the inadequacy of current political timeframes for producing adequate adaptation planning.

At the conclusion of the chat the group agreed that, with regards to the post-normal situation of climate change, the interplay between politics and science must change. Policy makers must acknowledge the inadequacy of current political timeframes, as the problems of climate change cannot be solved in a political cycle of four or five years. Additionally, though the scientizing of politics can be problematic, it can represent opportunities if new scientific information is used in a responsible way. It also became obvious that science is imbedded in specific cultural contexts, and so perceptions of problems and possible solutions differ. As such, climate change adaptation should focus on regional measures.

The Riverside Chat followed a lecture given earlier in the day by Michael K. Orbach at Ecologic Institute Berlin, entitled "Cultural and Historical Perspectives on Sea Level Rise: Our Migrating Coasts and Human Communities", which used an anthropological lens to address the challenge posed to coastal communities by sea level rise. Given the varying range of values humans hold towards the coast, and the immense scale and unprecedented challenge of the planning and adaptation activities that will be required, Dr. Orbach stressed the need for humans to acknowledge the severity of the threat posed by sea level rise, and to begin planning immediately.

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