Chameleon Research Group
Adapting Energy & Transport to Climate Change

Workshop on Barriers to Adaptation to Climate Change

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Documentation of the panel discussion: "Practical experience with barriers to adaptation"

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Introduction

In the last session of the workshop a panel discussion with practitioners from the private sector and different levels of policy making took place to check whether the outcome of the working group discussions and the prevalent issues identified there, are congruent with the main barriers perceived in practice. The practitioners were invited to provide insights into the kind of barriers they face in their field of work and which response strategies appear to be promising to address those barriers. Questions posed in the panel discussion related to the role of scientific knowledge and its applicability in practice. Further research needs and an efficient interchange between science and practice were also addressed in the discussion.

Participants

Dr. Mingyi Wang, German Insurance Association, Berlin – Mingyi Wang currently works as a consultant at the German Insurance Association (GDV), Berlin, in the field of property insurance and loss prevention. He is a member of various expert committees and lecturer at the German Insurance Academy (DVA) Berlin, the University of Cologne the Technical Academy Southwest (TAS) and at the University of Applied Sciences Kaiserslautern.

Dr. Heike Stock, Berlin Senate Department for Urban Development and the Environment, Berlin – Heike Stock is head of the unit Urban Development Planning – a “think tank” searching for new trends of urban development planning with main fields: new created living styles – cohousing, cross over generations, self-made housing; creative industries; green economy and climate protection and the relation of climate change to urban development. The urban development plan for Berlin shows a spatial analysis of urban heat areas, open space and green areas and qualities of waters. The plan suggests measures of adaptations.

Andrea Prutsch, Environment Agency Austria, Vienna – Andrea Prutsch joined the Department of Environmental Impact Assessment and Climate Change at the Environment Agency Austria in 2008. Her main field of expertise ranges from adaptation methodology and planning to policy relevant aspects of climate change adaptation, stakeholder involvement and adaptation communication. Andrea Prutsch is strongly involved in the adaptation policy process in Austria and supports the European Commission in the development of the European Adaptation Strategy (support project financed by DG CLIMA).

Annett Möhner, Secretariat of the UNFCCC, Bonn – Annett Möhner has worked for the Secretariat of the UNFCCC since 2004 in the area of adaptation. Her expertise includes climate policy, in particular in the area of adaptation and finance; information, capacity and financial needs of developing countries and multilateral and bilateral support for adaptation, development and disaster risk reduction. Most recently she has supported the implementation of the Cancun Adaptation Framework, in particular the Adaptation Committee.

Dr. Hans-Martin Füssel, European Environment Agency (EEA), Copenhagen – Hans-Martin Füssel works as project manager for climate impacts, vulnerability and adaptation at the European Environment Agency. Hans-Martin Füssel has 15 years of experience in climate change research and policy advice and has consulted UNDP, UNFCCC, WHO, IPCC, the World Bank, The European Commission and national governments on climate change. He served as author, review editor, and expert reviewer for the IPCC Fourth Assessment Report.

Barriers to adaptation in the respective working environment of the discussants

From the perspective of the insurance industry three barriers to adaptation are prevailing according to **Mingyi Wang**: The interactions between the objectives, measures and effects of adaptation are complex and very diverse; effects of implemented adaptation measures are rarely visible due to the long time horizon of climate change and the rareness of extreme events in a statistical sense. Second, the chain of argumentation for adaptation to climate change, from the objectives, over the strategies to measures, is not closed in comparison to fire and flood protection. There are no mandatory objectives and only partly legal requirements at present. Third, the uncertainty in the scientific models of climate change complicates the today necessary decision and investments to implement of the strategies for the future.

From the perspective of a city planner, **Heike Stock** stressed that climate change and adaptation seldom receive a high priority on the political agenda, because more (financially) pressing issues have to be dealt with. Furthermore climate change is a relatively new field to many people she works with. In order to convince people of the need for adaptation, the regional advantages should be emphasized. To reach practitioners, it is essential to choose the right language: simple and clear pictures of measures have to be communicated to place adaptation on the agenda. The lack of examples and experiences from other cities is an important barrier, because orientation by good-practice examples is missing.
According to Heike Stock the implementation of an adaptation measure is much more probable, if it serves other objectives of city planning besides adaptation as well: The planting of trees is widely perceived as an increase of life quality of the residents of the city, providing at the same time an important protection during heat waves and hot summers.

Annett Möhner from the UNFCCC discussed how the consideration of adaptation at the international level is dominated by questions of availability of and access to financial and technological resources. According to her, many developing countries see the insufficient and unpredictable adaptation funding provided by developed countries as an important barrier. Besides resources, she highlighted gaps in adaptation knowledge and called on the research community to address them. While adaptation spans the full policy cycle from assessment to planning to implementation and finally monitoring and evaluation, research so far has focused on assessing impacts and adaptation planning. In order to improve support to practitioners, Annett Möhner said that more research is needed during and following the implementation of specific adaptation measures to identify good practices and evaluate the efficiency and effectiveness of specific measures.

Andrea Prutsch presented a review of the development of an Austrian adaptation strategy in order to explain the practical barriers to adaptation from her perspective. The government gave a mandate to the Austrian Environment Agency to initiate a multi-stakeholder process to support the development process of a national adaptation strategy (NAS), involving about 100 institutions and conducting 20 workshops to gain insights into all relevant stakeholder perspectives. This process played a crucial role in awareness raising and capacity building among affected stakeholders. During this process, the Environment Agency managed to deal with a number of so called “barriers” (e.g. lack of resources) so that they did not negatively influence the making of the policy. Nevertheless, the barrier which the policy process faces at the moment is the approval of the NAS by the current government. Thus, a very pressing barrier to adaptation is the lack of political willingness, Andrea Prutsch points out.

Hans-Martin Füssel representing the European Environment Agency stressed that one of the most important barriers from a European political perspective was that a legal framework for climate adaptation issues was missing in some European countries, leading to unclear responsibilities.

Moreover, barriers arise from the fact that substantial uncertainty remains about the impacts of climate change at the regional and local level. Furthermore, there are no overarching and approved indicators available for measuring successful adaptation, in particular in relation to future hazards and to extreme weather events. This is particularly important as political decision makers often work with indicators due to their limited time capacity to conceive all aspects of a complex issue like adaptation. The lack of universally applicable best practice examples complicates decision making and negotiations about where, when and how deeply to become actively involved in adaptation projects. Financing of adaptation can be difficult because the economic benefits of many adaptation investments are hard to quantify. The EEA is hosting and further developing the European Climate Adaptation Platform (Climate-ADAPT, http://climate-adapt.eea.europa.eu/), to facilitate the provision of relevant information for adaptation to European, national and subnational policy makers.

After these short insights into the fields of work of the panelists and the identified barriers within these fields, Esther Hoffmann posed the question, whether the participants consider some barriers as specific for their policy level or area of responsibility. The discussion is summarized here according to the main barriers mentioned.

Awareness of a need for Adaptation

Due to uncertainty and longtime scales of climate change, Heike Stock explained, there is less awareness for these processes on the local level than on the global level. More illustrative examples and success stories of how climate change can be tackled on the local level are needed.

Concerning the global level, Annett Möhner added that awareness is high among those countries already affected by climate change impacts and that the issue needs to be raised among those who have the necessary knowledge and resources. At a national level, environmental ministries and agencies dominate the discourse on adaptation while ministries with more financial clout such as ministries of economics or agriculture remain outside. Increasing the budget for adaptation and ensuring leadership at the highest levels would enhance awareness and willingness to act, Annett Möhner points out.

On the European level, the need for legal obligations is intensely discussed, Hans-Martin Füssel explains. While some countries do not see a need for legal obligations for adaptation at the European level, such requirements are seen as positive by others. The European Commission is currently developing a European Adaptation Strategy, to be finalized in 2013.

Andrea Prutsch did not perceive a lack of awareness during the slow development of adaptation action. In case of Austria, Andrea Prutsch mentioned that the broad stakeholder involvement process raised the awareness for climate change and the need of adaptation. This “communication strategy” (although not named as such) of the Austrian Environment Agency has been proved to be very effective.

The importance of leadership for adaptation

The already mentioned challenge to set priorities in urban planning and development is strongly interrelated to the importance of leadership for adaptation issues. Heike Stock perceives implementation of adaptation measures as a participative process involving a great number of stakeholders (e. g. owners of real estate, commercial chambers). The success of this process depends on a professional communication of the issue by decision makers with sufficient responsibility and influence on the urban planning process. Only in this way adaptation can be included into the organizational plans and strategies. Heike Stock again points out, that it can be more convenient to “promote” adaptation measures under different labels (e. g. life quality in the city).

Mingyi Wang expressed the wishes for leadership and a methodological contribution of the scientific community for the practice, such as how the uncertainty of the modeling on climate change and its impacts can be handled in the short term and how this uncertainty can be reduced in the medium and long term. He illustrates with regard to risk management that until now, one can either use scenario techniques or try to find an agreement with stakeholders about how to handle uncertainty of climate change. However in order to make processes of risk management more effective, data collection and analyses have to be intensified and practicable indicators are to be developed.

Concerning both, the importance of awareness and leadership, Jochen Hinkel from the audience called for accepting a lack of awareness as there might be more urgent topics on the political agenda (e. g. the financial crisis) than adaptation to climate change. In response, Annett Möhner emphasized that attaching low priority to adaptation should be the result of an informed decision-making process rather than out of ignorance.

Uncertainty of Climate Change and the challenge to define common indicators

Related to this barrier to adaptation Mingyi Wang explained, that the important difference between the classical products and insurance solution to cover the consequences of climate change is the missing valid baselines and hence the certainty for trend projections. This data as valid calculation basis is required by law for the transfer of risk, because the risk management of the insurer is under financial supervision of authority. This situation causes some cautiousness to development and provide of appropriate products, although it could be expected that the insurers would push the policy to adaptation. Nevertheless, the German insurance industry contributed to the adaptation with their considerable financial and actively supporting of the research on climate change and will continue to do it.

In addition to the uncertainty of impacts, Annett Möhner added that the lack of sufficient indicators for monitoring and evaluating measures is a further barrier to adaptation. Very few adaptation projects have been evaluated. Results of these evaluations are very specific thus constraining a systematic analysis of the effectiveness and efficiency of various adaptation measures. The need for practicable indicators for structuring experiences and providing orientation was further discussed with the audience.

In this context, Lindsey Jones pointed out that the wish for quantifying indicators for adaptation (like the CO_2 emission level for mitigation) carries the risk of an undervaluation of soft measures. This position was supported by Maja Rotter and Hans-Martin Füssel, who emphasized, that the development and implementation of indicators is always connected with normative decisions as the objectives of the indicators as well as the target values depend on the interest of individuals or a group of society. Maja Rotter posed the question, who should define the goals of the indicators, which at the same time means, whose objectives and goals concerning adaptation should be measured.

This challenges to find indicators to evaluate the process of adaptation show an important difference between the discourses of adaptation and mitigation. In the discourse about mitigation, the emissions of CO_2 are used as a central indicator and target values can be formulated and discussed. For adaptation it is still an open question whether it is possible to create general indicators which could be applied in different countries with different policy systems.

Subsequently Richard Klein asked what lessons can be learned from the climate change mitigation discussion for the adaptation discussion: Are there similar barriers that have been overcome or are there barriers unique to adaptation?

Annett Möhner named the successful process of awareness-raising through the discourse on mitigation as an important example which has to be translated for adaptation. But she also remarked that benefits derived from adaptation are more difficult to promote, as adaptation measures are successful but less obvious when negative climate change impacts are not materializing, for example the absence of a drought or flood. Subsequently adaptation measures with visible co-benefits have higher chances of political success, Annett Möhner explained.

As a consequence, Johannes Klein finally pointed at the great advantages of integrating climate change adaptation into regular planning procedures (e.g. in urban planning) in comparison to treating it as an isolated issue. This position was strongly supported by Heike Stock referring to her experiences in urban planning.

After this range of barriers and possible response approaches was discussed by the panelists and audience, Esther Hoffmann asked the practitioners where they perceive further research needs and whether they see promising approaches to organize an efficient exchange between science and policy.

Research Needs and Science-Policy-Interface

Due to the need to gain proper financing for adaptation projects, Heike Stock sees low-regret adaptation options with co-benefits as the options with the highest political potential for implementation. In general the benefits of adaptation should be underlined and stressing barriers to adaptation should be avoided. She also perceives a need for better communication strategies to promote adaptation effectively (e.g. by good practice projects).

Annett Möhner agreed that communication is important to overcome barriers of adaptation. In terms of additional research, she called for: a bigger involvement of the social sciences; research on the interactions between different adaptation measures and between adaptation measures and other policy decisions; and systematic reviews of local and regional adaptation projects that are under implementation or have been completed with a view to identifying best practices. She requested scholars to present their adaptation research results at the international level and to take part in and inform the international political process. Finally, Annett Möhner saw a demand for research results to be presented in easy step-by-step guides for adaptation practitioners.

Andrea Prutsch had a general recommendation for scientists involved in adaptation research: Assumptions made in studies and the scientific lens chosen should be clarified in more detail. She also invites researchers to draw more concrete recommendations for the future by evaluating already conducted adaptation projects.

For Hans-Martin Füssel, clarification of those aspects of adaptation policy that are unique, compared to other long-term policies, is important for providing guidance on developing good adaptation policies. Moreover, he is very interested in research about how strongly good adaptation practice depends on the political and institutional context in a region, and the scale of adaptation.

Concerning the further development of the science-policy exchange all panelists declared that there is a broad willingness to take part in a continued dialogue with science on their political level and fields of responsibility. In this way some overarching barriers may be identified and response strategies could be developed that potentially solve a number of specific barriers. Finally Hans-Martin Füssel appreciates that there is no great interest of the workshop participants to develop completely new adaptation theories isolated from the existing (social science) literature. He concludes that adaptation and other fields may share many common points and it would be worth to explore them.