



**FONAS Jahrestagung 2010 in Osnabrück**

*(Bild: Markus Kohler)*

10 Jahren umfasse, würden auch andere Optionen, wie die Laufzeitverlängerung älterer Anlagen (>40 Jahre) diskutiert. In Europa gibt es zur Zeit nur zwei Neubauten, in Frankreich und in Finnland. Mehr als 40 Anlagen werden dagegen in asiatischen Ländern errichtet. In den westlichen Ländern bestehe derzeit nur wenig Erfahrung mit den Baukosten für eine neue Anlage. Unklar sei auch, welches Niveau an Sicherheitsanforderungen zu erfüllen sei. Nach wie vor handele es sich bei der Kerntechnologie um ein komplexes System, das vielfach noch nicht vollständig verstanden werde. Die Betriebserfahrung habe gezeigt, dass kritische Ereignisse (Materialfehler, Kühlmittelverluste, interne Auslöser wie Feuer oder Explosionen, externe (Erdbeben) bis hin zu menschlichen Fehlern) nicht auszuschließen seien.

Aufgrund dieser Probleme und der Tatsache, dass es bislang keine „revolutionären“ neuen Reaktoren (IV. Generation) gäbe, existiere seiner Einschätzung nach keine Renaissance der Kernenergie.

Im Anschluss an die FONAS-Mitgliederversammlung endete die Tagung.

*Ulrike Kronfeld-Goharani*

**Report on the international conference “Climate Change, Social Stress and Violent Conflict”**

“Struggle for water, hunger revolts, climate wars” – around the Copenhagen climate summit the media increasingly drew ties between climate change and conflicts. However, there are still significant research needs. How big of a threat is climate change for social stability? Where are the hot spots? Which conclusions can be drawn for policy makers?

To discuss these questions, more than 50 experts from 25 nations met at the conference “Climate Change, Social Stress and Violent Conflict” at the KlimaCampus of Hamburg University in November 2009. Thereby, the conflict-relevant impacts of climate

change were examined from different perspectives using applicable methodical approaches.

Migration as a possible reaction to aggravating environmental conditions was explored in various contexts. In general, Cord Jakobeit and Chris Methmann (both Hamburg University) noted that current estimates for the number of refugees lack a solid scientific basis. Koko Warner und Lars Wirkus from the United Nations University in Bonn stressed the importance of local institutions when handling migration in Africa. According to Úrsula Oswald Spring (National University of Mexico) droughts intensify “low intensity wars” at the border between the United States of America and Mexico. Both studies pointed to the difficulty of distinguishing the impact of climate change on conflicts from socioeconomic factors.

More obvious are the effects of changing environmental conditions on the societal arrangement in northern Kenya. Here, Beth Njeri Njiru (Kenyatta University Nairobi) showed how a combination of extended droughts and heavy rain falls can lead to violent disputes between pastoral and farming communities over a decreasing portion of fertile land. According to Francis Gachathi (Kenya Forestry Research Institute) alternative livelihoods such as the plantation of gums can help in this matter to reduce resource pressure as he showed for the northern drylands in Kenya. Possible ways to strengthen vulnerable parts of the population in growing cities were outlined by Paul Mukwaya (Makerere University Uganda) using the catastrophe management in Kampala as an example. In Bangladesh floods and storms threaten the livelihood of several millions of people. Interviews that were conducted by Sujana Saha (Norwegian University of Science and Technology) among the population of slum areas in Dhaka city indicate that the flooding significantly increases the social stress of the poor population and contribute to gunfights. Mustafa Saroar (Asian Institute of Technology) explored the climate awareness in Bangladesh in broader terms linking it to the adaptation efficacy of the affected people. Similar work was done by Ruchi Mudaliar (Indian Institute of Forest Management) who chose a psychological perspective to access behavioral patterns related to climate stress in coastal India. After analyzing a country known for war but not for suffering under climate change, Achim Maas (Adelphi Research Berlin) concluded “that the risk of climate change contributing to armed conflicts in Iraq is comparatively high”. Analog to Kenya, droughts seem to play a significant role here. In contrast, population pressure and social inequality are the major driving forces for routine violence in Java as stated by Mohammad Zulfan Tadjoeiddin (University of Western Sydney). Further case studies focused on the effect of water in the Israel-Palestine conflict (Clemens Messerschmid, Tel Aviv) and the Mediterranean area (Hans-Günter Brauch, AFES-PRESS), on the role of protected natural areas as a refuge for armed forces in Columbia (Guillermo Andrés Ospina, Universidad del Cauca) and on resource conflicts over oil

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and gas in the Niger delta (Felix Olorunfemi, University of Cape Town).

Aside from these qualitative studies, a number of quantitative studies were presented. By utilizing climate data and their own global conflict data base, Halvard Buhaug (International Peace Research Institute Oslo) and Ole Magnus Theisen (Norwegian University of Science and Technology) tried to grasp the coherence between climate change and conflict. Josh Busby and Todd Smith from the University of Texas demonstrated how geographic information systems can help to identify regions ("hot spots") in Africa which are prone to climate change. Accordingly, states in the Sahel as well as the north and south of the Democratic Republic of Congo are particularly threatened by a combination of factors such as physical exposure and population density. With the support of satellite data Pedram Rowhani (McGill University Montreal) showed that malnutrition is a conflict factor in the Horn of Africa.

The location and the context of social instabilities worldwide are captured in a comprehensive project called SPEED at the University of Illinois. Peter Nardulli gave an insight on how the project documents and evaluates global news reports about demonstrations, assassinations, riots and similar events. Such data is used by research groups like CLISEC (Climate Change and Security) in Hamburg who study the constellation of climate change and security using integrated approaches. For example agent-based modelling and social network analysis are utilized to determine the response of actors and societies to changing environmental conditions. A related approach was presented by Jasmin Kominek (Hamburg University) who explored the potential of path dependencies to find problem solving or intervening actions.

The theoretical approach to the conference topic highlighted different aspects. Anastasios Karafoulidis (National and Kapodistrian University of Athens) focused on mechanisms within the public debate while Beniam Awash (Binghamton University) promoted a political ecology approach. Julia Trombetta (Delft University of Technology) noted that the "initial interest for conflict induced by climate change was replaced by a focus on resource scarcity". Ravi Bhavnani from Michigan State University discussed the interaction of resource scarcity and resource abundance. Closely related was the debate on the securitization of climate change which refers to an interpretation of climate change as a security problem. According to Angela Oels (Hamburg University) and Delf Rothe (Helmut Schmidt University Hamburg) this interpretation entails the danger of perceiving those suffering from climate change as a threat. Avinash Godbole (Institute for Defense Studies and Analyses, New Delhi) argued that this perception is not helpful since climate change can only be addressed through regional and multilateral cooperation. "A political solution is urgently required" stressed Linda Wallbott (Johann Wolfgang Goethe University, Frankfurt/Main). Using the Persian Gulf as an example Dennis Kumetat (London School of Economics and Political Science) added that an integration of both governance and science perspective is highly important.

These aspects became also apparent during the public panel discussion which brought together peace researchers, diplomats, political advisors and representatives of the German armed forces. The issue of social stability was discussed controversially. In contrast, all participants of the panel (Michael Brzoska (Hamburg University), Alexander Carius (Adelphi Research Berlin), Heinz-Dieter Jopp (Führungsakademie der Bundeswehr, Hamburg), Bo Kjellén (Stockholm Environment Institute), Úrsula Oswald Spring) agreed that the military is an unsuitable instrument to deal with climate change. The presentation given by Steve Wright (School of Applied Global Ethics, Leeds) illustrated the harm done to humans when breaking up demonstrations or securing borders. Therefore, it is important to reform and to strengthen mediating institutions such as the United Nations, as ambassador Bo Kjellén and Janani Vivekananda (International Alert, London) pointed out. Giving options of cooperation in the energy and water sector as an example, Alexander Carius stressed that climate change could evolve from a destabilizing „threat multiplier“ to a stabilizing "peace catalyst". Strategies to enhance this process were discussed by Oli Brown from the International Institute of Sustainable Development. Frank Biermann (Vrije University Amsterdam) urged for a "global adaptation governance", which would allow for a faster and more effective response to the challenges posed by climate change.

The broad variety of conference topics, perspectives and methods met the complexity of the subject-matter. Regardless of the different contexts, the presented case studies also shared some common ground. First, it generally turned out to be difficult to distinguish the impact of climate change from socioeconomic factors. Second, in none of the cases was climate change the sole reason for social instability or violent conflict. It rather functioned as an aggravating force which strengthens the perception of climate change as a „threat multiplier“. Further, the conference showed that significantly more research is needed especially to validate the linkage between climate change and conflict. However, promising approaches are recognizable in this regard. The theoretical examination of the conference topic sensitized the participants for the debate on climate change and conflict. It also showed the danger of political instrumentalization which could turn climate change into a justification for the use of military force. With upcoming climate change talks in mind, states instead have to push for cooperative solutions for instance in the energy sector. When climate change is concerned, exchange and cooperation beyond borders is essential, as the conference demonstrated.

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*Jürgen Scheffran, Michael Link and Janpeter Schilling are members of the research group Climate Change and Security (CLISEC) at the KlimaCampus of Hamburg University and the organizers of the conference. Further conference documents can be found on the website: <http://clisec.zmaw.de> and in an edited book to be published in 2010.*