



Prof. Beate Ratter



Ratter's team at the Helmholtz Zentrum Geesthacht



B. Ratter together with colleagues Phil Steinberg (US), and Peter Billing, (DK), at a Primary School in Hualin, Taiwan; photos: private

Interview with Prof. Dr. Beate Ratter, Mai 2011

Beate Ratter has been a Professor at the Institute of Geography at the University of Hamburg and Head of the department "Human Dimensions of Coastal Areas" at the Institute of Coastal research at the Helmholtz-Center Geesthacht for the past three years. The interview was conducted in English.

What have been the high points in your professional life so far?

There have been a few. I worked on research projects on the Law of the Sea and resource management issues in the Caribbean spending some time on different islands. For my habilitation thesis, I visited Canada and studied different approaches to environmental protection and management with special focus on the environmental perception of the inhabitants. After that, I led an international project on the Trilateral Wadden Sea Cooperation at the World Wildlife Fund for Nature (WWF). I was a guest lecturer at the Universidad Nacional, Sede San Andrés, in Colombia, at McGill University in Montreal, Canada, and more recently at the National Taiwan Normal University in Taipei, Taiwan. I held a chair for Intercultural Geography at the Johannes Gutenberg University in Mainz from 2002 to 2007. Since October 2007, I have been a Professor of Geography at the University of Hamburg and have also been appointed Head of the Department Human Dimensions of Coastal Areas at the Helmholtz-Center Geesthacht (HZG).

What is your main contribution to CliSAP?

I contribute in four fields:

- a) a joint project with marine biologists to analyse the impact of climate change on shrimp fishing on the North Sea Coast;
- b) a Flexpool¹ project with Professor Irene Neverla, from the Institute of Media and Communication Sciences, on the 1962 Hamburg storm surge and its impact on current discussions on climate change in the media, politics and the public at large;
- c) the organisation of two teacher training workshops, one on "Climate Change and the Coast" and, together with Professor Jürgen Böhner, another on "Climate change and Climate Impact";
- d) and the development of a new gender action plan for CliSAP.

In what ways has CliSAP helped you most?

CliSAP helped me to get into contact with new disciplines and colleagues to foster interdisciplinary work on the social impacts of climate change.

What can climate science learn from analyzing local contexts such as Hamburg?

The case study of Hamburg – especially the big storm surge of 1962 – shows how geohazards shape mental constructs of disasters in society. This is important not only in understanding the role of the media in society but also in better understanding the interplay of society, policy and the media. A hazard only becomes a disaster when an extreme natural event meets an unprepared or vulnerable society. This is true not only for so called Third-World countries like Haiti but also for industrialised countries like the United States in the case of Hurricane Katrina. The most recent events in Japan show that even presumably prepared and non-vulnerable societies can be disaster prone in case of coupled, complex hazards – earthquake, tsunami and the impact on the nuclear power stations. Security is a relative concept.

In our research project we investigate hazard cognition, understood as the psychological result of perception, learning and reasoning. Central in this context is the perception of geohazards. And perception has a practical implication – without knowing what people perceive one can hardly develop a suitable hazard management plan. People who fail to perceive hazards as threats to their way of life are not usually prepared to actively involve themselves in the adaptation of management strategies to combat them. Climate change is a special case in this context because it is a gradual, slowly evolving process. Moreover, it is hard to specify its impacts and outcomes. However, only if people acknowledge climate change as a threat to their personal life, will they be prepared to proactively adapt to future challenges. I think Hamburg can teach us a lot in this respect.

What is the role of geography in the framework of climate science?

Climate is usually measured in a certain region of the earth. If translated into weather phenomena, climate happens on a regional and local scale, but it is only of interest when it shows an impact on societies. Geography is a spatial science dealing with the interaction of natural and social systems on different scales. This human-nature interaction, which is really how we influence, deal with and adapt to future changes, happening in specific places within specific societies. Therefore, the geographical perspective on the impact of climate change on societies is local/regional and is spatially differentiated. It focuses on the interaction of societies and natural systems in specific places and in specific contexts.

Do you think that you are a role model for your students?

I shouldn't be! However, I think my professional attitudes – diligence, perseverance and curiosity could be.

What would you consider the most significant achievement in your career?

That I still enjoy what I am doing!

When you look back in time, what do you consider the most significant or exciting developments in geographic research with regard to climate?

In my view, the most promising and positive development in recent geography is the return to the understanding of geography as an integrated and integrative discipline combining physical and human aspects. In this context, an important contribution has been the theory of complexity which bridges not only disciplines and perspectives but codes and communication of disciplines. The basic concepts of the theory of complexity help to analyse natural and social systems. It is not only the flap of the butterfly which can create a hurricane. It is the emergence of human interaction which can lead to major changes too. Climate scientists use non-linear, dynamic concepts for their modelling. Geographers can assist in understanding the social interaction with nature, the socio-spatial implication of climate change and transfer this understanding into management concepts for future development.

What do you think is the role of science within society?

Asking questions and searching for possible explanations of indistinct phenomena. However, there is not ONE science – I am convinced that different sciences have different tasks and obligations. For geography, I follow Johan Galtung² who once phrased the term of "three-pillared" science – theory, empirics and strategic planning – analysing, understanding and managing. Geography in this instance is an applied science, tasked with developing strategic measures for managing future development.

Do you see a rising influence of politics or the economy in climate science?

If there is a rise, then only because the topic of climate change has become so vital that everybody has to deal with it. Politicians ask

for decision support, hence they demand "answers" to the issues they are supposed to address. The economy serves the market, so to a certain extent politicians are driven by market forces and customer demands too. I often give my students the example of surfactant-free detergents. Initially, leading companies considered they would need 20 to 30 years to develop them. However, the demand in Germany in the 1980s grew so efficiently that it only took three years for normal stock in ordinary supermarkets to be basically all surfactant-free. In a nutshell, new developments call for new understandings and in consequence for new tasks in science.

What constitutes "good" science?

Impartial, self-reflective, critical, creative, free from plagiarism, honest.

How would you assess the present situation of women in climate sciences?

There is no big difference between the situation of women in climate sciences and other natural sciences. Women remain under-represented and over-exploited. Some of my assistants gave up their science careers because they did not want to fight the harsh struggles in science circles. When this happens, I always ask myself if I am on the right track. One can say that the majority of women are less career-oriented. I think gender equity would be an advantage in any social group because it makes places more civil and creative – including scientific institutes.

What would be your advice for young women and men who are contemplating going into climate science?

Do what you are interested in but do not do it half-heartedly. Be curious and ask inconvenient questions.

What would you do with an additional million Euros for your research?

I would support the "Slow Science" movement, moving away from publishing-driven, hastily-prepared research topics. Instead, I'd like to spend more time reflecting, discussing, and thinking. I could imagine establishing a kind of Think Tank with a selected interdisciplinary (ideally intercultural) group of good, reliable, inspiring and inspired staff. With this Think Tank, we could work not only on climate change issues but in a broader sense on sustainable regional development and future challenges.

A tempting topic which currently attracts me is swarm intelligence. This is a fascinating topic attached to the theory of complexity based on the analysis of non-linear, dynamic systems behaviour. It is interesting to find out how swarm intelligence can help to explain social behaviour but also to find out why people do not behave according to their insights. What are the pitfalls for precautionary behaviour in different societies? This is especially interesting in the context of an intercultural comparison of how cultural framing has an impact on collective behaviour.

¹ CtiSAP provides flexible funds for integrated activities. The so-called flexible pool projects, or Flexpool, cut across different research areas and provide new links between existing groups.

² Johan Galtung (born 24 October 1930) is a Norwegian sociologist and a principal founder of the discipline of peace and conflict studies.

The interview was done by Prof. Dr. Hans von Storch, head of the Institute of Coastal Research at the Helmholtz-Center Geesthacht and Jun. Prof. Dr. Mike S. Schaefer, head of the working group "Media Constructions" at the KlimaCampus Hamburg.