

PhD Project: ‘Normal’ and ‘abnormal’ climates: understanding their social, psychological and statistical constructions

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A conventional meteorological definition of climate is an aggregation of weather over a specified period of time, a definition that can be used to isolate normal or abnormal weather in a statistical sense. Individuals, however, construct their expectations of climate ‘normality’ in different ways. Direct experiences of weather, individual and social memory of past weather and meteorological data all contribute and interact to constitute a person’s mental definition of climate (Meze-Hausken, in press). And these interactions are shaped by wider cultural narratives about changing and future climates, narratives shaped in turn by scientific understanding and media practices (Hulme et al., in press).

Definitions of normal and abnormal weather, and expectations of future climates, become increasingly important under conditions of climate change and as societies, organisations and individuals are encouraged, or perceive the need, to adapt to such changes. While adaptation goals, processes and outcomes have received considerable attention from researchers in the UK (e.g. Adger et al., under revision), there is less understanding of the ways in which people’s definition of ‘normal’ weather and their expectations of future climate are shaped by the above interactions and of what such constructions signify for the success or otherwise of adaptation processes and actions.

This PhD project will investigate the ways in which the public’s definitions of ‘normal’ and ‘abnormal’ weather and their expectations of future climate are constructed, in particular seeking to understand the relative roles played by memory, direct experience and media-shaped and culturally-interpreted scientific narratives of climate change. The primary empirical evidence will be based on questionnaire surveys (soliciting people’s perception of recent seasonal weather) and focus groups in Norfolk and one other UK region, placed in context through the analysis of local meteorological data, media discourses and scientific depictions of present and future climate. The research will contribute to wider debates about public perception of and discourses about climate change (e.g. Lowe and Lorenzoni, 2007) and to our understanding of the relationship between organisational and individual adaptation.

The project will apply a combination of social science methods (surveys, focus groups, content and discourse analysis) and statistical analysis of meteorological data. The results will be of relevance for organisations such as UKCIP, Defra and the Environment Agency. This project would suit a graduate student from geography, environmental sciences, psychology or sociology.

References:

- Adger, W.N., Dessai, S., Goulden, M., Hulme, M., Lorenzoni, I., Nelson, D., Otto-Naess, L., Wolf, J. and Wreford, A. (under revision) Limits and barriers to adaptation **Climatic Change**
- Dessai, S., Hulme, M., Lempert, R. and Pielke, R. jr. (in press) Climate prediction: a limit to adaptation? Chapter in, **Living with climate change: are there limits to adaptation?** (eds.) Adger, N.W., Goulden, M. and Lorenzoni, I., Cambridge University Press, Cambridge
- Hulme, M., Dessai, S., Lorenzoni, I. and Nelson, D. (in press) Unstable climates: exploring the interplay between statistical and experiential constructions of climate **Geoforum**
- Lowe, T.D. and Lorenzoni, I. (2007) Danger is all around: eliciting expert perceptions for managing climate change through a mental models approach **Global Environmental Change** 17(1), 131-146
- Meze-Hausken, E. (in press) On the (im-)possibilities of defining human climate thresholds **Climatic Change**