

Environmental history

## Flooding and Fleeing

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**In a kind of commentary on the Kyoto Protocol, researchers at the Rachel Carson Center are studying historical examples that illustrate the scale of population displacement that climate change can bring about.**



*Last house on Holland Island in Chesapeake Bay (Foto: baldeaglebluff / www.flickr.com)*

**A new term is coming into fashion, "climate refugees". Do they really exist, given that the increase in atmospheric carbon dioxide and the global warming trend – which the international community hopes to slow down with the extension of the Kyoto Protocol – is a worldwide phenomenon? Or is the word a rather dubious attempt to link climate change semantically to the refugee problem as a whole?**

**Uwe Lübken:** The term is indeed controversial, because it quite simplistically extrapolates from an expected increase in the frequency of extreme events such as severe storms, flooding and droughts to the phenomenon of migration. Over the past several years, research has shown that whether or not people at risk choose to flee depends on a wide variety of factors.

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**Nevertheless, the asylum laws in Scandinavian countries now take displacement due to climate change and environmental disasters specifically into account.**

So far, they have few, if any, climate refugees. Most other States are opposed to incorporating such a category into their asylum laws. All in all, it is more in the nature of a theoretical debate.

**You are supervising a project that is systematically examining environmentally induced migration over the centuries and in all world regions. Has the topic been overlooked by historians?**

There have been lots of case studies. In our Climates of Migration project, researchers at the Rachel Carson Center and the Institute of Advanced Studies in the Humanities (KWI) in Essen want to get an overall picture of the diversity of environmentally induced population movements, in the hope of discerning common patterns. The most recent case that has been widely discussed is Hurricane Katrina. When the storm hit New Orleans, dams burst and low-lying areas in many parts of the city were inundated. Large numbers of the inhabitants were forced to leave, and many of them have yet to return. There was a certain degree of congruence between flood level and position in the social hierarchy: Those worst hit belonged to the marginalized sectors of the population. And, in addition to the purely environmental phenomena, factors like social vulnerability and racist social structures played a part in that. Our project will, in particular, explore these kinds of links between environment, society and forced migration.

**The USA has seen many disastrous floods in its time.**

Indeed. For example, after the Ohio River broke its banks in 1937, flooding cities like Cincinnati/Ohio and Louisville/Kentucky, many areas where poor Whites and African Americans had lived were simply abandoned. Large numbers of people were left without infrastructure and basic services. In effect, the areas worst affected were given up by the urban authorities. Such disasters often gave urban planners a welcome opportunity to "relocate" whole population groups. The wish to modernize the urban landscape and accommodate more motor traffic often coincided with plans to reorganize the social fabric of the city. Another example of environmentally motivated migration, which immediately occurs to me as an expert on American history, is the one provoked by the great drought of the 1930s, which forced people to leave the dustbowl of the Southern Plains, and move to California.

**Migrations caused by droughts and famines also occurred in Europe.**

Of course. Probably the best-known case is the mass exodus from Ireland following several catastrophic failures of the potato crop during the mid-1840s. Here in Munich, however, we focus mainly on the connections between migration and natural disasters, like the monsoon floods in Bangladesh. In the Bay of Bengal, sedimentation processes repeatedly lead to the formation of large, but ephemeral, new islands, which succumb to erosion within decades. These islands serve as havens for the marginalized. Here environmental and social vulnerability meet. This kind of case can be very instructive. My colleague Ina Richter is studying the population history in the

Chesapeake Bay area, the largest tidal estuary on the coast of the US, about an hour's drive from the nation's capital, Washington. Over the past 150 years, several islands in the Bay have disappeared beneath the waves. Here one can follow how people cope with creeping change. When do they become aware that their world is shrinking? When do the first ones decide to leave? Do the migrants retreat to the next island, or do they move straight to the mainland? Can tipping points be identified?

**You are also studying how people react to environmental threats in a number of contemporary cases?**

Rebecca Hoffmann, who is an ethnologist, has just spent a year on Chuuk, a small island state in Micronesia. She was able to observe how the islanders are reacting to the threat of climate change, and how they may even make use of historical experiences from earlier episodes of sea-level change. The inhabitants themselves are pretty mobile; they have relatives on neighboring islands, and even in the US, partly because Micronesia is politically affiliated with the USA. At the same time, they are deeply attached to their homeland, and all of those who would be willing to leave said that they would definitely return. Chuuk is a microcosm, but if things turn out as many people expect, whole States will cease to exist. This will destabilize whole societies, because social orders are not easily transplantable.

**You hope to distill some general patterns from your work on representative examples of environmentally driven migration. What have you learned from your set of historical examples so far?**

The possible extent of climate-induced migration is difficult to predict. It largely depends on whether or not the regions most affected by the changes are in a position, or are given the resources, to enhance their resilience and protect their populations. And even if that fails to happen, migrations will probably target the nearest refuges first. People will move to the next island, the mainland, to relatives who live in a less threatened area or to refugee camps. That is more likely to happen than the "flood" of refugees to the Western world that many fear. At all events, current debates will not get very far without recourse to historical patterns of vulnerability and resilience. The multiplicity of factors that can have an impact on regeneration after natural disasters is illustrated by a comparison between two earthquakes on the island of Sicily. The city of Messina was hit by a quake in 1908, but recovered quite well, and actually prospered afterwards. On the other hand, the Belice Valley, an impoverished country district, hardly recovered at all from the effects of the tremors that struck it in 1968.

**Fifteen years ago this week, the international community adopted the Kyoto Protocol, whose goal was to limit the rise in carbon dioxide emissions and reduce the pace of human-made climate change. The delegates in Doha have just agreed to extend the Protocol until 2020. Meanwhile, climate researchers are forecasting more alarming scenarios.**

Without doubt, anthropogenic climate change will have a huge influence on the decisions made by millions of would-be migrants. What concrete forms the resulting migrations may take depends on a great variety of factors. I believe it is very likely that we will see a broad spectrum of migratory behavior – from the migration of individuals through movement of family groups to relatives elsewhere to the relocation of whole cities. I regard the notion of waves of climate refugees battering the coasts of the industrialized world as highly questionable. These fears probably have more to do with Western hysteria over migrants than with the real problems we face.

*Interview: math*

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