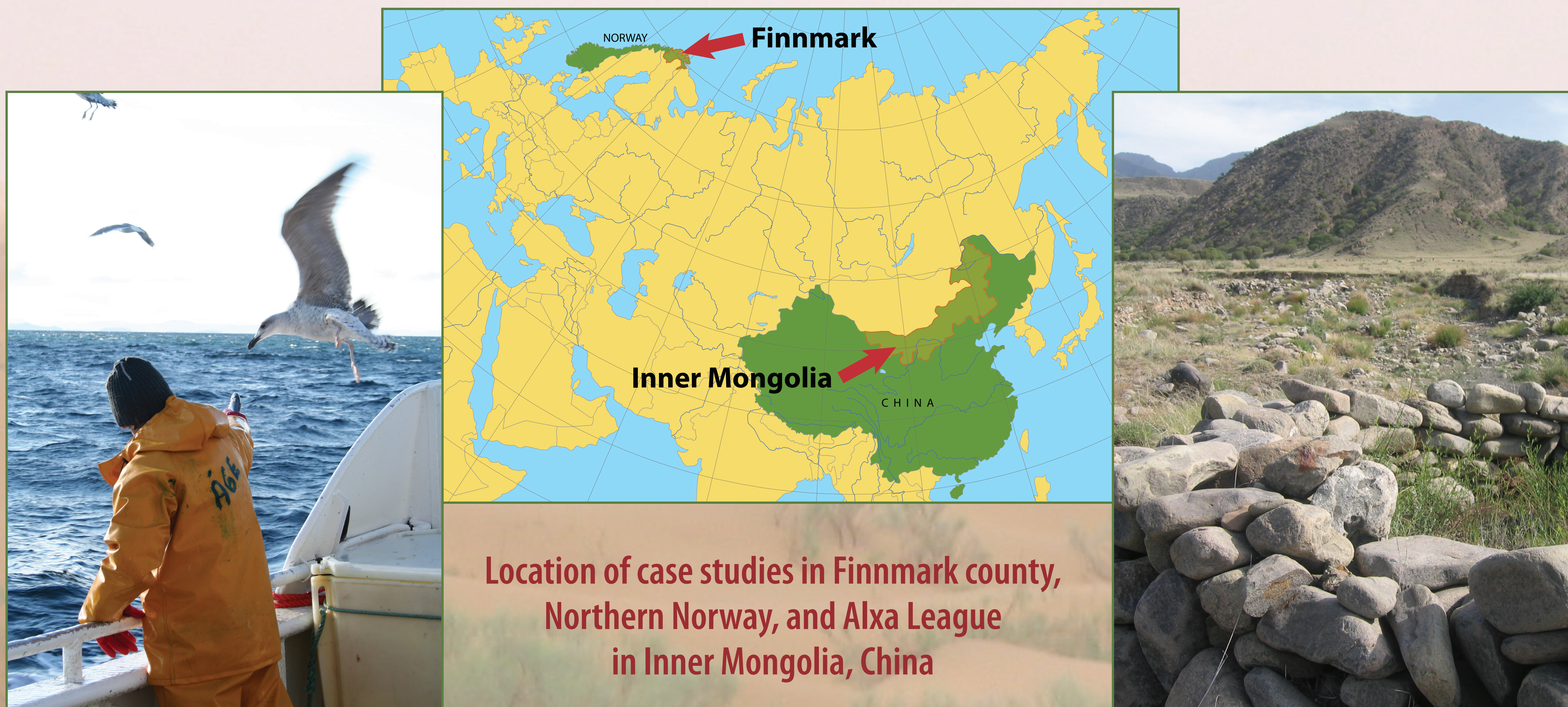


# Contexts for local adaptation: research challenges and considerations

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Fishing for King crab in Lebesby, Northern Norway (© cicero 2007).

Helan Mountain Nature Reserve in Azuo Banner, Inner Mongolia, China (© cicero 2007).

Location of case studies in Finnmark county,  
Northern Norway, and Alxa League  
in Inner Mongolia, China

## Context for research on local adaptation to climate change

Our research is based on the assumptions that:

- Climate change is one of a range of factors driving change at the local level
- Adaptation research must be relevant to the communities in which it takes place
- Different approaches to adaptation research may yield different answers to questions such as:

- *Who and what are vulnerable to climate change?*
- *What salient social, economic, cultural and environmental values may be at risk?*
- *What kinds of climate change adaptation efforts are needed to protect important values?*

## Research considerations and challenges

Research on local adaptation to climate change requires:

- Interdisciplinary analysis
- Integrating data and understanding processes across temporal and spatial scales
- Incorporating different knowledge domains
- Building in comparative research elements
- Thinking about the range of applications and users of the research outcomes

## Exploring values at risk using examples from Northern Norway and Inner Mongolia:

### Finnmark, Northern Norway

**Research approach:** Bottom-up research approach in which stakeholders themselves define the focus of research on vulnerability and adaptation and what it means in a local context.



**Context:** The Barents Sea region is a complex, coupled social-ecological system undergoing rapid change. The region supports some of the world's most important commercial fish stocks, and is also a centre for significant oil and gas findings as well as an area of increasing geopolitical interests. Coastal communities in the region are already confronting the impacts of and tradeoffs associated with climate change, such as changes in the distribution of fish species on one hand, and access to new economic opportunities on the other. The ways in which communities mediate these changes depends partly on attitudes, perceptions and values toward change. A central value held by local residents in the study area is the desire for a sustainable and vibrant community. A sustainable community in this peripheral, northern area is represented first and foremost by a sustainable population base – and in particular, a stable young population. A “vibrant community” has to do with the ability of residents – new or old – to contribute to or draw on - new skills, experiences and ideas - to secure the social, economic and cultural attractiveness of the community to both residents and outsiders. This is exemplified by communities experimenting with new economic activities such as tourism, windmill parks and participating in activities linked to oil and gas development.

### Alxa League, Inner Mongolia, China



**Research approach:** The research explores the Chinese environmental policy of ecological emigration in the context of climate change adaptation in Inner Mongolia, asking how local stakeholders' perceptions and experiences of environmental change might inform the development of adaptation policies in China.



**Context:** Chinese authorities are concerned that increasing aridification and desertification in Western Inner Mongolia are leading to an escalation in sand-storms that is threatening economic activities and infrastructure within and beyond the region. Although the causes and consequences of desertification in Inner Mongolia are complex, and partly driven by climate change, the dominant discourse about desertification in China is that overpopulation and uncontrolled grazing are driving environmental degradation. National environmental policies aim to combat desertification by re-vegetating desert margins, enclosing grasslands, and relocating people away from deserts into new settlements. The latter policy of “ecological emigration” in particular raises questions about the role of local values and perceptions of environmental change in informing Chinese adaptation planning. As it stands today, environmental policies linked to climate change adaptation and mitigation in Inner Mongolia reflect a top-down and technocratic approach to dealing with the effects of desertification on communities and ecosystems in the region. Investigation of local peoples' own experiences, perceptions and values of environmental change, and the implications for national, regional and local adaptation policies, have so far received very little attention.