

“WE WILL FACE IT”

The perceived need to adapt in natural resource dependent communities in Northern Norway

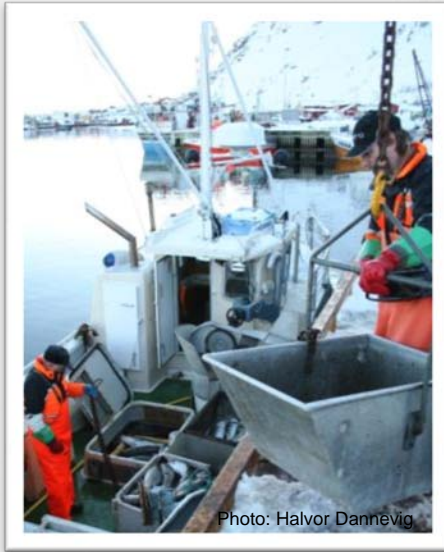
Halvor Dannevig, Western Norway Research Institute and Grete K. Hovelsrud, CICERO
Presentation for the IPY 2012 Conference, Montreal, 22.-27.04.2012

Photo: Halvor Dannevig

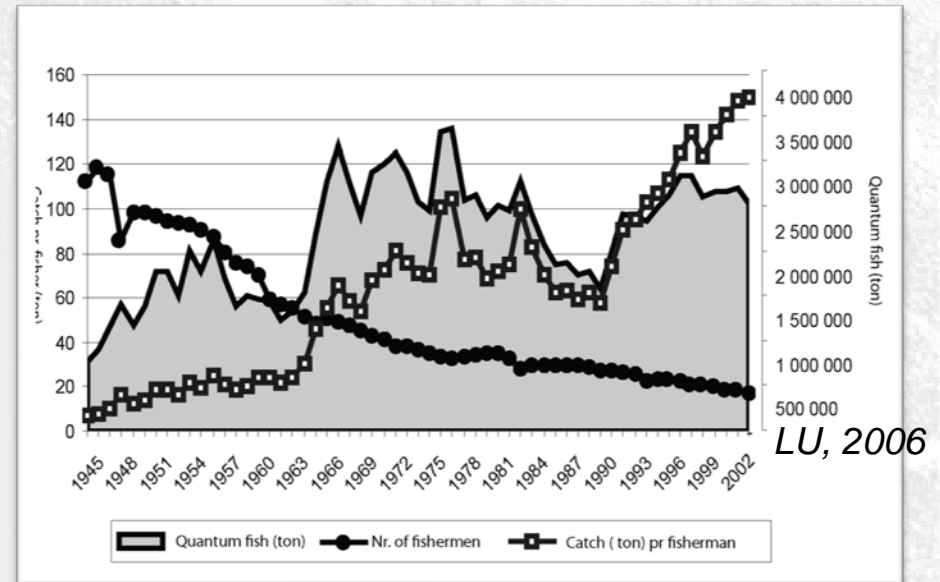
Today's presentation

- **Background: research on community vulnerability and change in the Arctic – cases from Northern Norway**
- **Framework: Combine bottom up with top down analysis. (CAVIAR)**
- **Why do actors perceive climate change risk differently?**
- **Findings: Scientific climate change knowledge needs to be presented in a way that resonates with different actors values and worldviews**

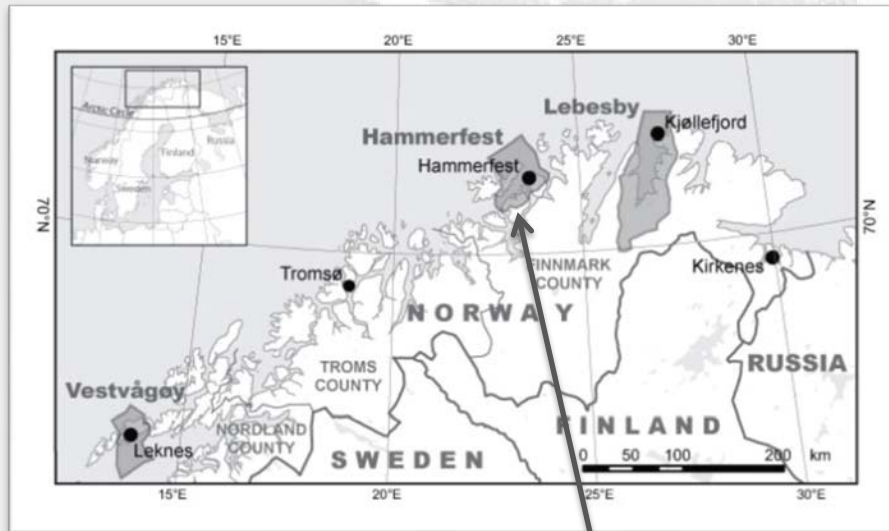
Northern Norway and natural resource industries



Landed catch and number of fishermen in Northern Norway



Framework & Method



CAVIAR 2007-2011

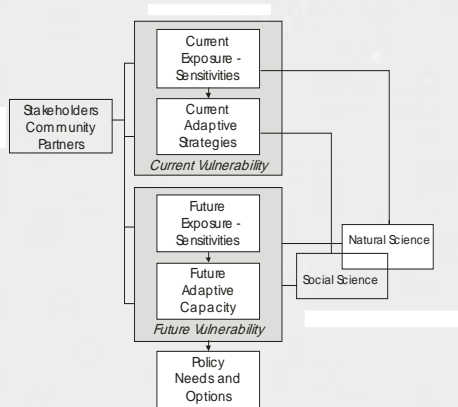
Semi-structured interviews with fishers, stockfish producers/fish processors, municipal planners, and farmers in total 63. Field discussions with fishers, group interview with municipal planners and industry advisors, three town hall meetings with approximately 30 participants in each.

“Vulnerability and adaptation in the agricultural sector in Northern Norway” 2009-2012

Group interviews with five farmers, representatives from regional agricultural extension services and local agricultural authorities in six municipalities, totally 30 informants in the period Sept.

NORADAPT 2007-2011

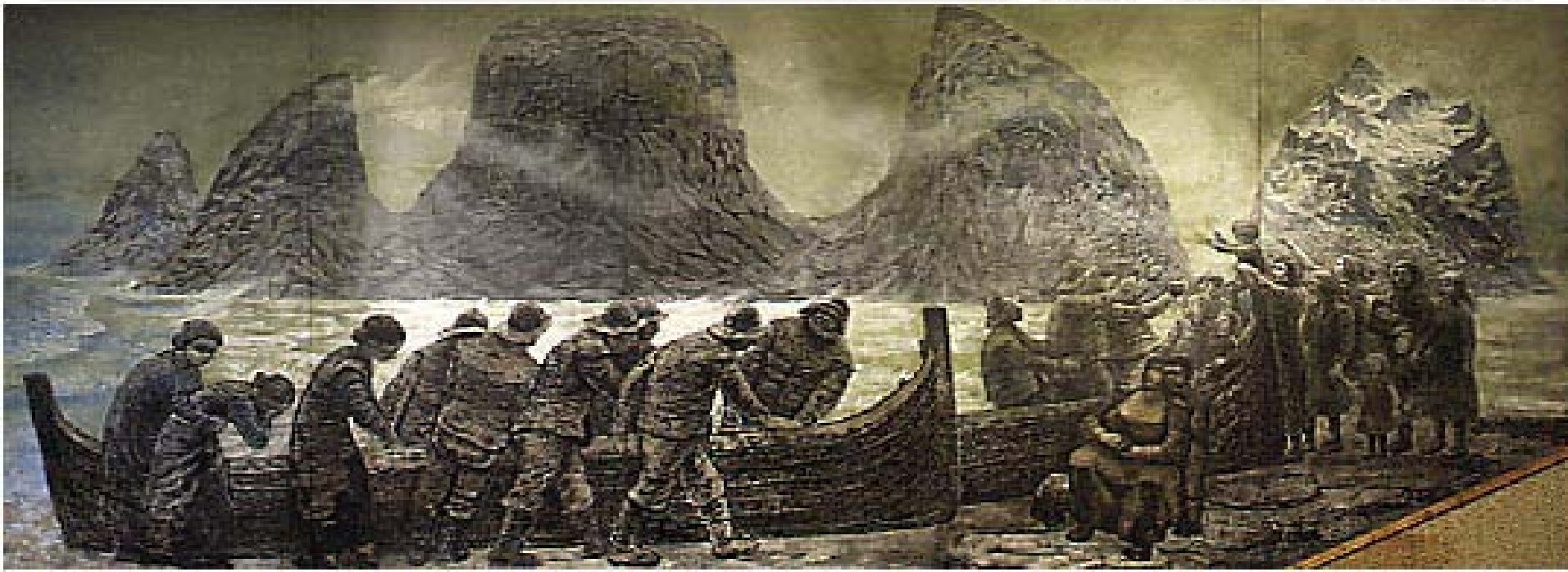
Eight municipalities
Annual workshops over three year.
Group interviews in all the municipalities
32 semi-structured interviews
Annual municipal survey over three years.



Hovelsrud and Smit 2010

A history of change

- Commercial fisheries and export for 1000 years.
- Communities in the north has always adapted to changes in climate and resource base.
- Until 1950-60.. Livelihood mix fisheries and farming, great flexibility. 2010: Flexibility = NAV



Local: Observed changes in weather conditions



Trønderbønder må redde seg ned helikopter



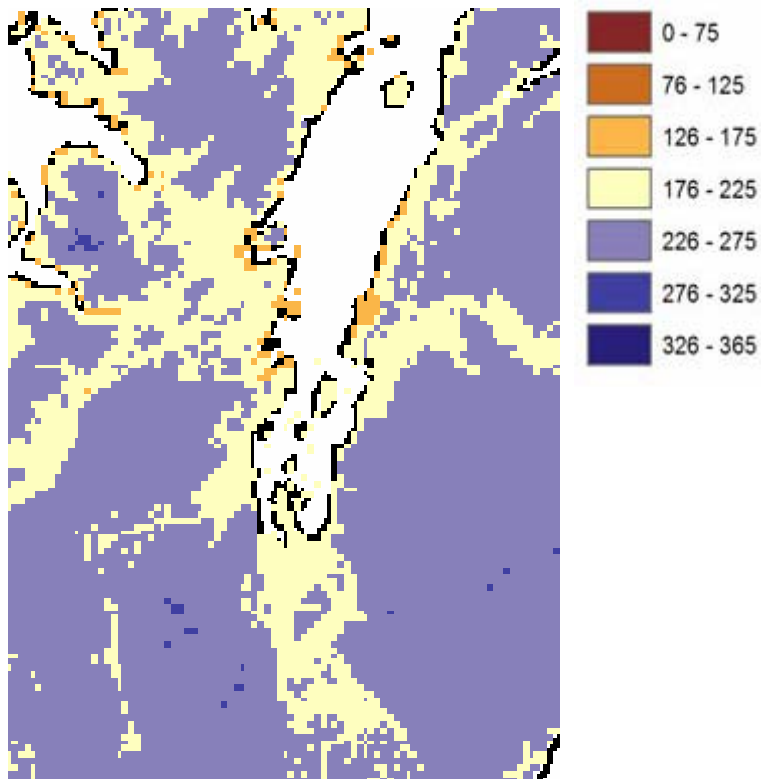
What are the vulnerability narratives ?

National government and science states: adaption to climate change is necessary



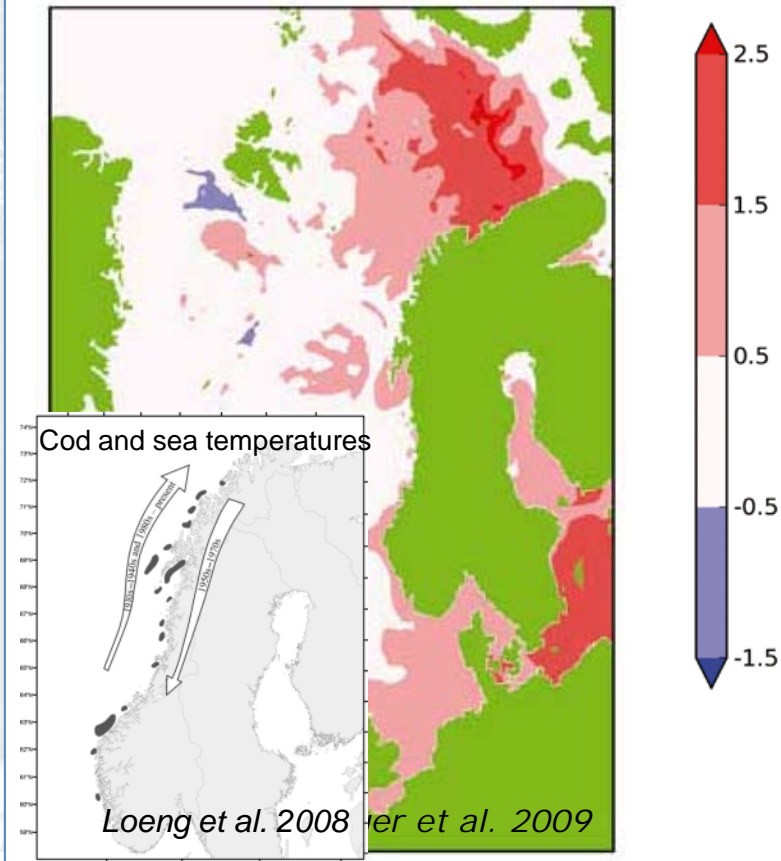
We tried to share those insights with communities in the North

Projected increase in growing season (number of days) by 2050 in Porsanger, Finnmark



Hansen-Bauer et al. 2010

Projected increase in summer surface sea temperature by 2065 in C



Local perceptions of climate change risk

- *“This has happened before”*
- *“ We are used to deal with changing conditions. We have always adapted ”*
- *”Vi står han av”*

Stockfish producers and fishers in Vestvågøy

“To plan for adaptation to climate change is a natural part of the routines as a municipal planner”

Planner in Hammerfest municipality

Why do we respond differently to climate change science?

- **Climate change narrative: based on climate science – highly abstract models of reality.**
- **Disconnect with actors experiences and perception of weather (Hulme 2008,2009, Jasanoff, 2010)**
- **Different actors interpret the risks from climate change differently (Kahan et al, 2011; Vervweij et al, 2006; O’Riordan and Jordan 1999).**
- **Cultural theory: one approach to explain why people perceive, make choices and act as they do.**

The four ways of life and perception of nature

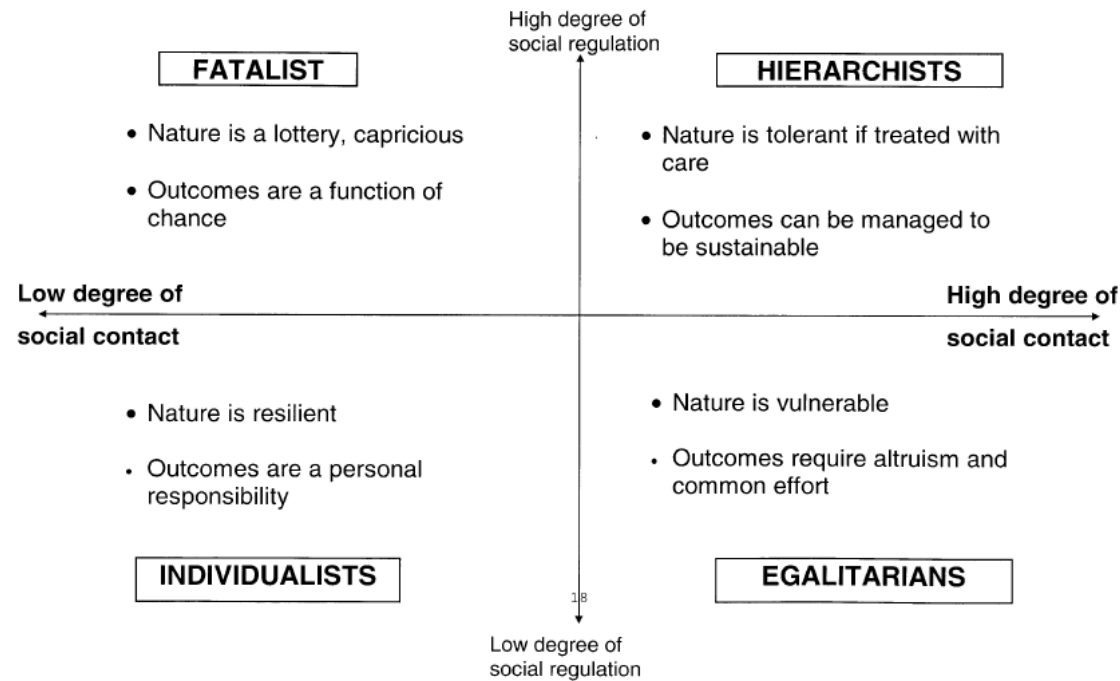
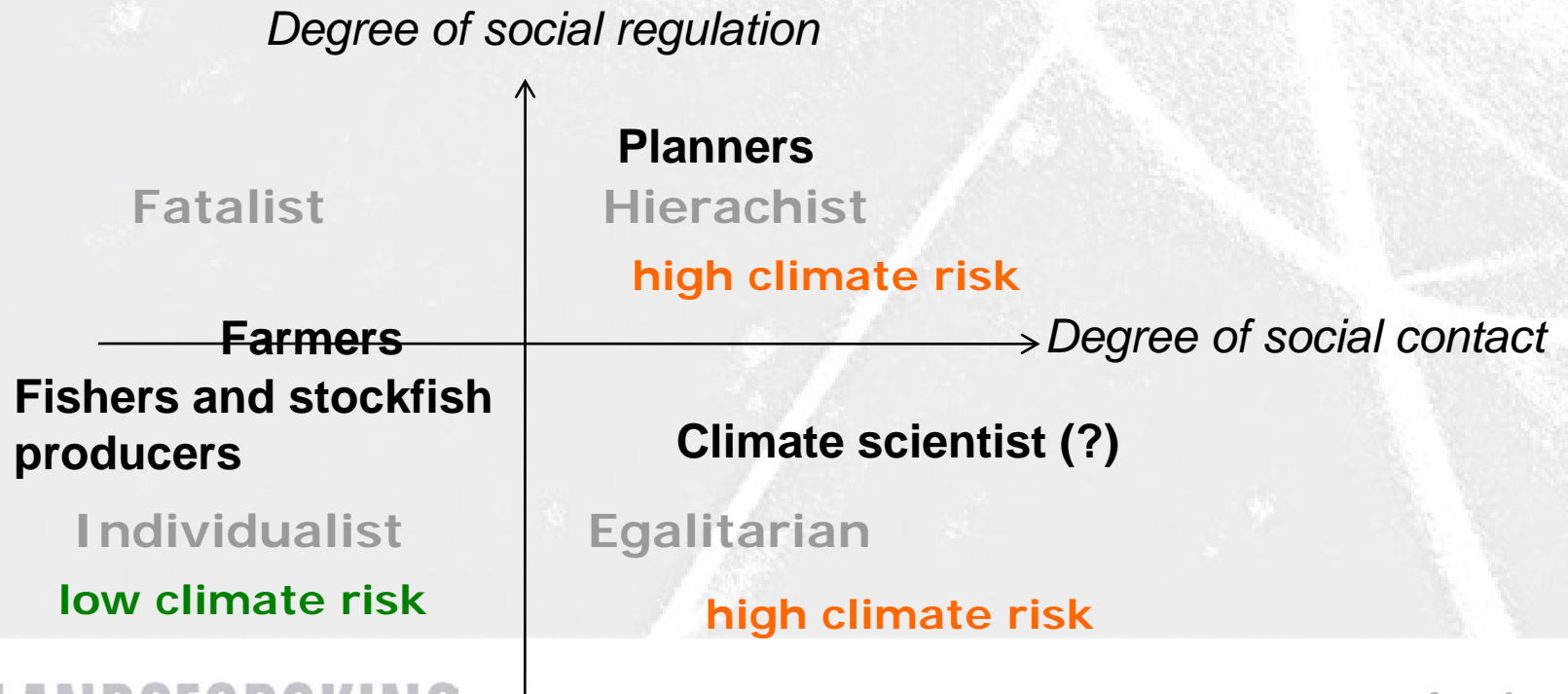


Fig. 1. The four 'ways' of life

Thompson et al. 1990

Same communities – different narratives

- Fishers: least concerned
- Planners: most concerned



Summing up

- **Disconnect between scientific knowledge and traditional, situated knowledge in natural resource industries.**
- **Discrepancy between adaptation conveyed in the global environmental change literature, inclusive the fourth assessment report from the International Panel on Climate Change (IPCC 2007) – and the perceived need to adapt at the local level.**
- **The discrepancy also exist at the local level.**

Conclusion

- The “facing it” attitude may imply overestimation of adaptive capacity.
- In order for scientific knowledge to support adaptation in natural resource dependent communities, it must be presented in a way that resonates with actors worldviews and values.

Further research (CAVIAR II)

- **Emphasis on the determinants of adaptive capacity in natural resource dependent industries.**
- **How are industries dependent on terrestrial ecosystems in the north able to adapt to projected changes?**



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Photo: Halvor Dannevig

Thank you for listening!

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