A wide-angle photograph of an Arctic landscape. The foreground is covered in a thick layer of snow and ice, with dark rocks visible. In the background, a body of water stretches towards a distant, hazy horizon. The sky is filled with soft, white clouds, and the overall lighting suggests a bright, overcast day.

1st IPY workshop on sustaining Arctic Observing Networks

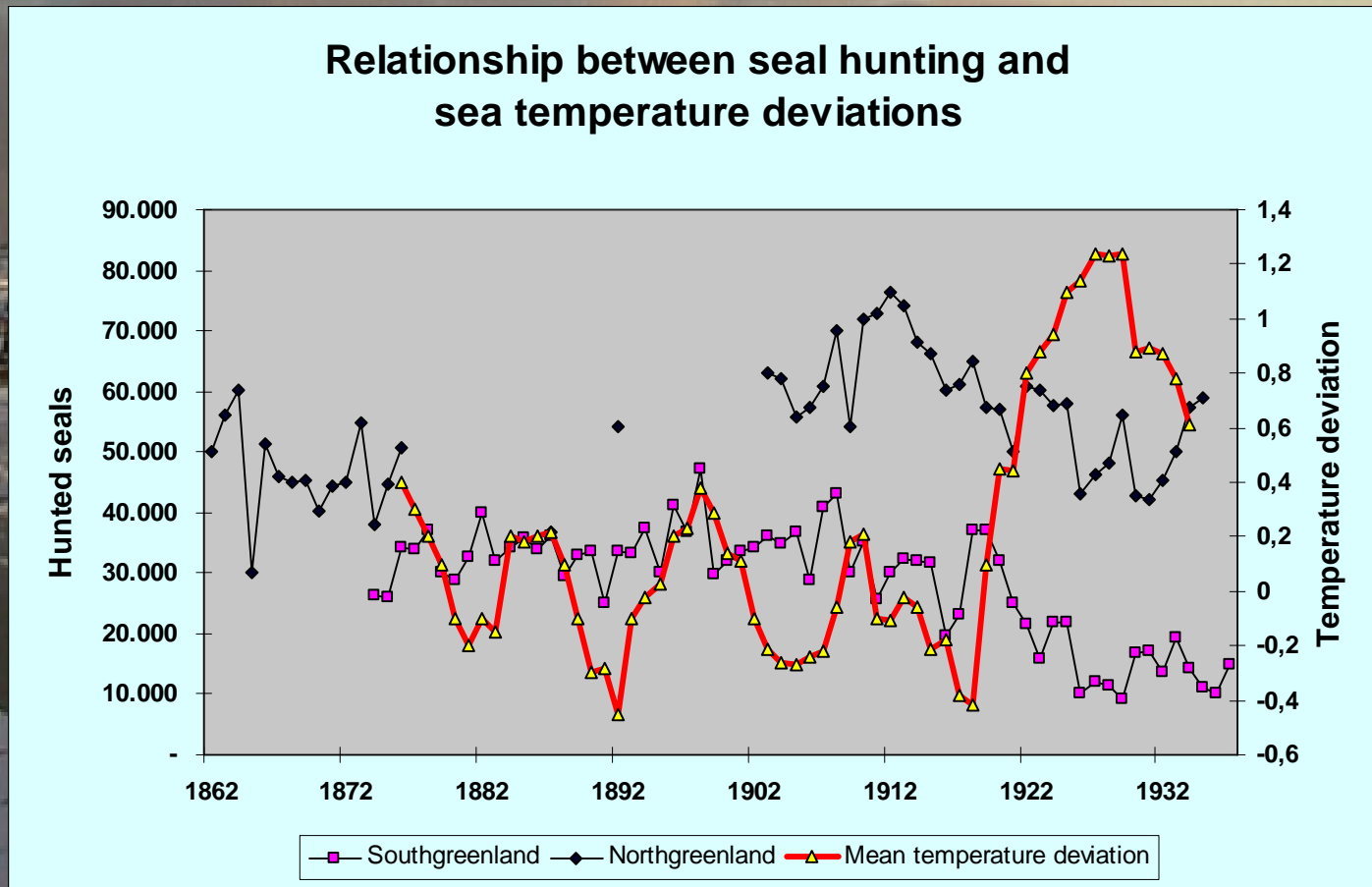
Observing and managing economic and social change

Rasmus Ole Rasmussen

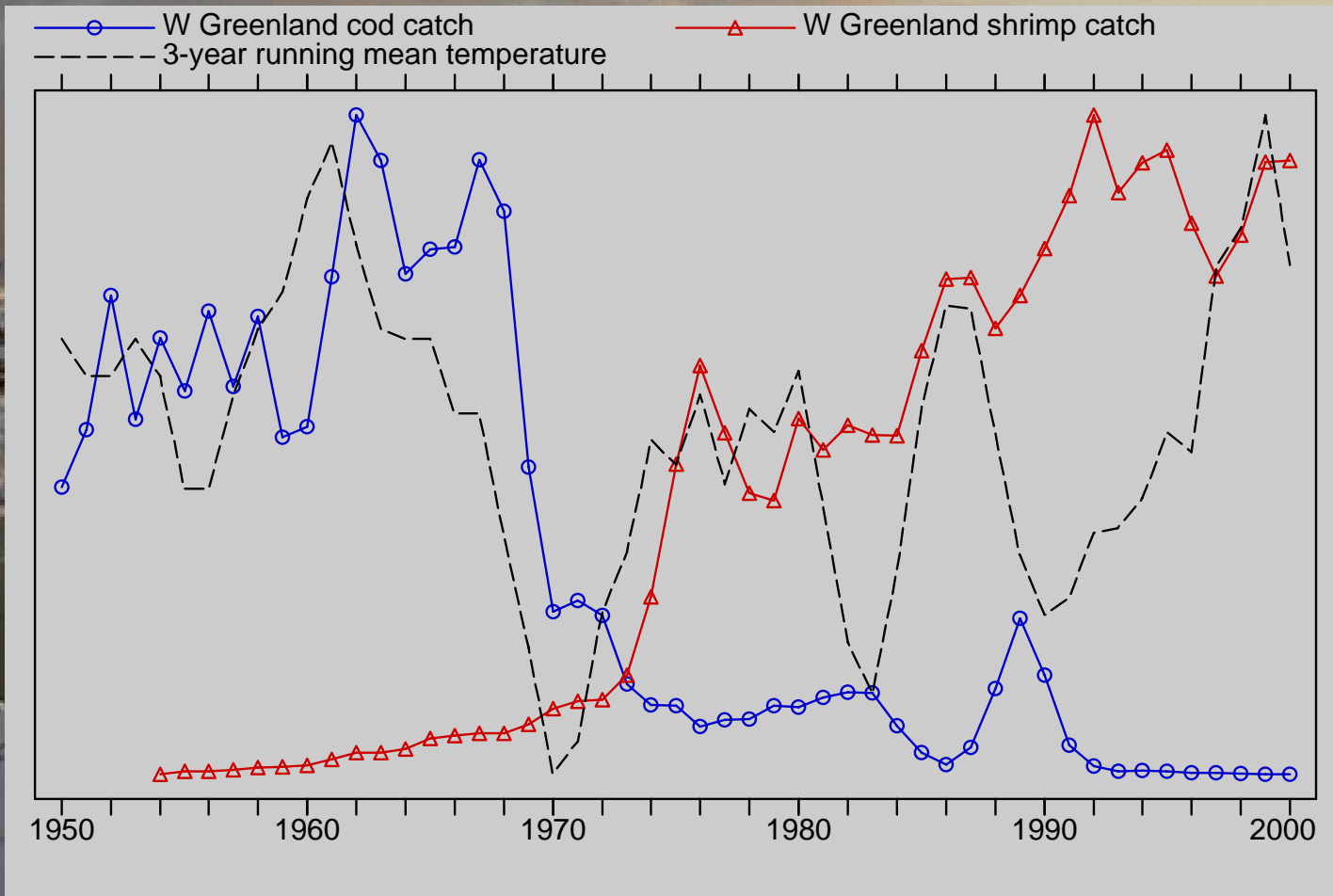
**Nordregio – Nordic Centre for Spatial
Development, Stockholm**

**NORS – North Atlantic Regional Studies, Roskilde
University**

Changing seal hunting, Greenland

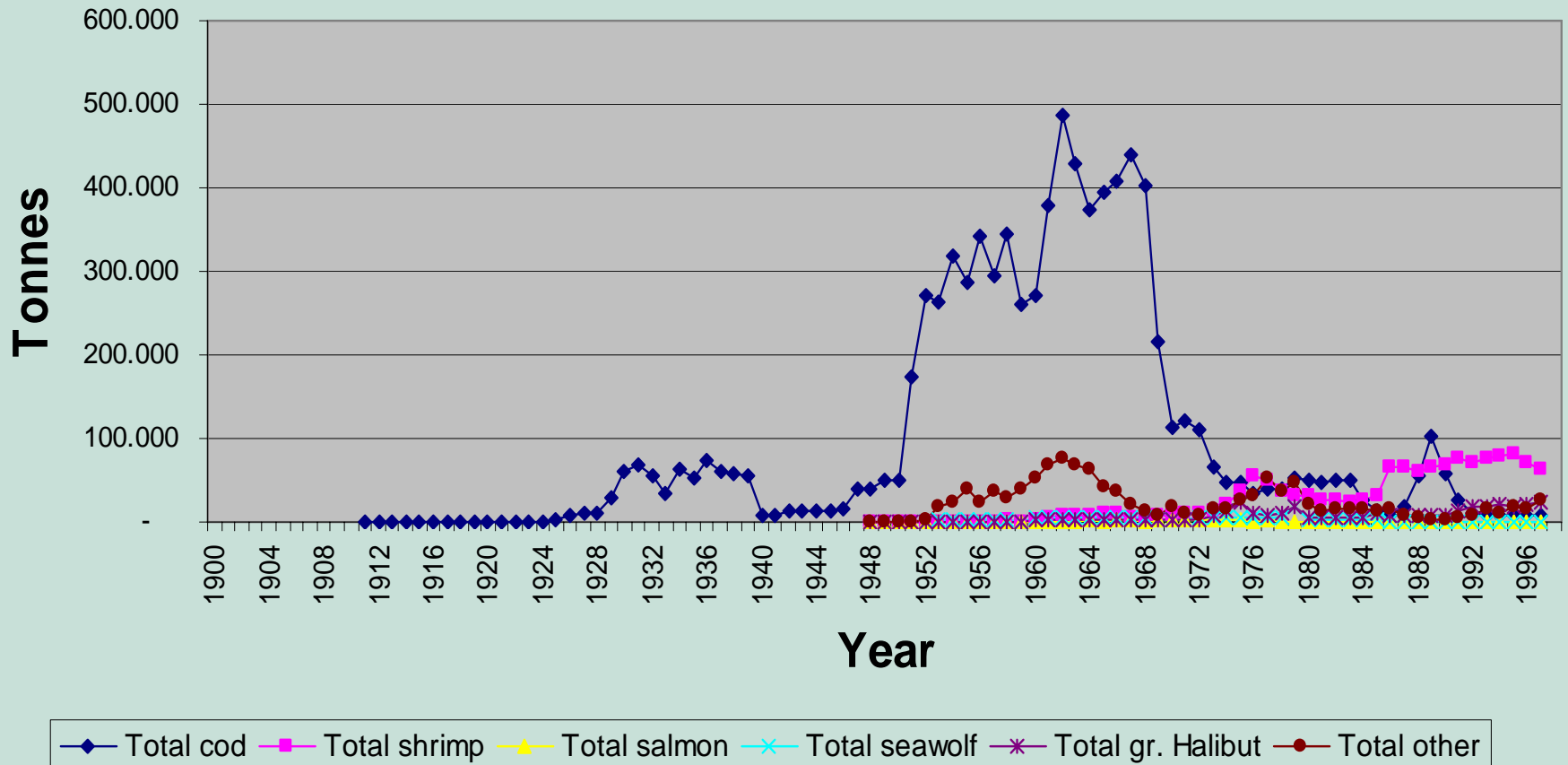


Temperature / Catch relationship

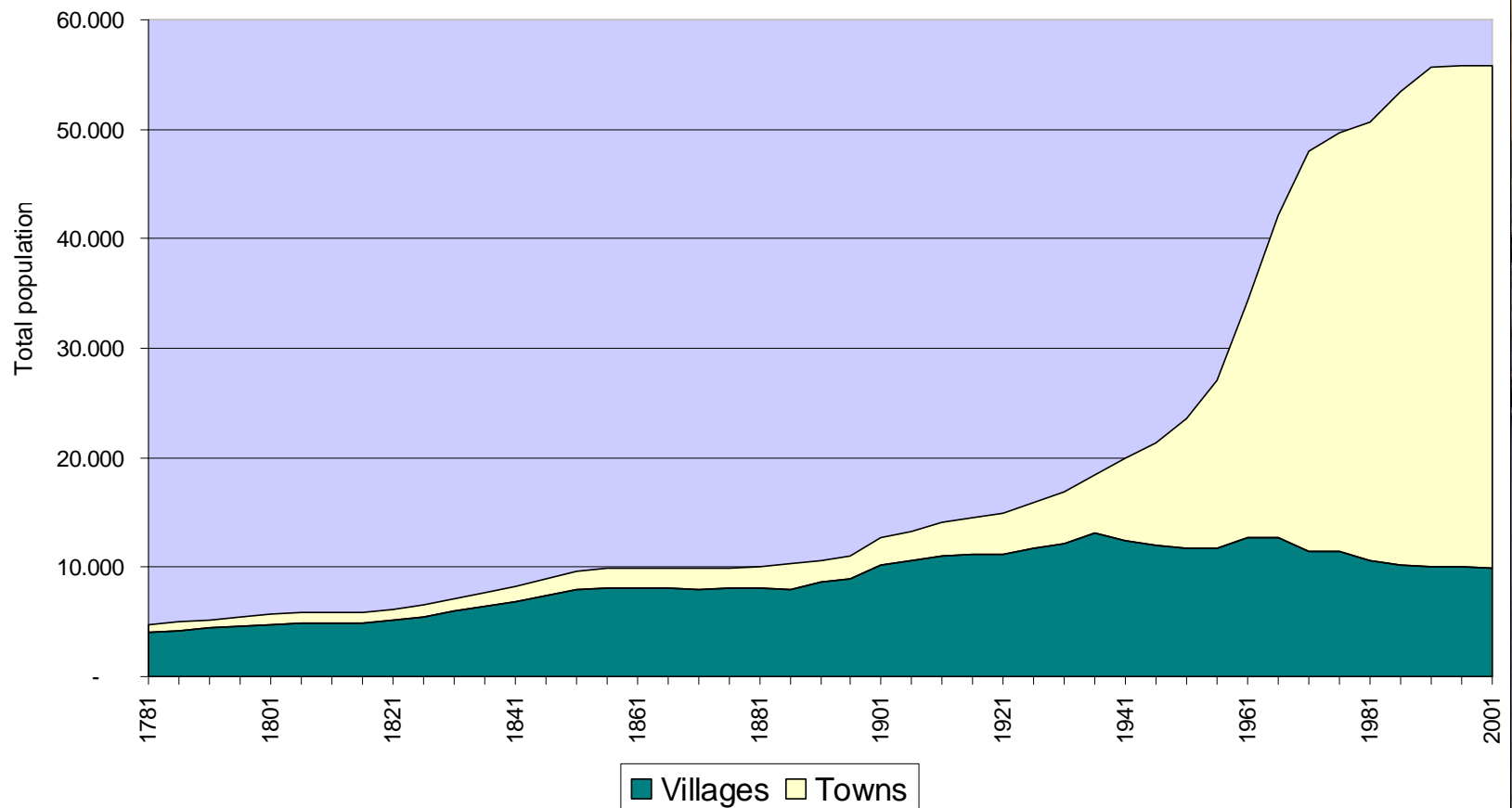


Fisheries in Greenland waters

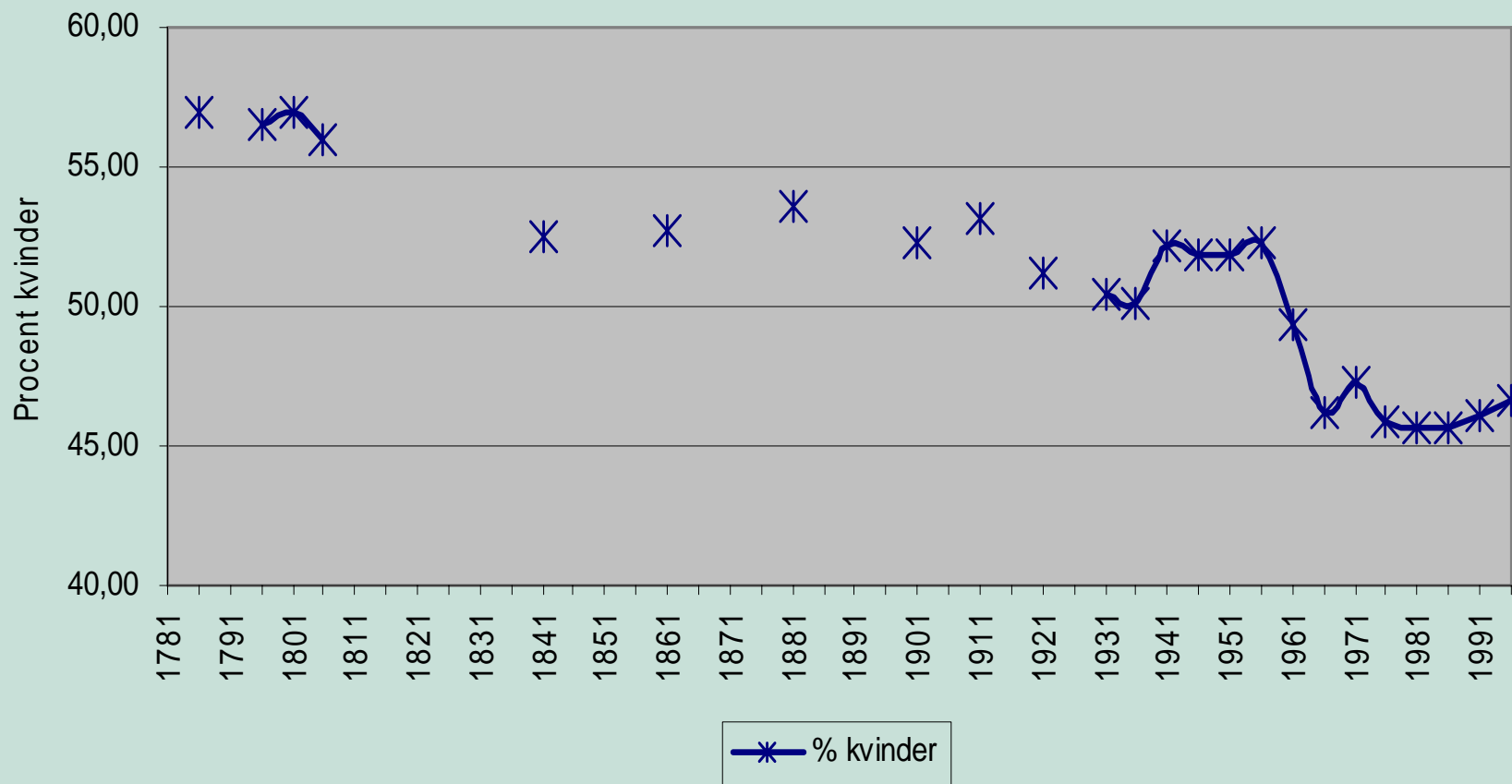
Fisheries in Greenland waters



Settlement Structure



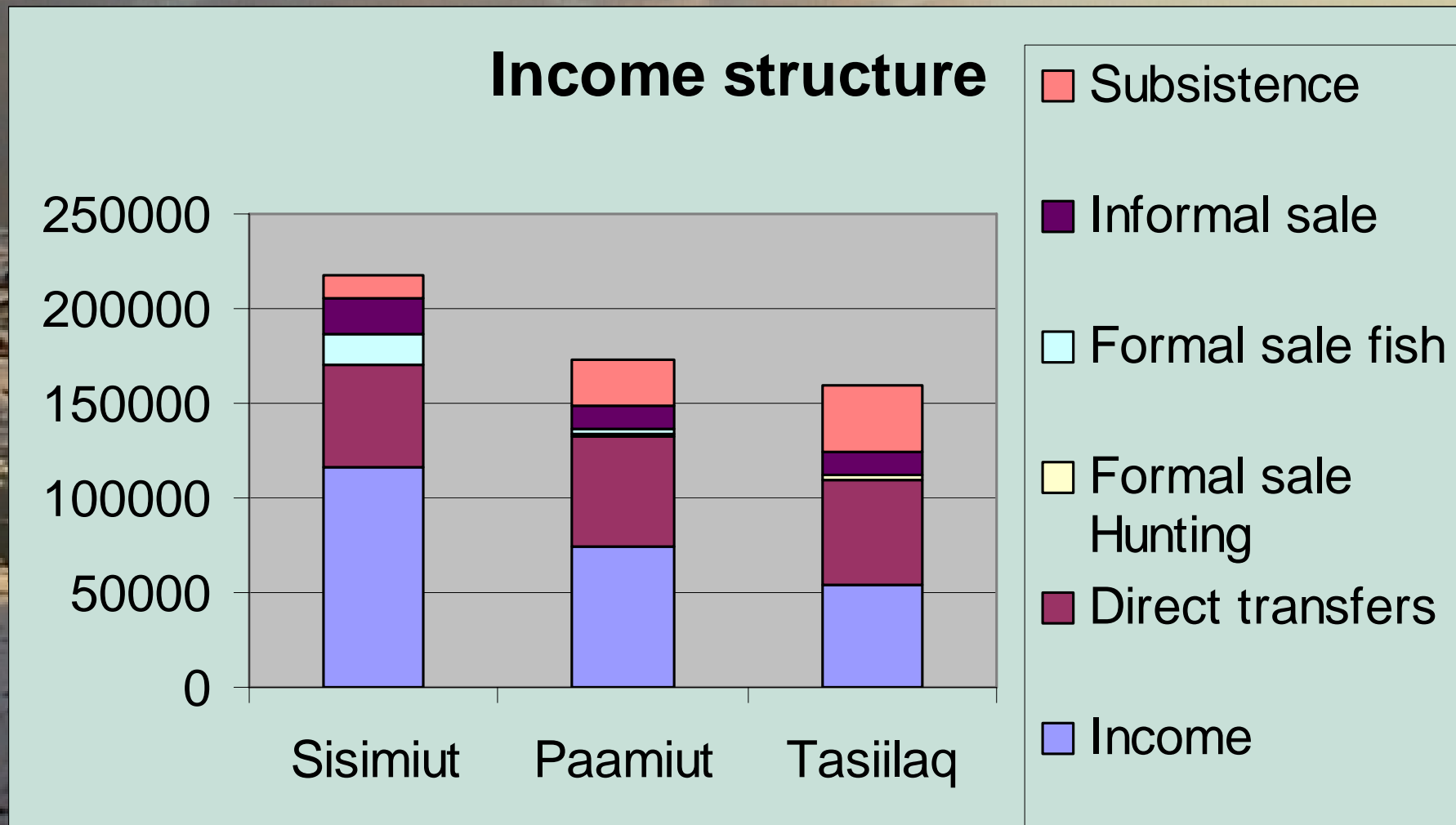
Gender distribution



Time series data

- **Short term data:**
 - Misinterpret ongoing changes as unique
- **Long term trends:**
 - Limited understanding of the role of specific events
- **Both:**
 - Differences between event driven and process driven changes

Income structure







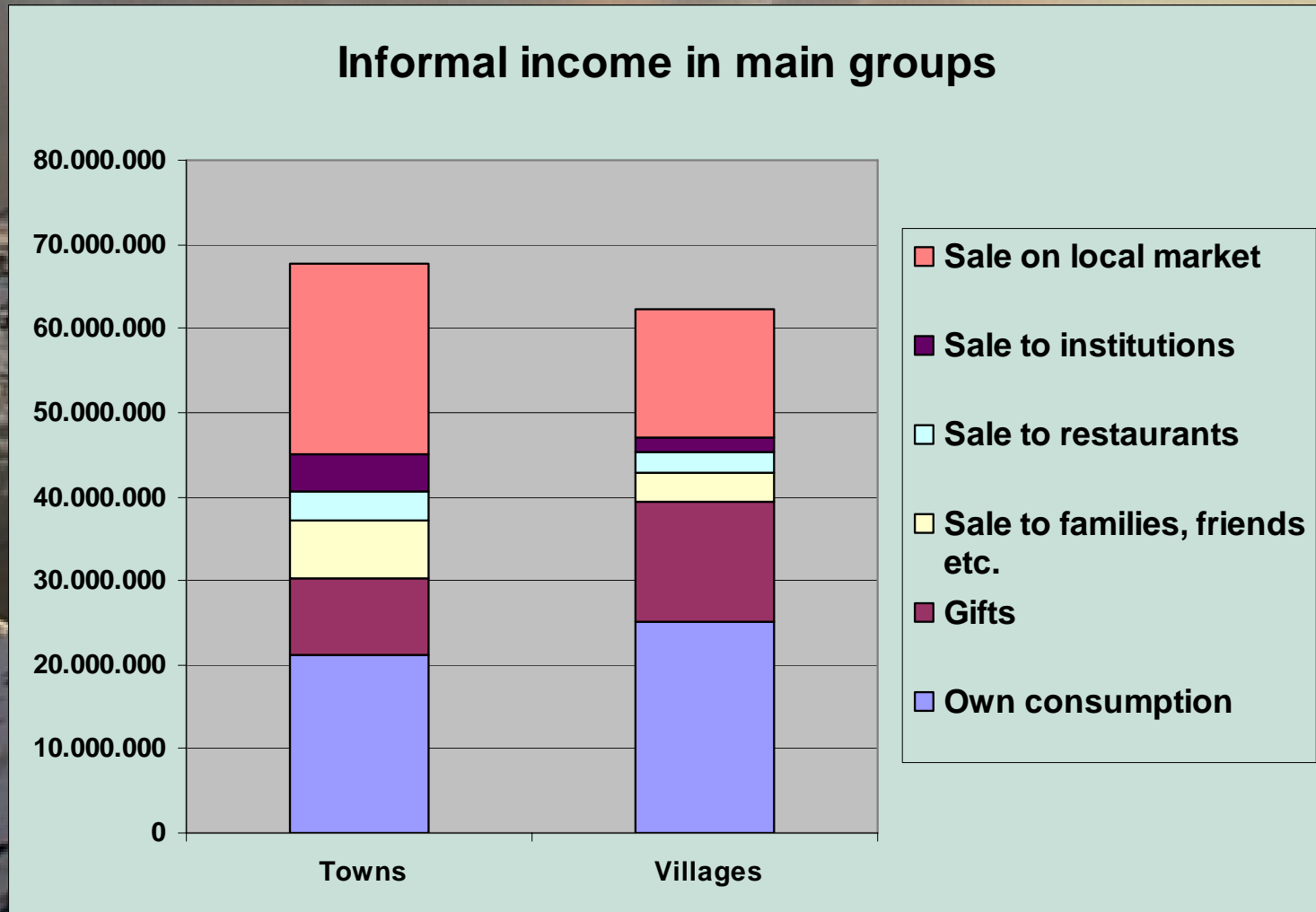








Informal economy in towns and villages

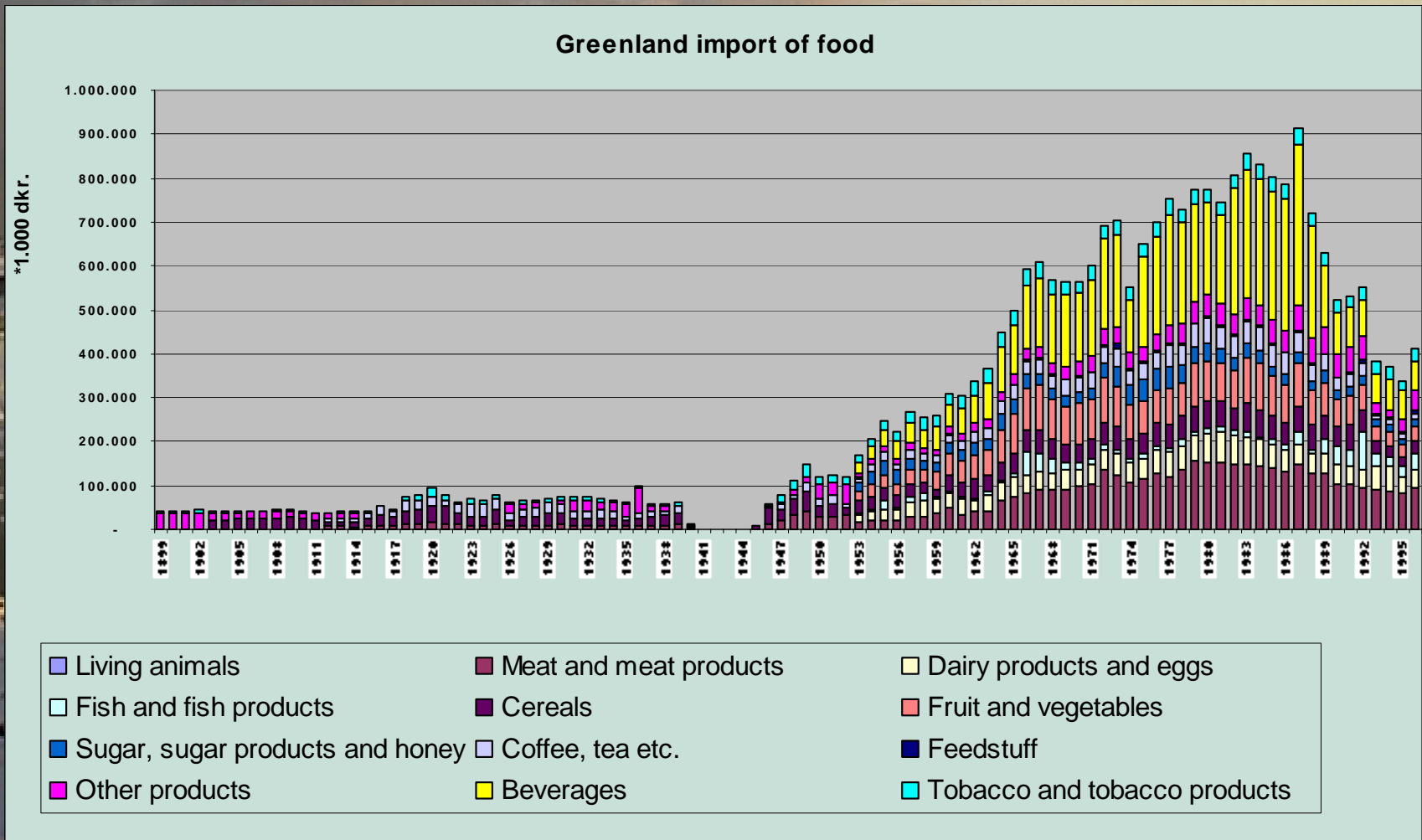


Scale problems

- **Highly aggregate data:**
 - Disguising local/regional variations but showing overall/common trends
- **Detailed data:**
 - Disguising differences but showing the role of events and individuals
- **Both:**
 - Understanding social and economic processes in TIME and in SPACE

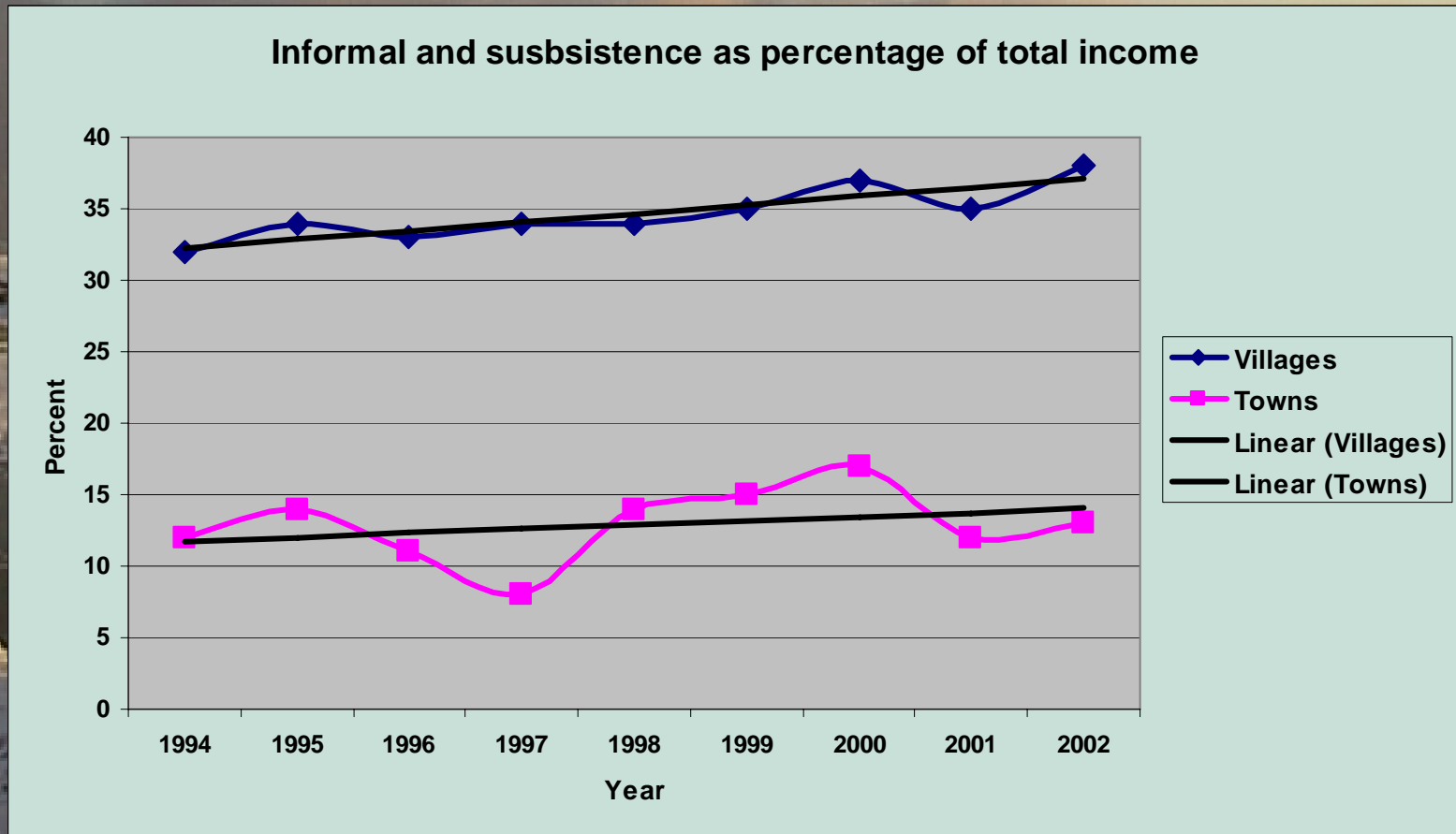


Food-security



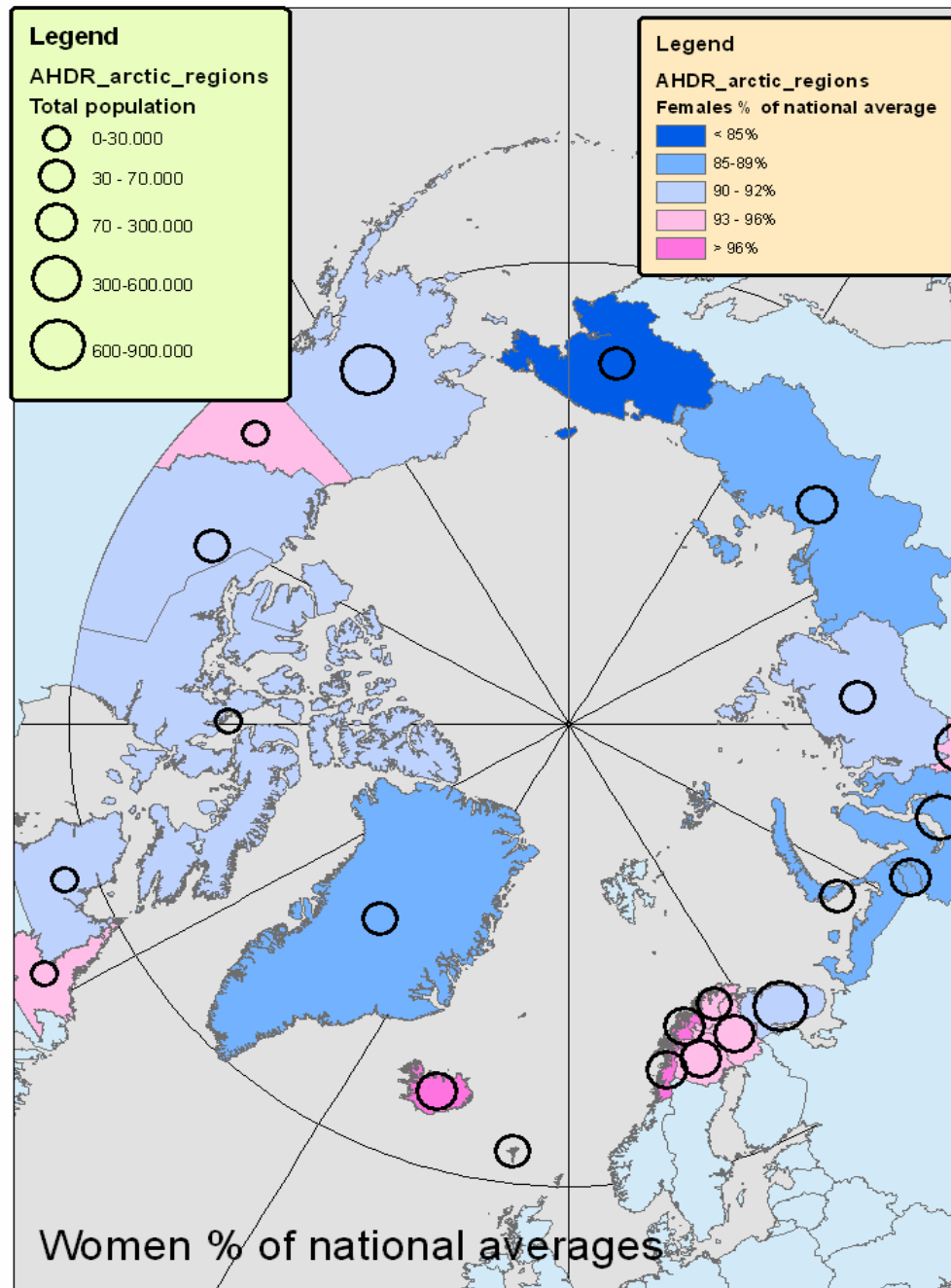


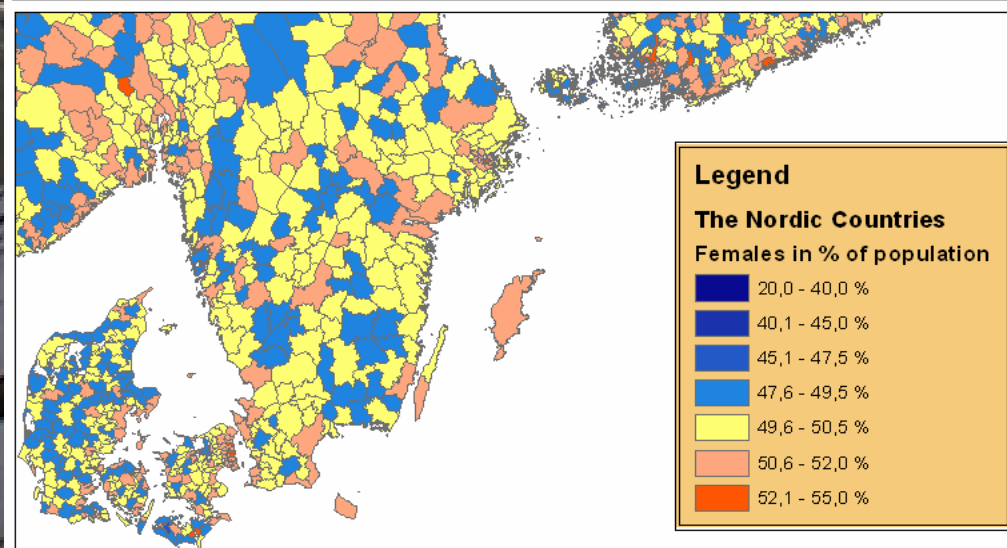
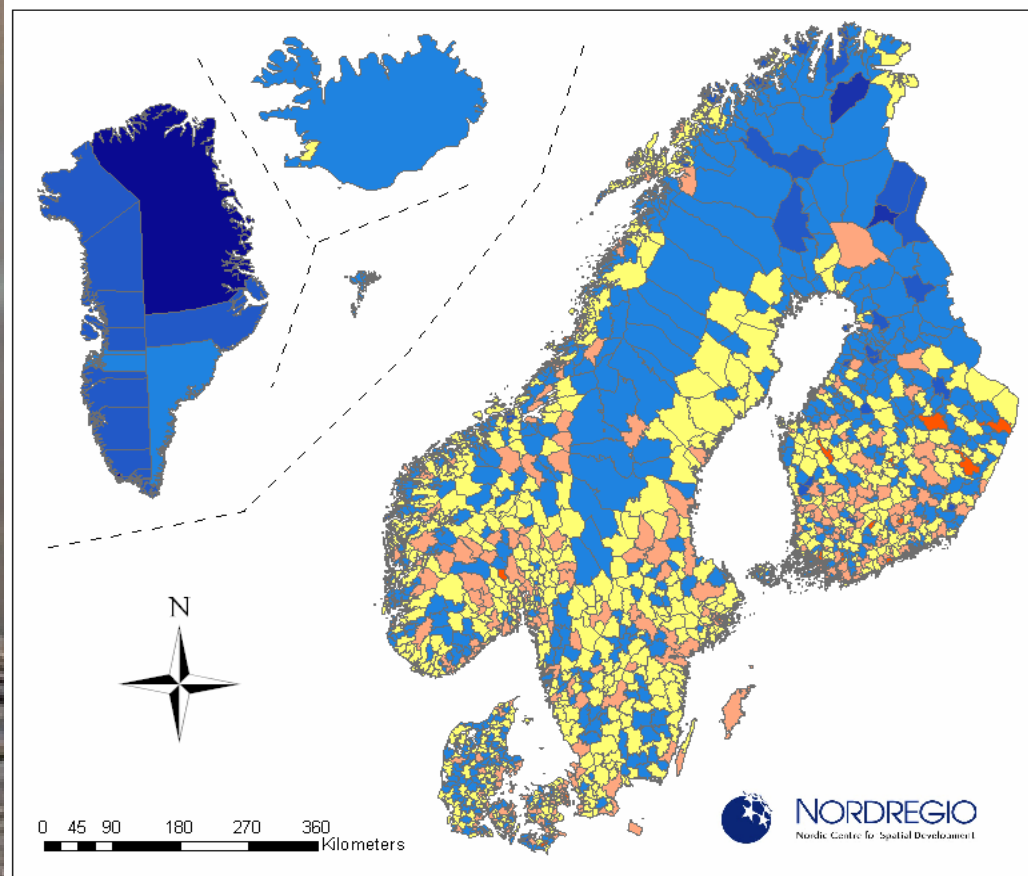
Formal/informal incomes



Data access

- **One and two dimensional data:**
 - Assumed relations, confirming or rejecting assumptions.
 - Theory and Paradigm driven analysis.
- **Multiple dimensional data:**
 - Unexpected relations, opening up for new theories, and even new paradigms
- **Active data = data which can be put together in new ways**
 - Relational databases.

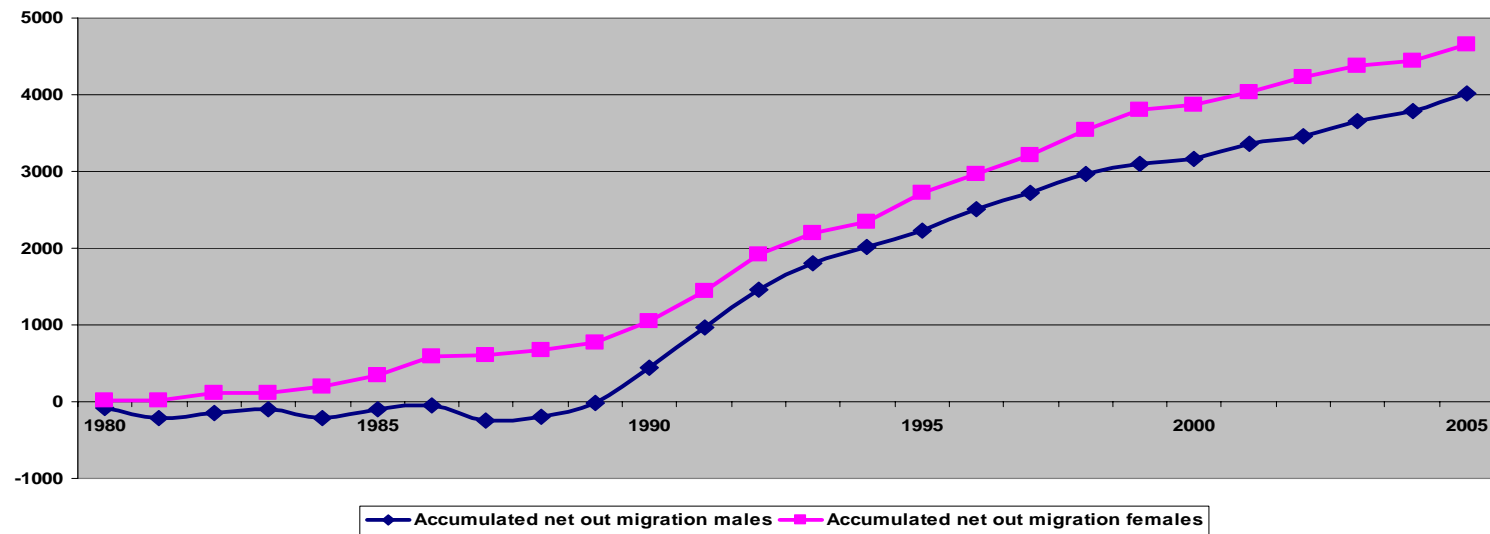




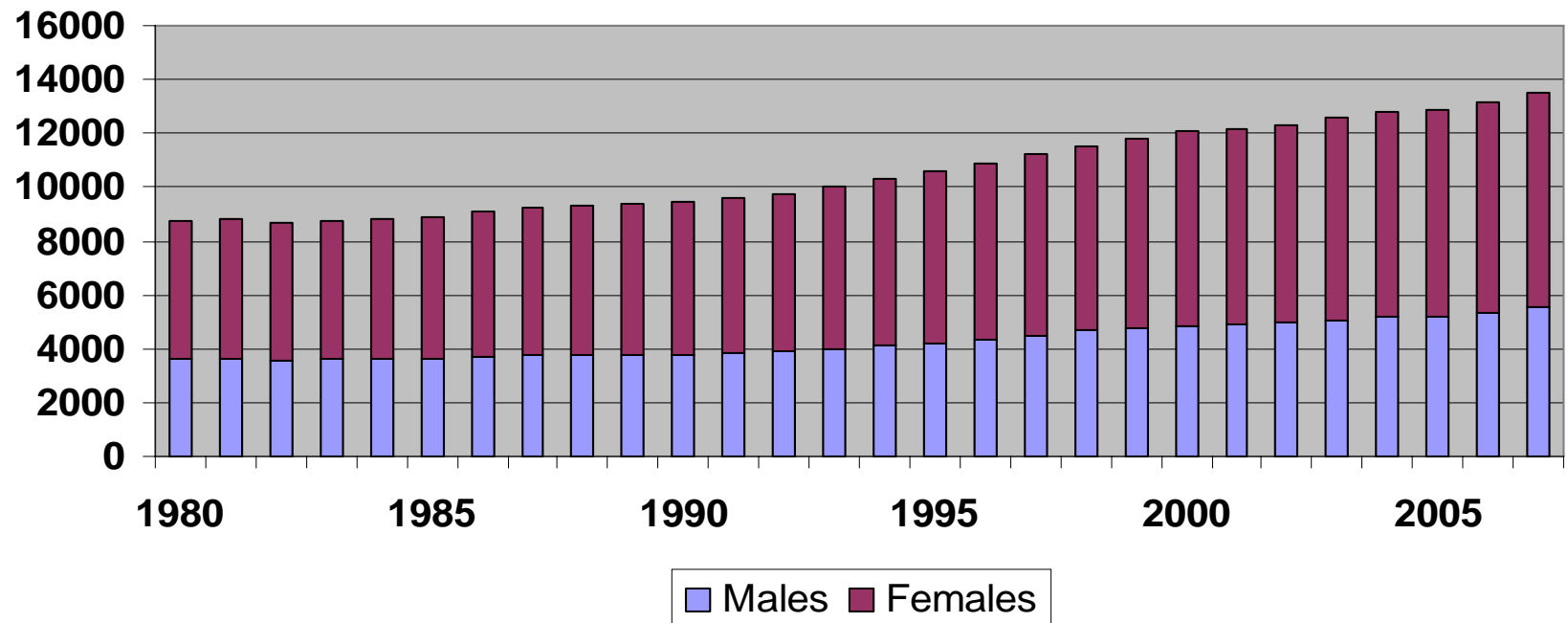




Summarized gender out-migration 1980-2005



Greenlanders in Denmark



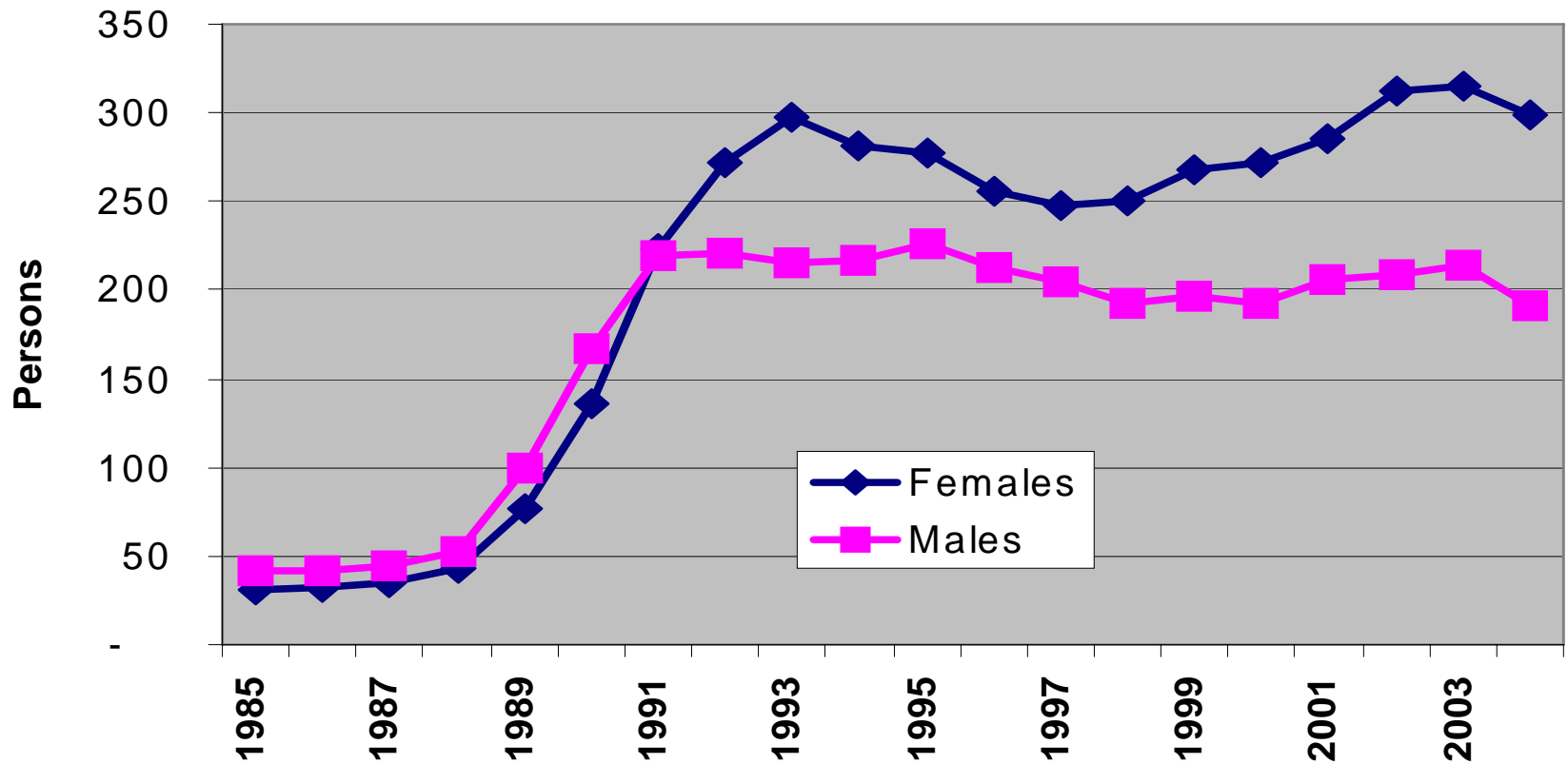


Qualities / Quantities

- **Qualities:**
 - Reflecting perceptions, experiences, perceived driving forces
 - Perceived or communicated rationales
- **Quantities:**
 - “Don’t look at their lips, look at their hands” – showing what is actually done
 - Lived rationales

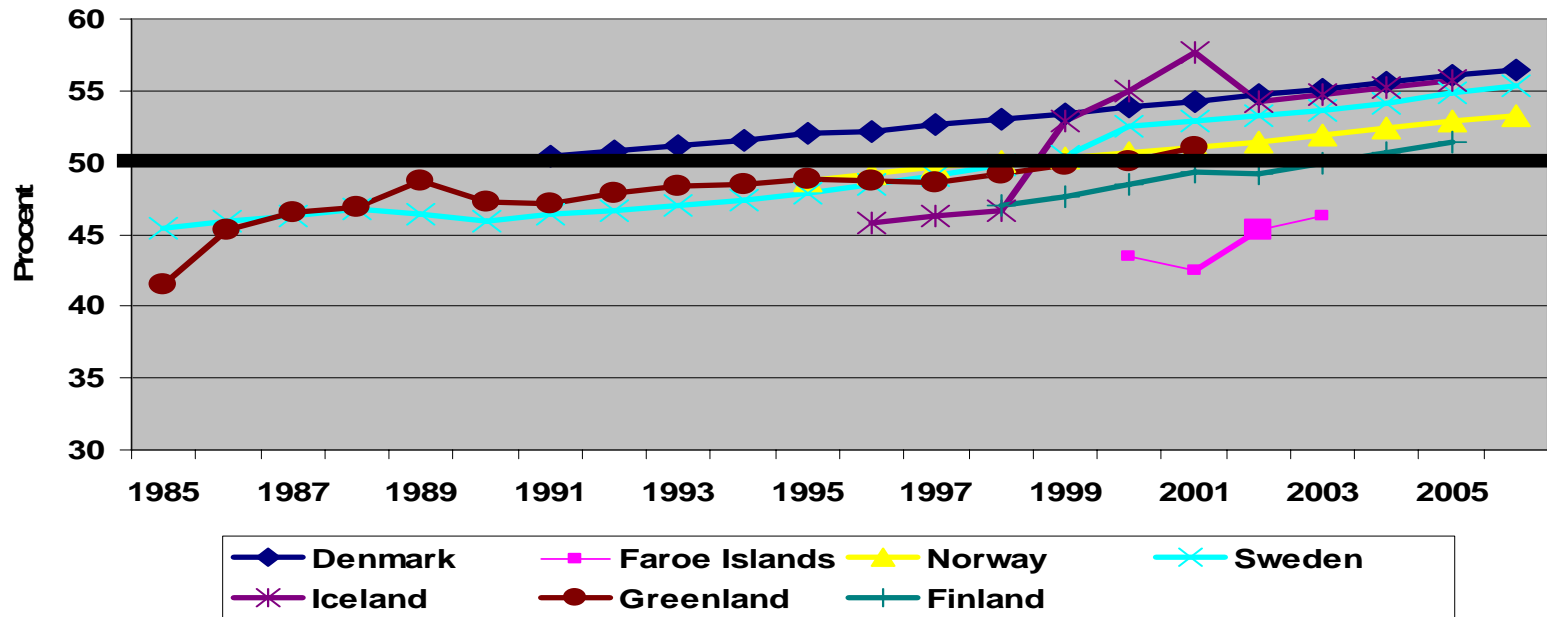
Education

Persons finished education

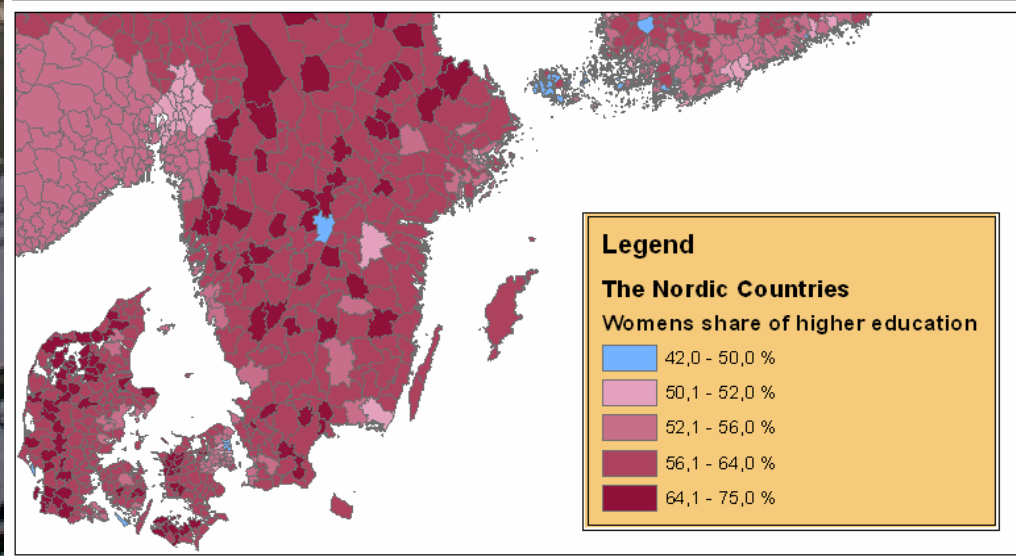
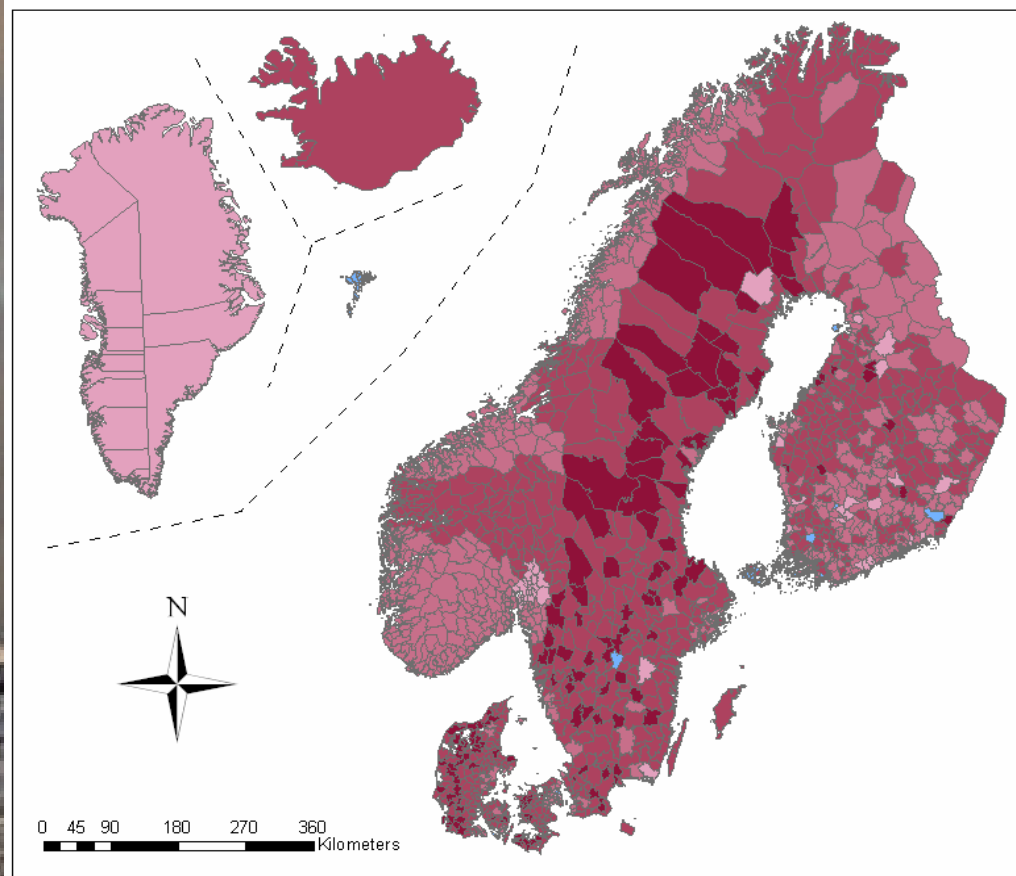




Women's share of persons with semi-long (bachelor level) and long (master and doctoral) education



In a globalised knowledge economy, education has become a crucial asset. In the Nordic Countries men are still dominating the research arena, but during the last 20 years women have surpassed men in relation to general level of education. And it has had marked regional consequences:



Contemporary dynamics

- **Biased focus:**
 - Paradigm driven
 - Path dependency
 - Data driven analysis
 - Given framework dependency
- **Problem based:**
 - Response to real-world problems
 - Unexpected relations
 - User driven analysis
- **Indicators**

Why OBSERVING and MANAGING?

- **Analyzing**
 - Interaction with stakeholders
- **Registration**
 - Getting access to information otherwise un-accessible
- **Reaction**
 - Immediate response regarding both quality and usefulness of data

A scenic view of a snowy, rocky coastline at sunset or sunrise. The foreground is a snow-covered slope with dark rocks. The middle ground shows a dark, choppy sea meeting a rocky shore. The sky is filled with soft, orange and yellow clouds, suggesting the sun is low on the horizon. The overall mood is serene and cold.

Thank you for your attention