



Human health

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Main achievements and products



Start in Nuuk 1992 and Tromso 1993

Joint study design for monitoring

Focus on fetus, pregnant women and children

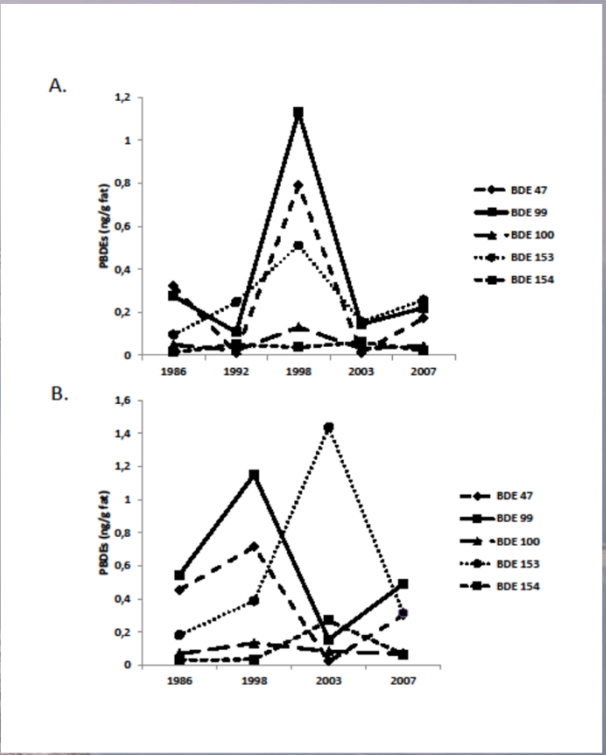
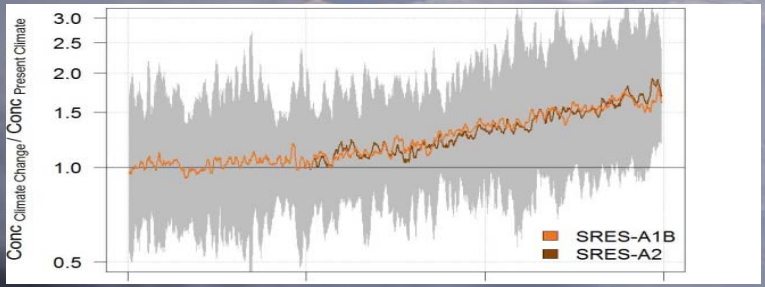
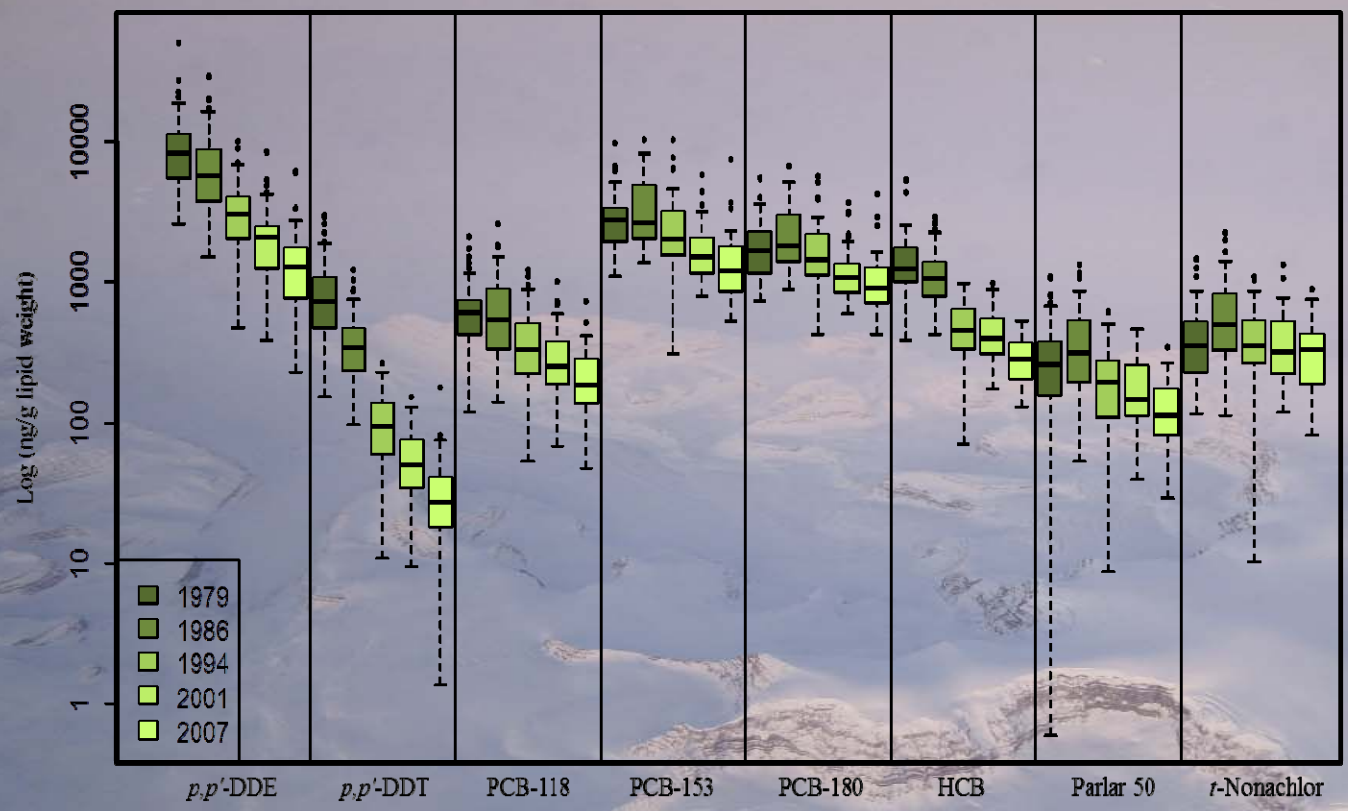
Cohort studies, guidelines, experimental and epidemiological studies

EU-funded projects, like ArcRisk, CLEAR, INUENDO, PHIME

Three Human health reports, 2003, 2009 and 2015; many national Health reports

Education, young scientists

Collaboration



Nost et al., EHP121: 1292, 2013
 Murtomaa-Hautala et al.,
 Sci Total Environ 526: 70, 2015

Main findings



Levels of old POPs, toxic metals

Effects of climate change, hot spots

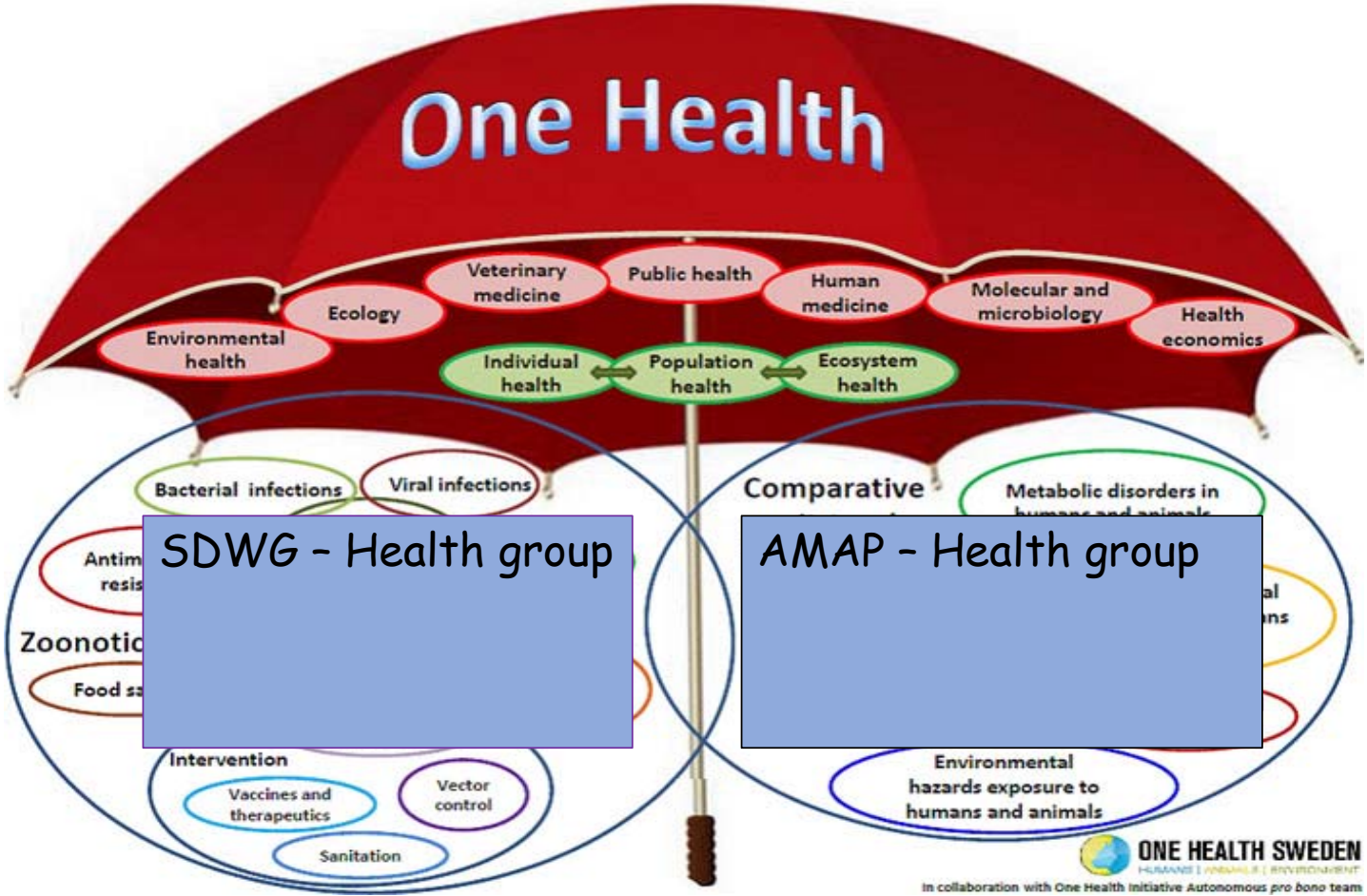
Main health effects found in the populations in Canada and Faroe Islands - neurotoxicity of mercury, immunotoxicity of POPs (perfluorinated compounds)

New methodologies for combining and estimating human health risks

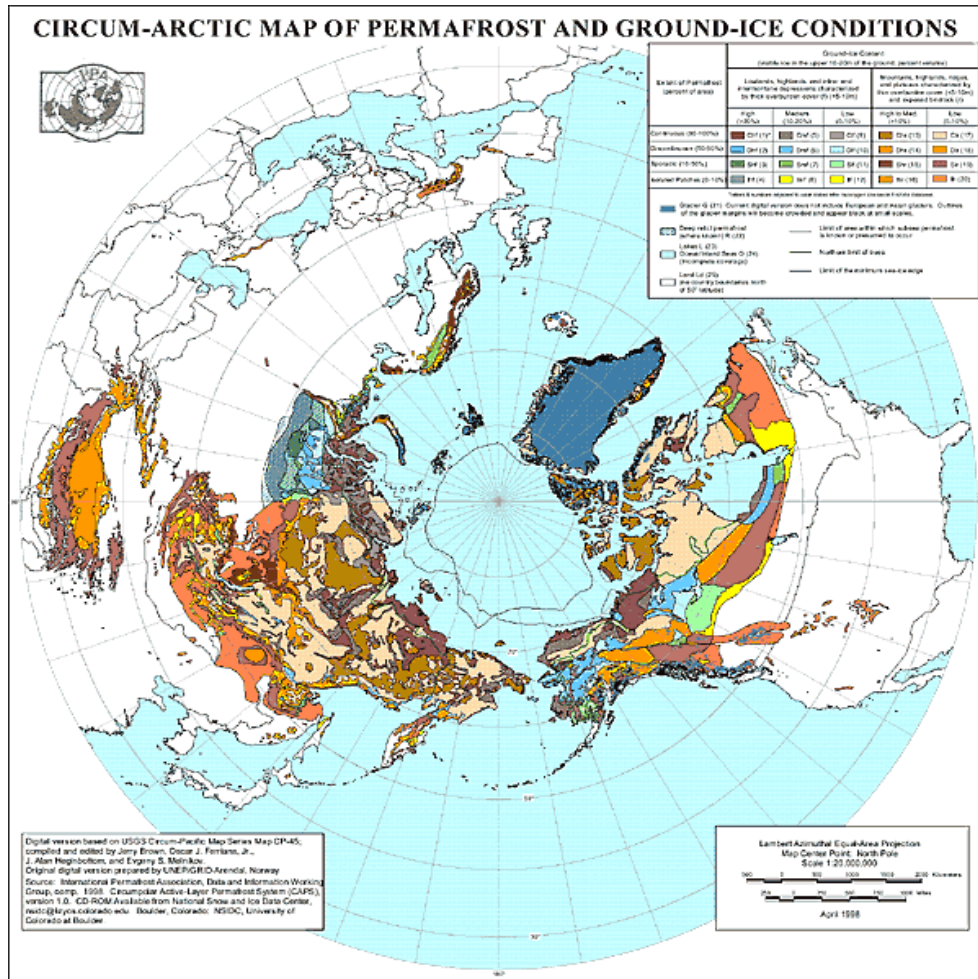
New chemicals, mixtures

Global view

One Health - health of environment, wild-life and humans



Permafrost - Warming causes frozen permafrost to melt, soften and subside forming watery thermokarst



Keymessages



Efforts globally to reduce levels of contaminants in the Arctic

Risk communication, dietary choices of both traditional and imported foods (social, economical and cultural factors)

Identification of vulnerable individuals in communities

Reduce risks of exposure and disease

Adaptation strategies

Continue analytical programs, external QA/QC is critical

Monitoring both old contaminants and be aware of new ones

Future challenges

Cohort development in all Arctic countries
Funding strategies for multinational research
Effect studies
New methodologies
"Black holes", vulnerable population groups
Communication strategy
Effects of mixtures, new chemicals
One Health
QA/QC
Cross fertilization



Quebec 1995



Aarhus 1998

Photos: Leena Soininen



Ottawa 1999

Leena Soininen





Photos:
Rautio

