Resource Stewards and Users in the New Arctic

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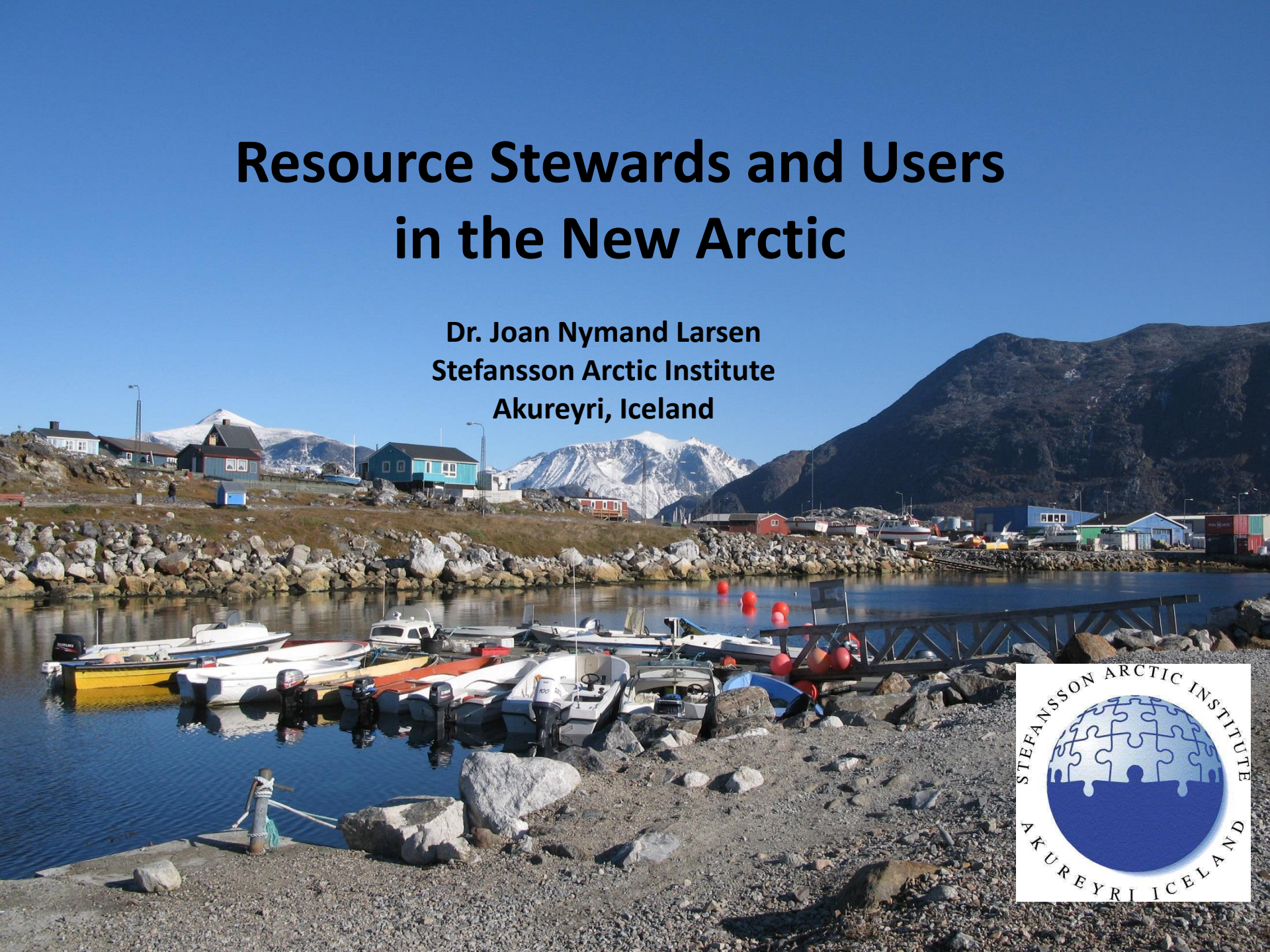
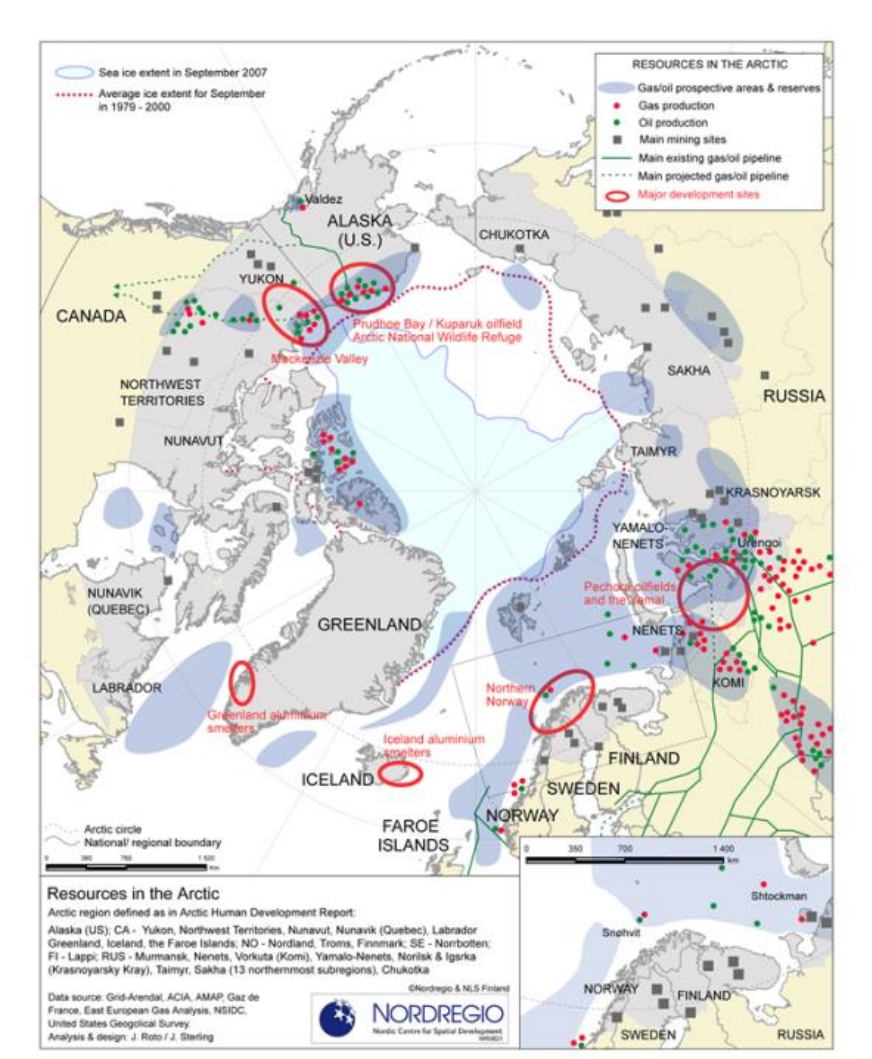
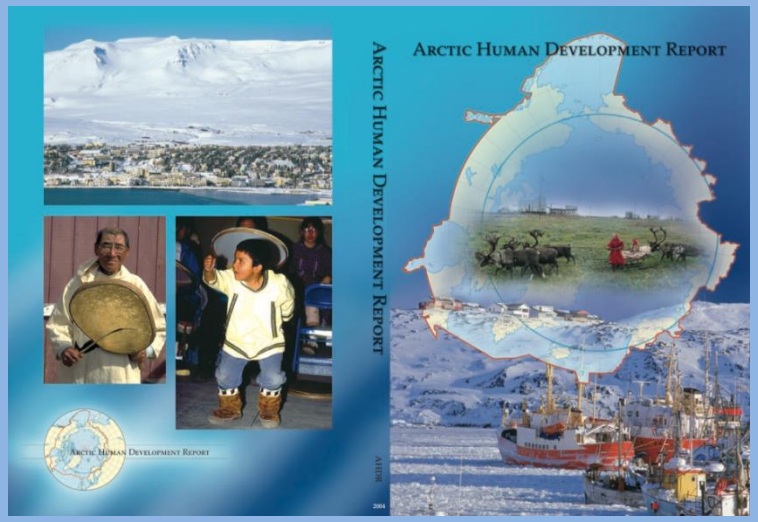


Overview: Two broad questions



1. What are the key trends in Arctic human development of relevance to the theme of this workshop?
2. What are the big challenges and the foremost success stories in the new Arctic, and what are their relevance to this workshop?

Arctic Human Development Report: Regional Processes and Global Linkages (AHDR-II)



- AHDR I (2004); AHDR II (2015)
- 27 lead authors, numerous contributors and reviewers.
- Rationale: A decade of accelerating change in the Arctic, and of increased attention to the Arctic.
- Objectives: To evaluate trends that affect sustainable human development among residents of the circumpolar world; and to help facilitate priority setting for SDWG, the Arctic Council and policy makers.

Impacts on Resource Stewards and Users: Rapid Socio-Economic Change. Beyond Climate Change

- AHDR (2004): Today Arctic societies are facing an unprecedented combination of rapid and stressful changes involving environmental processes, cultural developments, economic changes, industrial developments, and political changes.

Key Sources of Change:

Global

- Climate change
- World demand for natural resources
- World market commodity prices

Regional

- Rate and magnitude of resource exploitation
- Governance structures
- Measures put in place to protect the environment

What´s New in Arctic Human Development?

New messages, and their relevance to the topic of this workshop?

Arctic cross cutting trends (AHDR Vol. II, 2014)

- Communities on the move
- Increased awareness of the Arctic
- Linked to the global – and a need to build capacity
- Great expectations surrounding resource extractive industry, but non-resource extractive industries growing in importance
- Continued innovation in governance at all scales

Examples of trends relevant for understanding the context for resource stewards and users in the new Arctic

AHDR (2004)

- Growing importance of property rights
- Incorporation of traditional or local ecological knowledge with western science in decision-making
- Transfer or devolution of power to local decision makers and co-management
- Widening involvement of Arctic peoples in ownership and development of lands and resources

Changes since 1st AHDR?

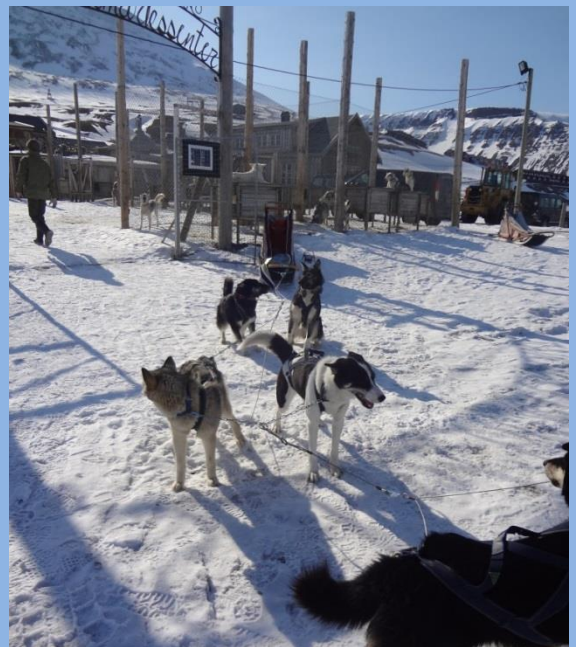
Economic Well-being of Arctic Residents and issues of control and ownership

Table 7. Arctic Per Capita Household Disposable Income and GRP, 2010			
	Per Capita Disposable Income (000s)	Per Capita GRP (000s)	PC Income as a share of PC GRP
Alaska	40.6	66.8	60.8%
Yukon Territory	32.3	56.5	57.1%
Northwest Territories	34.1	86.7	39.3%
Nunavut	24.6	45.9	53.7%
Greenland	16.3	28.3	57.6%
Faroe Islands	16.2	33.5	48.4%
Iceland	15.0	34.8	43.1%
Finnmark	22.0	39.3	55.9%
Troms	21.9	39.2	55.8%
Nordland	21.5	39.8	54.0%
Norrbotten	18.3	45.1	40.7%
Västerbotten	17.4	35.2	49.5%
Lapland	17.1	30.6	56.0%
Oulu	16.7	31.1	53.8%
Kainuu	17.0	25.6	66.4%
Murmansk	19.0	21.4	88.5%
Karelia	12.4	14.4	86.0%
Arkhangelsk	15.1	21.0	71.7%
Komi	18.1	28.3	64.1%
Yamal-Nenets	32.7	36.6	89.2%
Khanty-Mansi	24.4	274.9	8.9%
Arctic	21.9	45.4	48.3%

The Future of the Arctic: Great Expectations

Expectations of higher prices and lower costs for Arctic resources – overly optimistic

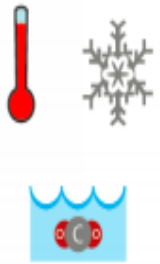
The Future of the Arctic: The New Industries in the North



The Future of the Arctic:
Changes in the Institutions of Resource Development

- Self-government
- Local Ownership
- Acting like owners

Polar Regions

Key risk	Adaptation issues & prospects	Climatic drivers	Timeframe	Risk & potential for adaptation
Risks for freshwater and terrestrial ecosystems (*high confidence*) and marine ecosystems (*medium confidence*), due to changes in ice, snow cover, permafrost, and freshwater/ocean conditions, affecting species' habitat quality, ranges, phenology, and productivity, as well as dependent economies [28.2-4]	• Improved understanding through scientific and indigenous knowledge, producing more effective solutions and/or technological innovations • Enhanced monitoring, regulation, and warning systems that achieve safe and sustainable use of ecosystem resources • Hunting or fishing for different species, if possible, and diversifying income sources		Present Near-term (2030-2040) Long-term (2080-2100) 2°C 4°C	Very low – Medium – Very high
Risks for the health and well-being of Arctic residents, resulting from injuries and illness from the changing physical environment, food insecurity, lack of reliable and safe drinking water, and damage to infrastructure, including infrastructure in permafrost regions (*high confidence*) [28.2-4]	• Co-production of more robust solutions that combine science and technology with indigenous knowledge • Enhanced observation, monitoring, and warning systems • Improved communications, education, and training • Shifting resource bases, land use, and/or settlement areas		Present Near-term (2030-2040) Long-term (2080-2100) 2°C 4°C	Very low – Medium – Very high
Unprecedented challenges for northern communities due to complex inter-linkages between climate-related hazards and societal factors, particularly if rate of change is faster than social systems can adapt (*high confidence*) [28.2-4]	• Co-production of more robust solutions that combine science and technology with indigenous knowledge • Enhanced observation, monitoring, and warning systems • Improved communications, education, and training • Adaptive co-management responses developed through the settlement of land claims		Present Near-term (2030-2040) Long-term (2080-2100) 2°C 4°C	Very low – Medium – Very high

Source: IPCC AR5

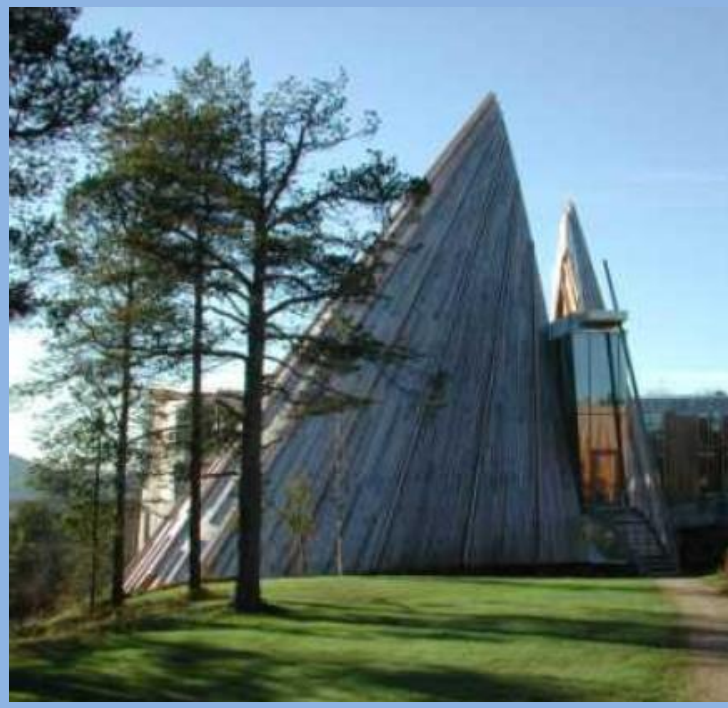
AHDR-II: Resource governance

Lead Authors: Bruce Forbes (FI), Gary Kofinas (US)

- ***Policy relevant conclusion***: Arctic resource governance continues to be innovative, while growing in complexity, and with increasing attention to the adoption of best practices.

AHDR-II: Political systems

Lead Authors: Gary Wilson (CA); Greg Poelzer (CA)



- ***Policy relevant conclusion*:** Devolutionary pressures continue to be a defining feature of political systems in the Arctic. Human and financial capacity challenges to devolution also persist. Whether and how these basic concerns of governance can be addressed will determine outcomes regarding social issues, economic opportunities, infrastructure, and land and environmental management.

AHDR-II: Education and human capital

Lead Authors: Diana Hirshberg (US), Andrey Petrov (US, RU)

- ***Policy relevant conclusion***: Disparities persist in education outcomes across the North. An increasing incorporation of Indigenous language instruction and the inclusion of traditional knowledge in formal schooling is counterpoised against a continuing erosion of Indigenous languages and traditional knowledge.

AHDR-II: Globalization

Lead authors: Carina Keskitalo (SE), Chris Southcott (CA)

- ***Policy relevant conclusion*:** In many instances globalization means increased dependency of local interests on external powers and unstable markets. At the same time, the forces of globalization bring many economic opportunities to northern areas, including increased resource development and employment.

Arctic Success Stories of relevance to Marine Resource Governance, Resource Stewards and Users

Success stories

- Non-extractive resource portion of the Arctic economy is growing.
- Increase in local participation, control and ownership.
- Increasing use of Indigenous knowledge.
- Continued growth of innovative governance arrangements.
- Emergence of Arctic identities and a sense of Indigenous and, more broadly, Northern identity becoming an asset.

Important questions remain

- What types of institutions work best to improve the economic well-being of northern residents?
- What is the role and significance of the traditional sector in the Northern economy?
- Need to address the challenges of human and fiscal capacity; essential to the co-production of the knowledge and strategies to address a changing Arctic.
- We need to better understand the ambitions of non-Arctic states in the Arctic, and the impacts these may have on Arctic future.
- How do we effectively transfer lessons from one part of the Arctic to another?

Gaps in Knowledge

- Gendered dimensions of Arctic change
- Arctic settlements and communities
- Arctic institutions
- Global linkages and the new actors
- Adopting best practices
- Indicators and monitoring

Thank You