



The social-ecological hoof print:



The integration of science and policy in
social-ecological systems of Northern Fennoscandia



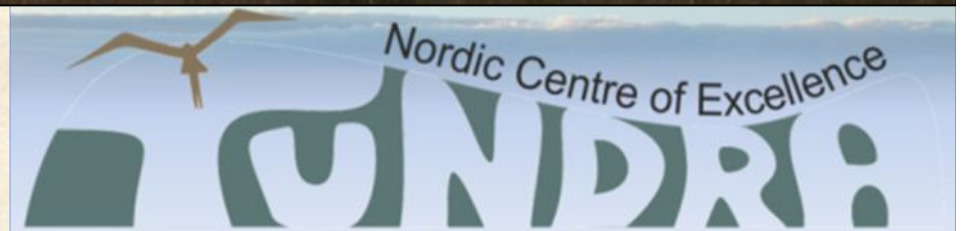
The Arctic Biodiversity Congress: Trondheim, December 2014

Tim Horstkotte, Sonja Kivinen & Jukka Käyhkö

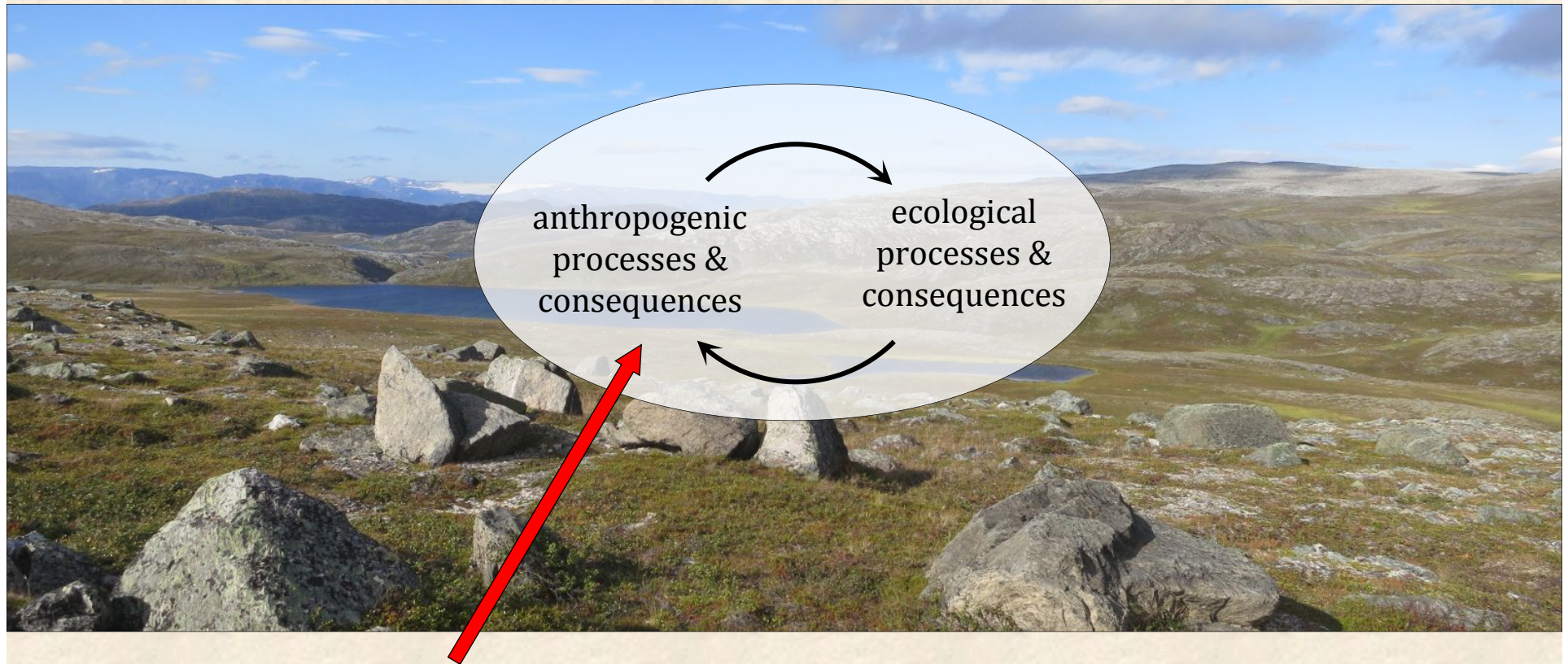
Department of Geography and Geology



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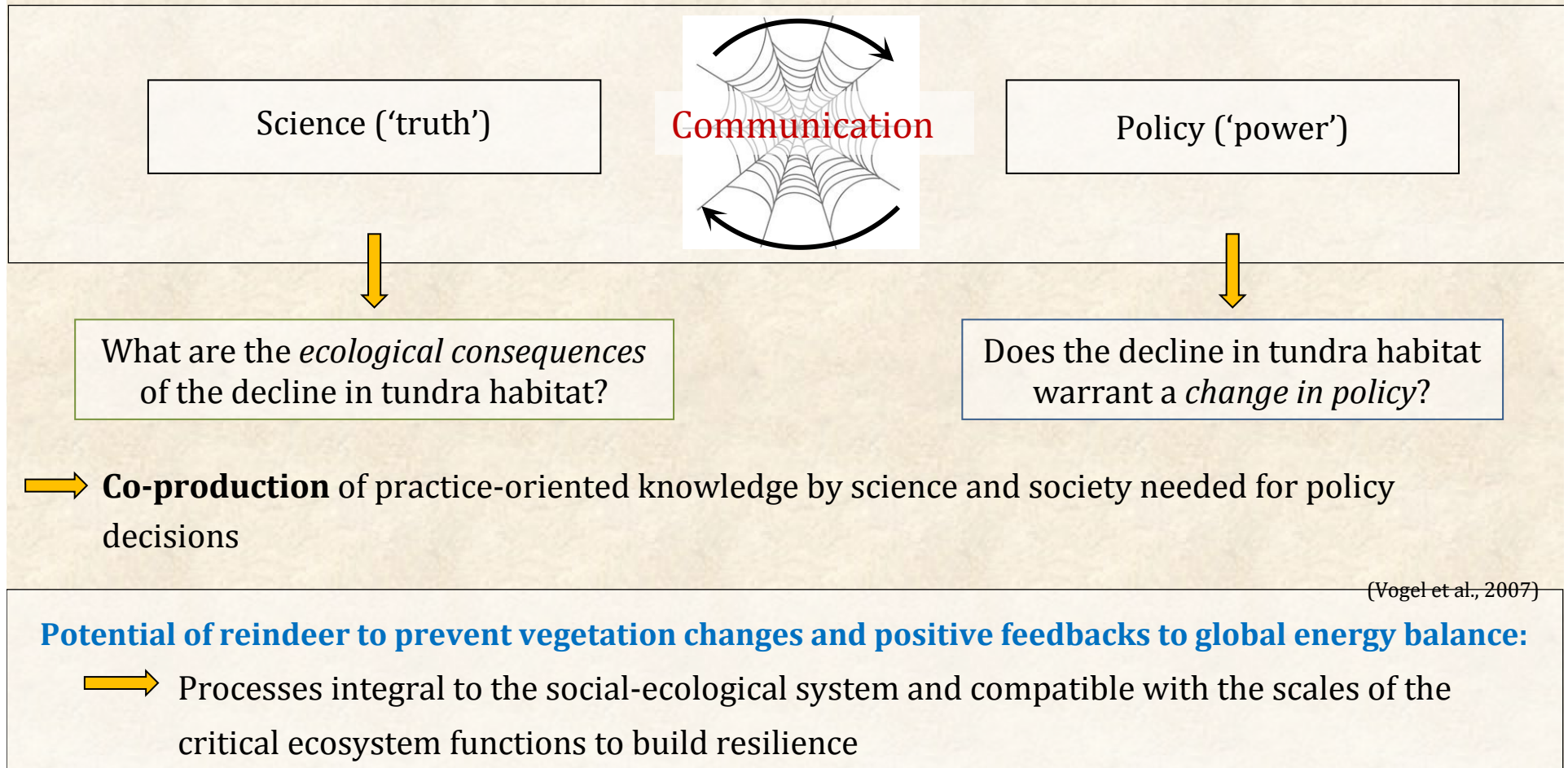
The co-evolving relationship between people and nature



Capacity to take intentional, conscious, transformative steps

➡ Range of actors engaged in understanding and managing environment–society interactions and building resilience

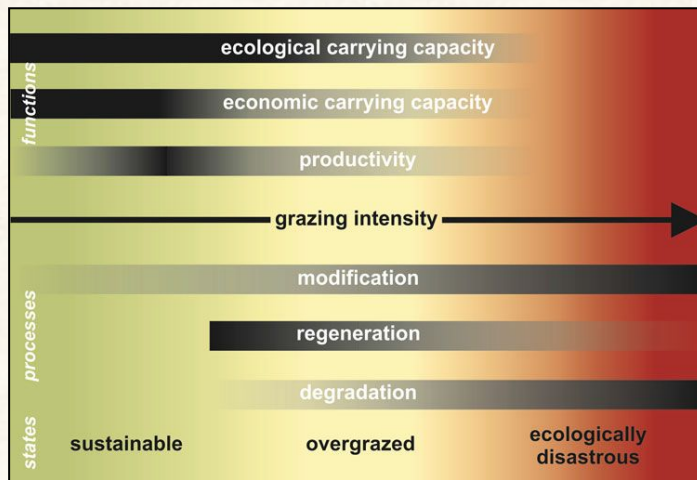
The co-evolving relationship between people and nature



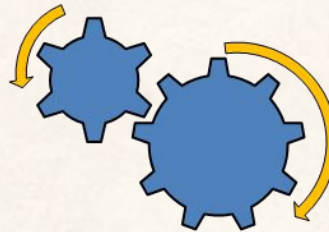
The co-evolving relationship between people and nature

Trade-offs between the **beneficial** and **detrimental effects** of organisms on ecosystems:

➡ multiple effects within **specific contexts** and **societal values**



Pape & Löffler 2012

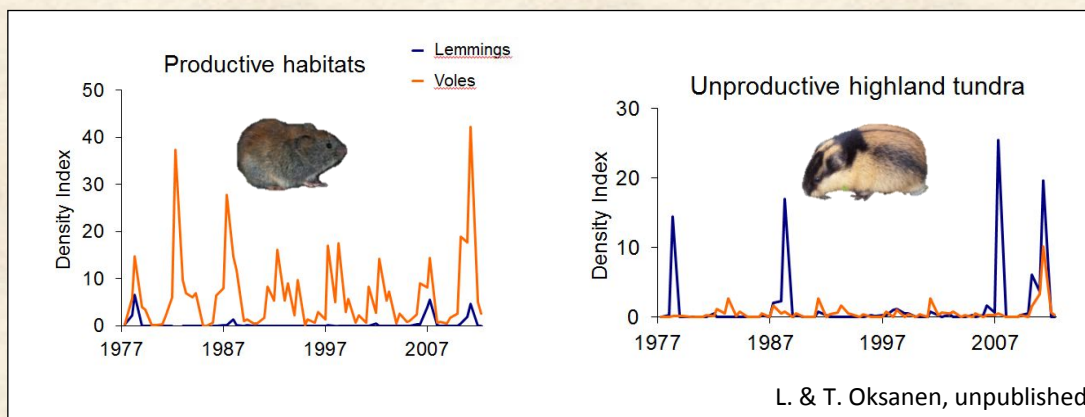
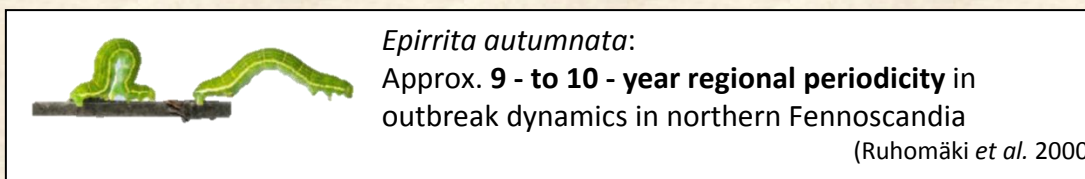
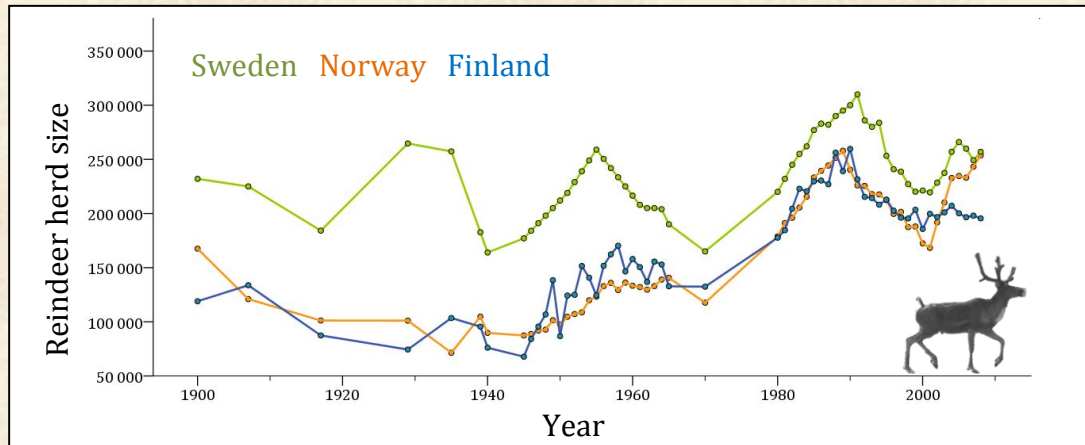


*“Goals that focus on specific endpoints... create **expectations** about **how and when** ecosystems should change. Management requires human agents to work **intentionally to control** the degree and rate of change...*

***‘Intact’ needs to be defined broadly, both spatially and temporally.**”*

(Heller & Hobbs 2014)

➡ Choice of for **socially desirable** and **ecologically reasonable** management:
socio-political process, not scientific decision *per se*



Magnitude of impacts at
different spatial and
temporal scales?

Ecological food webs and interactions alone are not the answer

➡ Which drivers can be controlled?

“Social landscape: nature is a home—a community of biotic actors with whom to have social life... livelihoods are interwoven with conservation goals.”

(Heller & Hobbs 2014)

➡ Landscape of multiple values, priorities and practices based on social heterogeneity

Adapt and implement existent grazing practices as management tool at large spatial scales?



➡ understand actor behavior

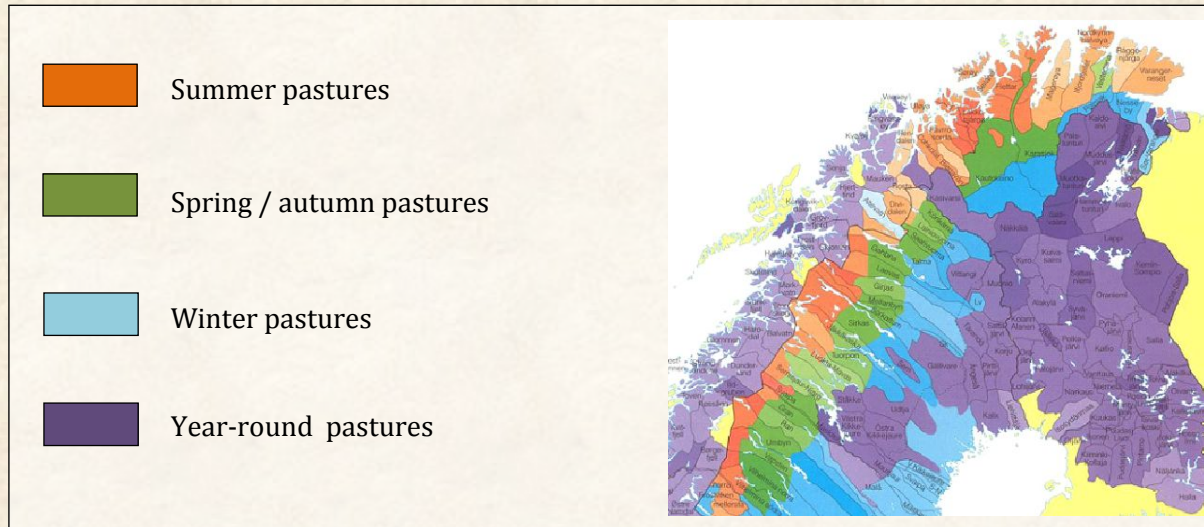


Photo: Philip Burgess

Transformations of ecosystems



contest the legal background and institutions that govern reindeer husbandry in the Nordic countries



Building resilience:

➡ Not only is an understanding of changes in ecological networks necessary, but also of potential re-structuring of existent or conceptualization of novel institutions.

Potentially: Sápmi could gain a more prominent role and position as a *region*

Lantto (2010), *Citizenship Studies*, **14**: 543-556

