

Sámi modernity and theoretical knowledge of reindeer management.

A reflection over knowledge encounters

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Klikk for å redigere undertittelstil i malen

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Decolonization requires independent knowledge development and management

- Knowledge encounter challenges:
- Which status for *traditional knowledge*?
- How can status be restored?
- Which intersections towards western science?
- How can knowledge of different origin mutually enrich each other ?
-and contribute to solve challenges within Sámi and other societies?
- How can traditional knowledge influence western science ?

Breaking the hegemony of established knowledge

- Colonization was more than taking land and resources, it is also important for colonized peoples to *decolonize their minds*.
- Indigenous methodologies point to the need for reconfiguration of all knowledge based on indigenous perspectives and aims.
 - *"Decolonization.....centering our concerns and world views and then coming to know and understand theory and research from over own perspective and for our own purposes"(Linda Tuhiwai Smith, 1999:39)*
- The Declaration on the Rights of Indigenous Peoples (2007) and its article 3 focuses the role of indigenous research in self-determination.
- The discussion on capacity building relates to the right to determine and develop priorities and strategies for the development or use of indigenous resources, in this case indigenous human resources, as expressed in Article 32. (Porsanger 2011)

Different relations between traditional knowledge and western science

- Does the development of a new Sámi modernity influence the interaction of traditional knowledge and science within reindeer management?
- Do knowledge encounters and integration of different knowledge traditions create something new?
- Is there an ongoing paradigm shift reducing legitimacy of outsider understandings?

Traditional knowledge & Carl von Linné (Iter Lapponicum 1732)

- *«The reindeer is much harmed, when in fall, snow that melts and refreeze, when reindeer moss become frozen, as it takes all its food fromwhen not having, it will die, hay it does not eat»*
- Linné also e.g. delivered high quality descriptions of Sámi reindeer milking procedures
- **Generations of scientists have followed in Linnés footsteps.....**

..some of themfor colonialism

- Within the age of colonialism scientists collected traditional knowledge that were used to advance nation state interests.
- Reports (6 + 18 volumes)a basis for Border convention negotiations Norway vs. Sweden (Renbetekommissionen, 1912, 1914)
 - Includes pasture & snow conditions, social relations etc.
 - Very interesting material for contemporary researchers
 - Collected with the clear objective of reducing the border-crossing reindeer herding of Swedish citizen Sámi

Othersfor modernization

- In Norway South Sámi herders in the 1960s and 1970s sought for ways of enhancing productivity. They achieved this using their traditional knowledge in co-operation with modern veterinary and agricultural science.
- Governmental attempts to use this new praxis as a basis for a countrywide policy failed in most of Finnmark due to unconsidered differences between the regions.
- Lacking a governance model that includes herder knowledge and real dialogue.

- In the period from April 2006 to April 2007, the Snow and Ice Project, led by the Nordic Sámi Institute, arranged 4 field workshops in the Abisko area, each of 2 or 3 days duration, and a team of 5-9 scientists and 4-10 herders participated in each meeting. We focused:
 - Relationships between *reindeer herders, reindeer and pasture landscapes* in late autumn, late winter and spring, and how to link TEK with natural scientific measurements and social science perspectives to better understand changing conditions.
 - By recording the *herders' descriptions of snow and ice conditions and their choices of herding strategies* under specific field conditions and making scientific measurements of different types of snow and ice, we created a platform for integrating TEK with science to address the three objectives of the study.
- Thematically, we examined:
 - (1) field observations of snow and ice conditions,
 - (2) the importance of the first durable snow, and
 - (3) long-term changes in snow and ice conditions.

Saarivuoma & Gabna

Density and hardness-**stratified** snow profiles

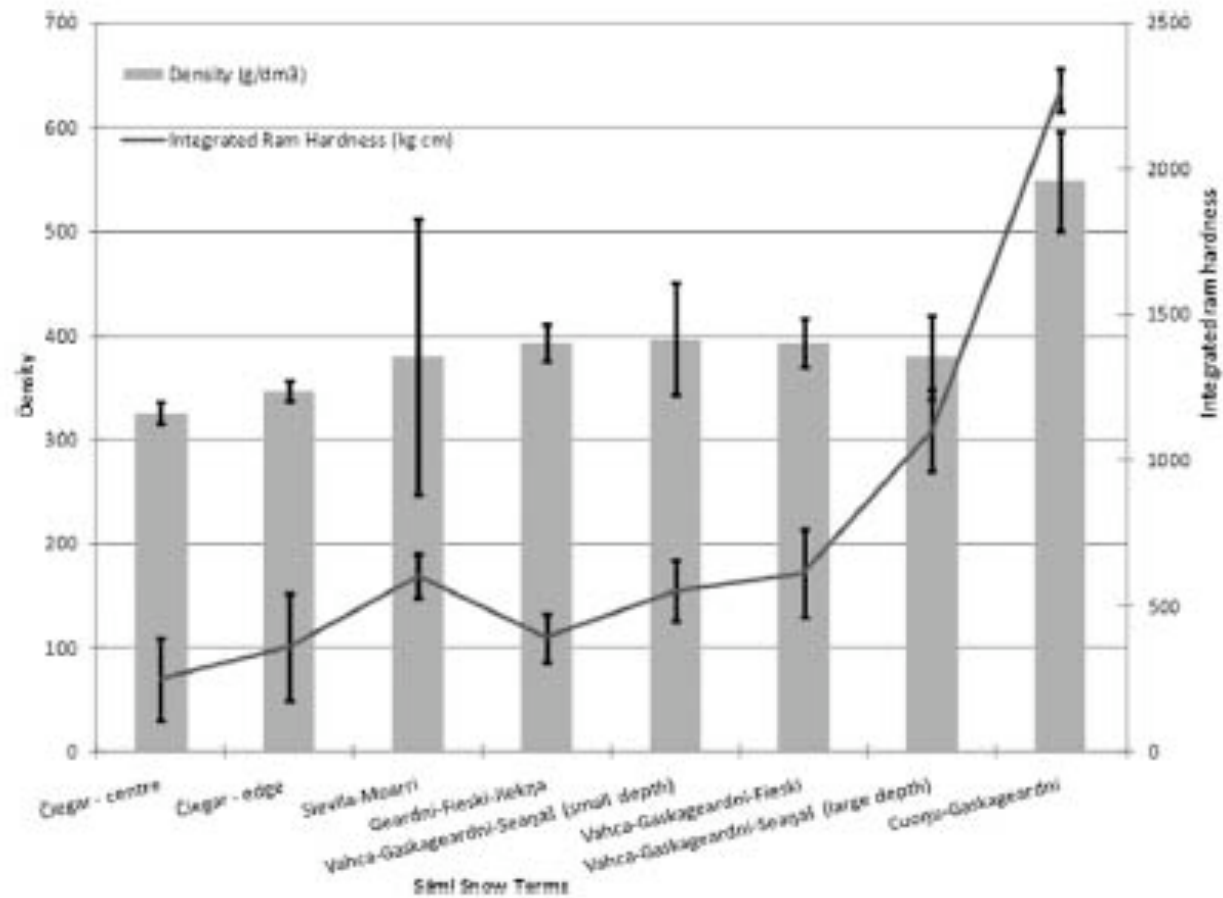


Fig. 3. Stratified snow profiles (Sámí snow categories). Relationship between the density (g/dm^3) and Integrated Ram Hardness (IRH) kgcm). Values are means \pm SE. This relationship was found to be significant (IRH: $R^2 = 0.85$, $P = 0.001$).

THE FIRST PERMANENT SNOW

“towards the end of the rutting season it is generally thawing (...) there is bare ground in some places, and in other places the snow is left lying, and when it freezes, then that snow is turned to ice, as it is called, bodneskardan [bottom crust], and it remains all through the winter just as it is at the time when the last thawings stop and the cold comes. But if the thaws do not spoil the snow, then it will be a good winter, unless there comes very deep snow, for the reindeer can get to the mosses [lichens] even if the snow is fairly deep, if only there is a clean bottom, that is, no ice on the bottom. And it is at this time that the Lapps [Sámi] are afraid [wondering] what the winter will be”

(Johan Turi 1966 [1910]: 53-54).



Observation & focus

- The herders observed that *a long term change in the wind direction* changed the snow conditions from fairly loose snow (*vahca*) to hard packed snow (*ceavvi*) made it difficult for the reindeer to penetrate.
- The explanation for this awareness seems to be that observations of the wind direction are integrated in herder knowledge of how to orientate themselves in their surroundings (Nutti 2007).
- We found that *the majority of the herders' observations are changes that are still little focused upon by scientists* requires a shift in the attention of scientists working in Sápmi to emphasise analysing data that are relevant to the Sámi.

observation & interpretation in research (Johannes 1993)

- While scientific measurements may be perceived as very **objective & accurate**, scientist's interpretation in research can be **subjective**.
- Herders' observation of weather pattern changes made Abisko researchers reconsider the analysis of existing temperature data and led them to discover previously unidentified patterns; thus, **herders' observations changed the focus of the scientists thereby advancing data analysis**.
- In parallel; Boulder (USA) researchers working in Nunavut revealed changes in weather persistence taking Inuit observations as their point of departure (Huntington et al. 2004; Gearheard et al. 2009, Weatherhead et al. 2010).

Bridging the gap

- A challenge for scientists as 'outsiders' is to interpret the meaning of reality as indigenous groups perceive it. In our case, several factors contributed to bridge the gap between different knowledge systems.
- (1) our group of researchers included persons with dual competence.
- (2), the Abisko research station has a century long history as a serious neighbour,
- (3) all participating researchers had at least some knowledge of Sámi culture.
- (4) we met in the field, that is within the herders' home range, and
- (5) our encounters were repeated allowing for the growth of mutual trust.
- One thing is to realize in theory the imperative of including local and/or indigenous people in the overall design and conduct of research related to their ecological views and subsistence activities.
- To practice it, requires care and sensitivity, and perhaps foremost; the time required for the exercise.

Access to knowledge?

- Together with a colleague I was rejected access to the field in a local community where we had established good relation with Sámi reindeer herders during several years
- We had worked with right's questions and wanted to document the case better by exploring Sámi TEK and we had planned a collective meeting by the involved to discuss how to proceed.
- Several times, there was conditions related to the reindeer making it necessary to postpone the meeting. The meeting never took place.
- Finally, one of us received an e-mail:
 - ***"When did the defence of our rights become a knowledge competition?"***
- Afterwards we still could meet with families and households and discuss rights questions.
- Interpretation: We were stopped from crossing a borderline. The Sámi did not want to have TEK taken out of its context and their control and "scientificated". We had learned a lesson (Ween & Riseth 2011).