

# **The impact of climate change on Sami reindeer husbandry in Sweden.**

## **What are the possible ways forward?**

*Léon Fuchs*

August 2015

### **I The significance of reindeer herding**

The Sami – also spelled Sámi or Saami, who were given the derogatory name of Lapp – have lived in northern Eurasia since immemorial times. Their ancestral territory, called Sápmi – also written Sábmme or Saepmi – is currently divided into 4 distinct national territories: Norway, Sweden, Finland and Russia. At the moment, approximately 70 000 Sami still live in and around Arctic Europe. There are 40,000 Sami in Norway, 20,000 in Sweden, 6,000 in Finland and 2,000 in Russia (Sami Information Center, 2006). In Sweden, 10% of the native population remains tightly connected with reindeer herding. There are 3500 reindeer-owning Sami and around 900 reindeer businesses spread among 51 Sami villages – named Sameby in Swedish or Siida in Sami (Ministry of Rural Affairs, 2013). Reindeer herding represents a significant aspect of Sami identity and is often perceived as a way of living as the Sami particularly emphasize harmony with the natural environment. Indeed, a long heritage of reindeer herding is still being shared in Sweden, where unlike some other Arctic countries, reindeer husbandry is a privilege of the native population (Wielgolaski, Karlsson, Neuvonen, Thannheiser, 2005: 270).

### **II The impact of climate change**

However, the development of reindeer herding is particularly challenged by climate variabilities. Many herders have already expressed concerns about the issue and the Sami living in Sweden are among the first indigenous peoples affected by climate change. The strongest effects of this phenomenon are probably felt during wintertime and some herdsmen believe they have not experienced a normal winter for at least a decade. They also believe that the current climatic situation is way different than the one faced by their ancestors (Inga, 2014). Indeed, water does not freeze in the same way anymore and the ice is not as thick as it used to be (Shorr, 2014). Traveling on frozen waterways becomes more dangerous, several accidents happened in the last few years and the migratory routes of the reindeers are getting longer as some areas are too risky and must be avoided (Johnson, 2011). At the same time, the unstable weather also leads to the creation of

massive crusts of ice on the lichen - a significant food source for reindeers during wintertime. The freeze-thaw cycle is constantly changing and winter rains appear to be more common in Sweden as well. The snow might get too hard and the reindeers are not able to smell their food and dig through the ice anymore (Inga, 2014). As a direct consequence, the animals are more and more threatened by starvation. Indeed, the unreliable weather, the increase in precipitations, the rising temperatures and the changing snow conditions have already strongly impacted reindeer husbandry in Sweden. According to the local population, climate change is therefore immediate and stressing, rather than something that might simply happen in the future (Nuttall, 2008). Climate change is already a reality and reindeer herding is particularly exposed (Furberg, Evengård, Nilsson, 2011:8). In fact, several herdsman are afraid of being the last generation of Sami reindeer herders in Sápmi (Furberg, Evengård, Nilsson, 2011:10). According to them, the animals will not be able to survive at this rate and long-term solutions are therefore expected as the end of reindeer herding would be very dramatic for the native population of Sweden.

### **III Land right issues and environmental pressures**

Of course, Sami reindeer herders are aware of their potential vulnerability and they are continually looking for ways to adapt. They do not sit on their hands and do nothing. Rather, they develop innovative solutions and probably do their best to cope with climate change. For instance, they can gather their reindeers in the forests and feed them with livestock food during wintertime, even if risks and costs are sometimes important. In fact, the flexibility of Sami reindeer herders is also highly limited by land rights issues and environmental pressures. Several industrial projects have already led to the degradation of significant landscape elements – such as the quiet calving grounds and the areas with good snow conditions (Horstkotte, 2013:7) – and the herdsman have also lost large areas of pastureland during the last 30 years (Brännstörn, 2008). Their access to land, water and natural resources is limited (Sametinget, 2015) and the legal aspect of the question is getting particularly influential. Indeed, Sami reindeer husbandry is achieved in a complex, interconnected and changing world where space is constantly diminishing. Even if the Sami can use a piece of land for grazing, they do not legally own it (Horstkotte, 2013:5). As they have always done their best to minimize their impact on the environment, they are also often not able to prove that reindeer herding has been maintained in an area for at least 90 years – the Swedish standard for immemorial prescription (Anaya, 201:14). The debate on land rights is very sensitive and there is not sufficient legal emphasis on the close relationship of the Sami with the land. Nature, culture and life are influencing one another and the point is not about owning but it is rather related with the further

protection of Sami livelihoods, worldviews and languages. At the moment, several legal cases have not yet been shut and some of them might well set a precedent in the future. However, the situation is further complicated by the Swedish State's refusal to ratify the International Labour Organisation Convention 169 on the Rights of Indigenous Peoples – a significant legally binding international instrument whose aim is to protect indigenous lands at the national level, establish a minimum standard of rights for native communities, highlight the concepts of cooperation, negotiation and consent and promote indigenous biodiversity-based land uses, as well as native knowledge (Barsh and Russel, 2010).

#### **IV A lack of indigenous self-determination**

The question of indigenous governance is indeed significant in the Arctic and the recognition of native rights is an issue that goes well beyond the Swedish national borders: the United Nations Permanent Forum on Indigenous Issues (UNPFII), the Organisation for Economic Co-operation and Development (OECD) and the Council of Europe have for instance already criticized the current status of Sami rights in Sweden (Sametinget, 2015). Their point is that powerful indigenous governance structures could provide the basis for native communities to deal with changes in a more feasible way. The current barriers are essentially political and the Sami need an active government intervention (Löf, 2013). Even though the recent development of the Sami societies in Finland, Norway and Sweden have significantly contributed to the improvement of indigenous rights all over the Arctic, there is still a long way to go before being assured that the Sami can sustainably strengthen their own self-determination in the future (Anaya, 2011:1). The Swedish legislation is not fully in line with international standards (Olson, 2008) and the Sami living in this specific country are often not considered an indigenous group, but rather they are seen and treated as a “minority de luxe” (Johansson, 2008). The Sami Parliament of Kiruna does not have any decision-making possibilities and it is mainly regarded as a state authority whose role is to deal with administrative issues (Henriksen, 2008:34). The Swedish example of indigenous self-determination does not reflect the essence of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP, 2007) as the situation is still highly dominated by the Swedish State. Therefore, greater local involvement, a sharing of responsibility for natural resources, co-management projects or collaboration on equal footing are possible concrete solutions for the future (Nuttall, 2008:666). The completion of some of these initiatives must be made easier by the Swedish State, whose responsibility is also to protect the future livelihoods of the Sami communities (Koivurova et al, 2015).

## **V The influence of Sami traditional knowledge**

In parallel, the development of Sami Traditional Ecological Knowledge (TEK) should also be prioritized as Sami self-determination could become a means of facilitating the transmission of native knowledge, technologies and opportunities to the next generation. Indeed, TEK has already proven its worth in the past since change is actually not new in the Arctic (Nuttal, 2008: 662). In fact, climate change is a fact of life and many Arctic communities have already faced long-term environmental variations. For instance, many centuries ago, several Arctic populations have adjusted to both gradual and rapid natural changes through the introduction of new technologies, the development of innovative social structures, the diversification of their activities and/or the migration of communities in new areas. But if these communities have succeeded in adapting before, why would the situation be so different in the coming years? The current pace of change is in fact unprecedented and many Arctic communities might not be as flexible as they used to be. Even though it is difficult to generalize, most of them now live in modern settlements. They are influenced by centralized management regimes and they face new pressures. To cope with climate change, Sami TEK is therefore expected to play a key role as it is a definite asset to reindeer herding communities (Ealat, 2013). Indeed, TEK helps understand biodiversity, risks and social organizations. For instance, Sami reindeer herders share precise knowledge on the behaviour of the animals, the weather prediction, the vegetation cover types, the natural resources of the region and the different kinds of snow and ice – for instance muohta, oppas, sievla, skarta or ceavvi (Tisdall, 2010). There is a need to preserve this knowledge for the next generation and collaboration between different knowledge systems – for instance traditional and scientific – should also help the promotion of a new thinking (Tisdall, 2010). Sami TEK is decisive and it highly contributes to make the right decision at the grass-roots level. It is an essential part of climate change adaptation and it is also particularly relevant when it comes to question future sustainability: how is it therefore possible to grow responsibly while developing indigenous livelihoods in the Arctic?

## References

- Anaya, 2011, Report of the Special Rapporteur on the rights of indigenous peoples, James Anaya: [http://unsr.jamesanaya.org/docs/countries/2011-report-sapmi-a-hrc-18-35-add2\\_en.pdf](http://unsr.jamesanaya.org/docs/countries/2011-report-sapmi-a-hrc-18-35-add2_en.pdf) [Accessed 2015-08-06]
- Berkes, 1999. Sacred ecology: Traditional Ecological Knowledge and Resource Management.
- Borchert, 2001, Land is Life: Traditional Sami Reindeer Grazing Threatened in Northern Sweden: <http://www.sametinget.se/6816> [Accessed 2015-08-10]
- Brännström, 2008, Climate change and Reindeer management: <http://www.sapmi.se/gronland.pdf> [Accessed 2015-08-03]
- Ealat, 2013, Reindeer Herding, Traditional Knowledge and Adaptation to Climate Change and Loss of Grazing Land: <http://reindeerherding.org/wp-content/uploads/2013/06/EALAT-Final-Report.pdf> [Accessed 2015-08-10]
- Furberg, Evengård, Nilsson, 2013, Facing the limit of resilience: Perceptions of climate change among reindeer herding Sami in Sweden: <http://umu.diva-portal.org/smash/record.jsf?pid=diva2%3A677047&dswid=-7698> [Accessed 2015-08-10]
- Horstkotte, 2013, Contested Landscapes: social-ecological interactions between forestry and reindeer husbandry: <http://umu.diva-portal.org/smash/record.jsf?pid=diva2%3A606665&dswid=-5209> [Accessed 2015-08-03]
- Inga, Our Shared Arctic, The People, US Embassy Sweden, 2014: [https://www.youtube.com/watch?v=C-6w\\_7TrGBQ](https://www.youtube.com/watch?v=C-6w_7TrGBQ) [Accessed 2015-08-10]
- Koivurova et al, 2015, Legal Protection of Sami Traditional Livelihoods from the Adverse Impacts of Mining: A Comparison of the Level of Protection Enjoyed by Sami in Their Four Home States: <http://arcticreview.no/index.php/arctic/article/view/76> [Accessed 2015-08-03]
- Löf, 2013, Examining limits and barriers to climate change adaptation in an Indigenous reindeer herding community: <http://umu.diva-portal.org/smash/record.jsf?pid=diva2%3A650281&dswid=8793> [Accessed 2015-08-06]
- Ministry of Rural Affairs, 2013, Reindeer husbandry: <http://www.government.se/sb/d/2160/a/66261> [Accessed 2015-08-06]
- Nuttall, 2008, Hunting, Herding, Fishing, and Gathering: Indigenous Peoples and Renewable Resource Use in the Arctic: [http://www.acia.uaf.edu/PDFs/ACIA\\_Science\\_Chapters\\_Final/ACIA\\_Ch12\\_Final.pdf](http://www.acia.uaf.edu/PDFs/ACIA_Science_Chapters_Final/ACIA_Ch12_Final.pdf) [Accessed 2015-08-10]
- Sametinget, 2015, The Right to Land and Water: <http://www.sametinget.se/10175> [Accessed 2015-08-08]
- Sami Information Center, August 2006, The Sami in figures: [http://www.eng.samer.se/servlet/GetDoc?meta\\_id=1536](http://www.eng.samer.se/servlet/GetDoc?meta_id=1536)

Shorr, 2014, Reindeer Herders of Northern Europe Confront Climate Change:  
<http://foodtank.com/news/2014/12/reindeer-herders-of-northern-europe-confront-climate-change>  
[Accessed 2015-08-10]

Tisdall, 2010, What the Sami people can teach us about adapting to climate change:  
<http://www.theguardian.com/environment/2010/mar/10/sami-finland-climate-change>  
[Accessed 2015-08-10]

Wielgolaski, Karlsson, Neuvonen, Thannheiser, 2005, Plant Ecology, Herbivory, and Human Impact in Nordic Mountain Birch Forests, Volume 1:  
[https://books.google.fr/books?id=nRb06VZLGCgC&dq=mountain+coastal+forest+sami+village+sweden&hl=fr&source=gbs\\_navlinks\\_s](https://books.google.fr/books?id=nRb06VZLGCgC&dq=mountain+coastal+forest+sami+village+sweden&hl=fr&source=gbs_navlinks_s) [Accessed 2015-08-10]