

# YOUTH

## THE FUTURE OF REINDEER HERDING PEOPLES



International Centre for Reindeer Husbandry (ICR) & Association of World Reindeer Herders (WRH) in cooperation with the UArctic EALÁT Institute (UEI).

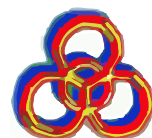
EALLIN is an Arctic Council project of the Russian Federation and Norway in partnership with the Sámi Council, UArctic and others.  
EALLIN is led and implemented by the Association of World Reindeer Herders in cooperation with the International Centre for Reindeer Husbandry.

Cover: Arctic Lavvu dialogue in Kautokeino, March 2012, between circumpolar reindeer herding youth, teachers and HSH Prince Albert II & HSH Princess Charlene of Monaco.  
Pic: Riccardo Pravettoni



Sustainable Development  
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Supported by



**Project leader:** Dr. Mikhail Pogodaev, Association of World Reindeer Herders, Yakutsk, Russia  
[pogodaevm@gmail.com](mailto:pogodaevm@gmail.com), +7 911 916 9780

**Co-project leader:** Anders Oskal, International Centre for Reindeer Husbandry, Kautokeino, Norway  
[ax@reindeercentre.org](mailto:ax@reindeercentre.org), +47 9945 0010  
[reindeerportal.org](http://reindeerportal.org)

Mikhail Pogodaev & Anders Oskal in collaboration with (in alphabetical order): Svetlana Avelova, Piere Bergkvist, Philip Burgess, Anna Degteva, Rávdná Biret Márjá Eira, Inger Marie Gaup Eira, Ol Johan Gaup, Alena Gerasimova, Yunting Gu, Kia Krarup Hansen, Mikkil Anders Kemi, Anne-Maria Magga, Svein Disch Mathiesen, Helena Omma, Per Jonas Partapuoli, Vadim Parfenov, Elna Sara, Nechei Serotetto, Igor Slepushkin, Anne Silviken, Petter Stoor, Ksenia Tibichi, Johan Daniel Turi, Issat Turi, Isak Turi, Ole Anders Turi, Ellen Inga Turi, Elena Walkeapää

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## The voice of reindeer herding youth

Youth are the future of reindeer herding peoples everywhere. Reindeer herding is an ancient livelihood practiced across the Arctic and Sub-Arctic regions, areas that have become the intense focus of science, development and policy interests, and are predicted to experience dramatic climate shifts over the next decades. Young reindeer herders today face an uncertain future: The full range of consequences and impacts of climate change is unclear, their pastures are being lost, and the conditions under which they practice today may well be very different by the time they are middle-aged. The goal of this endeavour is to bring the voice of reindeer herding youth to the Arctic Council: the good, the not so good and most importantly, what young herders want to see changed in order that they can bring their livelihoods into a future which their following generations will want to follow. This report is one of the deliverables to the Arctic Council Sustainable Development Working Group project '*EALLIN – The Voice of Reindeer Herding Youth 2012-2014*'. The main goal of the project was *to maintain and further develop a sustainable and resilient reindeer husbandry in the Arctic*, working towards a vision of *creating a better life for circumpolar reindeer herders*. Through this project, over 160 youth from different reindeer herding peoples have had the opportunity to meet each other, learning maybe as much about *themselves* in the process as they learned from their peers. The material, findings and recommendations below are derived from 12 community-based workshops in Norway, Sweden and Russia, China and Mongolia, where herding youth have been both organizers and participants. (See pp 15-16). An Executive Summary to this report is also available, entitled 'Youth – The Future of Reindeer Herding', which can be viewed and downloaded at [eallin.org](http://eallin.org)



*Pavel Sergeevich Vinokourov, Momsky District. Pic: Galina Sleptsova*

## Key Recommendations

Young herders, scientists and authors of this report make the following joint recommendations to the Arctic Council, that for 'Life to be Good':

### WE NEED TO BE HEALTHY:

- *Special attention needs to be paid to young herders' health care. Mental health issues require culturally relevant and specific expert care urgently in some regions.*
- *Access to fair and prompt response times to emergency health care situations in a culturally appropriate way is critical for nomadic herders in particular.*
- *Living conditions and quality of life need to be supported in accordance with locally specific customs and values so that reindeer husbandry is a viable choice for young people and their families.*

### OUR HERDING LANGUAGES NEED SUPPORT & RECOGNITION:

- *Support traditional models of governance and recognize that without such models, reindeer husbandry would not be possible.*
- *Recommend that the Arctic Council and its Members pay special attention to and take action on the status of reindeer herders' indigenous languages. The knowledge embedded in the professional languages of herders is a vital tool for the survival of the livelihood.*

### PREDATORS MUST NOT THREATEN OUR LIVELIHOOD

- *Heavy loss to predators continues to threaten the sustainability of reindeer herding in multiple regions. Young reindeer herders ask to be equipped with means by which they can effectively influence policies for predator management.*

### WE NEED NEW TOOLS IN THIS ERA OF ARCTIC DEVELOPMENT – SO DOES INDUSTRY

- *Loss of grazing lands and fragmentation of reindeer pastures and migration routes continues to threaten the sustainability of reindeer herding in multiple regions. Young reindeer herders ask to be provided with training courses and education to professionalize their societies in industrial relations and processes with developers.*

- *Industry and local institutions operating in areas of reindeer husbandry need to acquire and consider cultural competence in their local hiring practices in order that benefits are accrued locally*

#### WE NEED ACCESS TO TECHNOLOGIES THAT WORK FOR US

- *Equal access to telecommunication technologies across reindeer herding communities is needed so that young herders can unleash its potential in their communities, for their own purposes, on their own terms.*

#### WE NEED ECONOMIC MODELS THAT SAFEGUARD OUR FUTURE:

- *All forms of reindeer husbandry need to be supported equally across nation states and special attention should be paid to the traditional ownership practices of family based reindeer herding including indigenous understandings of private reindeer ownership.*
- *Create mechanisms and opportunities for young reindeer herders so that they can initiate their own added value businesses and bring new products to the market.*
- *Young reindeer herders in some regions, especially in the taiga, need start up support in order to manage and thrive. Without this help they often cannot even begin in the livelihood.*

#### WE NEED TO RECOGNISE THAT HUNTING IS ALSO INTRINSIC TO WHO WE ARE:

- *Hunting is an important source of food and income for reindeer herders in many regions and local hunting regimes and practices exist that can operate effectively outside official hunting regulations*

#### OUR NETWORKS NEED SUPPORT TO THRIVE :

- *Young reindeer herders ask that the Arctic Council support and facilitate fora where pan-Arctic reindeer herding youth can meet, exchange best practices and learn.*
- *Young reindeer herders asks that the Arctic Council and its Members support the Arctic Indigenous Peoples' Culinary Network Institute and UArctic EALÁT Institute, so they can deliver their relevant and culturally specific educational programs to indigenous youth.*
- *Young reindeer herders ask the Arctic Council and its Members to support the Arctic Indigenous Scientists Association (AISA), for the benefit of the Arctic. AISA was established in part to stimulate recruitment of indigenous youth into academia for the benefit of their own societies, so that solutions and expertise can be found from within.*

- *Young reindeer herders expressed the hope that the important work of EALLIN and the networks it has established be enhanced and further supported. Young reindeer herders are thankful to the Arctic Council for their support of the EALLIN project, which has connected and energized young reindeer herders.*
- *Young reindeer herders asked that the Arctic Council recognize and pay attention to the Aoluguya Declaration, on the occasion of the 5<sup>th</sup> World Reindeer Herders Congress in Inner-Mongolia in 2013.*



*Reindeer Herder, Hunter in the Taiga, Pic: Yuri Kokovin.*

# 1 *'EALLIN lea Buorre'– 'Life is good'*

***Eallin*** means "life" in Sámi language.

*It is related to the word ealát which means "good pasture conditions" and eallu which means "herd"*

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This is the final report of the Arctic Council Sustainable Development Working Group (SDWG) EALLIN project "Reindeer Herding and Youth".<sup>1</sup> This project represents a continuation of the legacy of both the Arctic Climate Impact Assessment (ACIA) and the International Polar Year (IPY), and is an IPY legacy project. It is linked to the strategic goals of Russia's Arctic Policy to 2020 and Beyond adopted in 2008 and the Russian Federation 2009 Climate Change Doctrine. The project is also closely linked to activities under the UArctic EALÁT Institute (UEI)<sup>2</sup> at the International Centre for Reindeer Husbandry (ICR)<sup>3</sup>, notably the circumpolar courses *Training of Future Arctic Leaders initiative* and *Reindeer Herders meet Arctic Industrial Development – Understanding Challenges of Impact Assessment* and *Reindeer Herders Food Culture*. The project started in 2011 under the Swedish Chairmanship in the Arctic Council, continuing into the Canadian Chairmanship. The project is linked both financially and content wise to the UNEP Nomadic Herders project<sup>4</sup>, coordinated by UNEP/ GRID-Arendal, Norway and Association of World Reindeer Herders (WRH). This report was financially supported by The Government of Norway; the Republic of Sakha (Yakutia); the Yamal Nenets AO; the Russian Federation; the Barents Secretariat; the Prince Albert II Foundation; the Swedish Sámi Parliament and the Nordic Council of Ministers.

The AC SDWG EALLIN project is related to several key areas of importance highlighted by the Arctic Council in the Kiruna Declaration of 2013 and the 2011 Nuuk Declaration, as well as the recommendations from the 9<sup>th</sup> Conference of Parliamentarians of the Arctic region in 2010. As recommended by the Tromsø Declaration this project also addresses the needs for adaptation and vulnerability strategies to be focused on the community level and "...reiterate the importance of the use of Arctic Indigenous Peoples' traditional knowledge and capacity-building initiatives in the planning and implementation of measures to adapt to climate change" (The Nuuk Declaration 2011). The project also addresses the recognition "... that climate change and other negative factors have impacted the traditional livelihoods and food safety and security of Arctic Indigenous Peoples" – a key area of the Nuuk Declaration.

This project will contribute to the Strategic Policy Priorities of the Norwegian MFA by among other things, strengthening and consolidating Norway's leading position in knowledge about northern areas. Further, the project seeks to improve the basis of management of environmental and natural resources in the north, such as the sustainable management of the petroleum resources. This would be achieved through contributing to the improvement of the relationships between local youths and industry workers, as well as building capacity and

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<sup>1</sup> <http://www.eallin.org>

<sup>2</sup> <http://www.ealat.institute>

<sup>3</sup> <http://www.reindeerportal.org>

<sup>4</sup> <http://www.nomadicherders.org>

knowledge development among youth. The project also has an emphasis on tradition-based knowledge as a knowledge resource in dialogue, development and decision-making processes in the terrestrial areas of Arctic indigenous peoples.

The project will strengthen the extent to which indigenous people are able to participate and get involved in the changes happening in northern areas, as a means to help protect their culture, traditions in the midst of land-based industrial and commercial development.

The project will strengthen the collaboration with Russia, which formally serves as the host of the project in the Arctic Council, especially with regards to the indigenous people in the northern areas. The initiation of the EALLIN project thus represents a milestone in engaging the Russian Federation in international reindeer husbandry cooperation. The EALLIN project further represents a positive, constructive and active engagement of Russia and Russian authorities, both centrally and regionally, for the improvement of Arctic indigenous peoples livelihoods. It represents a unique exchange of knowledge and experience between Norway, Russia, and a number of other countries also engaged in reindeer husbandry, as a result of contact between indigenous youths of the various associated regions under the framework of the Arctic Council. This supports Norway's aspiration to be at the front in knowledge related to the Arctic.

## 1.1 Why focus on reindeer herding youth?

Since the future of reindeer husbandry and its traditions lies with the youth, the most pressing question is to see whether youth within reindeer husbandry want to continue in this traditional livelihood and under what terms? Climate change and globalization are long-term challenges, therefore, our responses must also be long-term, i.e. investing in our youth.

Climate change and socio-economic change are now evident across the Arctic (IPCC 2013). Global and regional scenarios project dramatic changes in temperature, precipitation and snow conditions in the key areas of reindeer herding (Benestad 2008). Together with social-economic changes these trends are particularly evident in reindeer herding cultures, in their traditional areas and communities. Adding the degradation of pastures due primarily to industrial development, along with the consequences of a changing climate; the future of reindeer husbandry will undoubtedly be challenged (Magga *et al* 2011). These changes are going to have a heavy impact on the decisions young people make and whether reindeer herding as a livelihood is a viable choice for them and their young families. Competence, skills and new technologies need to be built into reindeer herding communities on terms that work for young herders. Empowering young herders to develop their own adaptation strategies to meet future changes is the best route for ensuring that this precious storehouse of knowledge about how best to live in a challenging environment is not lost.

The meaningful engagement of indigenous peoples for the future is “...*fundamental to addressing circumpolar challenges and opportunities*” (Tromsø Declaration, 2009), and Ministers have further “...*emphasized that a fundamental strength of the Council is the unique role played by Arctic indigenous peoples.*” (AC Kiruna Declaration, 2013). This must clearly also apply to the engagement of indigenous youth.

The hope is that the AC SDWG EALLIN project is a contribution towards a vision of creating a better life for circumpolar reindeer herders by:

- Linking reindeer herding youth throughout Fennoscandia, Russia and the Eurasian landmass, to share knowledge and lessons learned in their quest to ensure the future viability of a sustainable reindeer husbandry.
- Creating space for improved dialogue between reindeer herders and industry - a key issue for those in the Arctic practicing traditional livelihoods whose lands are increasingly of interest to industry.
- Working as a tool for recruiting indigenous youth to scientific work, by building competence locally in indigenous peoples' societies and encouraging the active engagement of reindeer herders in securing sustainable futures for themselves, their reindeer and their communities by building resilience.
- Assembling all the knowledge revealed in the EALLIN workshops, into key findings and recommendations disseminated to the Arctic Council. The long-term desired effect is a sustainable and resilient circumpolar reindeer husbandry and reindeer herding cultures, in the face of Arctic change.

Youth are the future of reindeer herding peoples. They are the ones that will carry on the traditions and skills related to reindeer herding. They hold in their hands the responsibility for the future of the reindeer and their communities. We strongly argue that building competence between reindeer herding youth in different regions is a critical factor for the protection of the Arctic, and will enable the maintenance of Arctic biodiversity and the sustainable development of Arctic indigenous societies.

## 1.2 Why gather youth in *Lavvu/Chum* dialogues, workshops and Facebook?

Dialogue is key to developing understanding and to building relationships. Through this work it has become apparent that young herders not only have a lot to say about the things that matter to them but also that they have a lot to say about what they think should be done to make their lives better. How best to encourage young herders to talk? Bring them together. As EALLIN means 'life', young herders wanted to stress that 'life is good', and they want to make it better as there are many factors that are making life 'not so good'. The challenges are many and they are as diverse as the peoples' herding reindeer. But reindeer herding youth, just as their parents and grandparents who initiated international collaboration among reindeer peoples' in modern times 25 years ago have found through the EALLIN process, that they face strikingly similar challenges to varying degrees, wherever they live.

### 1.3 Method: Co-production of knowledge

EALLIN brought young herders together by arranging a series of community workshops. Workshops were held in Norway, Sweden, Russia and China and involved young herders as well as scientists and experts in the field of traditional knowledge, natural resources and

#### ARCTIC LAVVU DIALOGUE

A forum where herders dialogue with scientists, authorities and industry in more familiar surroundings such as traditional tent poles, fire & reindeer hides.

“*Lavvu*” is the Sámi term  
for the traditional nomadic tent used in Sápmi  
Evenki use the “*Djuh*”, Chukchi use the “*Yaranga*”, Nenets and others use the “*Chum*”

environment, representatives of indigenous peoples, the executive and legislative authorities, NGOs and the media.

Reindeer herding youth participants included Sámi from Fennoscandia, Nenets and Khanty from the Yamal Nenets Autonomous Okrug, and Dolgan, Chukchi, Yukagir, Even and Evenki from the Republic of Sakha (Yakutia), as well as Evenki from China and herding youth of Mongolia.

The project was built on the successes and methodologies of one part of the IPY EALÁT project<sup>5</sup>, whereby young reindeer herders interviewed reindeer herding elders about traditional use of the land, climate change and reindeer.

EALLIN has further developed the use of place-based community workshop methodologies developed in SDWG EALÁT Information<sup>6</sup>, which proved to be a useful tool for community engagement and knowledge sharing. These workshops allowed for a diverse range of peoples, gender, age groups, social and economic backgrounds to communicate with each other in a collaborative and mutually beneficial environment.

There have been multiple statements regarding the need to join scientific and traditional knowledge, to give a clearer understanding of climate and other changes, and their consequences (ACIA 2004). This was also supported by Sámi reindeer herder and linguist Eira

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<sup>5</sup> See <http://www.ealat.org>

<sup>6</sup> See <http://www.reindeerherding.org/projects/ealat-information/> for a list of deliverables from this project and where you can download the book: *EALÁT: Reindeer Herders' Voice. Reindeer herding, traditional knowledge, and adaptation to climate change and loss of grazing land.*

(2012), who studied Sámi snow concepts and discussed the importance of using traditional knowledge when looking at adaptation strategies for herders.

Community-based workshops address this need and have represented an arena where science and traditional knowledge have met, where reindeer herders, scientists and local authorities have been brought together in dynamic discussions on important issues related to reindeer husbandry. This has utilized in a concept 'arena' for indigenous youth engagement and exchange throughout the Arctic, resulting in capacity building for the participants and their respective local communities. Community based workshops with a focus on youth are beginning to be more utilised elsewhere in the Arctic to explore themes related to youth, resilience and change (see for example Ulturgasheva 2014)

These workshops are a way to co-produce, where reindeer herders' local observations of change and their resilience and adaptive capacity, are used to explore, analyze, interpret and understand change. The data achieved through participant field observations and dialogues in the workshops are thus qualitative. They help to give an in-depth understanding of the complex human-ecological relationships in reindeer husbandry, and expands the co-production of knowledge about adaption. Participant work is used to attain a greater understanding of the holistic foundation of reindeer husbandry; their working life, their cultural connections to herding, their behaviours, attitudes and challenges. In addition, this method has the potential to stimulate a feeling of confidence between herders and other participants (observers, researchers, industry and politicians) and raises questions and answers (field conversations). However for such an approach to be effective, there needs to be close attention paid to risks, uncertainties, political structures and institutions (Dodman and Mitlin, 2013)

## **What kind of questions were raised throughout the EALLIN Project?**

*What challenges do youth face in the future? (Jokkmokk)*

*How should we meet these changes and challenges? (Jokkmokk)*

*What kind of knowledge do we need and how can we learn from each other? (Jokkmokk)*

*Are youth leaving reindeer herding in your community? (Aoluguya)*

*Are you experiencing the lack of ... women, income, areas and/or reindeer? (Aoluguya)*

*Why do you think these shortages exist? (Aoluguya)*

*Do you feel that youth in your area should take responsibility to build up your reindeer herding communities? (Aoluguya)*

*How do you carry out your responsibilities today? (Aoluguya)*

*What more could you do? (Aoluguya)*

***What should be done in the next 4 years by youth, before the next World Reindeer Herders' Congress in 2017? (Aoluguya)***

***What did I do so that my grandchildren could continue with reindeer herding? (Umeå)***

***What does the 'good life' mean to you? (Umeå)***

The hope is that information derived from these workshops could lead to new research questions and projects, where a process of co-production between herders and scientists in monitoring changes could be developed. By focusing on research, education, monitoring and information, this project could contribute to developing participatory methods and strengthen knowledge development on traditional knowledge and knowledge related to changes affecting circumpolar reindeer husbandry.



*EALLIN Kautokeino 2012. Pic: Riccardo Pravettoni*

# EALLIN FROM SÁPMI TO SAKHA

## 1 TROMSØ

January 23-26, 2012

## 2 KOLYMSKOE

March 9-12, 2012

## 3 KAUTOKEINO

March 22-30, 2012

## 4 SAINT-PETERSBURG

November 30, 2012

## 5 JOKKMOKK

February 15-16, 2013

Joint Skype seminar with Yakutsk

## 6 YAKUTSK

March 15-18, 2013

## 7 AOLUGUYA

July 26, 2013

## 8 SALEKHARD

September 26, 2013

## 9 UMEÅ

January 30 - February 1, 2014

## 10 KAUTOKEINO

March 24 - 27, 2014

## 11 LAPONIA

March 28 - 30, 2014

## 12 KAUTOKEINO

March 31, 2014



Inuvialuit-Sami

Inupiaq-Yupik

Chukchi

Chukchi  
Chuvans

Koryak

Yukagir

Yukagir  
Eveny

Eveny

Eveny

Nganasan

Dolgan

Dolgan

Evenki

Negidals

Uil'ta

Evenki

Evenki

Tofalar  
Soyot  
Tozha Tuvan  
Dukha

Enets

Selkup

Mansi

Khanty

Nenets

Komi

Nenets

Sami

Sami

Sami

Sami

## 2 Sometimes...Life is Not So Good

Young herders who attended the EALLIN workshops were motivated to change reindeer husbandry for the better and keen to further engage more youth in this process, all agreeing that without youth, the future of reindeer husbandry is bleak. Discussions among youth included the challenges of societal diseases and suicide prevention in times when herding communities are affected by many new factors. This report indicates that reindeer herders as a group may historically have been protected against suicide in reindeer husbandry. However, today many reindeer herders experience stress loads over time, and this work-related stress can have fatal consequences for some individuals. The Arctic Council has previously addressed this issue with the Hope and Resilience report (2009).

This chapter will lead you to one herder's story, which helps reveal why this problem can arise among reindeer herders. His story reflects on the situation in Sweden, because reindeer herders in this region have brought up the issue but we know from meeting young herders from across the world that this situation is not unique to Sweden. As there is a lack of research on this critical topic, we have chosen to use Sweden as a case study, thanks to the courageous speech by a young Sámi herder named, Piere Bergkvist during the 5<sup>th</sup> World Reindeer Herders' Congress in Aoluguya, China, July 24-28, 2013. The speech is reprinted here in its entirety with his permission.

### 2.1 "I didn't want to live anymore"

***My name is Piere Bergkvist, and it is little wonder that I stand here today. Seven years ago, I was going to commit suicide and end my life. I want to tell you why I had such thoughts and what made me think about ending my life.***

*After finishing the elementary school, I planned to continue with my education. I applied to a school in Östersund, but I stayed there only for few months because it was very hard to be there. I was bullied and called ugly names because I was Sámi. After that, I felt I could not continue to be there, so I quit the school. I started to work in reindeer husbandry, and after a while I decided to for this way of living, to work with reindeer. I invested and bought livestock. During the winter, we had many predators, and we lost many reindeer. Every day I came into the forest in the morning and knew that I was going to find a whole lot of dead reindeer.*

***One day I found six dead reindeer in an area no bigger than a hundred meters area. This really affected me strongly.***

*I had gone for it and bought reindeer, and then I experience that predators take reindeer from me. In a few months we lost over 60 reindeer. Some years after this, we got bad grazing conditions during the winter and lost many reindeer to predators. When we finally managed to gather all reindeer, and had delivered reindeer for slaughtering to a slaughterhouse, we got the message that the slaughterhouse was bankrupt. We did not get any income from the slaughtering. It was very tough to live a year without income. One simply had to borrow money to survive.*

*In addition, our district ended in a dispute with someone who wanted to build a tourist complex in the middle of our winter pastures. Many of the local residents were against us. This affected me strongly, and I felt very bad for several years. It is very difficult now in Sweden because there is a very large pressure of the predators that we have, it is mentally hard when you see that your own herd decreases constantly. But, this is not all. The life on our winter pastures is getting harder and harder. We have a lot of exploitation in our district, not only in my district but also throughout Sweden.*

*In our winter pastures, they are building windmills and the grazing area decreases constantly. You start worrying if there will be any winter pastures left. In addition, the mining industry is also coming everywhere in Sweden. They have also been drilling for minerals and uranium in the middle of the area where I have my herd in the summer.*

*Then, 7 years ago, I became a father for the first time, and it was the strongest moment that I have experienced in my life. Despite the fact that I had a son, I felt really bad.*

***When my son was 6 months old, it became simply too much for me, too tough for me. I felt I could not live anymore. I was sitting with the gun and was going to end this life.***

*Then a picture arose for me, and it was a picture of my son. He was the one who saved me, because I simply got second thoughts. I told my spouse what I had been planning, and it is clear that it was not easy for her to hear all this. I tried to do something about it. I got help from the health care, and I went to a psychologist. After a while I could feel that I felt better. Some years passed, and I felt that I got back the spark of life, and I felt I would even fight for reindeer husbandry, because this is what I want to work with. I did not tell anyone that I had felt bad because I was ashamed to talk about this.*

***A few years ago, I got the message that my relative and close friend had committed suicide. This affected me very strongly.***

*I got very angry with him because he had done what he did. Then I was angry, especially with myself for not telling others that I had been feeling bad, that I had same thoughts to end my life, that I got help and that it is possible to get out of such crisis. I have held many lectures in Sweden and I see that it helps young people who feel bad. Over the last 10 years, many young people in Sweden have committed suicide. But I see that there is a change when I have given lectures and shared my story.*

*I live in the middle of Sweden, in Jämtland, and am a member of a county group, that is working to establish a Sámi competence center for mental health, as in Norway. I have visited SANKS in Norway and we try to establish such a competence center also in Sweden.*

*That is what I wanted to share with you.*<sup>7</sup>

Piere spoke in his speech about SANKS. SANKS (*Samisk nasjonalt kompetansesenter - psykisk helsevern og rus*)<sup>8</sup> is based in Karasjok, Norway and is the Sámi National Centre for Mental Health. SANKS has a national responsibility to contribute to the development of equal opportunities within the mental health and substance use fields for the Sámi population in Norway.

It is important to note that there is no such facility or comparable for institution for Sámi in the other countries in which they live: Sweden, Finland or Russia.

The following text is taken from the article “Cry of Pain”, by Anne Silviken and Petter Stoor of the National Centre for Mental Health, The Finnmark Hospital Trust.



*Herding reindeer in Troms, Norway. Pic: Kia Krarup Hansen*

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<sup>7</sup> Piere Bergkvist, 5<sup>th</sup> World Reindeer Herders' Congress in Aoluguya, China, July 24-28, 2013 (Transcribed from audio recordings by E. Sara, 01/09/2014)

<sup>8</sup> See <http://www.finnmarkssykehuset.no/sanks/category10180.html>

## 2.2 "Cry of pain"- Development of suicidality among indigenous Sámi reindeer-herders as a result of work-related stress

### ***Suicide among Sámi reindeer-herders***

Suicide rates among indigenous people are in general higher than the majority population, especially in the arctic region. Tatz (2005) has proposed that suicide among indigenous ought to be understood as a social disease, rather than merely explained by mental diseases, and he underlines the significance of historical and cultural context. In an indigenous perspective this could include historical trauma such as colonization, forced assimilation and cultural discontinuity, as well as minority status and rapid social changes. Several of these factors can be identified when analysing challenges connected to maintaining traditional livelihoods, such as reindeer husbandry among the Sámi. We will use Williams (2001) psychological model "Cry of pain", as a framework to understand how suicidality can develop as a result of work-related stress within the Sámi reindeer-herding context.

There is limited research of the prevalence of suicide among the reindeer herding Sámi. A register-based follow-up study among Sámi in northern Norway in the period 1970-98 found significant increased suicide mortality in the general Sámi population, but no significant suicide mortality among Sámi belonging to reindeer husbandry (Silviken et al., 2006). In Sweden, two register-based studies among Sámi reindeer herders in the period 1961-2000 found no significant increased risk of suicide (Hassler et al., 2004; Ahlm et al., 2010). While another register-based study from the same period, found a

significantly increased risk of suicide, but only in the early follow-up period (1961-1980) and not during the later period (1981-2000) (Hassler et al., 2005).

Although these findings are not consistent, it appears that Sámi belonging to reindeer husbandry, in the respective time periods have had a moderate mortality of suicide, especially compared to other indigenous populations in the Arctic. Possible explanations could be that Sámi reindeer herders have experienced lesser degrees of assimilation and thereby greater cultural continuity than many other indigenous groups. These factors have been proven as protective in suicide, in other indigenous contexts (Chandler & Lalonde, 1998, Chandler et al., 2003). Åhrén (2009) also describes Sámi reindeer herders as having strong in-group membership and secure ethnic identities, factors that are associated with better mental health among Sámi adolescents (Kvernmo & Heyerdahl, 2004).

### ***Development of suicidality among reindeer-herders - a "Cry of Pain"***

Williams has developed a psychological model "Cry of Pain" to understand suicidal behaviour (2001). According to Williams suicidal behaviour can be understood as a consequence of certain life conditions, in response to a situation with three components.

1. **Defeat** - an experience of defeat, loss, or humiliation that offers a large need to escape from the situation.

2. **No escape** - an experience of being trapped.

3. **No rescue** - an assumption that this condition will last forever. When these components converge they can give rise to a phenomenon Williams calls "entrapment". "Entrapment" is central in the development of suicidality and is characterized by overwhelming feelings of helplessness (2001).

### ***"Defeat" - Major strains in reindeer husbandry***

Reindeer husbandry is characterized by hard work (of physical and mental character) in challenging climatic conditions. There are several factors in the reindeer husbandry related to internal and external strains and conflicts that can convey a sense of defeat, loss and/or humiliation. These include predators, access to grazing areas, poor pasture conditions, mixing of herds and long lasting land-conflicts with private landowners, and other industries (forest companies, hydro power, wind power, mining, tourist etc.) invading the pastures and migratory routes. Problems with predators are on the rise in many grazing areas, and pose a serious threat to the industry through loss of reindeer and conflicts in relation to the prevailing policy regarding predators. Research from Sweden has shown that working conditions for reindeer herding Sámi are characterized by a difficult economic situation, a perception of high demands, low control, low level of social support and little hope for the future (Daerga et al., 2008; Sjölander et al., 2008).

### ***No escape - an experience of being trapped***

Several of the strains mentioned previously are at a structural level but causes

problems on the individual level (e.g. predator policy, regulation of overgrazing, pasture conditions and land-conflict). Challenges of this nature leave no room for problem solving at the individual level and can cause a feeling of lack of control and powerlessness. In fact, Kaiser, Rounq & Renberg (2013) has shown that young male Sámi reindeer herders in Sweden may experience low influence on central reindeer herding challenges as well as lack of confidence in, and understanding from, authorities as central to their own understanding of themselves as reindeer herders. The structural level challenges can hence be viewed as internalised within the herders as feelings of hopelessness.

### ***No rescue - an assumption that this condition will last forever***

If you work in an industry, that sometimes is very stressful, and the strains can persist for years, a relevant question could be "Why don't you just change job?". In general it could have been the solution or rescue out of a stressful and burdensome work situation. However, reindeer herders do not experience the industry only as a job, but rather as a central part of who they are (their identity). Reindeer herding is a traditional family based livelihood that is passed on to new generations through life-long socialization processes. Choosing oneself "out" of the industry is therefore inconceivable for many herders since it will have devastating effects on themselves, their children and also the continuation of a Sámi cultural heritage. This is encapsulated in a quote by a young Sámi male talking in relation to the idea of leaving the reindeer industry: "Who am I if I stop working with the reindeer? There wouldn't be anything left of me" (2013). In Williams model, this can be interpreted as completing the last component in suicidality development - namely that

there is no rescue, since the situation is expected to last for life.

within the reindeer-herding industry and from the public support system.<sup>9</sup>

### ***Concluding comments***

In the article, we discuss how the work-related stress in reindeer husbandry can lead to the development of suicidality according to Williams model "Cry of Pain". Reindeer husbandry is an industry with very resilient people with cultural pride, and previous studies have indicated that reindeer-herders Sámi as a group may have been protected against suicide. However, today many reindeer-herders experience stress loads over time, and this work-related stress can have fatal consequences for some individuals.

Recent studies from Sweden suggests that Sámi reindeer herders may be seen as a risk-group, based on increased symptoms of anxiety and depression (Kaiser, Sjolander, Liljegren, Jacobsson, & Renberg, 2010) as well as suicidal thoughts and plans (Kaiser & Renberg, 2012; Omma, Sandlund, & Jacobsson, 2013). The study by Kaiser and colleagues (2010) indicates that work-related stress is strongly associated with depression and anxiety among reindeer herders, and especially among men. According to Kaiser and colleague, these findings may be understood as a consequence of mental health problems and lack of hope for future solutions, and they claim that the results may reflect the challenging situation that now prevails among Swedish reindeer herding Sámi (Kaiser & Renberg, 2012).

Due to several challenges in a reindeer-herding context, is important to prevent work-related stress and to intervene early in the suicidal process to prevent a fatal outcome. This requires an effort both

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<sup>9</sup> Silviken A (2011). "Reindrift på helsa løs" - Arbeidsrelatert stress i reindriftsnæringen i lys av Mark Williams modell "Cry of pain". *Suicidologi* 3: 10-14

## 2.3 Health care and reindeer herders in the Russian Federation.

Although youth in the EALLIN workshops highlighted this issue, it is important to note that there are few investigations on societal diseases and overall health among reindeer herders in Russia, but according to World Health Organization (WHO) the suicide rate among indigenous peoples in 1998-2002 amounted to more than 100 cases per 100,000 population (in Russia as a whole- 38),<sup>10</sup> Another indicator of health, Infant Mortality Rate (IMR) in the Yamal Nenets AO and the Sakha Republic are over twice that of the Nordic countries. The Evenki AO is four times higher (Rautio, Poppel & Young 2014) In fact, there it has been established that major gaps in knowledge remain regarding the health and well being of indigenous people in Russia (Rautio, Poppel & Young, 2014). Youth recommended that these issues should be more in focus. There was a wish to increase the availability of health care and the implementation of health programs, consistent with the principles of the WHO. Collections of statistical data on the category of indigenous peoples in the regions where they live should be stored and analyzed. Important areas should be psychological help, identification of environmental risks and major outreach work and education<sup>11</sup>. Access to quality health care services is one of the most challenging issues for reindeer herders in the Russian Federation due to remoteness of reindeer herding areas, the huge distances and lack of transportation and communication infrastructure. The low income and status of reindeer herding as a profession also contributes to poor health among herders. EALLIN workshops revealed that there is a serious shortage of culturally appropriate health care for herders and their families.

*"I want the reindeer herders' work to be honourable, to not be mocked"(Chukchi herder, EALLIN St. Petersburg 2012).*

*"The profession of reindeer herder must be recognized at the state level. Now it is considered only as a way of life" (Khudi H.A. B -31 group, Serotetto V.A. T -31 group, EALLIN Salekhard 2013)*

## 2.4 Climate change in EALLIN herding areas.

Climate changes are now evident across the Arctic (IPCC 2013). In all the communities where EALLIN workshops were held, herding youth reported dramatic changes. Furthermore reindeer herding youth were worried that the long-term effects of the warming of reindeer pastures is not understood nor recognized. Global and regional scenarios project changes in temperature, precipitation and snow conditions in the key areas for reindeer herding communities (IPCC 2013). The temperature has increased primarily in the spring between 1961-1990, both in Finnmark, Norway and the Yamal region in Russia, while precipitation seems to have increased in all seasons (Vikhamar- Schuler et al. 2010 a,b,c). The snow season

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<sup>10</sup>См.: Богоявленский Д.Д. Народы Севера России: демографический профиль на рубеже веков: сб. «Влияние глобальных климатических изменений на здоровье населения российской Арктики» / публикация представительства ООН в Российской Федерации. С. 17.

<sup>11</sup>См.: Абрютина Л.И. Между двух огней. Влияние социальных и экологических факторов на здоровье коренных малочисленных народов Севера. сб. «Современное состояние и пути развития коренных малочисленных народов Севера, Сибири и Дальнего Востока Российской Федерации» / издание Совета Федерации, 2013. С. 230-231.

is typically 220–250 days a year in both regions. The Finnmark and Yamal climate variation is partly correlated with the North Atlantic Oscillation (NAO)-index ( $R \approx 0.5$ ) (Vikhamar-Schuler et al. 2010a). In Sakha the average winter temperatures are usually between -35 to -45°C, while temperature has increased primarily in spring, (Vikhamar-Schuler et al. 2010 a,b,c) making snow melt occur earlier which has led to severe flooding. Climate scenarios indicate that summer temperatures in Finnmark and Yamal may increase by 2 to 4 °C in 100 years, while winter temperatures may increase by 7 to 8 °C (Benestad, 2011). These changes affect not only snow melt but also vegetation. Forest and tundra fires have become more frequent and intense in across Siberia (Lorantý et al 2014) and this is also impacting vegetation. The intensification of these impacts over time adds additional stress to the practice of herding, especially when herding opportunities and pastures are being limited in other spheres.



*Kolymskoe Tundra. Pic: Kia Krarup Hansen*

### Text Box 1 - Could You Live Like This?

#### Could you live like this?

*Vástit rehálaččat: Sáhtálit go duodas lávus orrut jagiid birra. -40 galbmagráda olgun, duljiid vuolde náddut. 4 diimmu girdiin lagámus gávpogii, itge don beasa earet girdiin dohko. Jus háliidat oahpu váldit fertet ruovttu guođđit. Gáiddus oahppu? It leat it gullan ge dan birra. Bohccuiguin bargat lea garra eallin, muhto it don eaiggát iežat bohccuid, leat stáhta dahje fitnodaga reanga ja du bálká lea 1000 ruvnnu mánnui. Návddit háddjejit du ealu, muhto it don daid jovssa ja veahki it oaččo it fal it gostege. Sovjetáiggi leat rehkenasttan ahte akta nissonolmmoš lea nuogis 8 dievdoolbmo biebmat. Danin eai leat go du muohát ja siesát geat barget siidda luhtte, muđui eai leat nuorra nieiddta gávdnamis. Eai ge sii ge hálit boazoeallimii. Gilis gal juobenge bivat nohkkat ja nu buorre go doppe lea hivsset dálu siste. Datgal lea albma buorre dilli!*

*Piotr jearai mus, sáhtášit go orrut dáppe guokte jagi? Ja háliidivččet go ná eallit agibeaivái? Vástidin rehálaččat: In dieđe. In dieđe jus dán áigásaš sáminuorat birgelivčče šat ná, mii geat leat hárvánnan geahppasit eallimii. Minsiidda geaidda lea diehttelas beassat mátkkoštit, oahpu váldit, mis leat iežamet dihtorat ja telefovnnat, biillat ja skoterat. Ja mis leat liegga dálut gos orrut, gal mii fal maid muhtumin lávostallat, muhto dan moadde geasseija, dieđe leašgo dat muitalanveara ge dáidda olbmuide. Dál easka ipmirdan isá-váinni sániid go lávii munnje lohkat "Allet dii nuorat negat doložiid ilá, dat lei garra eallin."*

Answer honestly: Would you be able to live in a lávvu all year? -40 Degrees outside (Fjällräven parkas do not work here, I'm telling you) and sleep under reindeer skins every night. To the nearest town it is a four hour flight and the only way to get there is by airplane. If you want to study, you have to leave your home, distance education is something you have not even heard about. Reindeer herding life is hard and you do not own your own reindeer. As a reindeer herder you are a State or a company employee and your salary is about \$200 per month. The wolves ravage your herd but you cannot do much about it. Surely, you are allowed to shoot them, if you only had the opportunity to hunt them down. During Soviet times it has been calculated that one woman is enough to serve eight men, so that is how many women will be employed as reindeer herders. If you are a young guy, the only women in the tundra are your elder relatives. How much fun is that? Anyway, in the village there is good standard! There they even have indoor toilets! And it is warm and comfortable to sleep.

Piotr Kaurgin (reindeer herder of Turvaugin obshina) asked me if I could live there for two years. And could I imagine to live like that for the rest of my life? I answered honestly: I do not know. I do not know if today's Sámi youth want to live like this anymore, as we have become used to a more comfortable life. Traveling, education, to have our own computers, telephones, cars and snowmobiles is something we take for granted. We live in houses and even though we also stay in a lávvu sometimes, those few nights are hardly worth telling about to these people. Now I finally understand my father when he used to say, "Do not dream about past times, it was a hard life"



Helena Omma, Svetlana Avelova. EALLIN Kautokeino. Pic: Riccardo Prevattoni

### 3 What Do We Need to Improve Our Lives?

At the EALLIN workshop in Umeå youth had to text their ambitions and future visions for reindeer herding, answering the questions “what did I do so that my grandchildren could continue with reindeer herding” or “what does the good life mean for you”? Their vision was then to be written on paper, and held in front of a camera where they would read his or her vision to the viewer. These visions were presented in the short video “*EALLIN lea buorre*”<sup>12</sup>.

#### Text Box 2 – ‘EALLIN Lea Buorre’

##### **EALLIN lea buorre**

#datbuorreallin #detgodalivet #thegoodlife

“Reindeer herding is my safety. I know who I am and what I want, thanks to the reindeer” Helena Partapuoli

“I never stopped believing on reindeer herding” Sanna Vannar

“The connection between the reindeer and human being” Sofia Engström

“I raised the position of reindeer herders in international and national decision making and politics” Helena Omma

“I practiced reindeer herding during my whole life, because I loved it and I never gave up” Johan Andersson

“Always remember your roots! Try to learn your history and it will be easier to understand the entire world. And never give up” Mikhail Pogodaev

“I worked to raise the consciousness of reindeer herding in the majority society. Our culture is a wealth that more people should get in touch with” Elena Walkeapää

“I participated in the improvement of empowerment for the Saami in the society” Per Jonas Partapuoli

“I brought Sámi reindeer herding back to Alaska” Issat Turi

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<sup>12</sup> Watch: <http://www.youtube.com/watch?v=EhAFHwH77HI>

## 3.1 Strengthen our societies through education & competence building

### Our Own Knowledge and Languages Are Key

*“That with the big changes now coming in the Arctic, the Arctic Council is still not focusing on education. Reindeer herding is closely attached to traditional knowledge and language. Did you know that we have over 300 words to describing snow in Sami? Reindeer herding is very much dependent on the language in its way of communicating and describing to others and this is something unique. The reindeer herding youth of today not only need to learn this traditional knowledge and master the language, they also need to keep up with modernization. We live in a modern world and it would be stupid not to adapt. Worth noticing though is that traditional knowledge and language should have a more obvious part in the general education of reindeer herding youth today as well as the fact that we need to educate ourselves in societal issues; but it is also important that the majority society has knowledge about reindeer herding, which in the long term can lead to mutual respect and sustainable communication”*

(Elena Walkeapää EALLIN Jokkmokk 2013).

#### 3.1.1 Relevant Education for Herding Youth

Today when reindeer husbandry is being impacted by of industrial development, climate change and loss of grazing lands, in order to lead successful livelihood, a herder needs to have veterinarian skills, knowledge in business, economy, law and other disciplines. But where can reindeer herder gain knowledge in these disciplines at the same time as they continue to work with their herds? There is a need to develop distance education and courses for young reindeer herders, as well as exchange between different reindeer herding regions.

Education is one of the most important and significant issues for reindeer herders today because it gives reindeer herding youth wider opportunities to maintain their livelihood. Youth raised questions on education at every EALLIN workshop. Every reindeer herding region has strong similarities, and sometimes differences, for example, the strong will of Sámi youth to become reindeer herder persists, while the fact that young people leaving reindeer husbandry in Russia is a big challenge.

*“All young reindeer herders have or wish to have an education together with the work with reindeer” – results from EALLIN Umeå, 2014.*

*“In order to preserve reindeer husbandry we need to attract youth” – results from EALLIN Yakutsk 2013.*

All the countries that have reindeer husbandry represented have a compulsory system of education for all children aged 6-16, which is also free of charge. Still there have been significant challenges in delivering models of education that are appropriate and effective to indigenous peoples in rural areas in all places where reindeer husbandry is practiced (Hirshberg & Petrov, 2014). EALLIN youth in the St. Petersburg workshop (2014) felt that because of these education challenges, children were being separated from the intergenerational and situational transmission of traditional knowledge and this might be one of the reasons for the low interest in continuing with reindeer herding after school.

In Russia, during Soviet times, children of reindeer herders were separated from their parents and sent to boarding schools. This policy has been extremely difficult for parents and children (Kryazhkov, 2010: 405). While isolated from their parents, children had difficulties in studying and at the same time, did not gain reindeer herding skills. Today some reindeer herding villages in Russia still have boarding schools where the children of reindeer herders live and study, only visiting their parents during school holidays. Children, who spent their first years of life in tundra or taiga, cannot get used to the rhythm of life in villages or towns, where they study. Often, they also no longer want to return to reindeer herding camps. Many such young people, who were torn from their native roots, face social exclusion (Kvashnin 2010) The fact that young people do not want to work in reindeer husbandry in most parts of Russia is clear and this threatens the future of the livelihood and the transmission of traditional knowledge.

Experience has shown that for many indigenous small-numbered peoples of the Russian North, who are leading traditional nomadic way of life, the most appropriate form of education for children are nomadic schools such as those which existed in the USSR in the 1920-30's. The revival of nomadic schools began in the Republic of Sakha (Yakutia) in the early 1990's (Arefiev 2014). On the 22<sup>nd</sup> of July 2008 the Sakha Republic parliament adopted the Law "On Nomadic Schools of the Sakha Republic (Yakutia)"<sup>13</sup>.

Despite the isolation from settlements, nomadic schools provide children with access to basic education through the Internet. Children are encouraged to study the culture and language of their peoples, and are also given an opportunity to lead the traditional way of life. Children get a basic education and at the same time, work with reindeer, which means that they will gain more knowledge from their parents, follow their traditions and will transfer traditional knowledge and skills in reindeer husbandry to future generations (Discussions from EALLIN Yakutsk 2013).

*"Here [in the taiga] children live with their parents, they go to school without breaking away from their families. And they will continue transferring traditional knowledge to the next generations" – Svetlana Egorova about nomadic schools, Aldanskiy region. EALLIN Yakutsk 2013*

Unfortunately, the nomadic schools that are in existence today can only provide children with a basic compulsory education, which may last for 1-5 years. There is a challenge when a student reaches the period when they start to study hard sciences, such as physics or

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<sup>13</sup> См. Закон № 73-IV о кочевых школах Республики Саха (Якутия) от 22.07.2008

chemistry. In these terms, children will be less educated than those children of their age, who receive their education at local schools. Of course, nomadic schools have specific needs in terms of legislation, textbooks, and support to families for transportation and infrastructure. The system of nomadic schools also requires special training of teaching personnel, which may require changes in federal state educational standards. Attracting and retaining teachers in Siberia is difficult – there is a high turnover rate in taiga schools (Hirshberg & Petrov, 2014). In addition, the challenges of actually establishing nomadic schools are considerable (see for example Lavrillier, 2013 on her experience of establishing a nomadic school to serve Evenki reindeer herders). There are said to be seven to eleven nomadic schools in Siberia, yet only *two or three* are ‘nomadic’ (i.e. the schools move along with the nomads). The others are housed in small school buildings located in the middle of nomadic areas in the tundra and taiga (Lavrillier 2013).

*“Nomadic schools are the backbone of reindeer husbandry. And there is a huge need in specially trained teachers” – Tatyana Terletskaya, indigenous teacher from Chukotka. EALLIN Saint-Petersburg 2014.*

According to Kryazhkov (2010), the establishment of nomadic schools and kindergartens, as well as community-based, taiga, stationary-nomadic and other schools with distance and on-line methods, is one way for indigenous peoples who lead a traditional way of life, to gain access to education (Kryazhkov, 2010). The Law “On Nomadic Schools” should be adopted at the federal level and there is valuable experience in the Sakha Republic (Yakutia), from which other regions could benefit.

Besides establishing nomadic schools there is also a need to develop local schools and pay more attention to preserving traditional knowledge and language. There should be special classes for children in reindeer herding regions about reindeer husbandry, including practical training and handicrafts. If learning native languages and studying traditional knowledge are encouraged within the educational process, then this stimulation may become a tool towards preserving cultural traditions (Kryazhkov, 2010).

In discussions regarding the availability of education for reindeer herders in Russia at the EALLIN workshops the impression was that young people from reindeer herding families have two choices: leave for the big cities or stay in the tundra (or taiga). There is a tendency that children, who grow up away from their families do not wish to come back after school graduation and prefer to stay in towns or cities.

*“In Yamal it is a problem that only few indigenous graduates come back after their studies. And they lose traditional knowledge in sewing clothes, constructing chums or even herding reindeer” – Nechei Serotetto, young reindeer herder from Yamal, EALLIN Kautokeino 2014*

*“In some areas reindeer herding youth does not finish basic general school education that results in inability to continue education at college level” – results from EALLIN St. Petersburg 2014*

In Russia it is difficult for a reindeer herder to find an institution, which can accept the nomadic life of reindeer herders and provide him/her with those disciplines that a reindeer herder actually needs, with the notable exception of the Yamalsky Agricultural Economic College<sup>14</sup> in Salekhard, where students can gain knowledge in veterinary science, law, and accountancy. This is a valuable role model for other regions in Russia. The creation of a college for reindeer herders in Topolinoe, Republic of Sakha (Yakutia), could be a solution for reindeer herders from different regions of the Republic. In Russia, a new national education law has been passed which gives students the right to have instruction in their indigenous languages, but this right has limits. It is too early to say whether the new law is having an impact (Hirshberg & Petrov, 2014, Russian Federation 2012).

Remote or distance education and online tools can offer some possible solutions for this challenge. One example is the distance education model for reindeer herders in Norway “Sámi allaskuvlla johttioahpahuš” (Sámi University College’s portable teaching for reindeer herders) where reindeer herders were equipped with a computer, Internet access and online courses in topics relevant to their livelihood. This distance education provided students with a basic education for university level and several of the students continued with further studies as Bachelor in Reindeer Herding studies at the Sámi University College and will be finishing their degrees in the spring of 2015.

*“A distance education system for reindeer herding youth further needs development of a method of exchange of students from different reindeer herding countries, possibilities with telecommunication and the establishment of mechanisms of transportation for reindeer herders families (parents, school students) from camps to the village, in spring and autumn” - recommendations from the Kolymskoe Declaration, to the Ministry of Education of the Sakha Republic (Yakutia), the Ministry of Communications and Telecommunications of the Russian Federation and the Ministry of Agriculture of the Sakha Republic (Yakutia).*

There is a strong body of literature on Indigenous education that argues that for it to be effective, it needs to be based on western science, knowledge and traditional knowledge (e.g. Barnhardt, 2005). The UArctic EALÁT Institute (UEI)<sup>15</sup>, intends to deliver educational opportunities for reindeer herders and could be a tool to implement education solutions for other reindeer herding regions. The UEI was established in 2009 and is a virtual institute created under the umbrella of the University of the Arctic and was established to maintain networks established in the circumpolar north during the IPY and to increase the cooperation related to information exchange, research and education in the circumpolar reindeer husbandry. The institute focuses on knowledge production related to reindeer herders’ traditional knowledge, land use change and their food cultures, through increased information, documentation, research, monitoring and education as an adaptation strategy to the rapid changes occurring in the Arctic. The Institute has organized multiple seminars between 2011-2014 towards these ends. UEI needs continued financial and scientific support to create systematic educational courses for reindeer herding youth on a national and

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<sup>14</sup> <http://www.ypat-salekhard.ru/>

<sup>15</sup> <http://www.ealat.institute>

international level, as well as assistance from Universities to develop tailored training programs.

In Kautokeino, Norway, there is the Sámi Upper Secondary and Reindeer Husbandry School where it is possible to receive a higher education in reindeer husbandry for those who are planning to continue their family business and become a reindeer herder. The education lasts for 4 years: 2 years of theory and 2 years of practice. The school provides training for Sámi youth, which come from different reindeer herding regions of Norway, and they have created a curriculum for reindeer herding teaching. The School also offers courses in handicraft, reindeer meat and leather processing etc., and invites teachers from different regions of the circumpolar North to conduct courses (Gerasimova, Internship report, 2013). After the upper secondary school, the Sámi University College (SUC)<sup>16</sup> in Kautokeino offers different courses and a full-time bachelor study over three years (180 credits) in reindeer herding studies where students immerse themselves in topics related to reindeer herding. The program introduces a multidisciplinary program with a combination of scientific knowledge and methods and Sámi traditional knowledge, showing for example how *siida*<sup>17</sup> knowledge is a parallel system to scientific knowledge and perspective. Other topics include reindeer as a resource, pastures and herding, plants and knowledge of pastures, knowledge on landscape, topography and herding, in addition to *siida* organization and systems of state management of reindeer husbandry, legislation and jurisprudence.

In 2014 the *Árbediehtu*-course "Traditional knowledge; theory, method and traditional knowledge as a basis for management of resources in the North" was initiated and 14 students graduated in the spring who were mostly from reindeer husbandry. This course introduces traditional knowledge in general and Sámi traditional knowledge in particular, and about the value of this knowledge both now and in the future. The emphasis is on scientific approaches to this knowledge, including documentation methods, and how traditional knowledge can help to contribute to strengthen local communities and indigenous livelihoods. The foundation of the course is the Convention of Biodiversity and 8(j). This autumn the course started again, with 22 students where most of the students are from reindeer herding families.

*"In Finland, there are education programs and vocational training for reindeer herding youth in Finland. From the reindeer herding youth's perspective, there is need to both integrate traditional knowledge into education and also include training about international and national law and governance pertaining to reindeer husbandry in education programs. Also more co-operation with other reindeer herding peoples is needed" – Anne-Maria Magga, young reindeer herder and Phd student from Finland. EALLIN Kautokeino 2014.*

According to the EALLIN workshops, many young reindeer herders expressed their wish to gain a higher education and study disciplines, which may be useful in reindeer herding life.

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<sup>16</sup> <http://www.samas.no>

<sup>17</sup> The *siida* has many meanings, but basically is a Sámi local community that has existed since time immemorial.

From the Umeå workshop it was revealed that many reindeer herders wish to have a higher education besides their reindeer herding work:

*"To organize courses on legislation for reindeer herders, because 90 % of them don't know their rights" – reindeer herder from Yakutia, EALLIN Yakutsk 2013.*

*"Maintain friendship, partnership and cooperation between reindeer herding regions, so that young herders could practice in other countries, under other circumstances" – Participant, EALLIN Yakutsk 2013.*

Low salaries, difficult living conditions, lack of prestige in being a reindeer herder, these are the main reasons why many indigenous youth in Russia don't choose reindeer husbandry. But by providing youth with more opportunities for education, to meet other reindeer herding youth, to exchange practice and knowledge might awaken their minds, and make them concerned about the future of reindeer husbandry and their traditions, appreciate their unique way of life and the culture of the indigenous people they belong to.

*"Young reindeer herders should be proud and know what is their aim of life. The important thing is the upbringing of children" – Anatoliy Lebedev, EALLIN Kautokeino 2014.*

*"Sad to hear that some do not want to continue. Education is important. Encourage youth to continue with reindeer herding. Cannot blame the external factors, take the sake in our own hands by educate ourselves. Learn from our elders" (Evenki herders Yun Ting, Aoluguya, Guo Fa, Aoluguya, EALLIN Aoluguya 2013.*

The right to education is one of the main cultural rights of indigenous peoples (Kryazhkov 2010). There is a need to create an education system in the mould of the traditional economic activities of indigenous peoples (Bernhardt 2005). Education is a powerful motivator and a creator of alternate and improved visions for the future, as evidenced by some of the 'future visions' stated by young herders at the EALLIN workshop in Umeå:

*"In 10 years - I will defend my thesis in an area that is of benefit to the Sámi community. More and more people have the opportunity for a sustainable reindeer husbandry. Besides the reindeer as a base, I work as an expert and politician. All achieved in 10 years. In 20 years - I can see how the next generation themselves control their lives and future. The Sámi people have autonomy over Sámi land and water, and the consensus is the guiding principle in all decisions. " - Per Jonas Partapuoli, EALLIN Umeå.*

*"In one year - finished with my Masters! Started cash-in. Bought a car with four wheel drive. 5 years - Active in WRH, we plan the Congress by 2021. I am possibly PhD student if I do not have another good role. 10 years - 37 years. I have found the right way to bring my agenda, so I don't need to spend energy on boring-policies and paperwork. I know where I "live", where my site is. I have my place in my siida. 20 years - 47 years. I stand firmly rooted in reindeer herding and have transferred it to my children / cousin's children / godchildren. I have a position in the society, representing the Sámi and the reindeer herding in the Swedish and the international society. We have real influence in our own affairs. " – Helena Omma, EALLIN Umeå.*

## 3.2 Traditional knowledge in reindeer herding - A treasure house for the future

Traditional knowledge (TK) represents a key resource in reindeer herding. Through centuries of experience reindeer herding societies have developed and accumulated invaluable knowledge and experience, vested in reindeer herding practices, languages and management strategies (Turi & Keskitalo 2014). Throughout the EALLIN workshops traditional knowledge was a recurring theme. Of particular concern were the importance of transfer of knowledge to younger generations, and the challenges and opportunities associated with applying and integrating traditional knowledge with science and governance.

The discussion below is divided into three themes. The following section discusses the issues relating to knowledge transfer from generation to generation. There follows a discussion of challenges and opportunities associated with integrating traditional knowledge and science. The final section discusses the ongoing process for developing principles for use of traditional knowledge in the work of the Arctic Council led by the Permanent Participant organizations. The conclusions highlight the key recommendations from the workshops.

### 3.2.1 *Continue to preserve opportunities for the development and transfer of traditional knowledge*

Traditional knowledge is transferred from generation to generation, through practice and oral transmission (Berkes 2002). The inter-generational link is crucial for the continued preservation and transfer of traditional knowledge. A great responsibility thus lies within the current adult generation of reindeer herders to teach this knowledge to youth and children. Indeed a failure to do so would deprive reindeer herding youth of future opportunities:

*“...Parents should teach their children the traditional way of life, they shouldn’t deprive them of opportunities to decide some aspects of [...] reindeer herding.”*  
– Participant, EALLIN Salekhard 2013.

Traditional knowledge in reindeer herding is strongly linked to the practice. In other words, traditional knowledge is transferred through oral transmission and through *learning by doing* (Berkes 2009) Therefore the preservation of traditional knowledge is dependent on the continued practice of reindeer herding. In order to foster transfer of traditional knowledge, youth need opportunities to stay on the tundra.

*“In order to not forget the traditions, we just need to follow them and transfer them to the next generation.”* – Khudi H.A., EALLIN Salekhard 2013.

*“The preservation of traditions also depends on the composition of the population. If there is no population of the nation, then there is no tradition, too.”* – Serotetto V.A., EALLIN Salekhard 2013.

*“Traditional knowledge is preserved and is used in the tundra home life. To preserve the traditional knowledge, we need transmit them by inheritance. To save the traditional food we need to love and eat it and, of course, must learn these recipes in our younger years.” – Khudi H.A., EALLIN Salekhard 2013.*

Further, reindeer herding youth participants in EALLIN expressed their awareness and readiness to accept responsibility for the continued preservation and development of traditional knowledge. At the workshop in Umeå, reindeer herding youth conducted an exercise where they drafted their visions for the future in 5, 10 and 20 years. The participants clearly accept and recognize their role and responsibility in ensuring the transfer of TK to future generations, demonstrated by the following quotes:

*“In five years time I will be sustained by reindeer husbandry and I am fighting for that also the next generation can continue reindeer herding” (Mattias)*

*“In 20 years I will be teaching my oldest child how to mark reindeer. I am more active in the political arena again. But life is good, and my reindeer herding enterprise is going well” (Helena Partapuoli).*

*“In 20 years I am 45 years old, working full time with reindeer in the forest and I am trying to teach my children all I know about sustainable reindeer husbandry” (Neila)*

*“In 20 years I am 46 years old. I will have worked towards my goals. I encourage my children and nieces and nephews and godsons/daughters to believe in what they do. I am still fighting for the continued existence of reindeer husbandry” (workshop participant)*

The vision of the future of reindeer herding youth is a vision of strength where they take responsibility for continued practice and transfer of traditional knowledge. In order to facilitate this, workshop participants also emphasized the importance of fostering solidarity and mutual support among reindeer herding youth. In Jokkmokk, for example, the role of social support among youth in preserving language was emphasized:

*“How can traditional knowledge be preserved? ... Help each other. Unfortunately there is not much Sámi spoken in the forest. We need to support each other in beginning to speak Sámi” (Summary from the Lavvu dialogue in Jokkmokk)*

Reindeer herding youth are ready to take on the responsibility of transferring traditional knowledge to future generations. And, they call for opportunities to stay on the tundra, and opportunities to develop networks of mutual support.

Beyond local relations, youth also emphasized the importance of fostering a network of support among reindeer herding youth across the circumpolar north. Through the EALLIN workshops youth from the various reindeer herding areas had the opportunity to meet, discuss and build collaborative knowledge networks. To continue such collaboration, youth

emphasized the importance of developing university-level exchange programs across circumpolar education institutions, focusing specifically on reindeer herding youth. The EALLIN project has been one means of fostering such student exchange. This type of exchange is fruitful not only for fostering networks among reindeer herding youth, but also for fostering knowledge-exchange and knowledge development in reindeer herding societies. Examples include recent works by reindeer herding studies focused on comparing cases from different reindeer herding regions (Gerasimova 2013; Eira, 2012). Indeed, the unique contribution of reindeer herding students in working in the interface between traditional knowledge and science was raised.

*Scientific studies (field studies) among reindeer herders should be a priority over the others. – Boytunova P.L., EALLIN Yakutsk 2013.*

Recent projects organized through ICR, including PhD and Master level courses on reindeer herding organized in collaboration with the UArctic EALÁT Institute, the Sámi University College and the UArctic network have been a means to foster scientific collaboration among reindeer herding societies. In addition, with regards to reindeer herding, the SDWG EALÁT project engaged scientists from reindeer herding backgrounds to explore topics relating to reindeer herding, traditional knowledge and climate change. Examples of the work of this project include Eira's (2012) work on traditional knowledge and terminology relating to snow in Sámi reindeer herding, Sara's (2009, 2011) work on traditional knowledge in the Sámi reindeer herding *siida*, and Turi and Keskitalo's (2014) work on the interactions between traditional knowledge and formal governance in reindeer herding. The experiences from the EALÁT project indicate that involving scientists from reindeer herding backgrounds in projects focusing on reindeer herding topics can facilitate a deeper dialogue between traditional knowledge and science, and thereby yield new insights.

Inspired by such academic collaboration, reindeer herding students and academics in collaboration with indigenous scientists from across the Arctic initiated a process for establishing an association for indigenous scientists (Arctic Indigenous Scientists Association). The aim being to unite both students and established-scientists from arctic indigenous backgrounds in a collaborative effort to improve collaboration between science and traditional knowledge, and to address the ethical dimension involved in the use of traditional knowledge in science (see Young & Brunk 2012).

Indeed, a challenge of Arctic transformation is finding effective governance solutions that utilize the best knowledge available, including reindeer herders' traditional knowledge. On the one hand, asymmetrical power relations between ways of knowing, i.e. between science and traditional knowledge, represent a barrier to incorporating traditional knowledge into policy (Turi and Keskitalo 2014; Sara 2011). To facilitate the use of traditional knowledge in governance, deliberate efforts to overcome such barriers is required. Recently steps have been made towards a better integration of traditional knowledge in governance in the Arctic. Most of these advances have been made in North America, some in Fennoscandia and few in Russia. There is still much to do in order that 'conceptual confusion' does not reign (Forbes & Kofinas, 2014) The section below outlines the work in process for developing fundamental principles for use of traditional knowledge in the work of the Arctic Council.

### 3.3 Drafting fundamental principles for the use of TK in strengthening the Arctic Council<sup>18</sup>

The Kiruna Declaration on the occasion of the 8th Arctic Council Ministerial Meeting in May 2013 called for the Arctic Council to:

*“...recognize that the use of traditional and local knowledge is essential to a sustainable future in the Arctic, and decide to develop recommendations to integrate traditional and local knowledge in the work of Arctic Council.”*

Based on this mandate from the Ministers, a group consisting of the Canadian Chairmanship, Permanent Participants (PPs) and Working Groups (WGs) have worked intensively together, under PP co-leadership, to develop recommendations for how to integrate traditional knowledge in the work of Arctic Council. Through two workshops the group has developed and drafted fundamental guidelines. The project is currently under review in SDWG, which also may result in a need to alter this chapter subsequently.

As a starting point the mentioned group, consisting mainly of PPs, have only focused on Traditional Knowledge (understood as *indigenous* traditional knowledge). The group has thus not focused on *local* knowledge (understood as local knowledge of non-indigenous communities), a term which is in fact in the Declaration text.

A set of fundamental principles for inclusion of TK into the work of the Arctic Council has been drafted. The PPs advocate calling these principles ‘fundamental’ to show that they should be the basis upon which the Arctic Council operates, i.e. a form of ‘ground rules’.

This initiative can be seen as part of the ongoing process of strengthening the Arctic Council that has been intensifying in later years. Indeed, this initiative aspires to change the way the Arctic Council works, how it functions, i.e. *to improve the Arctic Council*. PPs specifically point out that the fundamental TK principles will “...advance (the Arctic Council’s) objectives by supporting the active participation of Permanent Participants.”

Recognition of TK has been part of the Arctic Council from its very beginning, e.g. reflected in the words of the Ottawa Declaration from the establishment of the Council in 1996:

*“...Recognizing the traditional knowledge of the indigenous people of the Arctic and their communities and taking note of its importance and that of Arctic science and research to the collective understanding of the circumpolar Arctic;”*

Likewise, TK has been recognized in almost all Arctic Council Ministerial Declarations. Over the years the Arctic Council has existed, there have been some good examples of TK related

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<sup>18</sup> Disclaimer: The author of this section underlines that any assumptions or statements made herein are entirely his own responsibility, based on his own subjective perceptions of the process as one of the participants, and does not in any way attempt to represent PPs’, the Chairmanship’s or any other entity’s positions. Any errors or misrepresentations in this section are thus the sole responsibility of the author

projects. Concerning reindeer herding, the SDWG EALÁT Project needs mention, representing an initiative initiated and led by indigenous peoples themselves. Also of special significance is the Arctic Indigenous Languages Symposium. In addition, there are good examples of mainstream-projects that have included TK in constructive and rewarding ways. A generally acknowledged best-case in this regard is the ACIA report in 2004-2005.

On the other hand, there have also been less successful efforts. As an example, The Aoluguya Declaration, on the occasion of the 5<sup>th</sup> World Reindeer Herders Congress in Inner-Mongolia in 2013 specifically mentions “...note of the CAFF Arctic Biodiversity Assessment (ABA) synthesis document published May 15<sup>th</sup> 2013, and note that reindeer herders’ traditional knowledge and understanding of biodiversity and nature has not been included into the ABA reports.”

Developing principles for inclusion of TK into the work of Arctic Council, represents an effort to clarify and outline the means by which TK can and should be included in future projects.

The PPs have clear expectations to the outcome of this initiative, for instance reflected in this introductory passage from the draft TK principles document:

*“...The inclusion, promotion and use of Traditional Knowledge in the work of the Arctic Council is a collective expression of Arctic Council States in supporting the domestic and international rights, roles, and place of indigenous peoples in the circumpolar Arctic; and will address a collective need to produce information that are of use to Arctic indigenous peoples, decision makers and scientists of all cultures from a community level to international governments.”*

PPs further concludes that they represent TK holders, and that PPs are thus

*“...integral to the inclusion and use of Traditional Knowledge in the work of the Arctic Council.”*

The draft TK principle document outlines working definition on Traditional Knowledge, and before reflecting about some of the actual principles we shall have a look at it: Although the PPs themselves did not see a pressing internal need for a definition of TK initially in the process, the group did develop a ‘working definition’ for TK at the meeting in Ottawa. This was primarily done for clarification externally, though not to attempt replacing existing definitions in use by indigenous organisations. The definition was adapted from ICC and GCI definitions of TK, and modified, as follows:

*Traditional Knowledge is a systematic way of thinking and knowing that is elaborated and applied to phenomena across biological, physical, cultural and linguistic systems. Traditional Knowledge is owned by the holders of that knowledge, often collectively, and is uniquely expressed and transmitted through indigenous languages. It is a body of knowledge generated through cultural practices, lived experiences including extensive and multigenerational observations, lessons and skills. It has been developed and verified over millennia and is still developing in a living process, including knowledge acquired today and in the future, and it is passed on from generation to generation.*

The definition is rather broad, which may be seen in relation to that it was made to concur to external needs, i.e. the need to have a working definition for researchers and entities from outside the indigenous communities carrying TK. The resulting document then lists

fundamental 13 principles for the use of traditional knowledge to strengthen the work of the Arctic Council, printed in full in the table below.

**Text Box 3 – Ottawa Traditional Knowledge Principles**

**Principles for the Use of Traditional Knowledge in Strengthening the Work of the Arctic Council)**

1. The use of Traditional Knowledge is an overarching mandate of the Arctic Council and is a central commitment for implementation by the Senior Arctic Officials, Permanent Participants, and all Arctic Council Working Groups.
2. Traditional Knowledge enhances and illuminates the holistic and shared understanding of the Arctic environment which promotes and provides a more complete knowledge base for the work of the Arctic Council.
3. Recognition, respect, trust, and increased understanding between Traditional Knowledge holders, scientists, and representatives of the Arctic States are essential elements in the meaningful and effective inclusion of Traditional Knowledge in the work of the Arctic Council.
4. The inclusion, use, review, and verification of Traditional Knowledge in the work of the Arctic Council will occur at all stages of every agreed-to initiative and will be led and facilitated by the Permanent Participants. Recognizing that Permanent Participants will determine the appropriate use of Traditional Knowledge in work of Arctic Council.
5. Traditional Knowledge is the intellectual property of the indigenous knowledge holders, therefore policies and procedures for accessing data and information gathered from Traditional Knowledge holders should be developed at the appropriate ownership level, recognizing and adhering to each Permanent Participants' protocols.
6. In order to maintain the integrity of specialized information and avoid misinterpretation of Traditional Knowledge, it is crucial that evaluation, verification and communication of analyzed information be conducted by Traditional Knowledge holders with appropriate expertise, to be identified by Permanent Participants.
7. Each of the Permanent Participants represent their respective cultures, communities, peoples and Traditional Knowledge systems and holders; processes of including Traditional Knowledge in the work of the Arctic Council

will respect and reflect this diversity.

8. The inclusion of Traditional Knowledge in the work of the Arctic Council requires adequate capacity and resources to address the unique needs and circumstances of the cultures, languages, communities, governance processes, and knowledge systems of Arctic indigenous peoples represented by the Permanent Participants.
9. Traditional Knowledge and science are different yet complementary systems and sources of knowledge, and when appropriately used together may generate new knowledge and may inform decision making, policy development and the work of the Arctic Council.
10. The use of Traditional Knowledge within the Arctic Council must benefit the knowledge providers and appropriately credit indigenous contributions.
11. The co-production of knowledge requires creative and culturally appropriate methodologies and technologies that use both Traditional Knowledge and science applied across all processes of knowledge creation.
12. Communication, transmission and mutual exchange of knowledge using appropriate language conveying common understanding, including strategies to communicate through indigenous languages, is critical to work of Arctic Council.
13. Recognize the need to bridge knowledge systems, including leveraging existing indigenous knowledge networks, institutions and organizations, as well as developing education strategies to broaden mutual understanding.



*Preparing food on the taiga. Pic: Yuri Kokovin.*

### 3.4 Our silent languages

*“If there is no reindeer, indigenous languages will disappear! When people leave traditional occupations, the language will be forgotten. Reindeer are the very foundation of reindeer peoples’ universe.” – Arkadiy Gashilov, EALLIN St. Petersburg 2014.*

All reindeer herding peoples have their own language and culture. Language is the means by which a person describes his or her own environment, acts, objects and events, etc., and concepts and terms are necessary to explain their meaning to other people (Eira *et al.*, 2010). Reindeer herders’ experience of living with nature and from what nature provides has created a specialist language rich in vocabulary for describing natural phenomena (Eira, 2012). Reindeer herders’ understanding is based on the experience of generations, which has been collected and preserved about the specialized work techniques and language of the herders, both on the individual and herding group levels (Joks *et al.* 2007; Eira, 2012).

Through language people transfer traditional knowledge, culture and traditions to their children. There is a diverse range of languages in reindeer husbandry and include the following groups:

- Uralic (Khanty, Komi, Mansi, Nganasan, Nenets, Sámi, Veps, Enets, Selkup)
- Altaic (Dolgan, Nanai, Oroch, Evenki, Even, Udege, Tofalar, Dukha, Negidal)
- Chukchi-Koryak (Koryak, Chukchi, Itelmen)
- Yukaghir (Yukaghir, Chuvany)
- Yeniseian (Ket)

Linguists consider that most of indigenous peoples’ languages are endangered. In many indigenous communities, only adults and old people can fluently speak their native language, while the youth use mostly the majority languages. For example, in Russia Soyot use the Buryat language for communication, Dolgan people use Yakut, Todzhu Tuvans use Tyva language, and in addition all of them know Russian (Arefiev 2014). Due to historical and socio-economic events in Russia in the areas where indigenous people live, the language situation has been completely changed.

There are many places, where indigenous languages are not spoken at all and where the quality of teaching methods must be improved. For example, in the Murmansk region, Sámi teaching is only in the primary school curriculum (Arefiev 2014). In some schools in the Sakha Republic; students have compulsory subjects on indigenous languages. However, when they become high school students, they have a choice what language to learn for the following two school years. There is a tendency, for native languages to be treated equally with learning foreign languages. Many students have rarely heard native speech and have never used it in their daily life (Arefiev 2014). In Russia, there is a decreasing number of schools where indigenous languages are taught: in 2001/2002 indigenous languages were taught as a

subject in 284 schools, by 2012/2013 this had fallen to 215 schools (Arefiev, 2014). National and regional action is needed on this question to immediately make efforts to improve the educational system for young herders and other young indigenous peoples.

*"We know that in most of our schools the Chukchi language and other languages are taught less and less. In our school Chukchi language is taught from kindergarten to 8th grade, but it is not enough. In general, we should immediately revive and raise the culture. People must understand its significance, or after 2-3 generations it will be more difficult to do it". – Participant EALLIN St. Petersburg 2012.*

*"Problem with learning of indigenous languages: In the Yamal Multidisciplinary College in Salekhard there is no opportunity to learn Selkup language and recently even Nenets, while teaching of indigenous languages in Salekhard had been at a very high level, before several colleges were merged in one. Experts move out of the region, when they lose their job". – Arkadiy Gashilov, EALLIN St. Petersburg 2012.*

*"There is no school in the Verkhnekolymskiy ulus in the village of Utaya. Children do not know their mother tongue and do not want to become reindeer herders. I would like the Utaya school to work, because all kids have to move to the district centers in order to get knowledge". – Participant, EALLIN Yakutsk 2013.*

Fortunately, the situation is not the same everywhere. For example, in the Yamal region in Russia and in the Scandinavian countries many youth engaged in reindeer husbandry use their indigenous languages. However, languages spoken by few people are vulnerable and Any breakdown in the language structure signals a breakdown of their conception of the environment, affecting the nature of knowledge and worldviews passed on from the previous generations (Näkkälajärvi, 2009, Eira 2012). Even in countries where national education systems are ranked very highly (e.g. Finland) and bilingualism is officially supported, youth are becoming more fluent in the language of their nation state than their indigenous mother tongue (Rasmussen 2015). A decline in use of indigenous herding languages could mean changes in traditional management models, and possibly increased vulnerability (Eira, 2012).

If the languages of indigenous peoples disappear, unique knowledge about environment will also disappear. From the point of view of the preservation of cultural heritage, it can be considered that the defence of languages is of equal importance to that of historical buildings and landscapes. Nevertheless languages are not treated in this way as their existence depends on the choices of people, their ethnic identity and their requirements (Zamyatin et al, 2012).

The tundra and the taiga are development hot spots. Many oil and gas extraction projects are underway and more are planned. Industry representatives could better communicate with herders and others in order to have common dialogue. Reindeer herding peoples also need to learn the language of international communication in order to negotiate with industrial companies' representatives. Scientists and industrial workers need to learn the languages of local peoples. While this might seem unrealistic, this challenge must be taken into account and appropriate solutions need to be found.

Languages are part of the world's cultural heritage and language and worldviews are tightly connected. Much accumulated knowledge about the environment is embedded in indigenous peoples languages (Austin & Sallabank 2011). Indigenous languages can be considered as a core element in the maintenance of herders' traditional knowledge. The disappearance of traditional knowledge can be connected to a disappearing of indigenous languages and, therefore, to a reduction in biological diversity (Arefiev 2014).

For example, the Sámi culture bears evidence of a long intimate relationship with the Arctic environment and Sámi languages have a rich terminology for reindeer, snow, and ice (Eira et al, 2010). Sámi snow terminology is in daily use in reindeer herding. Snow concepts are central for daily work with the reindeer, and constitute important parts of herders' traditional knowledge (Eira, 2012).

From an academic point of view, indigenous peoples' languages are insufficiently studied and more research is needed (Austin & Sallabank 2011). There is an urgent need in training personnel among indigenous peoples. For example, in Russia most of scientists in the field of indigenous peoples' languages are close to being retired and the literature (including school textbooks) need to be updated and improved according to modern teaching methods (Arefiev 2014). The Arctic needs new experts, who deeply understand their own particular cultures and peoples. If these experts are from within indigenous peoples' societies, research priorities will be more finely tuned to the specific needs of their peoples.

As a result of the EALLIN workshops numerous recommendations related to education and language were brought forward:

- Create an education system in the traditional economic activities of indigenous peoples, and develop conservation projects, that document traditional knowledge, language and culture (from UN report Tromsø<sup>19</sup>);
- Attract the attention of high level politicians to the problems related to the teaching of indigenous languages (from EALLIN workshop, Herzen University, June 2014);
- Organize international seminars on reindeer herders' lands, in order to discuss importance of preservation of language, culture and traditional livelihoods (from department of Northern Philology of the North-Eastern Federal University M.K. Ammosov);
- Create indigenous language courses for all ages, based on local educational centers (schools, cultural centers, etc.);
- Popularize the study of indigenous languages through local media, TV, radio and online.

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<sup>19</sup> Indigenous Reindeer Husbandry, A study prepared for the UNPFII, 2012, full report available at [bit.ly/1o6JcBc](http://bit.ly/1o6JcBc)

### 3.5 Focus on the foundation of our livelihood – our families

*“We should live life not only for ourselves, but for our development. Primarily, we should think about the family, our culture and we must lead our people forward”*

*– Recommendation from EALLIN Salekhard 2013*

*“We have 29 000 reindeer, 250 reindeer herders, 60% of them are young people. There are 3 million hectares. Tundra, and no women” – Komi herder, Andrey Terentjev, Nenets Autonomous Okrug, Russia, EALLIN Aoluguya 2013*

Reindeer husbandry is a family-based traditional activity. In order for reindeer husbandry to succeed, herders need to be able to support their traditional family structures in order that life on the tundra remains vibrant and strong. Strengthening family life could strengthen reindeer husbandry (Aoluguya Declaration 2013).

*“Honestly, I must admit that the whole problem of reindeer husbandry in Yakutia is the loss of family traditions” – Participant at EALLIN Yakutsk 2013.*

#### 3.5.1 Where are the women?

In Soviet times a single job for women in reindeer herding was created – a *tent-worker* (*chumrabochnitsa*). Only one woman could work as *chum* worker at each reindeer-herding unit that consisted of several men. As a result in Republic of Sakha (Yakutia) as well as in other regions women were withdrawn from the tundra and taiga. In Sakha, the rule was to have one female tent-worker for four male reindeer herders, her duties were to cook for men, sew, and help in the work with reindeer. Other women and children were sent to live in the local villages (Habeck 2005). As a result the situation for family reindeer husbandry has deteriorated and led to a loss of traditional knowledge and skills. When women are not in the tundra, knowledge on e.g. traditional food and clothing is lost. Men have to cook modern food themselves and order clothing from elders who live in the settlements. Also some knowledge held by men could be lost. For instance, there are numerous types of reindeer sledges, including those used by women and children. If they are not in use, the knowledge how to make them may also be lost.

From the EALLIN workshop held in Kolymskoe 2012 it was found that this system (of one woman per several men) was still in use for the state employed herders in this area. This raises challenges for the young male herders who wish to start a family. One solution to this challenge may be to change the employment of women / men to a “1 man to 1 woman” system. Other solutions could be around shortening the distances from the men (on the tundra) to the women (in the villages).

At the EALLIN workshop in Saint-Petersburg, young students from Yamal explained why in the 1990’s Nenets reindeer husbandry in Yamal experienced growth, while in other reindeer herding regions during this period there was a clear reduction. One reason offered was that

they mostly have private reindeer husbandry in the region, and a second, that the structure of the family was not changed - whole families of herders were living and working in the tundra.

Today young women from reindeer herding families are often not keen to work in reindeer husbandry and live in reindeer herding camps. This is why improving the living conditions for herders at their camps, such as providing them with modern technologies, electricity, better medical service and so on is a priority.

*“There are a lot of single unmarried people in reindeer husbandry. It is possible and it is necessary to organize meetings between districts, exchange of personnel. New reindeer herding families can be created” - Sleptsova T.K. Bulunsky ulus, EALLIN Yakutsk 2013.*

To become effective reindeer herders of the future, children need to live with their families, including elders, to ensure the transmission of essential tundra and taiga skills, which cannot be learned in books.

The Republic of Sakha (Yakutia) is over 3 Million km<sup>2</sup> making it the largest subnational governing body area in the world, only slightly smaller than India<sup>20</sup> The population is fewer than a million inhabitants, making distances between settlements immense. Reindeer herding is generally located in the most remote places in region, in common with most reindeer herding regions around Russia.

*“Roughly speaking, there are no conditions for reindeer herding in our region (Aldansky ulus). For example, in our community (“Idzhek”) we have to go a few hundred kilometers from the village. In winter, first we go by car to the village Yllymah, where the road ends, then from there to the camp. It takes week on reindeer” – Participant, EALLIN Yakutsk 2013.*

During the summer holidays, for the children to go to the reindeer camp, they need to rent a helicopter and the price of a single trip costs 700,000 Roubles (approx. 13000 USD in early 2015), which herders have to pay themselves. The long distance to schools means children are separated from the family and the herd most of the year, which can lead to a loss in their mother tongue, and skills and interests in the herding life.

*“It would be very nice if the children were involved in reindeer husbandry and its basics since childhood, were brought up on the traditions and values of the people. Future reindeer herders would not only herd reindeer and count them, but would transfer their knowledge and skills to the next generation so that they would have the opportunity to know their traditions” – Participant, EALLIN Yakutsk 2013.*

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<sup>20</sup> Wikipedia: [http://en.wikipedia.org/wiki/Sakha\\_Republic](http://en.wikipedia.org/wiki/Sakha_Republic)

#### Text Box 4 - Voice of a Young Evenki Herder

### Voice of a young Evenki reindeer herder

*"Facing the second reading of the draft law "On Nomadic Family" in June 2014 in Yakutsk, we decided to publish a short article where a young reindeer herder from the village of lengra (southern Sakha Republic (Yakutia), Russia) expresses his concern about reindeer herding families and the future of traditional knowledge:*

*" I'm twenty-six years old. I spent all my childhood in taiga with my family, working with reindeer. I can't stay in the town for too long, my legs almost without control carry me into taiga, to my reindeer. Only then I feel comfortable, I start to have good sleep – reindeer are close to me, and my soul is calm. And when the hunting season starts, there is no peace for me – all I start to think about is hunting. So I like living in taiga, everything suits me here..*

*But there are a lot of reindeer herders who cannot create their own families, because girls don't want to live in the taiga or tundra. They got used to living with comforts, such as hot water, electricity, and the internet. Today young women are afraid of those living conditions, which the taiga is giving them. And this is also the reason why traditional knowledge is disappearing. For instance, knowledge in handicrafts. I have to ask elderly Evenki women to sew me traditional clothing, make working shoes from reindeer skin. But usually because of their age, they are not always able to make proper clothing, it is hard for them to prepare reindeer skin. And young girls they don't know how to make this traditional clothing, which is needed for reindeer herders work. It is very sad.*

*While married a reindeer herder can come to his tent, where his family is waiting for him, where it is warm and food is prepared. He can have a good dinner, take a proper rest and continue to work. But bachelors got used to eating instant noodles. It is easy to prepare, but for how long it will be enough to be full, and continue to work? Of course reindeer herder gets tired very quickly, and his work cannot always be finished.*

*It is very good that the Parliament raised the question about nomadic families again. Girls need to be attracted to work in reindeer husbandry. And for that purpose, the living conditions in taiga must be improved. Because today even the material for tents is not of a good quality – it used to be better before. If we don't have reindeer herding families, then how can we preserve our traditions? To whom we will pass our knowledge and experience? To become reindeer herders, children should be raised close to reindeer, in the taiga. And of course they need their mothers to be close to them. "*

*Igor Kolesov, nomadic community "Oldoyo", lengra village, Neryungri region.*

*Source: Reindeer Portal:<http://goo.gl/Yf8Nwn>*

*Interview by Alena Gerasimova.*

#### Text Box 5 - BIRGEN

##### *Birgen*

##### WOMEN'S ROLE in Sámi reindeer husbandry (birgen.no)

Sami reindeer herding has traditionally been a family-based industry, where men and women had different roles and tasks. When the families moved year round with the herd, the man worked most often with the herd, while the woman was in charge of cooking and the upbringing of children. This meant that it was the women who were key for the transfer and training of traditional knowledge and the technical language to the younger generation. Due to changes in society and reindeer herding, the family has become more stationary. Now many women have jobs outside the reindeer husbandry, thereby helping the family business financially. But still today, she has a key role as knowledge provider to the younger generations, in preserving and developing traditional reindeer husbandry knowledge. When there is intensive work needed with the herd, for example, by separation, calves and slaughtering, the women and children all participate. Transfer of knowledge occurs through communication and participation, and it is usually the mother, grandmother or aunt who is the teacher. Thus, women thus have an important role in preserving and developing traditional reindeer husbandry knowledge, recruiting young reindeer herders, as well as maintaining family-based Sami reindeer husbandry.

Reindeer women's professional competence is about to disappear with the older generation, and womens' traditional knowledge and expertise has been little documented. On this basis, ICR together with women in Sámi reindeer husbandry established a three-year project called *Birgen*. The purpose of the project was to strengthen all aspects of the traditional family-based reindeer with special emphasis on women's knowledge and expertise. During the project period, some of the womens husbandry knowledge and work has been documented, and material for use in teaching has also been prepared.

By Elna Sara



*Mother and child in the Taiga. Pic: Yuri Kokovin*

### 3.6 Equitable access to technology

*I have not even thought about the Internet in the tent, but I like this idea. There is partially a network in the Yamal region. But, unfortunately, it is just next to the railway.*

*Nenets youth participant, EALLIN St Petersburg, 2012*

Reindeer herders have always encountered new technologies and have incorporated them as needed and adapted them, or to them as required. Importantly, not all new technologies are embraced - for a multitude of reasons they may not meet the demands of what is after all rigorous and demanding workplace environment. In addition, many technological advances are introduced to larger markets first and take some to arrive in remote areas, if indeed they arrive at all. However, the lack of one technology, may assist a region in leapfrogging right to the next stage of innovation – the rapid spread of mobile telephony and mobile enabled internet access being one such example.

*“Of course, I understand that it's the 21<sup>st</sup> century, computers, big cities, mobilization and so on. In this case, those who want to become a reindeer herder and live in the forest would be very few. But why does everyone think in clichés? We can perfectly combine our traditions and new traditions and new technologies, and not only combine, but also extract the maximum benefit from it. If we develop this idea and bring it to life, we will have more benefits “– Boytunova P.L. from Aldansky region EALLIN Yakutsk 2013.*

New technologies – from the snowmobile to the mobile phone and the internet, have already transformed the lives of reindeer herders in various ways and this topic was actively discussed in the EALLIN workshops from Sweden to St Petersburg to Sakha and Salekhard.

Youth were both welcoming and desirous of new technologies, most especially access to the Internet through cell phone devices. However concerns were also raised as to the potential for negative consequences that technologies such as the Internet could wreak on traditional activities and livelihoods.

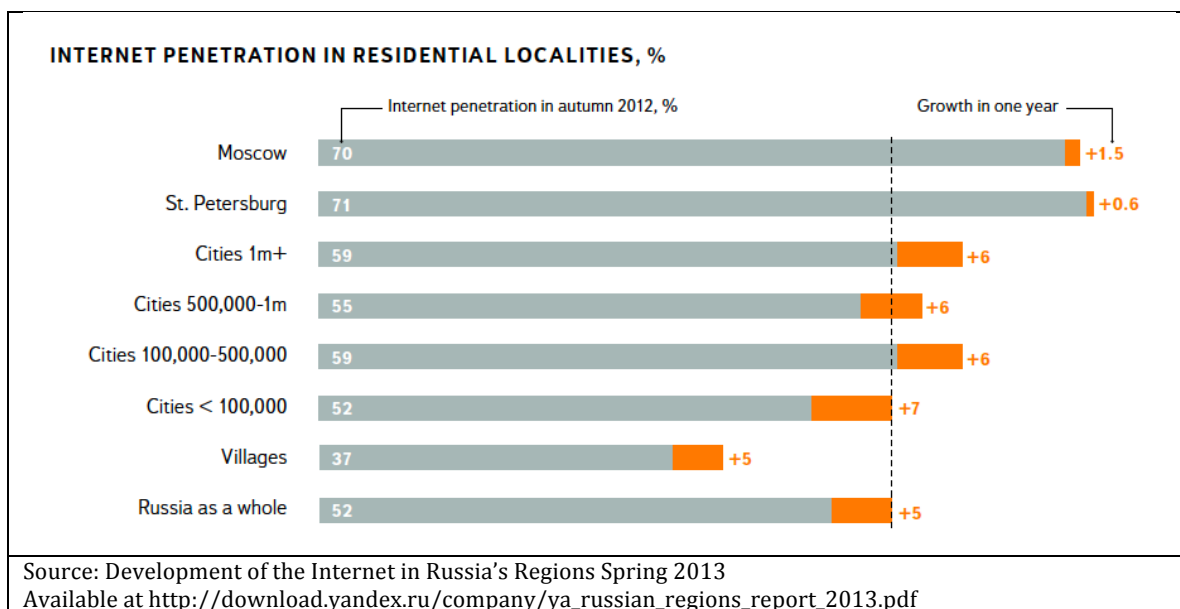
A technology that has rapidly made its way into reindeer herding societies across Russia is the mobile phone. Some argue that we should now be talking about a mobile phone revolution (Stammler 2009) – a play on the phrase ‘snowmobile revolution’ (Pelto 1987) that altered life in the Arctic for herders and hunters immeasurably.

In 1981, the first cellphone network was launched in the Nordic countries, the Nordic Mobile Telephone (NMT) system in Denmark, Finland, Norway and Sweden and anecdotal evidence suggests that reindeer herders in Norway were early adopters of this technology as they quickly realized its potential. By 1988, Norway had the world’s highest density of mobile

phones.<sup>21</sup> By 1991, second generation (2G) *digital* cellular technology was rolled out in Finland, after which came 3G networks (2001) and now 4G with even more data transfer capability.<sup>22</sup>

Just as with mechanized transportation, the integration of cell phone technologies into reindeer herding societies was rapid and complete in Scandinavia long before Russia. However, what is striking is once introduced, its spread across Russia has also been rapid. Russia is now the 5<sup>th</sup> highest country for number of mobile phones and with an estimated 155 phones per person, surpassing the mobile phone per capita figure of Finland, Norway and Sweden.<sup>23</sup> However, reindeer herders work in remote areas, often far from villages, roads and cellphone towers. Cell phone coverage is patchy even in many herding areas in Scandinavia. In Russia, coverage is extremely scarce in reindeer herding areas and focused almost solely on towns, villages and industrial installations.

In Russia, the primary growth in cell phone ownership, data transfers and the reduction in cost of access has been focused on urban areas. Villages in particular lag far behind the urban areas. Remote areas generally have no coverage at all.



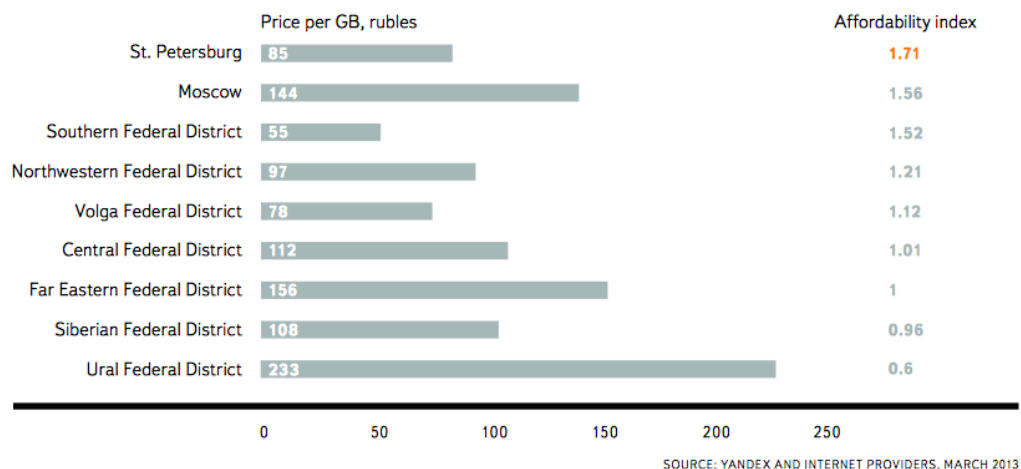
Speed has increased for the same tariff rates and affordability of mobile Internet access has improved. However, there are marked regional variations in Russia, with the Far East, North and Siberia standing counterpoint to the speed, accessibility and affordability of cities such as St Petersburg and Moscow as the following graphs show.

<sup>21</sup>The Mobile Phone Adventure. <http://www.telenor.com/media/articles/2012/the-mobile-phone-adventure/>

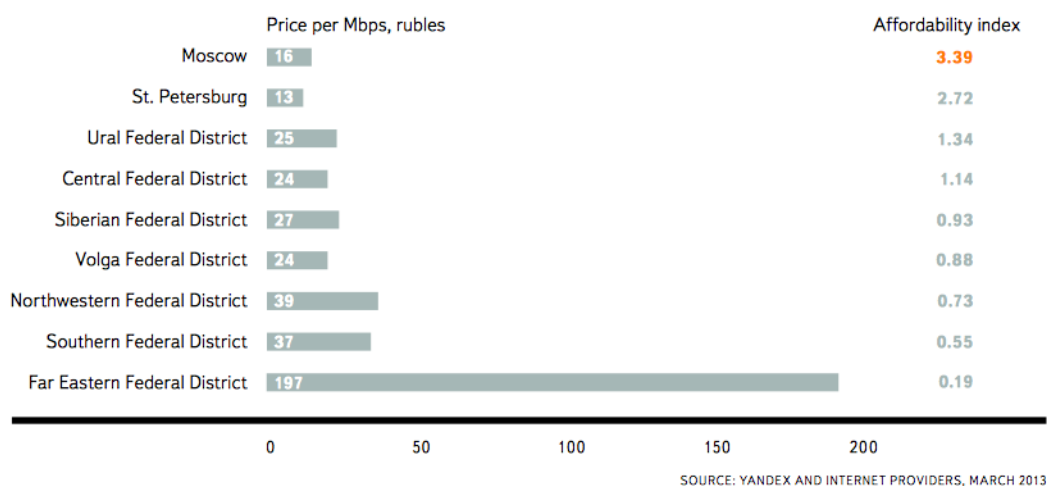
<sup>22</sup>The Mobile Phone. [http://en.wikipedia.org/wiki/Mobile\\_phone](http://en.wikipedia.org/wiki/Mobile_phone)

<sup>23</sup> See Indexmundi.com for list comparisons, eg <http://www.indexmundi.com/g/r.aspx?v=4010>

### PRICE AND AFFORDABILITY OF MOBILE INTERNET ACCESS



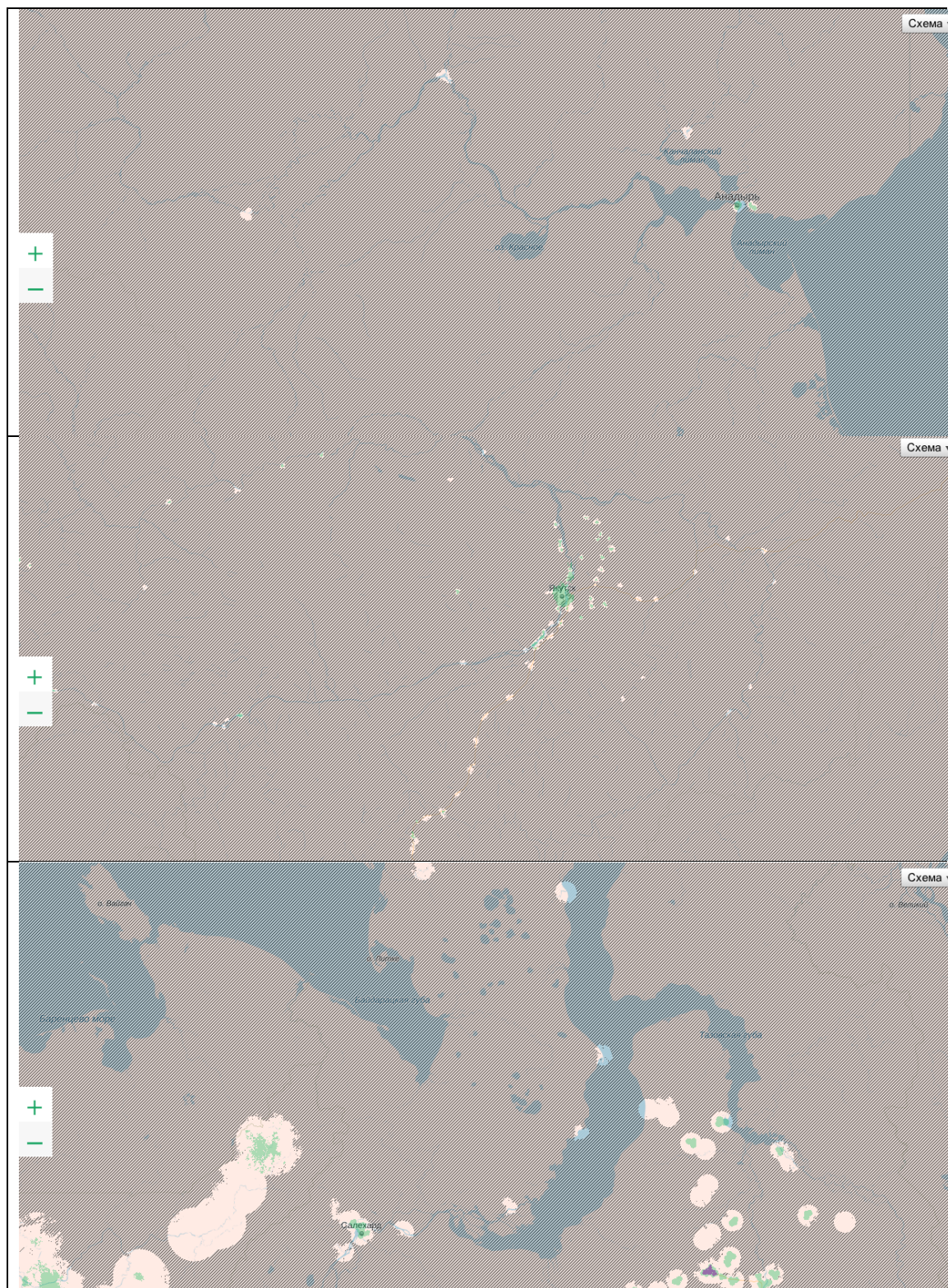
### INTERNET ACCESS COST AND AFFORDABILITY INDEX



(Source: Development of the Internet in Russia's Regions Spring 2013

Available at [http://download.yandex.ru/company/ya\\_russian\\_regions\\_report\\_2013.pdf](http://download.yandex.ru/company/ya_russian_regions_report_2013.pdf))

Clearly in regions where herders are, it is more expensive to access the Internet using cellphones and the speeds are markedly slower for the same prices as urban areas. By way of illustration of the challenges facing rural mobile users below are a sampling of cellphone coverage offered by *Megafon* one of Russia's largest providers (see [megafon.ru](http://megafon.ru)). From top to bottom are images of 2G-3G coverage for the region around Anadyr (Chukotka), Yakutsk (Rep. of Sakha (Yakutia)) and Salekhard/Yar Sale (YNAO). It should be noted that this is one carrier, local carriers may and often do have a larger spread of coverage.



As one can see, vast swathes of the Russian backcountry are completely without cellphone coverage. Some of these regions are very mountainous, the distances are immense and the population distribution is very low making it unlikely that private sector expansion of coverage in these rural areas is on the near horizon.

The lack of access was a stated concern in several workshops - In Salekhard, one young herder stated:

*"In the tundra people need a mobile connection. In this way people know what is going on in the world, also in the world of reindeer herding" – Participant EALLIN St. Petersburg 2012.*

Many young herders in the EALLIN workshops spoke with their frustration of the lack of access to the Internet and poor cell phone coverage. Youth in several workshops spoke to the advantages - for information, education, their usefulness for herding purposes and communicating with neighbouring reindeer herding units, keeping in touch with family and friends and connecting to the rest of society.

Full access to the Internet while in the 'chum' is some way off. However, technological advances may result in expanded and improved coverage in the next 5-10 years. Norway (the Norwegian Space Centre and Telenor Satellite) have announced plans to expand broadband Internet to the high Arctic over the next decade for Internet by launching new geostationary Satellites. Their focus is likely to be the energy and shipping sector<sup>24</sup>.

A recommendation from the Salekhard EALLIN workshop was that all people working in the tundra should have a satellite phone. Satellite telephony is certainly another option for communication in remote areas. The system with the best coverage in the Arctic is the Iridium phone, which is expensive to purchase - approx \$1350 USD, plus \$60 month access fee and over 1\$/minute and 50c / text. In addition, these phones are for talk and not data.

However - new products are always coming to market. One such is the Iridium Go. At a cost of \$850 USD, it uses specialty apps that are downloaded to your smartphone or tablet to make or receive calls, check and send email, connect to the Internet, send files, track your GPS location and a host of other features. The Iridium works everywhere, even on the North Pole, just as long as the sky can be seen. And while the Internet connection is quite slow at 2.5 Kbps (uncompressed), it is enough to do the basics such as sending small files, or checking the weather from a mobile weather app. The 100' Wi-Fi hotspot (30 meters) lets any authorized in-range device or devices to connect.<sup>25</sup> As prices fall and more Arctic focussed satellites are launched, the costs of these systems will fall. It is worth recalling that early handheld NMT phones cost considerably more (30,000 NOK) than contemporary satellite phones.<sup>26</sup>

Many youth however, pointed out the risks of new technologies and how they might disrupt traditional livelihoods,

*"I think if we have a mobile connection, on the one hand, it will be good; on the other hand, it entails a settled way of life. This leads to the fact that people won't pay attention*

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<sup>24</sup> Northern Arctic Could Have Long Wait for Reliable Broadband, WSJ. January 23, 2014. Accessed April 11, 2015.

<sup>25</sup> See for example [http://www.groundcontrol.com/Iridium\\_Go.htm](http://www.groundcontrol.com/Iridium_Go.htm)

<sup>26</sup> The Mobile Phone Adventure. <http://www.telenor.com/media/articles/2012/the-mobile-phone-adventure/> Accessed April 15, 2015.

*to the reindeers. People are known to require a lot of needs. And the towers will not stand for the whole area of Yamal. And each reindeer herder, a resident of the tundra, will seek to quickly get closer to the tower. In this case there will be a lot of problems.” – Khudi H.A. B -31 group, Serotetto V.A. T -31 group, EALLIN Salekhard 2013*

This young herder points to the law of unintended consequences - that placing cellphone towers along the Bovanenkovo railway on the Yamal peninsula could have both positive and negative consequences for herders, some of which were surely unanticipated.

A Chukchi student in the EALLIN workshop in St Petersburg put it rather well:

*“I want modern things like the Internet and then the good life would not seem like a fairy tale...”*

With the energy sector placing more focus on the Arctic, and its oil and gas resources, the irony is that many herders are ‘energy poor’ in Russia, a fact pointed out by an EALLIN participant in St Petersburg:

*“Even if the problem of Internet access will be solved through cheaper satellite Internet and good coverage, how can nomadic herders charge their devices? There’ll be a need to provide energy generators and fuel?” – EALLIN St. Petersburg 2012*

This participant raises an excellent point - that all these new handheld devices need energy to charge them and this is a challenge when out on the land. It is even a challenge in many villages in the Arctic. The majority of Arctic settlements are powered by diesel which needs to be trucked/shipped in and this is a dirty source of energy and highly vulnerable to interruption. On the village level, some sites could utilise micro hydropower - Micro-hydropower is generally defined as having a generation capacity of less than 300 kW. Solar power (PV) has some promise for micro power generation on fixed and mobile sites though reduced light in the Arctic during winter months renders this technology of limited use during that period.

A small-scale solution on the family ‘chum’ level could be thermoelectric generation. Thermoelectric generators (also called Seebeck generators) are devices that convert heat (temperature differences) directly into electrical energy, using a phenomenon called the Seebeck effect (a form of thermoelectric effect). An old technology, and one with a very low efficiency, this is a technology that could have a useful function in a reindeer herders tent, while herders are on the land. Fire is an essential part of herders life in the *chum*, for heat and for cooking. New products exist that produce light and power (to charge a phone for example), from the energy produced by a campfire.<sup>27</sup>

### **3.6.1**      *Technology and safety*

Reindeer herding is a very dangerous occupation and it is possible for reindeer herders to get into difficulty and have no way of alerting their families or other herders. Several youth raised

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<sup>27</sup> See for example: biolitestove.com, flametower.com These are relatively inexpensive solutions.

this question and expressed an interest in microchip technology. While personal microchips were considered as being invasive and impractical, options worth investigating are 'Distress Radio Beacons'. The *type* of a beacon chosen is determined by the environment in which it is intended to be used:

- EPIRBs (Emergency Position Indicating Radio Beacons) signal maritime distress,
- ELTs (Emergency Locator Transmitters) signal aircraft distress
- PLBs (Personal Locator Beacons) are for personal use and are intended to indicate a person in distress who is away from normal emergency services;

There are a number of options when it comes to PLB's, which would be the most appropriate type for herders, but ones using the COSPAS/SARSAT satellite network are the most effective in the Arctic and have been in operation for over 30 years. Devices range from USD\$280-\$380. No annual subscription is subsequently needed.

### *3.6.2 Technology, education & networking*

With the rapid development of Information and Communication Technology, there has been a concomitant increase in advances in distance education – a useful model for content delivery to small remote communities. ICR in collaboration with the WRH, the University of Oulu and the Arctic Portal (Iceland) have already tested an online course aimed at reindeer herding youth but also open to all interested parties. The course ran for 12 weeks, was coordinated from Canada, with students and teachers from Russia, Norway, Sweden, Finland, France, the USA, and the UK. Students that completed the course received credit from the University of Oulu, Finland. Technically, students were linked together with Moodle, Skype and other web sharing platforms and the course was a resounding success, with over 50 individuals attending and 6 graduating<sup>28</sup>.

Real time online collaborations have also tested and been successful. A repeated need stressed by youth during the EALLIN workshops was the need for more communication between reindeer peoples and effective networking between regions, to share lessons learned and challenges faced.

To meet these desires two parallel reindeer herding student workshops, in Yakutsk (Sakha), and in Jokkmokk in Northern Sweden which were connected by Skype, February 15-16, 2013. In Jokkmokk there were close to 50 young Sámi reindeer herding students from Sweden, Norway, and Finland while 10 reindeer herding students from all across the Sakha Republic, including Even and Evenki students were gathered in Yakutsk.

### *3.6.3 Social media and the Reindeer Portal*

Social media is expanding rapidly throughout Russia, with a heavy emphasis on youth users, just as in Scandinavia. In Scandinavia, Facebook is by far the most popular social media platform and is heavily used by reindeer herding youth. Twitter and Instagram are also

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<sup>28</sup> 'Adaptation to Globalisation in the Arctic, the Case of Reindeer Husbandry', hosted at vlt.is. Read the backgrounder here: <http://reindeerherding.org/projects/uarctic-ealat-institute/courses-2/>

popular. In Russia, the two most popular social networks are *Vkontakte*, a similar platform to Facebook, and *Odnoklassniki*, a platform for connecting with old friends and classmates. ICR has developed the Reindeer Portal - an online platform in English, Russian and Sámi that focuses on reindeer and reindeer herders around the world. This Reindeer Portal attracted nearly 100,000 visitors in 2014 with well over half coming from countries with reindeer herding present. An increasing number of users are from Russia and content in Russian has been considerably expanded. ICR/WRH also have a Twitter channel and an active Facebook page (over 1000 'Likes'). The Reindeer Portal is a platform for and by reindeer herders from across Eurasia to inform, connect and learn while communicating with the outside world.



*Charging mobile phones on the move. Yamal Peninsula. Pic: Svein D. Mathiesen*

### 3.7 Use economic models which safeguard our futures

Reindeer have always been and remain the foundation of reindeer herding peoples' lives. Reindeer provide people with shelter, food, clothing, security and are at the centre of herding peoples' universe, the foundation of their cultures, languages, worldviews and ways of knowing. Reindeer are also the foundation of herders' economies.

One of the most engaging and frequently discussed topics at the different EALLIN youth workshops was the economics of reindeer husbandry. Many young reindeer herders were talking about low income in this livelihood in some regions, resulting in the reality that there is a low interest or possibility among young reindeer herders to continue reindeer herding. This is also connected to a complex of issues regarding the structure of reindeer ownership, especially in Russia. In the western parts of reindeer husbandry, there was much focus on the lack of available pastures and loss of pastures because of encroachment, as well as heavy predator losses, amongst other things.

***“...My name is Samira, I am from Chukotka, from a small village called Kanchalan. I know the hard work of reindeer herders, because I grew up in the tundra. My uncle continues the work of his parents, he is the brigadier of brigade #12. Uncle rarely goes to the village, he has a small salary. And I'm surprised by this! How this hard work could be paid at a minimum. Most of the conditions are not the best now. Sometimes there is no enough food, the reindeer herders begin drinking ... It's very sad. They forget the traditions and don't conduct traditional ceremonies... – Samira Tymnekvyna, young Chukchi reindeer herder and student, EALLIN St. Petersburg 2012.***

#### 3.7.1 The East: Russian reindeer husbandry economy

The reindeer herding livelihood and its economy can be seen in the light of challenging historical events. Throughout the 20th century in different countries there have been attempts in acculturation of indigenous peoples of the North, "civilizing" and "modernizing" of their social and economic activities.

In Russia, during the Soviet regime, after the policy of non-interference in the self-governance systems of the indigenous peoples of the North, the government pursued a policy of transformation in order to integrate these peoples into the family of Soviet peoples by changing their traditional ways of life and traditional economic activities (Klokov, 2001). Similar patterns and national policies were also practiced in Scandinavia. These peoples, who mostly lived nomadic lives were actively transformed into sedentary peoples, and connected into the construction of Soviet society.

With all the positive changes in the lives of herders that are associated primarily with access to social benefits, such as general education, medical care, improvement of living conditions etc., still the process of transformation of the nomadic peoples throughout the Soviet Union was accompanied by profound long-term challenges, such as the loss of identity associated

with the disappearance of the cultures, languages and traditional knowledge of indigenous peoples.

Another significant change in the lives of reindeer herders was the introduction of new approaches to the management of reindeer herding on the basis of scientific development related to agricultural production. Therefore, after the painful process of collectivization began, came the process of enlargement of reindeer units into collective farms, so called *kolkhoz* and *sovkhoz*, the purpose of which was to increase the efficiency of agricultural production. It also had a significant impact on the traditional social organization of herders' society and the structure of their economic activities (Stammler 2005).

Soviet science aimed at improving the efficiency of production of reindeer herding. It should be noted that due to the strong support of the activities of the state, reindeer collectives were relatively successful in terms of meat production. Many farms achieved good results, as they delivered hundreds of tonnes of meat per year to the state, built and equipped with modern conveniences, villages for herders and improved social infrastructures.

However, after the collapse of the Soviet Union and its management systems, reindeer dependent economies began a rapid decline. This is primarily reflected in the reindeer population, which in Russia in the 1990s decreased by almost 2.5 times (Jernsletten and Klovov, 2002). The only region in which there was an increase in the number of reindeer was the Yamal-Nenets Autonomous Okrug, which perhaps, among many other reasons, has been explained by the fact that the Nenets reindeer herders were able to preserve family-based reindeer husbandry and because of the existence of private reindeer ownership, that the number of reindeer in this region grew steadily (Stammler 2010).

It is worth noting that despite the transition to the market economy, reindeer management systems from the Soviet period still persist. Former state farms have changed their names to cooperatives, state or municipal unitary enterprises. Some were disaggregated and reformed as *Obshinas* (Stammler 2005b).

The issue of ownership of reindeer remains ambiguous. There are three forms of ownership of reindeer in Russia today: state, public, and private. (Jernsletten and Klovov, 2002) During the years of Soviet power after forced collectivization most of the livestock was in state or public ownership. Today we can say that most of the reindeer livestock can still be considered as public livestock even if they are a part of indigenous *obshinas*. Therefore, the difference between the state and public property, in practice, is not essential (Jernsletten and Klovov, 2002). This situation drives other challenges, ranging from the low incentive of reindeer herders in this kind of economic activity, to poor economic development and low income for reindeer herders' families.

During the EALLIN workshops many young people named low income as the main reason for the outflow of young people from reindeer husbandry. Several noted that in the absence of normal working conditions and extreme environmental conditions many young people do not want to work for the low wages reindeer herding offers. As a result, many people choose higher paying jobs in other areas of economic activity. However, some participants said that

they would like to be engaged in reindeer husbandry, if they could own reindeer and could determine for themselves how they conduct their work.

***Conditions in reindeer husbandry today are quite hard, many youth leaves reindeer herding. We need to have our own private reindeer husbandry. I worked for 20 years, and now have around a thousand reindeer in the taiga. Industries grow, modern life takes over. I would like to continue, for the sake of our reindeer, but we have many problems with transportation, communication, and no infrastructure. So it is difficult to develop the economy of our business***  
– Djulustan Sidorov, Reindeer herder, leader of obshina "Gonam", Sakha Republic, Russia, EALLIN Yakutsk 2013.

A general lack of legal and organizational frameworks for the institution of private ownership of reindeer in Russia in reality takes away from reindeer herders a key issue in any economic activity: motivation. And it threatens the sustainability of reindeer husbandry, because when there is an outflow of youth from reindeer husbandry, it breaks the continuity of knowledge and experience.

Therefore, it seems that the question of ownership to reindeer is one of the keys to the future development of reindeer herding in Russia. In this regard, the EALLIN workshops in Russia revealed hopes of many young herders for improvement of national and regional legislation to better accommodate the private ownership of reindeer, on the basis of traditional understandings of reindeer ownership. At the same time there is a need to solve other pressing issues related to the further development of reindeer husbandry, where state support is also important (see WRH Aoluguya Declaration 2013).

Reindeer herders with better access to markets such as in the west/ Fennoscandia have over time created a meat-based economy for reindeer, and this has also been a positive outcome of the recent oil and gas related boom in parts of the Yamal Peninsula and the Nenets Autonomous Okrug in Russia. In the majority of reindeer herding areas, especially in the Eastern parts of world reindeer herding, the poor state of the local economy and the lack of access to markets has typically meant a very low standard of living for reindeer herders. In such areas, recruitment into the livelihood has been a challenge and this is threatening the long-term sustainability and future of reindeer husbandry.

### **3.7.2      The West – Sámi reindeer husbandry economy in Fennoscandia**

Ironically, what largely appears to be an economic success story in western/ Fennoscandian reindeer husbandry has some less known side effects that may also threaten the long-term sustainability and future of the livelihood, in other ways. The “modernisation” of reindeer herding in Norway (our example here) took off from the mid 1970’s, with the introduction of subsidies based on agricultural models and logic (Reinert, 2006). While the price per kilo of reindeer meat to reindeer herders over the following 20 years was roughly cut in half (in inflation corrected figures), and the vast majority of Sámi traditional family-owned slaughter facilities were eventually closed down, and reindeer herders lost control of the most valuable parts of the value chain for their products (Reinert, 2006; Reinert et al, 2009). Something else

also happened, gradually (and perhaps less visible at the time): The “modernisation” or “industrialisation” of the livelihood has come to impact the original family-based model of reindeer herding among the Sámi. Basic elements of this development are listed below, Myklevold et al (2004), Reinert (2006), Joks (2007) and Reinert et al (2009) etc.:

- New legislation and regulations of entry into reindeer husbandry from the mid 1970s, impacting the internal organising of reindeer husbandry, and also subsequently over time creating a gender imbalance.
- Changes in the industrial structure, with the reduction of local family-owned small-scale slaughtering facilities from the 1990s onwards, with subsequent consequences on important tasks of women and children (in handling fur, food products etc.), as well as concentration of market powers (monopsony).
- Introduction of motorized vehicles also over time contributed to women and children generally living in settlements (i.e. while the men would be out herding). While standards of living may have improved, the role of women could be said to have weakened, while costs have increased.
- A weakening of the basic profitability of reindeer herding, that over time resulted in an increased need for women to gain outside employment to secure family economies, has had consequences also for traditional tasks and the roles of women.

Traditionally, women in Sámi reindeer herding have also played a crucial role in the transfer of knowledge, particularly to younger children (who cannot yet participate in daily herding), see Joks (2007). The “modernisation” of this traditional nomadic livelihood in the west, seemingly a success story as seen from the east, has come at a price: A weakening of the traditional family-based model of reindeer herding. A concerning aspect of this is that this could weaken the mechanisms of transfer of Traditional Knowledge between generations within the families, in part tacit knowledge, which can be seen as a core competence and strategic asset of reindeer herding.

### 3.7.3 *Reindeer herders’ perception of economy, shortcomings of existing models*

Reindeer herders have their own understanding and vision of the economy of reindeer husbandry, which are often different from those of the mainstream society and the “western scientific tradition” (Turi 2013). Although, of course, we must recognize that western scholars have always interpreted the economic categories in reindeer husbandry in accordance with their ideas and practices of western economic science (Turi 2013). Herders, for example, would not have considered the number of reindeer only as a means of production. One of the reasons, as mentioned above, is that the reindeer is associated with all aspects of the life of reindeer herding peoples.

*“...Reindeer herding peoples have always known they have to work in collaboration with nature, not against it”,* says senior Sámi herder and Secretary General of WRH Mr. Johan Mathis Turi (in Oskal et al, 2009). This also reflects a basic general understanding of reindeer herding peoples: *People migrate after the reindeer, not the other way around.* Sámi reindeer herders for instance, say that the reindeer knows best itself where to find pastures. So herders’ tasks are more about guiding the animals, then controlling them. This separates reindeer herders

understanding of their livelihood and economy from for instance a “standard” agricultural understanding, where your animals are more or less fully controlled continuously, e.g. in the barn. Johan Mathis Turi further highlights reindeer herders’ perspectives this way: “...*We have some knowledge about how to live in a changing environment. The term ‘stability’ is a foreign word in our languages. Our search for adaptation strategies is therefore not connected to ‘stability’ in any form, but is instead focused on constant adaptation to changing conditions.*” (Johan Mathis Turi, Secretary General of WRH, Statement at UN World Environmental Day, June 5, 2007).

In reindeer herders understanding, pastures/ good pasture conditions (in north Sámi language “*ealát*”) are the foundation for the reindeer herd (Sámi “*eallu*”), and the reindeer herd is the foundation for the life (Sámi “*eallu*”) of reindeer herders (Magga et al, 2011). While none of the indigenous reindeer herding peoples are known to have the term “sustainable development” in their languages, we still find an understanding of this concept in the above example, hidden in the language. While the term sustainable development might implicitly presuppose the maximizing of production or output, herders’ traditional way of thinking is better expressed by for instance the Sámi term “*birgen*”: If you have enough to manage or cope (“*birget*”), you have enough. Economy is therefore integrated into reindeer herders’ own core understanding of their livelihood, though often with its own different departure points, and is expressed by traditional knowledge manifested through indigenous languages and ways of organising (Sara 2009).

A fundamental challenge, then, is that still today *there seemingly exists no theoretical-empirical economic model adapted for, made for or genuinely suitable for reindeer herding as a traditional, family-based, nomadic livelihood in cyclical and highly variable natural environments*. Still, the economic models that are used often originate from the agricultural sector as Reinert (2006) points out. To quote the Stanford economist Moses Abromowitz in 1993: “...*It ain’t what we don’t know that bothers me so much; its all the things we do know that ain’t so.*” Translated to our situation: One issue is if the economic logic of family-based reindeer herding is not fully understood; another issue could potentially be that one might *believe* one understands it, for good reason by using one’s own models, while in reality one might not.

*Is it possible to increase reindeer herders’ salary? Because of this problem, young people simply do enter reindeer herding. – Young reindeer herder from Yamal (anonymous), EALLIN St. Petersburg 2012*

Wealth, according to the traditional understanding of reindeer herding peoples, is not only expressed by quantitative characteristics, but rather also in quality. We could for instance look at the concept of a “beautiful herd” (e.g. in Sámi language - “*čappa eallu*”): What the term really expresses is that the structure of the herd is made up in such a way that it has been adapted to the available grazing conditions and pasture diversity, as well as to the changing climatic characteristics of the territory concerned, i.e. taking into account the cyclical nature of the environment and climatic changes. This reveals a much more advanced and complex understanding than simply the aesthetic meaning of the term itself (Sara 2009).

The economic situation of reindeer husbandry in the Nordic countries is significantly different from the Russian situation, though in many respects the changes in the management of reindeer husbandry that occurred in the Nordic countries are remarkably similar at its core. In the 20th century in Fennoscandia there was also a process of attempting to “modernize” reindeer husbandry. The authorities utilized economic approaches of scientific research to improve the efficiency of the economic activity in reindeer herding, with a focus on meat production volume for instance in Norway. Today we can certainly say that reindeer husbandry in Fennoscandian countries is likely the most “modernized”. Reindeer herders are using mechanized transportation, a developed production system and good social infrastructure, and there are significant markets for reindeer products. However, the conceptual approaches that have been used in Fennoscandia, introduced by various researchers, were not devoid of the shortcomings that were inherent to the planning and administration of the economy of the Soviet period of Russia's development. Reinert (2006) for instance states that in 1976 agricultural principles and a “planning paradigm” were introduced to reindeer herding in Norway. Subsequently, slaughtering and marketing - the most profitable activities in the value chain - came under government regulation and non-Sámi ownership.

A common feature of public policy in Russia and some of the Nordic countries is the desire to maximize the productivity of reindeer husbandry and introduction of ideas of mass agricultural production, which Erik Reinert calls the introduction of “Fordism” to reindeer herding (Reinert, 2006). However, due to the specifics of reindeer husbandry, cyclicity of natural variations and significant differences of reindeer herding from agricultural production, that desire might actually make reindeer herding more vulnerable to the challenges of climate change and globalization (Reinert 2006).

In political economy, the concept of “sustainability” of management first emerged in the second half of 19<sup>th</sup> and the first quarter of the 20<sup>th</sup> century in Western Europe. According to the theory of “sustainability of small peasant farming” small-scale production in agriculture has an advantage over large and therefore is more viable. The founders of this theory were economists Klawki, Hecht, Puzor and Brentano. In Russia, prominent representatives of this theory have been M.I.Tugan-Baranovsky, P.B. Struve, S.N. Bulgakov and others. According to supporters of the sustainability of small peasant farming, the owners of small farms and their inherent greater diligence, hard work and thrift produces products at lower costs than large farms, favouring the efficiency of small-scale production over large (Nosov 2005).

Therefore, it seems that the economy of reindeer husbandry should also develop along the path of small-scaled reindeer businesses on a family basis, using traditional knowledge and modern technologies in the field of processing of reindeer products. It is necessary to revise the concept of the ‘development’ of reindeer husbandry and develop new approaches and models for reindeer husbandry, which could fit with specific family-based nomadic reindeer husbandry and fluctuations in the natural and climatic conditions of the Arctic and Sub-Arctic.

The traditional livelihood of reindeer pastoralism represents a model of sustainable exploitation and management of northern terrestrial ecosystems based on experience accumulated over generations, conserved, developed and adapted to the climatic and political / economic systems of the north (Magga et al, 2011). It also represents a human-coupled eco-

system, which has developed a historical high resilience to climate variability and change (Turi, 2008; Magga et al, 2011; Arctic Council Arctic Resilience Interim Report, 2013).

The key foundation of reindeer herding is of course reindeer, which provides herders with food, security, clothing, transport, and more. However, herders also rely on a *diversity* of resources in their economic adaptation, including traditional activities such as hunting, fishing, gathering and more, as well as combinations of the above. Reindeer herders' adaptation strategies would seem to be focused on flexibility (ARR, 2013), constant adaptation to changing conditions (following Turi, 2002), and risk spreading through diversity in social organisation, economy and through understanding biological diversity (following Magga et al, 2011; ARR, 2013). Such a starting point does not go well together with a planned-economy paradigm of maximizing output based on monoculture specialized production – which some argue is exactly the model that has been introduced and consolidated in Sámi reindeer herding in Norway by public incentives over the last 30 years. The so-called Lenvik-model (see Reinert 2014) with the slaughtering of reindeer calves for maximum meat production, in kilos, with subsequent reduced diversity in herd structure, use of pastures, types of slaughter animals, even industry structure, reindeer product ranges, reindeer product value chains, and so on. All this taken into account, the contrast between these two ways of thinking and knowing is clear.

#### 3.7.4 World reindeer herders on economy:

To bring in world reindeer herders' own perspectives on their economy, the statements referred below are taken from the *Aoluguya Declaration, on the occasion of the 5<sup>th</sup> World Reindeer Herders' Congress in Aoluguya, Inner-Mongolia, China, July 25-28<sup>th</sup>, 2013*. Held every four years, through the Aoluguya Declaration, world reindeer herders emphasized reindeer herding as a sustainable model for human life in the north:

*“...**Underline** that reindeer herding represents a circumpolar model for sustainable management of the barren Arctic and Sub-Arctic areas, utilizing marginal natural resources which can hardly be used by others, and which historically has not displaced others. “*

The Declaration states a concern for the future of reindeer herding societies facing Arctic change, and specifically mentions the development of reindeer herders' economy as being key for robust societies:

*“...**Recognize** the need for active local reindeer herding societies in face of the major changes that are now happening, and underline the importance of making local reindeer herding peoples and societies capable of handling these changes themselves through local capacity building and ensuring that the voice of reindeer herders is heard, and **recognize** that the freedom of reindeer herders to develop their own economy and value added is a key factor to avoid vulnerability. (...)*

***Underline** that well-functioning reindeer herding communities is dependent on utilizing the knowledge of the people to maintain and strengthen the well-being and resilience of their own societies. “*

The Declaration also highlights the diversity in reindeer herders and reindeer herding societies' economical foundations, including other traditional industries and coping mechanisms:

*"...**Underline** that reindeer herding also includes hunting, fishing, gathering, harvesting and other forms of nature use as integrated parts of the traditional and economic foundation, which is of particular importance for taiga reindeer husbandry."*

As with reindeer herding youth at the EALLIN workshops, the Declaration puts strong focus on the issue of predators, that have clear negative economic implications for reindeer herding families:

*"...**Note with concern** the severe impacts from heavy losses of reindeer to predators and the predator policy and management in Norway, Sweden and Finland,"*

In the Declaration, the significance of economic freedom and concrete economic development for reindeer herders are underlined, including both existing value chains and new economic activities such as tourism:

*"**Reiterate** the statements of the Kautokeino Declaration on the occasion of the 4<sup>th</sup> World Reindeer Herders' Congress in 2009, that underline the importance of economic freedom and improvement of the economic basis of the reindeer herders by securing their access and ownership to the most profitable activities in the value chain, and **support** initiatives and active work for more profitable reindeer husbandry within production, processing and marketing, and the development of strategies for this. (...)*

***Recognize** that development connected to reindeer husbandry such as tourism can be a positive opportunity to improve local reindeer herders' economy, and underline that this also requires sustaining and developing the traditional nomadic reindeer husbandry, and basic ethical principles and schemes for fair division of value added."*

The expression of reindeer herders from around the world through the Aoluguya Declaration emphasize a holistic understanding of the reindeer economy, as a traditional, circumpolar and diversified model. It also addresses the role of economic development, knowledge and people in avoiding the vulnerability of local societies. And finally it includes the need for initiatives and measures to improve the economy of herders.

### **3.7.5**      *A paradox of opportunity: Arctic change*

Indigenous peoples in the Arctic now face major challenges related to changes in their societies, and a changing climate, which might be the first indications of coming major global changes effecting Arctic societies (Magga et al, 2011). Today, climate change and globally driven socio-economic changes are already profoundly affecting reindeer herding cultures (Arctic Council Arctic Resilience Interim Report, 2013; Magga et al, op cit; Oskal et al, 2009, ACIA, 2005; IPCC, 2014). The physical, biological and socio-economic impacts of climate

change in the Arctic also have to be seen in the context of often interconnected factors that include not only environmental changes caused by drivers other than climate change but also demography, culture and economic development. (IPCC, 2014). The negative effects of these global changes comes on top of the socio-economic challenges already faced by Arctic indigenous communities.

These changes are both rapid, profound and interacting, and indeed represent historical change: As the Arctic is now quickly becoming an integrated part of the global economy, we are experiencing changes that we have not seen before in the history of reindeer herding peoples (Oskal, 2014). The combination of the different changes constitutes a legitimate concern for the future sustainability of some of the reindeer herding societies and cultures.

However, change necessarily means both opportunities and challenges, and both are frequently mentioned in the current discourses on the Arctic. A changing Arctic necessarily also means changing economies, and thus also the changing economies of reindeer herders. The Arctic Council, Arctic States, and public debates are focusing both on challenges and opportunities in the Arctic. The possibilities seem many, diverse and rewarding.

However, Arctic indigenous reindeer herding communities often find themselves in a disadvantaged position; The negative impacts of e.g. cumulative land use change and socio-economic conditions often 'overshadow' the possibilities of positive local development, in terms of the communities' capacity to be proactive and take the lead for local actions.

This may be elaborated by the following case (Vistnes et al, 2008), where young Sámi reindeer herder Aslat Ánte M.J Sara, former leader of the Fálá Reindeer Herding District, is commenting on a major industrial development next to their summer pastures: *"...It was said that the new development [Statoil's LNG plant in Hammerfest] in this area would have positive effects for the local community and...many people saw it as a positive development. We reindeer herders were concerned about how this development would affect our future livelihoods – we felt **that the promise of positive effects for the local community put a strong pressure on us.**"* Expectations in this particular city were clearly high with regards to the economic prospects, workplaces, contracts etc. Mr. Sara continues: *"...We had no idea about the scale of the industrial development when it started, and nor did people in the town [Hammerfest] either. It was impossible to make a picture of it before it began and we see it all just now, and only now we see what it has meant and what it can come to mean to us."* According to the company's own figures, it spent ca 500 000 000 USD on purchases from local suppliers in Northern Norway during the development phase. This represents a substantial amount of money for this region, representing major opportunities for business development. At the same time, the reindeer herders sell their own products, mainly reindeer meat, some reindeer fur and so on. Hardly any of the 500 000 000 USD was spent on local reindeer herders, and none of it on the particular herders who got the brunt of the negative effects of this development. Mr Sara concludes like this: *"...We have to try to adapt to this, as long as we can. But to do this, also developers, local and national authorities and mainstream society must be willing to contribute. It cannot be right that one side gets the benefits of development, while the other only get the negatives."* (own highlight).

So the paradox here is that ‘an opportunity is not an opportunity’: What appears to everyone else as great economic prospects in a rapidly changing Arctic does not automatically represent opportunities for all.

The Kuellnegk Neark Declaration (2013) on the occasion of the 20<sup>th</sup> Sámi Congress in Murmansk, Russia stressed the importance that governance frameworks do “...*not constrain the Saami peoples’ ability to use their own knowledge in order to cope and adapt to climate change.*” Along the same lines, an early recommendation from the IPY/ Arctic Council EALÁT Project was that “...*it is important to define institutional mechanisms which constrain indigenous peoples’ original resilience and ability to adapt to climate change.*” There are indications that industry structures and governance networks for reindeer herding products are not always in line with the needs for local value added for reindeer herders facing (Reinert, 2006; Reinert et al, 2009, ARR, 2013). The Kautokeino Declaration, on the occasion of the 4<sup>th</sup> World Reindeer Herders’ Congress in Norway in 2009, also highlighted *fair trade regimes* as a way forward in this. Finally, a focus on reindeer herding peoples’ food culture as a means for economic adaptation represents a novel approach to this paradox, as also recommended by EALLIN reindeer herding youth. Mechanisms should be developed to assist reindeer herding youth develop innovative solutions, new businesses and local action, based on their own knowledge and on their own terms.

### 3.7.6 *A paradox of organisation: Collectivization under the Soviet Union*

Historically, there occurred a shift in the internal organisation of reindeer husbandry, in a way separating the east (Russia) from the west (Fennoscandia), by the forced collectivization of reindeer herding in the Soviet Union from the 1930s. This had major impacts on reindeer herding families and peoples, impacts that persist to this day in relation to their internal organisation.

Traditionally, the ways of organising reindeer herding is often based on resilience-enhancing strategies such as promoting diversity and flexibility, based on the traditional knowledge and language of the people, as is the case with Sámi reindeer herding (ARR, 2013; Oskal et al, 2009).

It could be seen as a paradox of organisation that while reindeer herders in the east are surrounded by entities all run by “modern” principles and market economy logic (ie. companies, societies, institutions), reindeer herders are largely confined to still live within the old planned-economy system of collectives.

Traditional Knowledge is today increasingly emerging and respected as an important knowledge base for more comprehensively addressing the impacts of environmental and other changes as well as development of appropriate adaptation strategies for indigenous communities (IPCC, 2014; Magga *et al.*, 2011), including key concepts of diversity and flexibility (ARR, 2013). This cannot be said to have been the starting point of the planned-economy paradigm. This was expressed by the opinion of one participant at the St. Petersburg EALLIN youth workshop in the following way:

*“...If you asked reindeer herders themselves to organise their own societies, I think the answer would not be what Stalin created in the 1930s.”*

To the extent that private incentives, initiative and entrepreneurship are considered positives for the development of local economies, and thereby local societies, there is a need to look at new models of organisation in all areas where reindeer herding is practiced. Reindeer herding youth participating in the EALLIN project have signalled a need for new solutions in this regard, discussing different options and highlighted the importance of promoting reindeer herders food culture as being a valuable tool in enhancing and securing herders’ livelihoods and economies into the future.



*Energy infrastructure is being built across the Yamal Peninsula. Pic: Anna Degteva*

### 3.8 Predators

Reindeer herding youth from Fennoscandia and some regions in Russia strongly expressed that reindeer loss to predation has increased and this problem appeared very much in focus of EALLIN workshops in the Sakha Republic, Sweden, and Norway. In some regions there is a clear growth in certain types of predators over the last decades, such as in Yakutia the number of wolves in 2014 was reported to be ca. 3500 and in 2013 – ca. 2000 vs. a stated optimal of 500-600 (Report by the Ministry of Agriculture and Food Policy 2013). In others, like Fennoscandia, there have been reports on estimated decrease of reindeer predators and, in general, rather moderate number of some, like lynx, wolverines and wolves (ca. 400 wolves jointly among Norway, Sweden and Finland (Brøseth, H. & Tovmo, M. 2014, Brøseth, H. & Tovmo, M. 2013, Wabakken et al. 2014). Recent research in Norway has disputed predator increase and pointed to larger herds and compensation regimes (Tveraa 2014). Nonetheless, EALLIN youth clearly voiced that the number of predators' attacks on domesticated reindeer had increased, whether due to changes in predators' behaviour or, importantly, due to the increased vulnerability of Sámi reindeer herds towards predators. Sámi reindeer herding youth expressed that their losses to predators had grown to such an extent that many herders see it as one of the biggest threats to their livelihood.

*"I think the high number of loss to predators in Norway is a result of the authorities economic subsidies for slaughtering calves. We have to save every female reindeer as a "production-reindeer" to produce enough economically, even though the weak female reindeers aren't strong enough to protect their calves against predators. And that system generates the problem, because the "bad-genetic" female reindeers, that should have been slaughtered in the first place, reproduces weak reindeer. Such a herd is far more vulnerable to predators. We don't have the possibility to adapt the herd structure based on our own knowledge. For example, in areas with higher risk for predator-attacks, one can't have a herd structure based on economic system of calf production." – Johan Daniel Turi, EALLIN Kautokeino 2014.*

*"If reindeer herding should develop, there has to be a bigger understanding of how it really works. It should be a change in the politics of predators, there is way too much predators in Sápmi today." – Participant, EALLIN Jokkmokk, 2013.*

*"The municipality of Inari/Utsjoki has seen a drastic increase in predators reducing the reindeer population for many reindeer herding families. It brings complete loss of livelihoods and culture for some families. Is the future of reindeer herding going to become farming? Similar to pigs/cows/ goats... Maybe herders should fall back to 100 years ago, and live with their herds 24-7... I think this is the only way for the future of a sustainable reindeer husbandry in the extreme northern Finnish forests where predators thrive." – Participant, EALLIN Jokkmokk, 2013.*

*"You say there is not too many predators. Come and visit us in winter!"  
– Participant, EALLIN Kautokeino, 2014.*

*If the issue of controlling the number of predator is not solved in the near future, we can give up on reindeer husbandry. It directly impacts on the survival of indigenous reindeer Peoples.*

*– Pogodaev, M.P., a reindeer herder from Yakutia, EALLIN Yakutsk 2013.*

As discussed in the EALLIN workshops the problem of predation has several dimensions. First of all it damages the economy of reindeer herders, but also – it represents the exclusion of local herders and their knowledge from the management of their homelands. In some cases, it is also a matter of security and social tension, like depression in herders' communities (see Chap 2.1).

### *3.8.1 Predators impact herders' economies*

EALLIN youth stated that economic losses are the first consequence of high predation. Young reindeer herders are especially exposed due to the reason that they are just starting up, but predators considerably decrease the number of reindeer in their herd. In addition, in some areas expanding industrialization also contributes to a concentration of reindeer and predators to a smaller area, which makes the livelihood unsustainable.

EALLIN youth also referred to the fact that compensation systems in the countries where the policies forbid hunting due to predation does not work appropriately. There is no herders' control over understanding and formulating the definition of how much one loses and how it should be compensated. Sámi youth discussed that in Norway they are probably able to prove only 10% of losses to predators and receive compensation for that. But this is at least better than in Sweden, where Sámi don't have even that right: someone else decides how much you should be compensated, based on an expert estimation how much predators consume (Hobbs et al 2012).

In the Republic of Sakha, Russia; there is no compensation for reindeer lost to predation, but in 2012-2014 the regional government has undertaken a major effort, including legal and financial measures to control and decrease the impact of predators (Decree №1834; Resolution from 27.02.2014). However, small private communities of reindeer herders call for special measures to protect their especially vulnerable livelihood.

*"There is a lot done in Yakutia to reduce the number of wolves. But the territory is huge, the wolves are numerous and it is very difficult to hunt them. Therefore, what is done is not enough. There is a need to help private reindeer herding communities to fight the wolves. And regulation of predators' number should occur on a systematic basis"*

*– Dulustan Sidorov, the head of the Evenki community "Gonam" EALLIN Yakutsk 2013.*

In many EALLIN workshops, herders were finding that their herds were under pressure from year to year and they worry that they will not be able to provide an income, or security to their families.

*“Wolves cause great damage to private reindeer herding obshchinas. According to the Ministry of Agriculture, in 2012 we lost 16 000 reindeer in Yakutia as a result of predation. This is one of the main threats to reindeer husbandry in Yakutia today.” – Alexander Grigoriev, head of the Evenki community “Bugat”, EALLIN Yakutsk 2013.*

*“Major losses reindeer herding suffer from the invasion of predators: wolves, bears, wolverines. The reports on consumption by predators only include the number of reindeer that were found, while the ones we didn’t find go to other losses. If a reindeer is alive it would usually come back to the land where it was born and to its herd. If you consider this, then you understand that the damage from predators is much higher than in the reports.” – Participant, EALLIN Yakutsk 2013*

*“A decrease of predators could be a way to increase the production of meat”. – Participant, EALLIN Jokkmokk, 2013*

*“The predators’ compensation system does not work. Sometimes when representative of authorities cannot come to the mountains to witness the accident, we are asked to bring the dead reindeer to the village. Then, while a herder is absent, the predator comes back and takes more reindeer, while it could have consumed the one it killed before.” – Rávdná B.M. Eira, EALLIN Kautokeino, 2014*

*“The number of wolves increases with time; the support measures are not sufficient. There is a desperate need to create normal conditions for herders. At least to provide transportation and equipment for hunting wolves and bears, which are the first threats to reindeer husbandry.” – Participant, EALLIN Yakutsk 2013*

### **3.8.2**      *Predators are a governance and self-determination issue*

Reindeer herders of Fennoscandia also pointed out that the states’ predation policy lacks Sámi management and a self-determination perspective. An elder Sámi herder explained:

*“When Sámi had control over predators, we only took the ones that got particularly aggressive to our herds. Now you breed this aggressive type. And our losses are growing. The “experts”, who are supposed to control the number of predation now, they don’t see the difference - they don’t read the behaviour of particular animal. For them all wolves are the same” – Johan M. Turi, EALLIN Kautokeino 2014.*

In addition the youth expressed that Norway’s governance of reindeer husbandry and subsidy policies made reindeer herders change the herd structure towards a dominant number of females and small calves (see Chapter 3.7). A herd of such composition of gender and age is highly vulnerable to predators. EALLIN youth called for changes in predator policies and wished their perspectives and knowledge to be included in the management of nature, and in the management of predators’ in particular.

*"As a young reindeer herder I would like to see a change in the politics of predation: decrease in predators." – Participant, EALLIN Jokkmokk 2013*

*"I am annoyed that authorities don't believe us and don't take our knowledge into consideration. Reindeer herders know that White tailed eagles do take reindeer calves. We have witnessed it many times!" – Rávdná B.M. Eira, EALLIN Kautokeino 2014*

*"In our district we have only one or two Golden eagles, and 50 White-tailed eagles, but authorities don't consider White tailed eagles as a threat. In May when new-born calves are just 3-5 kilograms, the White tailed eagles take one almost every day." – Participant, EALLIN Kautokeino 2014*

*"Wolf hunting in the taiga is completely different from hunting in the tundra, where you can use snowmobiles. Wolves are very difficult to get, so the control over their population should be carried out systematically involving the experience of herders, because we have the traditional methods of dealing with wolves, and we know a lot about their habits." – Alexander Grigoriev, head of the Evenki community "Bugat", EALLIN Yakutsk 2013.*

### 3.8.3 *Predators are a security and mental health issue*

Discussing high number of predators' attacks on reindeer, EALLIN youth also described various accidents related to herders not being able to protect their own lives and protect their safety. Herders explain that many predators had changed behaviour and become less afraid of humans on account of decreased forage and habitat, and increased interaction with humans. Herders in Yakutia explained that in some areas wolves had started to interbreed with wild dogs and are less afraid of human settlements ((Discussions of youth with elder herders, EALLIN Kautokeino 2014). In May 2013, a Swedish reindeer herder was attacked by a bear.<sup>29</sup> In May 2014, Russian media reported that a bear killed a reindeer herder in the Olutorskiy district of Kamchatka.<sup>30</sup> In China, Evenki herders mentioned that when a bear approached their camp, they had only a dog to defend themselves, as no rifles are allowed (Evenki camp, Aoluguya 2013). Worrisome news about predators attacking reindeer herders come from other reindeer herding regions as well. In this situation reindeer herding youth expressed the need for extra legal and practical measures to be granted to herders for the purpose of self-defence against predators.

*"Proof that the predators are increasing too much is that yesterday when one reindeer herder was out observing his herd, a bear attacked the herd. While trying to protect them the herder was attacked too and got severe injuries. I think this has reached an inappropriate level when one needs to risk his own life for protecting the reindeer." – Elena Walkeapää, Address to Arctic Council Ministerial, Kiruna, 2013.*

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<sup>29</sup> <http://www.dagbladet.no/2013/05/14>

<sup>30</sup> <http://www.ntv.ru/novosti/602836/>

*“Not sure if I’d able to live in taiga or mountains of Yakutia. There’s too many predators. The wolves are huge here, not like in Sápmi and I don’t have experience with bears”  
–Sámi reindeer herder, EALLIN Yakutsk 2012.*

*“We’ll pay for 2 environmentalists from Europe to come and stay with us in the taiga in winter. The wolves are 150 meters away from our herd. If they are able to stay more than 2 nights we can discuss with them why we need to shoot the wolves” – Participant, EALLIN Yakutsk 2012*

Some EALLIN workshops also focused on the issues of depression among reindeer herding youth and the situation with high predation and an inability to fight it was defined as one of contributors to even suicidal thoughts. The dimension of social depression, including due to high number of predators is described in more detail in Chapter 2.

*“Every summer when I come to my obshchina we have less and less reindeer. It is a bad feeling. Uncle says the number of wolves is very high and they can capture only a few with snowmobiles.” – Even school boy from the Tompo district, during EALLIN Yakutsk 2012.*

*“As for a young reindeer herder it is important for me to see a future within reindeer herding, and not to be depressed. The amount of predators needs therefore to be decreased and the grazing lands need to be bigger.” – Participant, EALLIN Jokkmokk 2013.*



*Predators are a major concern in the Taiga. Pic: Yuri Kokovin*

### 3.9 Our reindeer need pastures

Many issues concerning legal rights to land were raised throughout the EALLIN workshops. Even though reindeer husbandry is connected to – and dependent on – vast areas of land throughout the circumpolar area, reindeer herders and reindeer husbandry have little to no rights acknowledged by the states to their traditional lands. The key word here is land. The necessity to have access to land is crucial for reindeer husbandry, not only in the sense of mere area but land that can be utilized in different seasons and climate conditions.

#### 3.9.1 *The international protection of indigenous peoples' rights*

The underlying right of peoples is that they have the right to freely determine their past, present and future. This right is protected by international human rights instruments on different levels (see e.g. Anaya 2004). For reindeer husbandry peoples of the circumpolar North, the right to continue reindeer husbandry is crucial to uphold our cultural, economic, social and spiritual foundation as peoples. The rights holders to traditional reindeer herding lands are the indigenous peoples upholding the tradition of reindeer husbandry and the right to manage the lands is to be managed by the social and social, economic, cultural and political institutions retained by them.

Reindeer husbandry is protected as an indigenous peoples' livelihood by many international and regional human rights treaties. United Nations' Declaration on the Rights of Indigenous Peoples (UNDRIP) is the international communities consensus on the minimum standards for the life and survival of indigenous peoples. While a General Assembly Declaration it is not a legally binding instrument under international law, the UNDRIP is an important standard for treatment of indigenous peoples and is considered to be customary international law<sup>31</sup>.

UNDRIP contains many articles dealing with indigenous peoples' right to self-determination and their rights to traditional lands, territories and resources. Article 3 guarantees, that indigenous peoples have self-determination and Article 4. Furthermore, according to Article 26, *'Indigenous peoples have the right to the lands, territories and resources which they have traditionally owned, occupied or other wise used or acquired'*. At the moment, however, there are no international bodies that monitor the compliance and implementation of UNDRIP.

The only international binding convention on indigenous peoples' rights is the International Labour Organisation's Convention no. 169 concerning Indigenous and Tribal peoples in independent countries. The Conventions places focus on the procedural and land rights of indigenous peoples. Article 14 deals with indigenous peoples rights to lands and territories. Pursuant to article 14 *"The rights of ownership and possession of the peoples concerned over the lands which they traditionally occupy shall be recognised. In addition, measures shall be taken in appropriate cases to safeguard the right of the peoples concerned to use lands not exclusively occupied by them, but to which they have traditionally had access for their subsistence and traditional activities. **Particular attention shall be paid to the situation of nomadic peoples***

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<sup>31</sup> The Special Rapporteur on the Rights of Indigenous Peoples. Report to the General Assembly, A/68/317. (14 August 2012) para. 64

*and shifting cultivators in this respect.*" Article 14 also states, that governments shall guarantee effective protection of indigenous peoples' rights of ownership and possession to their lands and establish adequate procedures to resolve land claims.

Article 15 of the ILO Convention no. 169 deals with natural resources. The article states, that *'the rights of the peoples concerned to the natural resources pertaining to their lands shall be specially safeguarded. These rights include the right of these peoples to participate in the use, management and conservation of these resources.'* States are also obliged to consult with indigenous peoples before exploiting or exploring natural resources and to pay compensation for the benefits arising from the use of natural resources situated on the lands traditionally occupied by the peoples concerned. Thus far, only 20 countries have ratified the Convention no. 169, including Norway. Sweden, Finland, Russia and China have not ratified the Convention.<sup>32</sup>

The protection of reindeer husbandry falls also under Article 27 of the International Covenant on Civil and Political Rights, which states that the individuals belonging to the ethnic, religious or linguistic minorities may not be prohibited from enjoying of one's culture in community with the other members of their group. The Human Rights Committee, the monitoring body of CCPR, have interpreted this pertaining also to the traditional livelihoods of indigenous peoples. Sámi reindeer herders have submitted many complaints to the Committee, but none of the cases have yet been successful.<sup>33</sup>

The European Convention on Human Rights protects the fundamental civil and political rights of the European citizens. The Convention especially protects rights to private and family life of individuals.<sup>34</sup> The European Court of Human Rights, which monitors the compliance of the Convention, has the binding jurisdiction to examine individual applications both in Sweden, Norway, Finland and Russia. Nevertheless, the court's jurisprudence regarding indigenous peoples' livelihoods<sup>35</sup> has not been meritorious thus far.

In conclusion, there are many human rights monitoring bodies accessible for reindeer herding youth in the cases when their human rights such as rights to livelihoods, cultural integrity, property and private and family life become infringed upon. In order for reindeer herding youth to be better prepared for defending their rights to their livelihoods and lands, there should be training programmes about human rights mechanisms and relevant national

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<sup>32</sup> International Labour Organization. Normlex: Ratifications of C169 - Indigenous and Tribal Peoples Convention, 1989 (No. 169). Available in: [http://www.ilo.org/dyn/normlex/en/f?p=1000:11300:0::NO:11300:P11300\\_INSTRUMENT\\_ID:312314](http://www.ilo.org/dyn/normlex/en/f?p=1000:11300:0::NO:11300:P11300_INSTRUMENT_ID:312314) [retrieved 15 April 2015]

<sup>33</sup> Länsman et al. v. Finland, Communication No. 511/1992, U.N. Doc. CCPR/C/52/D/511/1992 (1994); Jouni E. Länsman et al. v. Finland, Communication No. 671/1995, U.N. Doc. CCPR/C/58/D/671/1995 (1996); Jouni Länsman et al. v. Finland, Communication No. 1023/2001, U.N. Doc. CCPR/C/83/D/1023/2001 (2005); Kalevi Paadar et al. v. Finland, Communication No. 2102/2011, U.N. Doc. CCPR/C/110/D/2102/2011 (2014)

<sup>34</sup> European Convention of Human Rights, article 8. [http://www.echr.coe.int/Documents/Convention\\_ENG.pdf](http://www.echr.coe.int/Documents/Convention_ENG.pdf)

<sup>35</sup> See e.g. Application no. 27033/95 by Könkämä and 38 Other Sámi Villages v. Sweden; Application no. 42969/98 by Johti Sapmelacat ry and Others against Finland, 18 January 2005 (Fourth Section); Application no. 39013/04 by Handölsdalen Sámi Village and Others against Sweden, 17 February 2009, (Third Section)

legislation. The need for this kind of capacity building was also highlighted by youth in many EALLIN workshops.

A need for special institutions and competence centers with the responsibility to assist reindeer herders in legal questions and share information about reindeer herders' rights was raised:

*"Is it possible to create special institutions authorized for the protection and rights of indigenous peoples? For example, in each region, at least. Sometimes people are illiterate, and therefore, if any serious problem happened, they would not apply to the court, in view of the fact that just do not know where to go." – Participant, EALLIN St. Petersburg 2012.*

Furthermore, youth felt that reindeer husbandry needed better legal protection against different kinds of encroachments on a national and regional level:

*"There is a need to introduce legislation on the protection of reindeer husbandry, to allocate land for the reindeer pastures and to expand the territory of reindeer husbandry." – Participant, EALLIN Yakutsk 2013.*

### 3.9.2 Does the protection of nature protect reindeer herders?

***The governments protect the nature from us. But we are people that were living on this land for thousands of years in a sustainable way. At the same time big companies dig the ground for gold and other metals, they extract oil and gas, they pollute the environment and say that we can't use the nature as we used to. We can't have dogs when we migrate with reindeer near protected areas, we cannot hunt there, but this is the main source of our subsistence. Maybe I don't understand something? – Evenki reindeer herder, EALLIN Yakutsk, 2013.***

Across many of the areas where reindeer have traditionally been herded, lie valuable oil, gas and mineral resources. With commodity prices increasing and the introduction of new extractive technologies, these areas are seeing a new mineral boom, the extraction of which is precipitating a biodiversity crisis, leading to habitat loss, and an increasing fragmentation of the landscape which is pastures for their reindeer (Degteva & Nellemann 2014).

Major drivers behind this development are the world's need for energy and natural resources, also potentially linked to and facilitated by climate change. As such, globalization very much influences the lives of reindeer herders and the sustainability of their communities. As reindeer herding peoples over time have tried to preserve the pastures on which they are dependent, they have also contributed to preservation of biodiversity. While reindeer herders are not in principle against economic development, there is a growing concern regarding the needs to balance such activity with the traditional livelihoods of Arctic indigenous peoples and biodiversity (Johnsen et al 2010).

Reindeer herders are in crisis mode within many taiga areas. In Mongolia, reindeer herds have fallen by about 50% since the 1970s and remain dangerously low; the livelihood is close to extinction. Within the Russian taiga, the number of reindeer has declined by 85% between 1991 and 2007. In some areas of Russia such as the Irkutskaya oblast, Buryatia, the Amurskaya oblast, the Khabarovskiy kray and others, it has become extinct (Johnsen et al 2010). Nowadays, reindeer herders are the minority in nearly all societies in which they reside, often a minority within a minority. They are generally poorly represented in governance processes, and their institutions are poorly adapted to deal with competing land users and other sectors of society, including industry and even protected areas administrations (which may seek to exclude them from their traditional lands, leading to conflict). Their traditional knowledge, essential for living and working in a challenging and changing environment, is eroding rapidly (Johnsen et al 2010).

The continued disappearance of reindeer husbandry is bad news for biodiversity conservation and sustainable land management in these northerly regions. Across the world, research and practice are increasingly demonstrating the environmental benefits of pastoralism: the benefits it provides to pasture growth and to biodiversity. Reindeer herding is also one of the most sustainable forms of land use there is in the world: 7000 years of continued existence, in areas where high levels of biodiversity still exist, can attest to this. The areas where reindeer herders live – whether it is within hotspots of mega-industrial development (such as in Russia and Fennoscandia) or within extreme biodiversity hotspots (north-west Mongolia is one such example) – provide important test cases for how different sectors of society can co-exist, and achieve biodiversity, land use and sustainable development goals (Johnsen et al 2010).

The connections between reindeer husbandry as a livelihood and Arctic biodiversity are complex. One of the main challenges in reindeer husbandry today is loss of pastures resulting from increasing human activity and infrastructure development, with subsequent habitat fragmentation and reduction in biodiversity.

The challenge of preserving Arctic biodiversity and the sustainability of the nature-based livelihoods of Arctic indigenous peoples is also a knowledge challenge. Science is, of course, important in this context, but not exclusively.

There is also a need to include and involve the knowledge of reindeer herding peoples in the management of the Arctic. As traditional users of land reindeer herders have knowledge about their areas that is deeply rooted in the environment on which they depend. This represents another kind of knowledge, still based on observation and testing, a knowledge that is developed, organized, and transmitted differently from “western scientific knowledge”. This kind of knowledge is experience-based, closely linked to the specific context it originates from. At the same time it represents knowledge probably older than western science itself, developed through generations of reindeer peoples’ observations and living in the north. This knowledge needs also to be respected, used, and implemented in managing the Arctic and Arctic biodiversity. This could happen through the integration of traditional knowledge into science in a real partnership of co-production of knowledge, and through implementing co-management regimes in the Arctic.

Traditional knowledge that herders and their communities have can make a great contribution to both the conservation and the sustainable use of biological diversity (Berkes 2012). It is natural that protection of areas where there is reindeer husbandry ensures the equitable sharing of benefits arising from the utilization of traditional knowledge.

### **Convention on biological diversity, Article 8 (j)**

*Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices:*

There is also a great concern of reindeer herders to preserve the biological diversity in a sustainable way for future generations and for communities dependant on reindeer husbandry. These factors bring up a natural interest to protect traditional reindeer husbandry areas of potential long-term negative impacts of developments that might negatively affect these areas.

States usually have a policy to protect the environment from impacts of human activities by establishing protected areas and very often these territories also lie on a reindeer herding pastures. This can lead to a situation when protected area is lost for reindeer herding and reindeer herders use of these areas very much limited. This kind of approach can jeopardize resilience of reindeer herding societies and increase vulnerability in face of climate change and socio-economic transformations.

But there are some examples of different approach when reindeer herders have the possibility to participate in the management of protected areas such as Laponia National Park (Green 2009).

*“The natural value is based on the same foundations as those of the national parks and nature reserves. The purpose of the protected areas and the provisions made to safeguard these are important parts of the judicial and practical management of the area. The value of the view that the Sámi have on nature is also emphasized in the management of the World Heritage. The cultural value is based on the Sámi culture and reindeer industry. Apart from that there are also strong values linked to the traces of new land users who arrived in Laponia in more recent times, like settlers, scientists and tourists. The holistic perspective also includes, in addition to safeguarding the World Heritage values for the future, that development is possible in the area.”<sup>36</sup>*

Laponia provides an example of where the natural and cultural values intersect, and offers some insights into the role of reindeer herding in the management of nature and biodiversity. Until 1996, the Laponia was protected as a natural area, but its designation as a World

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<sup>36</sup>Laponia Management Plan, 2014, available at <http://laponia.nu/om-oss/dokument/>

Heritage Site meant that the local Sámi reindeer herding culture should be preserved as well. Local Sámi herders often find themselves caught between the expectation placed upon them by the majority society to engage in environmentally friendly reindeer herding, and the existing requirement to engage in rational reindeer herding (Nilsson 2003). Lapponia now has over a decade of experience in negotiations between different interests; lessons learned from this example could potentially be highly relevant to other reindeer herding regions.

*A new and modernized management of Lapponia is based on local participation and joint responsibility taking, where the area is looked at from a holistic perspective, a sustainable perspective and a developmental perspective. In all three perspectives, learning is a constant part of the process.”<sup>37</sup>*

In Russia there is a process to develop a similar concept called ‘Territories of Traditional Nature Use’ which is a specially protected area, which aims to preserve areas where traditional livelihoods are practiced.

The application of the “*terroirs*” concept may also be useful. *Terroir* is an interesting French concept: both a natural and cultural territory which has qualities and specificities that are not found elsewhere. Such a concept could be used when looking at both promoting the unique habitats and cultures where reindeer herding societies exist, as well as in the promotion of alternative livelihoods (especially in the case of Mongolia) (Barham & Sylvander 2011; Vandecastelaere et al 2009).

An increasing number of international policy initiatives call for the inclusion of traditional knowledge and the empowerment of local, Indigenous communities in the protection of biodiversity and land management. Examples include the CBD Article 8j on Traditional Knowledge, Innovations and Practices<sup>38</sup>, which calls on contracting parties to take necessary measures to respect, preserve and maintain traditional knowledge for the conservation and sustainable use of biodiversity. The relatively recent adoption, in 2010, of the Nagoya Protocol on Access and Benefit Sharing (including associated traditional knowledge) is another indication of a step in this direction. Furthermore, at the national level there are indications that traditional knowledge and use is being further recognized, although challenges remain as to its implementation.

Therefore, there is a need to address land degradation and biodiversity conservation in an integrated fashion in reindeer herding regions, by developing biodiversity conservation capacity, capturing, analyzing and applying traditional knowledge for use in co-production approaches, and empowering again nomadic reindeer herders to become the key stewards and main actors for the conservation of critical large pasture ecosystems. There is also a need to increase herders’ capacity to engage with, collaborate and support relevant government institutions with the mandate to conserve biodiversity and promote sustainable land use management, as well as providing reindeer herders with the capacity to engage with the

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<sup>37</sup>Lapponia Management Plan, 2014, available at <http://lapponia.nu/om-oss/dokument/>

<sup>38</sup>Convention on Biological Diversity. (2012) Article 8(j) – Traditional Knowledge, Innovations and Practices. *Programmes & Issues*. Retrieved from <http://www.cbd.int/traditional>

private sector on a more balanced basis. Furthermore, there is a need to increase the understanding and capacities of government institutions and other sectors of society to engage constructively with reindeer herders, with the goal of improving joint stewardship of the land and improving livelihoods.

### **From the Laponia Management Plan<sup>39</sup>:**

#### *“1.10 The Laponia Process 2006-2011*

*From the time of the establishment of Laponia and until 2005, different attempts were made to create a new management for the area. However the time was not ripe until the autumn of 2005 when the Sámi village organizations in Laponia, the municipalities of Jokkmokk and Gällivare, the County Administrative Board of Norrbotten and the Swedish Environmental Protection Agency initiated discussions and negotiations about the framework for the development of the World Heritage management.*

*On June 20th 2006 the parties made an agreement that laid the foundation for the so-called Laponia Process. They also wrote to the Government, which in December assigned the County Administrative Board to develop the management framework.*

*The work procedure and the process that were the foundation for the new management and this Management Plan are in several ways unique in Sweden. The Laponia Process was based on local, regional and national involvement represented by five parties, Mijá Ednam, which represent Sámi village organizations with land in Laponia, the Swedish Environmental Protection Agency, the municipalities of Jokkmokk and Gällivare and the County Administrative Board of Norrbotten. The process has been based on common basic values, consensus decision-making and participation on equal terms as far as possible. The work has been done with methods based on utilizing traditional knowledge and with fundamental respect for the competence and experiences of all parties, especially for those who make use of land and water in the area.*

*The most important lessons to learn from the Laponia Process are:*

- consensus as the form for decision-making is to be used as far as possible and the council, rádedibme, is an important part of this,*
- the view of nature and culture should be based on the landscape as a whole,*
- the people who live and operate within an area have important competence and experiences that the management cannot be without,*
- the prevailing view on culture and history is changing because of our work so that knowledge and solutions are sought out more from the perspectives of the local cultures,*
- we work within a system and develop and renew it so that the creation of norms, etc. are based on local competence and traditional knowledge,*
- language is an important part in culture creation.*

*The Laponia Process was presented to the Government on July 2nd 2010.*

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<sup>39</sup> <http://laponia.nu/om-oss/dokument/>

### 1.11 Starting-points for the New Management

*To be able to understand the viewpoints that the different stakeholders have on Laponia, it is also important to describe their ideas of what management is and what importance they give local participation. Together these parts make up important starting-points for the new management. The comprehensive view brought forth in the World Heritage appointment is fundamental. In this view, the values that were the basis for the appointment are equal.*

*During the work to develop the Laponia Management, the stakeholders agreed that the work is to be based on a holistic view:*

- *The natural environment and its high values,*
- *The living Sámi culture and reindeer industry,*
- *The historical heritage that previous land use has given rise to.*

*The natural value is based on the same foundations as those of the national parks and nature reserves. The purpose of the protected areas and the provisions made to safeguard these are important parts of the judicial and practical management of the area. The value of the view that the Sámi have on nature is also emphasized in the management of the World Heritage. The cultural value is based on the Sámi culture and reindeer industry. Apart from that there are also strong values linked to the traces of new land users who arrived in Laponia in more recent times, like settlers, scientists and tourists. The holistic perspective also includes, in addition to safeguarding the World Heritage values for the future, that development is possible in the area.*

*A new and modernized management of Laponia is based on local participation and joint responsibility taking, where the area is looked at from a holistic perspective, a sustainable perspective and a developmental perspective. In all three perspectives, learning is a constant part of the process.”*

#### 3.9.3 This land of competing interests is our home

The future existence of reindeer husbandry is highly dependent on the availability of grazing land, as the use of vast territories for free reindeer grazing and migration between seasonal pastures is at the core of the indigenous reindeer husbandry system (Turi 2002, Oskal *et al.* 2009, Vistnes *et al.* 2009). Land use change or different loss of land due to development and other drivers of change was one of the biggest worries that youth expressed in most of the EALLIN workshops. Development in the Arctic should be an opportunity for all, but first of all for its residents, including reindeer herders – this was the main outcome of the EALLIN workshops, where youth put forward ideas regarding the issue of industrial development on their lands. Reindeer herders wish to develop their livelihoods at the same level as other “*stakeholders*” in society and youth hoped that their voices and suggestions will be used by the Arctic Council, Permanent Participants, Ministers and other decision makers.

*“I am in that opinion that eight countries are able to perform greater achievements than just one country standing alone.” – Elena Walkeapää, EALLIN Jokkmokk 2013.*

*“Have you ever considered the future of us young reindeer herders? Are you about to allow mining, oil and gas and every other exploitation to have bigger priority than us? We will no longer exist if you continue like this.” – Participant, EALLIN Jokkmokk 2013.*

*“Imagine yourself two hundred years ahead in time, where you will be described as an eradicated people, that had used the land for several hundred of years before any other. The land has to be unexploited and the predators have to decrease.” – Participant, EALLIN Jokkmokk 2013.*

*“Show acceptance – future industrial areas are peoples’ home.” – Participant, EALLIN Umeå, 2014.*

*“To preserve the lives of herders and traditional reindeer husbandry in Yamal, Youth need a guarantee that the gas companies won’t hinder us.” – Participant, EALLIN Salekhard, 2013.*

Reindeer herding youth see the lands where reindeer graze as their home. Despite all the changes that have occurred in reindeer husbandry, there is still a strong attachment to places and dependence on land among reindeer herding peoples (Mustonen & Syrjämäki 2013, Kharyuchi 2004, Nuttall *et al.* 2005). In the EALLIN workshops young herders have strongly expressed that their home is not just a house with a garden, but the land, where their ancestors lived and where their reindeer are. This connection and attitude that young herders have to their homes is being challenged by globalization. The change in land use towards industrial exploration is taken very personally.

*“For the environment to remain preserved we have to watch that the land, where we live stays clean. Yamal is our home.” – Khudi H.A & Serotetto V.A, EALLIN Salekhard 2013.*

*“Don’t forget that there is always a history of an area that the majority don’t or won’t see.” – Participant, EALLIN Umeå 2014.*

*“I would like to tell Obama how great the reindeer herding area truly are and that there is a great deal of life in the Arctic and that now there are big threats to our livelihood.” – Participant EALLIN Umeå, 2014.*

*“Dear Carl Bildt/Stoltenberg/Katainen!  
Please stop all the mining in Sámi areas. We need the land for our reindeer. Come visit us, then we can show you how much it means to us!” – Participant EALLIN Jokkmokk, 2013.*

Throughout the EALLIN project, reindeer herding youth described the direct and indirect impacts they experience when reindeer herding areas become too small. A physical loss of some areas comes with a fragmentation of pastures and migration routes and with nature pollution and disturbance of herds (Degteva and Nellesmann 2012). The world has turned its interest to the North and remote regions are receiving an inflow of international companies

and outsiders, who don't always possess cultural competence regarding the region where they are working. A feeling of disempowerment comes when youth realize that they are not able to refuse industrial development projects on their lands. Other indirect impacts refer to conflicts within local indigenous societies and degradation of reindeer health when there is a lack of grazing areas. There are cases of suicidal incidents among herders, who could not cope with multi drivers' stress (Stammiller 2005) and the multiple tensions in society they experience personally. Across the Arctic suicidal rates are considerably higher among indigenous youth than non-indigenous and the effects of rapid socio-cultural changes on indigenous youth health, as well as on other groups, still are not well understood (Lehti *et al.* 2009, Hope and Resilience 2009). With loss of land and the loss of other activities, like fishing and hunting that the land provides and that the herders depend on as a livelihood, many youth doubt the very future of their livelihood.

*"Companies from outside cannot put money in something we need for our survival The grazing lands of the reindeer should be protected from exploitation." – Participant, EALLIN Jokkmokk 2013.*

*"Reduce the amount of oil and gas produced by drilling;  
Stop driving by tracked transport;  
Collect the scrap metal across the tundra;  
Recycle waste."*

*– Youth from group B-11, Yamal Polar AgroEconomic college, EALLIN Salekhard 2013*

*"The problem of my area is contamination of water resources near the railway – the fish disappear or go to other places." – Participant, EALLIN St. Petersburg 2012.*

*"Limitation of reindeer pasture area and insufficient quality of pastures, and (caused) physical deterioration of reindeer health are our main problems."– Yunting Gu, EALLIN Aoluguya 2013*

*"Mining in the northern areas of Finland has different effects on the nature. It will push reindeer further north towards Utsjoki and further south towards Ivalo, increasing the density of reindeer in these areas... It could increase spread of disease among reindeer. Further the mining will have a direct negative impact on the water quality of Lake Inari. This is both regarding the fish stocks and the human drinking water quality."*  
*– Participant, EALLIN Jokkmokk 2013.*

#### **3.9.4**      *There are many ways our land is lost*

Once remote and managed by indigenous herders vast arctic and taiga reindeer areas have now become the land of many interests: there is an economic interests of big business and the States in natural resource extraction; the environmentalists see pristine and 'undisturbed' areas that should be protected areas; and local people still need to be able to use the land for their livelihood (Nellemann and Cameron 1998, Nellemann *et al.* 2000, Nellemann *et al.* 2001, Nellemann *et al.* 2003, Green 2009).

Oil and gas development and their effects were much discussed in the EALLIN workshops in Norway and Russia (especially by the youth from Nenets AO, Yamal and South Yakutia). Only recently have traditional areas of reindeer husbandry in Finnmark and YNAO become interesting for interests such as the oil and gas and mining sector (Tyler et al 2007, Magga *et al.* 2011). With a changing climate and increased industrial development, the ability to adapt the fine-tuned survival skills of reindeer herding has become jeopardized as development can terminate, block or delay critical migrations between winter and summer ranges (Degteva and Nellemann 2013, Maynard *et al.* 2010; Oskal *et al.* 2010, Vistnes *et al.* 2009).

*“There are problems with oil companies, fuel spills and destruction of soil by machinery.. Every year pastures and grazing lands are reduced. This will significantly affect reindeer population”. – Participant, EALLIN St.Petersburg 2012.*

*“What to do with oil and gas production in the Yamal-Nenets Autonomous District? It damages reindeer husbandry in the region. Gas and oil are very important to the economic situation in Russia, but the reindeer husbandry on the Yamal Peninsula has always been promising for the whole world.” – Participant, EALLIN St.Petersburg 2012.*

Mining is a challenge in the Sakha Republic, and in Sweden, Finland and Norway. As Elena Walkeapää said at the EALLIN workshop in Jokkmokk 2013:

*“There is no question that the mining industry has made its way into the Arctic regions, the question is though how much our earth can handle”*

*“The mining exploitation cannot leave big wounds in the nature that will be of great consequences for the people using the lands” (Participant, EALLIN Jokkmokk 2013)*

Bit-by-bit encroachments, each of which may have limited effect, together lead to a large cumulative impact. There are studies showing that in addition to reduced use or abandonment of industrial areas as such, there is also a considerable reduction in use of pastures up to several kilometres from an encroachment (Nellemann and Cameron 1998, Nellemann *et al.* 2001, UNEP 2001, Nellemann *et al.* 2003). Farming, infrastructure and cabin building are some of the greatest bit-by-bit encroachments. For example, herders in Northern Norway are not consulted when a leisure cabin is built on their pastures. As a result, many cabins are constructed a certain distance from each other and reindeer suffer from affiliated traffic and human disturbances (Nellemann *et al.* 2000). At the workshop in Jokkmokk herders from the Swedish side raised the problems related to forestry, wind and waterpower. Therefore each encroachment should not be considered alone and a seemingly limited development or construction can have disproportionately large affects under adverse circumstances.

*“I thought that there was no problems for reindeer herders in Scandinavia, due to the globalization – technology, economy and organization – of the Sámi reindeer husbandry. But now I see that other problems follow with it.” – Participant, EALLIN Kolymskoe 2012.*

*I think development is the main problem of my land. Yamal is rich in oil and gas. This is certainly good for economy of the country. But in terms of ecology it brings great damage here. Every year the Nenets living in traditional way move to a settled life....where they live in flats. After couple of years of living there, people begin to drink too much...Why? Because people don't have any work. They are not employed.” – Participant, EALLIN St.Petersburg 2012.*

*“In Arctic regions every single square meter is in use. Every new economical project decreases the areas for reindeer herding and that leads to personal, social and cultural problems. The traditional knowledge of the nature and culture is disappearing in the world.” Participant, EALLIN Jokkmokk 2013.*

Another way to lose grazing land is to lose access to it. In some areas of Fennoscandia the fragmentation of pastures and migrations routes are at such an extent that it is not possible to continue reindeer herding without the use of various vehicles or ships during the migration. The loss of access to pastures can also occur due to extreme weather events (Maggia *et al.*, 2011). At the EALLIN workshops youth discussed challenges related to locked pastures, due to rain-on-snow, floods and fires. Furthermore climate change may cause other changes in reindeer pastures and access to it. Climate shifts have already been noted by herders all over the Arctic, and scientists project more precipitation and increasing temperatures in the near future (Benestad 2008, Eira *et al.* 2012). These changes could lead to both positive and negative effects for reindeer and herders (Tyler *et al.* 2007). Some scientists refer to a regime shift in Arctic vegetation (from tundra to shrub) in some reindeer regions (Forbes *et al.* 2009). Further changes could affect the population size or the animal conditions or distribution as a result of changes in vegetation and access to it. In the EALLIN workshop in Kolymaskoe, Northern Yakutia herders pointed out that changes in climate have also affected their transportation possibilities, for example during migration or hunting routes were blocked because of lack of snow cover or unfrozen river/lakes and floods.

Protected areas and environmental management, that exclude herders' needs and their knowledge about the nature may cause a severe problem for sustaining reindeer husbandry. A particular alarm was raised in regard to taiga areas where hunting has always been the main source of food supply and income to herders families. Reindeer herding youth from Mongolia and China are particularly worried about restrictions to hunting in their homelands (Participants, EALLIN Aoluguya 2013, Participants, EALLIN Kautokeino 2014). However, in some reindeer regions this issue has had some positive developments. The government of the Sakha Republic, has started consultations with herders and initiated an examination of legal mechanisms to include them into the management of protected areas established on their pastures

*“Some years ago we were forbidden to keep rifles and guns and now we cannot hunt and a dog is our protection against a bear.” – Participant, Evenki camp, EALLIN Aoluguya 2013.*

*“It is not only lost the hunting to income, the most important thing lost is the hunting culture of our nation.” – Yunting Gu, EALLIN Aoluguya 2013.*

*“Dukha reindeer herders in Mongolia should be able to provide for traditional livelihood and continue reindeer pastoralism within the borders of recently organised protected areas.” – Battulga, EALLIN Kautokeino 2014.*

Youth called for emergency measures to address the many ways of losing their grazing lands and access to it and to other resources caused by urbanisation and industrial development of the Arctic coupled with effects of climate change and nature protection policies.

*“The politics that consider reindeer herding and its areas need to start taking us, reindeer herders, into consideration. You endanger our future. The forest politics need to be changed, with less clear-cut areas. Predators need to be decreased, which is something that the Swedish state has to fund. Every other exploitation has to be reduced.” – Participant, EALLIN Jokkmokk 2013.*



*Hunting is a major source of income and cultural identity in the Taiga for many herders. Pic: Yuri Kokovin*

### The Tofalar - Reindeer Husbandry is Disappearing

(An Overview By Vadim Parfenov and Anna Degteva)

*"I call to all the participants of the Congress to pay particular attention to saving the unique Tofalar reindeer!" (Vadim Parfenov, Delegate of WRHC from Tofalar People, EALLIN Aoluguya 2013).*

The Tofalar reindeer is a unique reindeer breed. It is the largest and most enduring transport reindeer in the World. It was bred by the reindeer people of the Altai-Sayan mountain taiga, the Tofa (Tofalar). Tofa are very few in numbers: there are 731 Tofalars in Russia and most of them live in three villages – Alygzher, Nerkha and Gutora - in the Irkutsk Oblast (Irkutsk Census 2012). Today the Tofalar reindeer is under the threat of complete disappearance (Klokov & Khrushchev 2004). According to herders there are 250-300 Tofa reindeer left from approximately 3000 animals in 1980s. At the 5<sup>th</sup> World Reindeer Herders Congress in China, a young Tofalar from village of Alygzher expressed strong concern that at the present rate his people might not be able to maintain this unique reindeer and their livelihood for the future generations.

Tofalar reindeer husbandry has faced many challenges, since the economic and political changes of 1990s. According to the herders in Tofalaria, the number of reindeer dropped because the state collective reindeer enterprise, which owned the reindeer, disappeared along with the funding. They could not take care and protect their reindeer any longer, as they had to provide for their families by hunting. The number of predators increased, especially when use of poison was forbidden, but other measures to help them were not introduced. For young Tofa people it is hard to go to reindeer husbandry, as there is no start-up capital, and no stable income from herding. The head of the Tofalar municipality, Vladimir Lobchenko has introduced a small compensation to the youth working with females and calves. It had a positive result and the number of reindeer grew. It also grew due to the need for transport reindeer for hunters, who were no longer able to spend money on vehicles and fuel. The Tofalar have managed to increase their reindeer from absolute minimum of ca. 140 at the end of the 1990s to ca. 300 at the present day. The youth from Alygzher expressed that the social and economic situation in the Tofalar villages is very vulnerable, and unemployment is high. They have a will to maintain the livelihood, but they should be able to make a living from it. Some have explored opportunities in tourism, but Tofa youth also expressed a need to access new technology in the taiga, such as the Internet to stay in touch with the village, radio and TV to be connected to the world. The local administration and the herders from Tofalaria call for a joint effort with the regional authorities to develop a special programme to preserve and develop the unique Tofalar reindeer and livelihood.

*"My father used to bring our Tofalar reindeer to many other region, because it is considered to be the biggest and strongest in taiga ... At the beginning of 1990s the number of reindeer rapidly decreased. Budget funds were gone. The work in the herds was not paid. Veterinary activities were not carried out. The number of predators, and wolves in particular grew a lot. People could not continue to work in reindeer herding, they had to hunt." –Vadim Parfenov, EALLIN Aoluguya 2013*

*"From my early childhood I stayed with my father in the herd and all this time I see what kind of problems reindeer herders face. When there is no salary, we had to leave the female and calves' herd and go hunting to provide for our families. There is no equipment, no communication with the village, and now even radio does not work. These need to be fixed and then all the brothers and relatives will gladly work with and revive our Tofalar reindeer. –Egor S. Amostaev, Alykzhir 2014*

*"The situation with the number of reindeer has become critical, since the poisons were forbidden. In our region it is almost not possible to kill the wolf without poisons. Perhaps special measures should be developed to control the number of wolves in Tofalaria... We also need veterinary assistance. For the Youth to stay in reindeer husbandry, they need stable profit and access to modern technologies at the taiga camps, like internet and television." –Aleksandr Bakanov, Alykzhir 2014*



*Tofalar reindeer husbandry. Author Vadim Parfenov pictured here with his family. Pictures: Courtesy of Author*



### 3.9.5 Development or no development: Exploring the possible

EALLIN youth have expressed various attitudes with regard to acceptance of industrial development in their pastures. Some were absolutely negative to more industrial development and requested a stop to an existing one for the sake of saving their livelihood. Others saw that it was not possible and many suggestions on the improvement of present processes came out as the result of the EALLIN workshops.

*"I do not question the matter IF the minerals should be extracted but HOW, it should be done in a civilized way, which shows respect to every concerned part." (Elena Walkeapää, EALLIN Jokkmokk 2013)*

*"Sustainable communication with the aboriginals of the world needs to be established. We need to learn to listen to and learn from each other in an honest manner." (Participant, EALLIN Umeå 2014)*

*"No construction sites where indigenous people practice nomadism. Traditional knowledge should gain the legal power as science has." (Participants, EALLIN Salekhard 2013)*

*The 10 years in the future vision of a young reindeer herder: **"I have managed to stop all exploits on my pastures."** (Helena Partapuoli, EALLIN Umeå 2014)*

*"Mining and reindeer herding cannot coexist. Do you choose an industry that gives short-term sustenance or a livelihood that has been there for several generations already?" (Participant, EALLIN Jokkmokk 2013)*

- Reindeer herding youth observe that the mechanism of free and prior consent is not fully working and their perspectives and knowledge should be included as soon as possible when any land use change is planned.

*"Include indigenous knowledge in early (development) planning." – Participant, EALLIN Umeå 2014.*

*It is recommended that industrial developers in the Arctic respect the results from public hearings related to industrial development in reindeer herders pasture land and the results be mandatory for those authorities who consider commercial development in the territories where traditional nature use occurs. – Recommendation from UN report E/C.19/2012/4, EALLIN meeting in Tromsø 2012.*

*"How can you describe Sweden as a multicultural country when you do not have any understanding of your original inhabitants. The reindeer herding is our way of life and*

*we have enough problems, even without your mining, waterpower and windmills etc. Your experts have said that your projects won't disturb the reindeer herding, but that has been proven to be wrong, so many times." – Participant, EALLIN Jokkmokk 2013.*

- Some EALLIN youth pointed out that extractive industries and mainstream society needs more first-hand information and knowledge about why and how herders use their land and then less harm might be done.

*"The majority society should get knowledge of aboriginal societies and cultures in order to be able facilitate future politics." – Participant, EALLIN Jokkmokk 2013.*

*Arctic States and industrial developers must recognize the integrity and holistic view of the use of reindeer pastures that is based on herders' traditional knowledge. – Recommendation from UN report E/C.19/2012/4, EALLIN meeting in Tromsø 2012.*

- Herders need sufficient human and financial resources to protect their interests when meeting mining, oil, gas and other industries, which have access to enormous resources to secure their projects. EALLIN youth pointed out an urgent need to increase new types of competence in their own society to defend their livelihood in the phase of increasing land use change.

*"In conflict (situations) herding-interests often lack resources, capacity, information and tools." – Anders Eira, EALLIN Kautokeino 2014*

*"We need more information about the ways of participating in decision-making and the mechanisms to protect our livelihoods from outside infringements. This could be done by organising training tailored for reindeer herding youth about relevant national legislation and international human rights mechanisms." – Anne-Maria Magga, EALLIN Aoluguya, 2013*

- Reindeer herding youth are particularly concerned that they do not know the big picture of upcoming industrial development and they are often informed just about one particular project at the time. They need to understand the multiple effects of various projects and prepare themselves.

*"It is a challenge to illustrate the cumulative effect of encroachments. We need a tool. Sweden is ahead: it has established a GIS system as a planning tool, which show the cumulative effects." – Anders Eira, EALLIN Kautokeino, 2014.*

*“There are scientific estimations of pasture capacity and how much reindeer it can carry. But are there assessments of how much industrial development our pasture can take?” – Helena Omma, EALLIN Tromsø 2012.*

- Improvement of existing Impact Assessments is urgently needed and learning from best practices in various Arctic countries and regions should take place. New standards should include herders’ knowledge and perspectives and understandings of direct and indirect impacts and interaction between economic, ecological, and social changes and its effects.

*“Impact assessment based on traditional knowledge must be required. Apply reindeer herding Sámi terminology.” – Participant, EALLIN Kautokeino 2014.*

*“It is recommended that Arctic States and industrial developers be urged to improve the standards used in impact assessments and agreements with reindeer herders so that they take into account the structure and knowledge of nomadic societies and the cultural base for pasture use and to include herders in the process as early as possible to avoid conflicts.” – Recommendation from UN report E/C.19/2012/4, EALLIN meeting in Tromsø 2012*

The EALLIN youth expressed that herders themselves need to participate in monitoring when it comes to implementation of projects and management of nature in their homes.

*It is recommended that the Arctic Council establish a “Reindeer herders’ watch”, which would be a tool for monitoring changes in reindeer pastures that includes a yearly report on changes in reindeer herding. – Recommendation from UN report E/C.19/2012/4, EALLIN meeting in Tromsø 2012*

Economic policies and compensation measures should not erode the foundations of traditional reindeer herding systems, but enhance it. Examples of enhancing measures are compensation with other pastures in cases of land use change, development of processing industry for reindeer husbandry and increased access to market for herders’ products.

*“In Yar-Sale (Yamal) 55 families lost all their reindeer because of harsh winter 2013/2014 and had to settle down in the village. A special program is needed to compensate with live reindeer.” – Nechei Serotetto, EALLIN St.Petersburg 2014.*

## Voices of reindeer herding youth

Show acceptance - future industrial areas are the home of people  
(Vis aksept for at områden som tenks i industriell utvikling er hjemmet til noen mennesker)  
Jokkmokk 2013

Don't forgot that there always is a history of an area that the  
majority don't see or won't see  
(Ikke glem at det alltid finne en historie til et område som majoriteten ikke ser eller vil se)  
Jokkmokk 2013

I would like to tell Obama how great the reindeer herding area  
truly is and that it is a great deal of the life in the Arctic  
regions and that there now is big threats to our livelihoods  
Muitalivččen Obamai das ahte man viiddes guvlui boazodoallu olle ja ahte dat lea measta  
seammá go eallin obanassiige diein guovlluin..Arktalaš guovlu. ????  
Jokkmokk 2013

Remember! No area is deserted and of free disposal!  
(Husk! Intet område er øde og til fri disposisjon!)  
Jokkmokk 2013

Include indigenous knowledge in early (development) planning  
(Innkuder urfolkskunnskap i fremtidig planlegging)  
Jokkmokk 2013

Sustainable communication with the aboriginals of the world  
needs to be developed. We need to learn to listen to and learn  
by one another on an honest manner. We need to make dialogues  
with one another!  
(Arbete för hållbar kommunikation med världens urfolk, vilket betyder att vi måste lyssna  
och lära av varandra på ett ärligt sätt. Skapa dialog med varandra!)  
Jokkmokk 2013

Dear Carl Bildt/ Stoltenberg/ Katainen!  
Please stop all the mining in Sami areas. We need the land for  
our reindeers. Come visit us, then I can show you how much it  
means to me/us

Ráhkis Carl Bildt/ Stoltenberg/ Katainen!  
Bissehit buot ruvkedoaimmaid Sámi guovllus. Mii dárbbášit bohccuide guohtoneatnamiid.  
Boađe fitnat mu geahčen, de čájehan maid dát mearkkašit midjiiede/munnje  
Jokkmokk 2013

## 4 Young Herders Hopes for the Future of Reindeer Husbandry

***"For us, the reindeer is everything. If we lose the reindeer we lose our language, our culture, our traditions and the knowledge to move in the nature."***

***EALLIN Jokkmokk 2013***

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The Arctic Council SDWG EALLIN project was successfully conducted in multiple reindeer herding regions and accumulated a strong voice of reindeer herding youth. Young reindeer herders from different Arctic nations gathered together and on the basis of cooperation and a common view on the future of the Arctic region, shared their knowledge, insights and thoughts about how Arctic states, organizations of indigenous peoples, regional and local governments, industry, international organizations, the private sector and reindeer herders should work together in order to maintain and develop reindeer husbandry for the creation of a better life in the Arctic.

Major goals have been achieved: young herders were brought together, knowledge has been exchanged, and challenges and solutions have been shared. This was an attempt to involve youth, preserve biodiversity and herding traditions in a time of rapid change. Through these EALLIN workshops reindeer herding youth expressed their wishes and needs for new insights into matters of land use change, industry, and the shared experiences of reindeer peoples. New tools required include relevant education programmes for reindeer herding youth, tundra Internet and innovative knowledge co-production methods in order to build capacity of youth in relation to their traditional livelihoods. Reindeer herders are generally poorly represented in governance processes, and their institutions are poorly adapted to deal with competing land users and other sectors of society, including industry and even protected area administrations.

Reindeer herding youth pointed out that first of all we need to secure the good physical and mental health of reindeer herders and their families since there are a lot of external stressors that make this life sometimes very challenging. Young reindeer herders in particular need attention and support. There is a need for further research and development of specific programs in order to provide quality medical services to reindeer herding societies.

Youth are greatly concerned about the loss of grazing land. Loss and disturbance of reindeer pastures are primarily related to oil and gas extraction, mining and infrastructure development. Bit-by bit encroachment combined with climate change is challenging this traditional livelihood and herders wish to be heard at an earlier stage in the planning process of industry as well as contributing with knowledge on changes which will impact their livelihoods.

Loss of grazing lands means that fewer people can work in and with reindeer husbandry and this affects knowledge and language because fewer people will speak about daily herding life. If herders' are not speaking about and working with reindeer on a daily basis, highly specific language related to animals, landscape and the environment will be lost. This represents a loss of *knowledge* too and herders' traditional knowledge is a precious storehouse for the future of reindeer husbandry.

Youth want to ensure that traditional family structures within reindeer husbandry will continue to ensure the success of this livelihood. For reindeer husbandry to remain a way of life and not just an occupation it is critical for women to be able to revitalise their multiple roles in reindeer herding life. We hope that in regions where reindeer husbandry is still a family based practice, that the transfer of professional reindeer herder knowledge occurs across both genders. Family skills and knowledge is not only related to reindeer but the many other skills that are needed to be successful.

Reindeer herding youth from various regions point out that losses to predators has increased. Reindeer loss to predation has reached such an extent, that some youth see it as the biggest threat to their future. Young reindeer herders ask to be equipped with means by which they can effectively influence policies for predator management. Currently young herders feel excluded from this conversation.

Hunting is an important source of food and income in the taiga. Nature protection policies can limit the possibilities of reindeer herders to hunt. It is important that representatives of indigenous peoples are meaningfully included into environmental and nature protection decision-making process.

Young herders need appropriate education systems, which fit with their nomadic way of life and their needs. Reindeer herding communities need their own educational institutions, based on using their own knowledge to develop societies. Remote or distance education and online tools may offer possible solutions for herders' education during their daily work with the reindeer. Education builds capacity and can provide young reindeer herders with new skills and knowledge to handle development and also contribute to better solutions. As an example, the UArctic EALAT Institute (UEI) ([www.ealat.institute](http://www.ealat.institute)), intends to deliver tailored educational products for reindeer herders. UEI needs financial and scientific support to create systematic educational courses for reindeer herding youth on a national and international level, as well as assistance from Universities to develop tailored training programs.

The judicious use of technology could provide some solutions to education, security, health and networking. Equal access to technology could provide herders with better workplace safety, because reindeer herding is a dangerous occupation, and technology could provide measures to alert families of herders who are in difficulty whilst on the land.

EALLIN has clearly shown how complex the drivers of change in reindeer herding are. During several EALLIN workshops, especially in Kolymskoe and Yakutsk, concerns were raised, that young people were disappearing from reindeer husbandry. There is an urgent need for an increased understanding of the effects of globalization, climate change and development, as well as economic adaptation and society resilience, for securing sustainable development in the Arctic. Reindeer herders propose that knowledge and appreciation about reindeer

herders' food culture is essential to the future ability to adapt to Arctic climate change and globalisation and maintain social and economic sustainability. Mechanisms such as governance networks and industry structures should be developed to assist reindeer herding youth develop innovative solutions, new businesses and local action leadership, based on their own traditional knowledge and on their own terms. Traditional forms of governance and management have a great deal to offer citizens and governments in this time of Arctic transformation.

The very existence of reindeer peoples and livelihoods depends on the availability of grazing land. That is why EALLIN youth expressed a particular worry for land use changes in their homelands, occurring due to such drivers as industrial development of resources, nature protection policy, climate change and the interconnections between these factors. Reindeer herding youth insist that if industrialization of the Arctic is to be advanced it should include indigenous peoples interests and knowledge and take place on the basis of true partnership and respect. Reindeer herding youth wish to be able to maintain their traditional livelihood and be in a position to develop their own society.

Above all, young herders want to stress that the herding life is good, but there is much work to do to make it better.

#### **Credits:**

SDWG EALLIN project leadership would like to express thanks to Arctic Council represented by the Arctic States and Permanent Participants, lead countries, regional governments, scientific society, partner institutions, authors and special thanks to all the young people that were so eager to share with their vision on the future of Arctic development and particularly the future of reindeer herding!



*EALLIN Lea Buorre! EALLIN Jokkmokk. Pic: ICR*

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## 6 Appendix

### 6.1 Description of the SDWG EALLIN workshops

#### 6.1.1 Tromsø (Norway) – January 23-26, 2012

A SDWG EALLIN workshop in Tromsø (Norway) was also a preliminary start-up session to the *HSH Albert II UArctic EALÁT Student Programme* by ICR. It was held alongside the *Arctic Frontiers Conference*. The workshop involved both reindeer herding youth from Scandinavia, Nenets AO, Yamal-Nenets AO and Sakha Republic in Russia. The aim of this preliminary session was to get direction on key issues of the project from a youth perspective, as well as testing methodologies such as the *Arctic Lavvu Dialogue* concept. During Arctic Frontiers in Tromsø, both industry, authorities and reindeer youth, participated in the pilot *Arctic Lavvu Dialogue* session.

The main goal of the workshop in Tromsø was to improve and learn about the dialogue between herders, industrial developers, and decision makers, in that way to prevent conflicts through insights and understanding. With this in mind, the main issues discussed was loss of grazing land, globalization, impacts, land use change, consequences and adaptation. Through the workshop an urgent need to implement international laws on the rights of indigenous peoples into domestic and local legal systems as well as their rights to lands and resources, was revealed. This includes recognizing herders' use and management and increase reindeer herders' capacity in negotiating with developers competing for their grazing land, including better impact assessments and agreements for reindeer husbandry should be developed. The idea of developing a reindeer watch monitoring system was initiated at this workshop. All of the above issues on the impacts of land use change on indigenous reindeer herders was fed into in a report to the United Nations Economic and Social Council February 2012: Indigenous Reindeer Husbandry, A study prepared for the UNPFII, 2012, full report available at [bit.ly/1o6JcBc](http://bit.ly/1o6JcBc)).

#### 6.1.2 Kautokeino (Norway) – March 2012

*Training Future Arctic Leaders: Arctic Indigenous Peoples' Adaptation to Climate Change – Introductory training course.* This course was arranged in Kautokeino, Norway March 20 – March 30, 2012. The planning of this introductory course was a collaborative effort between the International Centre for Reindeer Husbandry, the Association of World Reindeer Herders, Sámi Joatkkaskuvla ja boazodoallokuvla / Samisk Videregående- og Reindriftsskole, the Municipality of Kautokeino, NRK Sápmi, the Sami Reindeer Herders' Association of Norway and Finnish Sámi Reindeer Herders Association. The project concept *Training Future Arctic Leaders* aimed to recruit reindeer herding youth to higher education and academic careers, to

share competence, understanding and insights between reindeer herding peoples and regions, across cultures and national borders, and across different disciplines.

During the 10 day long program the reindeer herding youth were introduced to important themes concerning reindeer husbandry as loss of grazing land, impact assessments, adaptation strategies, planning and leadership in land use change and climate change, globalization, communication with industry developments, resilience in reindeer husbandry, and use of technology and so on. Youth achieved knowledge and experience using role-play with a dialogue between the different stakeholders including elder reindeer herders, industry and NGO-organisations.

The connections these youth formed between each other during this workshop, should strengthen their ability to deal with the forthcoming challenges connected to climate change, industrial development, land use change, traditional knowledge and also to see the possibilities in the future for the indigenous communities.

The workshop included working sessions, independent study and preparation for an *Arctic Lavvu Dialogue* with HSH Prince Albert II of Monaco. This occasion took place in a large Sámi lavvu prepared by Sámi Joatkkaskuvla ja boazodoalloskuvla / Samisk Videregående- og Reindriftsskole. Students and HSH Prince Albert II of Monaco were having a dialogue and discussing the challenges experienced in their herding regions. Further field trips were arranged to the Statoil LNG facility in Hammerfest and Kvalsund where a copper mine is to be expanded and reopened. Both of these industries are within in reindeer herding districts. This workshop including *Training Future Arctic Leaders* course, the visit of Prince Albert II of Monaco and HSH Princess Charlene of Monaco and the international television broadcasting conference ([www.WITBC2012.org](http://www.WITBC2012.org)) involved several circumpolar regions, indigenous peoples, organizations and institutions.

### 6.1.3 Kolymskoe, Yakutia (Russia) – March 9-12, 2012

The settlement of Kolymskoe is located by the Kolyma river, four hours by car on the ice road from the city of Chersky near the East Siberian Sea. Kolymskoe houses 5 different indigenous peoples with 5 different languages and traditions. The main goal of this EALLIN workshop was to engage Chukchi and Yukagir reindeer herders from the obschina “Turvaurgin” and “Nutendli” together with students from N.I.Tavrata school. Further participants of this international seminar included representatives of public organizations, experts and students from Yakutsk, Sweden and Norway,

Discussions in Kolymskoe concerned issues related to reindeer husbandry development, the potential for growth for young reindeer herders, development of the professional competencies in reindeer husbandry and herders’ adaptation to climate and socio-economic changes. Participants noted the importance of maintaining inter-generational communication and the preserving of the territories of traditional nature use of indigenous peoples across the circumpolar North

The delegation from Norway and Sweden visited the herders of the “Nutendli” obschina on the tundra, in order to better understand the challenges they experience there. Further this

workshop included a meeting with the Governor of Nijnekolymsky ulus in Chersky, a meeting with the Ministry of Foreign Affairs of the Sakha Republic and participation in the Congress of Indigenous Obshinas of the Sakha Republic in Yakutsk. At the Federal North-East University in Yakutsk the delegation from Scandinavia and Chair of the board Mikhail Pogodaev (Association of World Reindeer Herders/UArctic EALÁT Institute for Circumpolar Reindeer Husbandry) met with the students and signed a MoU between UArctic EALÁT Institute and Federal North-East University (TBC).

Recommendations to the Ministries of Sakha Republic from the workshop in Kolymskoe included increased subsidies in order to attract young reindeer herders, the facilitating of private reindeer husbandry and measures to meet the challenges of reindeer husbandry in the remote regions of the North; distance education, exchange of students, social housing, transportation for reindeer herders families from camps to school as well as full medicine service for reindeer herders.

#### 6.1.4 Saint-Petersburg (Russia)- November, 2012

The EALLIN workshop in Saint-Petersburg was held in conjunction with the *Days of the Sakha Republic (Yakutia)* dedicated to the 380<sup>th</sup> anniversary of Yakutia's integration in the Russian state. One of the key events there was the International Scientific and Practical Conference "Arctic Zone of the Russian Federation: North-Eastern Vector of Development" (28<sup>th</sup> and 29<sup>th</sup> of November).

The conference was further divided into several sessions. In the session on effective economic development in the Arctic in terms of industrial development, particular attention was given to the preservation of the fragile nature of the Arctic region. The second section was dealing with geopolitical aspects of Arctic development, provision of security and strengthening of international cooperation. The development of knowledge about Arctic and the results of scientific research in the region were the issues of a third session. And finally, the fourth section was discussing issues relate to the human dimension of the Arctic, the preservation and development of traditional lifestyle of indigenous peoples of the North, the involvement of local communities into economic development of the Arctic territories, the prospects of education, health and social infrastructure of the Arctic region.

On November 30 at the Institute of Indigenous Peoples of the North of the Herzen University the main theme was "The training of Future Arctic Leaders". Students at the Institute include Eveny, Evenki, Yakut, Dolgan, Koryak, Sámi, Nenets and other indigenous peoples of the north. At the Institute students get an opportunity to learn the language, culture and history of the people they belong to. This part of the workshop was attended by the director of the Institute of Indigenous Peoples of the North Lyudmila Gashilova, the author of several Evenki language books Nadezhda Bulatova, as well as other scientists and experts. Presentations were given by Mikhail Pogodaev, Anders Oskal, Svein Mathiesen, Anatoly Lebedev, Kristoffer Thomasson and others. A movie about Chukchi reindeer herders in the Chukchi language was presented to the participants. This seminar was attended by over 40 participants

### 6.1.5 Jokkmokk (Sweden) – February 15-16, 2013

An EALLIN workshop was held at the Sámi educational centre *Sámij áahpadusguovdasj* in Jokkmokk February 2013. Jokkmokk is ideal for a workshop on and with reindeer herding youth since there is both a high school and folk school with a focus on reindeer husbandry. Close to 55 reindeer herding youth participated in the first day of the two day workshop.

The first part of the workshop comprised of an introduction of the different Arctic regions. This included presentations from WRH (Johan Mathis Turi), ICR, the Sami Council (Helena Omma), the Arctic Council, Oarjehieibma - a joint Northern Sámi Reindeer husbandry teaching pre-project (Per Gustav Idivuoma) and Alena Gerasimova a young reindeer herder from Sakha (Yakutia). A delegation in Sakha Yakutia followed this session through a live-streaming meeting, while they were gathered for an EALLIN meeting.

The workshop focussed on the threats and difficulties reindeer herders are facing in the region in relation to predators and mining. Benny Jonsson presented the problematic situation with predators. Matti Berg had a presentation about the mining exploitations in the Kiruna area and the conflict this creates with the reindeer herders. Henrik Blind and Tor Lundberg Tuorda presented the planned mining plans in the municipality of Jokkmokk. Anna Maria Fjellström and the youth summarized the lectures, by discussing the day's theme and the possibilities of reindeer herding. Young herders were questioned about why they wished to carry on with reindeer herding.

The second day of the workshop Marja Katarina Påve led youth in a series of role-plays. Herders should imagine themselves and reindeer herding thirty years from today. Youth should create their own fictive worlds, good and bad, and discuss why. The workshop closed with a *lavvu* dialogue, with representatives from the municipality of Jokkmokk and the mining company searching for minerals in Jokkmokk. The dialogue was arranged as if people were sitting in a real *lavvu*, with reindeer skins on the floor, a fictive fireplace, coffee and dried reindeer meat. During the *lavvu* dialogue the youth presented their wishes and concerns about the future for reindeer herding to the representatives of the municipality and the mining company.

Following the workshop in Jokkmokk, during the Arctic Council meeting in Kiruna 14<sup>th</sup>-15<sup>th</sup> May 2013 there was an opportunity to talk to the foreign ministers of Arctic Council, who flew to Abisko for a short visit. Here a ten minute speech was given by Elena Walkeapää, from Sáminuorra ([www.saminuorra.org](http://www.saminuorra.org)), a young reindeer herder and EALLIN project coordinator in Sweden. This presented the wishes and concerns regarding reindeer herding from youth across the whole Arctic, with the results of the Jokkmokk EALLIN workshop working as a guide.

#### 6.1.6 *Yakutsk, Yakutia (Russia) – March 15-18, 2013*

The EALLIN workshop “Role of Youth in Preservation of Traditional Knowledge of Indigenous Peoples in the Arctic” was held in Yakutsk, Russia. In total, over 130 people participated. The workshop was supported by the Government of Sakha Republic (Yakutia), the UNESCO Office in Moscow, and by the Norwegian Ministry of Foreign Affairs through its Arctic cooperation grant. It was coordinated by the WRH and ICR, with support from GRID-Arendal. The workshop brought together scientists and experts in the field of traditional knowledge, natural resources and environment, reindeer herders, representatives of indigenous peoples, the executive and legislative authorities, NGOs and the media. Among the objectives of the workshop was the promotion of the role of youth in reindeer herding to inspire them to continue working within reindeer husbandry; promote networking between reindeer herders and between reindeer herders, scientists, local politicians and others; build the capacity of reindeer herders to monitor and contribute to observations of biodiversity status, trends and conservation; explore the relationship between biological diversity and reindeer herding practices. The workshop was held hand in hand with the workshop organized by the UNESCO Moscow office, entitled “A Networked System of Open Indigenous Knowledge Resources for Climate Change Mitigation and Adaptation in Polar Regions” as well as the celebrations marking of the 100<sup>th</sup> Anniversary of Yakutian reindeer herder and Hero of Socialist Labour - Il’ya Spiridonov.

The first day of the workshop started with the round-table discussion “Problems and perspectives of reindeer husbandry development in Far East of the Russian Federation”. Invited experts provided a concise summary of the situation for domestic reindeer husbandry in their respective regions, and a number of specific recommendations were drawn up. A later round-table discussion focused on the UNESCO project «A Networked System of Open Indigenous Knowledge Resources for Climate Change Mitigation and Adaptation in Polar Regions». This provided a platform for dialogue and exchange of views and experience between experts of ethnography, ecology, information technology and the representatives of local community. March 15 finished with a gala evening, attended by the President of the Sakha Republic (Yakutia) Egor Borisov, who expressed warm words and wishes to reindeer herders. In his speech he noted that reindeer husbandry in Yakutia has a rich history and is today experiencing a rebirth. According to Borisov, the Government of the Sakha Republic has as one of its priorities the renewal of reindeer husbandry, the preservation of indigenous culture and the traditional way of life of indigenous peoples of the North, and, most notably, the creation of qualitative and comfortable living conditions for people. The EALLIN workshop participants discussed the importance of traditional knowledge, conservation of biodiversity, and raised questions on traditional nature use of indigenous people, the impacts of industrial development and other related topics. It was noted that, in Yakutia, the phenomenon of indigenous youth leaving reindeer husbandry is a huge social problem.

EALLIN also undertook a “Chum dialog” in one of the tents. Young reindeer herders from the Sakha Republic were together with reindeer herders from Norway to meet, share experiences and discuss common issues. The last day of the EALLIN workshop, March 18, participants discussed the contribution of science and traditional knowledge for the future of reindeer herding societies; the importance of languages of indigenous peoples of the North; and the exchange of experiences and traditional knowledge among reindeer herding youth for the

future of Arctic and other issues. The participants presented a series of recommendations for the preservation and development of reindeer husbandry in the Arctic.

#### 6.1.7 Aoluguya (China) – July 26, 2013

This EALLIN Workshop in China was held as a part of the programme of the 5th World Reindeer Herders Congress (5<sup>th</sup> WRHC) Aoluguya, Genhe County July, 25–28 2013. Participants and contributors were Chinese Evenki youth and youth from other reindeer herding areas represented at 5<sup>th</sup> WRHC. All delegates, participants and guests of 5<sup>th</sup> WRHC followed the discussion of the EALLIN workshop which was held on July 26. Youth themselves took responsibility to organize the event, set up the agenda, moderate the dialogue, summarize the discussions and formulate recommendations to WRH. The main goal was to bring the voices and ideas of reindeer herding youth into Aoluguya Declaration 2013 and the next 4-year-period work of WRH, including this report.

The EALLIN workshop in China consisted of two parts: an introduction to the EALLIN concept and a *Djuh* dialogue with world reindeer herding youth (similar to the Lavvu Dialogue- *Djuh* is traditional tent of Evenki reindeer herders). Over 20 youth took part. Furthermore the youth discussed their role in the future of reindeer herding peoples and shared their ideas on how to carry on reindeer herding traditions in their home regions successfully. The dialogue started with short presentations by young reindeer herders from Aoluguya China, Sápmi, Yamal, Sakha, Tofalaria, Chukotka and Mongolia, who introduced their reindeer husbandry areas and main challenges they are facing. The participants were challenged to bring their thoughts on what they need to continue in a traditional livelihood and how to make the most out of it, as well as what they shall do themselves today to take responsibility in their local communities and ensure the future of reindeer herding. Youth made important inclusions to the Aoluguya Declaration.

#### 6.1.8 Salekhard, Yamal-Nenets Autonomous Okrug (Russia) – September 26, 2013

The EALLIN Workshop in the Yamal-Nenets Autonomous Okrug (YNAO) took place in the city of Salekhard on 26th September 2013 and was attended by 60 young herders. The theme of this workshop was *The Role of Youth in Maintenance of Traditional Knowledge and Protection of Environment of the Arctic* and it was held on the occasion of III International Arctic Forum «ARCTIC – TERRITORY OF DIALOGUE». The workshop focused on such issues as (i) what should be improved in the lives of reindeer herders to maintain the traditional reindeer herding in Yamal; (ii) what skills and knowledge is needed for herders to exercise successful reindeer herding today and in the future; (iii) Traditional knowledge and food culture of indigenous peoples of the North; (iv) Herders' traditional knowledge and the preservation of ecology and pastures.

The Yamal Polar AgroEconomic College was chosen to be the main venue of the EALLIN workshop, which gathered reindeer herding youth from various settlements of the region. The event was also attended by representatives of Yamal Multidisciplinary College, The Union of Reindeer Herders of Yamal, RAIPON and various departments of the YNAO Administration

(Department on the Issues of Indigenous Peoples of the North, Department of Agroindustrial complex, Trade and Food and Department of Education).

Students of the Yamal Polar AgroEconomic College took over the initiative in the discussion and practical parts of the EALLIN workshop and organized master classes on Northern reindeer husbandry and traditional sports. The youth also demonstrated the practical results from their fieldworks, including self-made videos and examination papers of challenges for reindeer husbandry caused by climate change and industrial development. Apart from participation in the *Chum Dialogue: Youth is the Future of Reindeer Husbandry*, students prepared the following scientific lectures:

- «Preservation of pastures' ecology" - Olga Kanyukova and Zakhar Lamdo, first-year students, department "Veterinary", supervisor: Ludmila Borodina)
- «Traditional knowledge and the food culture of indigenous peoples of the North" (Raisa Tobol'ko, second-year student, department "Processing of aquatic biological resources", supervisor: Inna Khalimova)
- «Cuisine of the Northern Peoples" (Marina Rusmilenko and Elena Serotetto, third-year students, department "Veterinary", supervisor: Inna Khalimova)

All participants received a certificate confirming their successful participation in the EALLIN workshop signed by Lars Kullerud, the president of the University of the Arctic, Johan Mathis Turi, the chair of ICR, and Mikhail Pogodaev, the chair of WRH and the President of the UArctic EALÁT Institute.

#### 6.1.9 Umeå (Sweden) – January 30-February 1, 2014

In connection with the opening ceremony of the Capital of Culture Umeå 2014, a SDWG EALLIN workshop was held, with the theme “EALLIN lea buorre” - *LIFE is good*. Twenty young people from reindeer husbandry attended.

After a series of presentations, the day was concluded with a vision workshop, where participants had to text their ambitions for the future of reindeer husbandry. That by answering the question “What did I do so that my grandchildren could continue with reindeer herding” or “What does the good life mean for you?” The vision was then to be written on a white paper, and held in front of a camera where the youth read his or her vision and presenting it for the viewer. The visions that were presented: “Reindeer are my saviour. I know who I am and what I want thanks to reindeer”, “I never stopped believing in reindeer herding”, “The connection between the reindeer and human being”, “I raised the profile of reindeer herders in international and national decision making processes and politics”, “I practiced reindeer herding my whole life because I loved it and never gave up”, “Always remember your roots, try to learn your history and it will be easier to understand the entire world. And never give up”, “I worked to raise the consciousness of reindeer husbandry in the majority society. Our culture is a wealth that more people should get in touch with”, “I participated in the movement for self determination for Sámi in the society” and “I brought Sámi reindeer husbandry back to Alaska”.

January 31<sup>th</sup> started with a lecture by PhD student Annette Löf who presented her work about traditional knowledge and research. She talked about an outside view into the Sámi society,

what challenges and possibilities that she saw and see and how one might work to change the situation. The next lecture of the day was by Jenny Wiik Karlsson, Chief Lawyer at SSR (Svenska Samernas Riksförbund), who informed the participating youth about the reindeer herding's laws and how one can use them in many specific issues. Rebecca Lawrence, from the University of Stockholm, held the afternoon workshop session. Her workshop was about how to interact with decision makers; how to step out from the role as a victim, how to make an active choice to make difference and to choose to say yes to ones that owns the rights.

The two days were concluded with a workshop, "Back to the future". Which summarizes what the future will look like if you have to power to choose. Every participant did a look back into the future, but in this summary there is only one participant's future: one young man's. *My vision: I've lived my life working with reindeer husbandry for its survival. Thanks to hard work and stubbornness I now see that the position of Reindeer Husbandry is stranger and more respected than ever.*

#### 6.1.10 Kautokeino (Norway) – March 24-27, 2014

This EALLIN workshop was arranged around the following events held in Kautokeino:

- 1) *Seminar giddälodden – vårjakt på ender (spring hunting on ducks) March 24th 2014 at Diehtosiida in Guovdageaidnu (Kautokeino, Norway).*

This was a seminar on spring hunting of ducks organized by the Árbiediehtu project at Sámi University College in cooperation with Kautokeino Municipality, *Sámi bivdo – ja meahcástansearvi* (a local hunting association) and ICR on the hunting of ducks in Spring. In Norway spring hunting of ducks was forbidden in 1954, but in some areas people have applied to be able to continue this tradition. Since 1994, the Ministry of Environment opened up for this hunting tradition in Kautokeino by trial arrangements, and the Kautokeino municipality has for a long time worked for making this a permanent settlement. In spring 2013 spring hunting of ducks was on hearing, with the result that the Ministry of Environment decided on making this a permanent arrangement for Kautokeino municipality from 2013 to 2022. The quota was though reduced to 150 birds and the hunting areas were additionally restricted. Kautokeino municipality decided that they would not give permission for duck hunting this year, as the decision came after the trees had burst into leaf, and according to the local tradition, one should no longer hunt ducks by that time. The municipality further stated that the quota was too small, as it would only amount to one bird for each hunter. Accordingly, it is likely that this case will be continued, as the local people do not agree on the hunting restrictions.

The purpose of this seminar was to highlight indigenous and local communities knowledge, innovations and practices that apply to birds, hunting and the use of birds as food and other resources. In the seminar presentations on some of the traditional knowledge Sámi and other indigenous peoples have on hunting of birds, the prevalence of hunting birds in the Arctic and discussion on the knowledge from different perspectives, such as from the indigenous perspective, traditional knowledge, scientific knowledge, management and jurisprudence. Presenters included Dr. Douglas Nakashima, Chief of Section at UNESCO LINKS (Local and Indigenous Knowledge Systems). Other presenters were reindeer herders and hunters from

Yamal-Nenets and Sakha Republic in Russia, local duck hunters in Kautokeino and the Tana valley, Norway and from Swedish side of Gárásavvon was represented in the seminar program. Scientists and a representative from the Norwegian government was present explaining how the regulations on spring hunting of ducks work. This seminar has brought the discussion on spring hunting of ducks and the knowledge the hunters have on a higher level. Approximately 130 participants attended the seminar, most of them local people from Kautokeino which shows that this issue has great interest in the local community.

2) *Workshop on Global change, indigenous community, based observing systems and co-production of knowledge for the circumpolar north*

The main focus of this workshop was on the role of traditional knowledge in governance of natural resources in the high - north with cases from reindeer husbandry and other indigenous societies. The Minister of Regional Development Mr. Jan Tore Sanner, Norway opened the workshop and highlighted the importance of indigenous peoples traditional knowledge and the importance of using traditional knowledge with modern technology so that indigenous peoples themselves may be able to monitor their own natural resources. Mr. Sanner also acknowledge the effects climate change has on the North and it must be taken seriously by seeking new creative solutions for social planning where monitoring locally with new knowledge and technology must be prioritized. The initiative with an academic cooperation between indigenous peoples in the Arctic related to observations of snow, ice and environmental changes can also be an important follow-up of Biodiversity Convention on preservation of indigenous traditional knowledge.

ICR and UArctic EALÁT Institute organized this workshop in cooperation with UNESCO and Sámi University College with participants from Alaska, Canada, United States, Greenland, France, Norway, Sweden, Finland, Denmark, Russia and Mongolia. This workshop was a continuation of the exchanges and reflection that took place at the international workshop "Global Change in the Arctic and Co-production of Knowledge" held in Paris in September 2012 at the Museum national d'Histoire naturelle, organized by CNRS/MNHN and UNESCO. A third expert workshop in this series is planned held in Paris in the last quarter of 2014. The statement from the first workshop on Global Change and Co-production of Knowledge for the Circumpolar North was as following:

Establishing a New Community of Practice: Unprecedented changes are occurring in the circumpolar North. These changes are creating both challenges and opportunities for Indigenous peoples and northern residents, as well as for researchers. In order to fully understand and respond to these many interconnected changes that are transforming territories, resources and communities, there is a need for heightened collaboration and partnership among these groups.

During an experts meeting hosted by UNESCO and the French National Museum of Natural History in Paris, September 27-29, 2012, an *ad hoc* and open-ended group was established, involving circumpolar indigenous peoples and natural and social scientists, with the purpose of advancing innovative tools and methods, and engaging in activities that bridge across knowledge systems, disciplines, actors, networks and institutions. Knowledge co-production

refers to the complementary and joint work of bringing together indigenous knowledge holders and scientists. This new paradigm is attracting a great deal of interest in international discussions, for example relating to climate change, biodiversity conservation and sustainable use. Knowledge co-production goes beyond interdisciplinarity (coming together of scientific disciplines) or transdisciplinarity (bridging between science and other knowledge systems). This 'Community of Practice' will foster knowledge co-production among and between Indigenous and scientific knowledge holders that generates robust responses to global change, including climate change, for the circumpolar North.

Approximately 80 participants attended the workshop. The discussions continued on co-production of knowledge and ways on how to bring together indigenous peoples and scientists for future cooperation. The *ad hoc* group discussed on a common project focusing on community-based observations and monitoring in local and indigenous societies. There were presentations on different case studies presented by the participants on reindeer herding in the regions of Sápmi (Norway, Sweden and Finland) and from different regions of Russia and also Mongolia. Sea/ice case studies presented from Greenland, Canada and Alaska and also reports from similar workshops, seminars and conferences on traditional knowledge were presented and discussed during this 3-day long workshop. The objectives were to propose and assess concrete methodologies for community-based observatories in the Arctic that are interlinked with indigenous livelihoods, such as reindeer husbandry or hunting/fishing/trapping. A contribution to the development of methods, rooted in traditional knowledge and building synergies with science, that reinforce the role of indigenous peoples in observing systems and decision-making with respect to change in the Arctic. The work will continue in the third workshop in late 2014.

#### *6.1.11 Laponia National park (Sweden) – March 28-30, 2014*

A workshop on The Laponia management - as a Solution for Reindeer Herders in Russia and Mongolia - "Including reindeer herders and traditional knowledge in management of protected areas: Is the Laponia world heritage model the way to go?" This workshop was held in Jiellevárre, Sweden March 28- 30th for reindeer herders from Mongolia, Russia, Norway and Sweden. There were over 30 participants. This workshop was performed in cooperation with Laponiatjuottjudus, The Laponia management, Gávpi Gällivare, Nils-Anders Pittsa and the Saami school in Gällivare.

During two days a delegation of reindeer herders, from Russia (Nenets, Yamal, Sakha Yakutia), Mongolia and Norway, visited reindeer herders that live and work with reindeer within the Laponia world heritage site. The aim with this gathering was exchanging knowledge between reindeer herders about how management of protected areas could include, instead of exclude, reindeer herders and their knowledge and land use.

The trip went by bus from Kautokeino to Gällivare. During the first evening the guests visited a Saami shop in Gällivare to learn about meat processing and sale and how to market Saami products on a private basis.

The second day the delegation visited a local *siida*, Nils-Anders Pittsa's *siida* in *Stubbá* in *Unna tjerusj* reindeer herding district. The site of *Stubbá* is within the Laponia world heritage site, within the *Stubbá nature reserv*, boarding to *Muttos national park*.

The *siida* was feeding reindeer artificially because of the poor grazing conditions that winter and discussion went on about protected areas, what opportunities the herders had to use the protected areas and knowledge was exchanged between herders that have experience of protected areas of different kinds within their traditional lands.

After having an outdoor lunch in *Stubá* the trip went back to the Saami school in Gällivare where a seminar was hosted. The issues presented and discussed were the history behind the Laponia management, how it works today and in what way reindeer herders are included in the work. The Laponian reindeer herders shared experiences about why it had been important for the herders to participate and engage in the question of management of a world heritage site, what has been gained and what challenges they have faced. Gudrun Kuhmunen, chair of the Laponia management board, and representative from the reindeer herding districts held a lecture about the history of the so called Laponia process and the methods used by the reindeer herders to be able to negotiate with the state parties. Bernt Wennström, co chair of Laponia management board and representative from the city council of Gällivare, also explained what the municipality's perspectives have been on involving reindeer herders in the work of Laponian management.

The status of protected areas in Sakha Yakutia presented by Dimitry Marfuslov, Mayor of the Evenki village Khatystyr and Battulga Solnoi, Dukha reindeer herder, presented the situation of national parks and reindeer herding in Mongolia.

During the seminar discussions went on about what the herders could learn from each other and it was concluded that the management of Laponia represents one of the best practices in how to involve reindeer herders and their knowledge in management of protected areas, and that the knowledge and experience exchange between the Laponia management board, the reindeer herders of Laponia and Association of World Reindeer Herders should develop further.

#### **6.1.12** *IPCC launching meeting Kautokeino (Norway) – March 31, 2014*

The EALLIN SDWG project also included the International Launch event for IPCC AR5 IPCC 5<sup>th</sup> Assessment, Working Group II, Polar Regions Chapter with the seminar: Arctic Indigenous Peoples and Climate Change: Real Impacts, Managing Change in Guovdageaidnu/ Kautokeino, Norway at March 31<sup>st</sup> 2014.

The launch event was endorsed by IPCC as part of the official launch of IPCC AR5 WG II, by an endorsement statement from IPCC AR5 WG II Co-Lead Prof. Chris Fields, Stanford University.

The event was opened by President of the Saami Council, Ms. Aile Javo, and included greetings from Executive Director Achim Steiner of UNEP, Executive Chair Mikhail Pogodaev of WRH, Director General Rune Fjellheim of the Norwegian Sámi Parliament, President Lars Kullerud

of UArctic, as well as indigenous leaders from across the Arctic.

The event included speeches and discussion on key topics including keynote presentations on the IPCC, the IPCC AR5 WG I & II, the WG II Polar Regions Chapter, the WG II Human Security Chapter, perspectives of Sámi, Inuit, Nenets, Even, Evenki and Dukha indigenous peoples and youth, and more.

The event also had a separate session on Climate change resilience and managing change. Under this theme, the topics included Science and traditional knowledge co-production, Education and two ways of knowing, the SDWG EALLIN Reindeer Herding Youth project, as well as local business perspectives.

New initiatives were brought forward and launched at this IPCC event, as responses to climate change:

- Arctic Indigenous Scientists' Association (AISA), uniting Arctic indigenous scholars for knowledge production in the Arctic.
- Arctic Indigenous Peoples' Culinary Institute, representing a novel approach for adaptation to change for Arctic indigenous societies, focusing on traditional knowledge on food culture, local value added and innovation.

The session also included an Arctic Lavvu Dialogue entitled "Is Adaptation Possible – Will Democracy Cope? Managing Knowledge Resilience and Power", convened by Dr Robert Corell and Ms. Gunn Britt Retter.

Participants included over 70 people from Norway, Sweden, Finland, Russia, Greenland, Mongolia, Canada and the US, including representatives and scholars from Sámi, Inuit, Nenets, Even, Evenki and Dukha indigenous peoples.

EALLIN youth from Fennoscandia and Russia contributed actively to the event, both as the main session moderators, co-organisers, lecturers as well as participants. A central dimension throughout the program was indigenous youth perspectives, where indigenous youth from Fennoscandia and Russia and early career indigenous scientists themselves expressed their views, concerns and perspectives on climate change, adaptation and resilience.

## 6.2 EALLIN home and herding

Arctic reindeer husbandry is as diverse as its distribution. It is a traditional livelihood in Eurasia, carried out by more than 20 different ethnic indigenous Arctic peoples in Norway, Sweden, Finland, Russia, Mongolia and China. About 100 000 herders are involved in herding 2.5 million semi-domesticated reindeer, covering some four million square kilometers of pasture.

### 6.2.1 Sápmi (Norway, Sweden & Finland)

Sámi reindeer husbandry is performed in the northern part of Norway, Sweden, Finland and north western Russia. In Fennoscandia reindeer and people have a connection that is thousands of years old in what is today, first by hunting, then through domestication and herding. From the 16<sup>th</sup> century. Sámi reindeer herders moved nomadically to be close to their reindeer, which were used for transport, milk and meat production. This changed during the 1900's, when reindeer herding becomes more extensive and meat production became increasingly important. New technology was introduced in the 1960's, and today snowmobiles, ATVs, helicopters, and mobile phones are major features of modern reindeer herding. This has had a variety of impacts on reindeer husbandry where the reindeer are not watched year-round and reindeer wander freely during certain periods. However, reindeer herding would not be possible without the maintenance of traditional knowledge on for instance how land should be used during different periods and times of extreme weather fluctuation. In Norway, Sweden and Finland reindeer husbandry is a small industry on a national scale, but it is one of the most important parts of the Sámi culture.

Sámi reindeer herding in present day Sweden, Norway and Finland are still affected by the creation of national borders in 1751. Later the Lapp Codicil secured that reindeer herding Sámi could migrate with their reindeer across the border between Sweden and Norway ([www.sapmi.se](http://www.sapmi.se)).

Reindeer are for the most part privately owned. According to the New Norwegian Reindeer Herding Act from 2007 (Lov om reindrift 2007-06-15-40), only the Sámi can own reindeer. The reindeer are earmarked to tell who the reindeer owner is. According to the Reindeer Herding Act, reindeer husbandry in Norway must be economically, ecologically and culturally viable and it will be based on Sámi culture, Sámi traditions and Sámi customary practices (Lov om reindrift (reindriftsloven) 2007-06-15-40, Landbruks- og matdepartementet). As Norway modernized, rapid development and new regulations and administrative structures were introduced into reindeer husbandry, the state control over the livelihood has increased.

The reindeer herding area comprises approximately 14,000 km<sup>2</sup> or 40% of Norway's surface area, and is divided into six regional reindeer herding areas which are divided into 89 districts. The district replace the traditional *siida*, as an administrative unit which includes a specific geographical area and whose main task is to organize reindeer husbandry within the district. In Norway, as of 2006/2007, there was a total of 556 *Siida* units with total of 2 936 people, most of them in Finnmark, northern Norway. The number of reindeer in Norway is about 200 000.

Sámi reindeer herding in Sweden is divided into 51 Sámi reindeer herding districts (*Samebyer*). In Sweden there is migratory mountain reindeer herding, more static forest reindeer herding and concession Sámi reindeer herding where the owner of the reindeer are non-Sámi with a limited ownership of 30 reindeer. Reindeer herding employs about 2500 people in Sweden, while the total number of reindeer owners is about 4 600 people.

Reindeer husbandry in Finland is carried out in the northern part of the country, covering an area of 114 000 km<sup>2</sup> - 36 per cent of the entire surface area of Finland. The northernmost part

of the Finnish reindeer husbandry region is classified as the 'Sámi reindeer herding area'. In Finland, reindeer husbandry is not ethnically restricted to Sámi, and the majority of the herders are Finns. In total there are 4500 reindeer owners, of which approximately 1300 are Sámi. Reindeer husbandry is organised officially in co-operatives, but the Sámi have retained traditional *siida* system as an internal way of organising reindeer herding. The Sámi are in minority also in the highest representative organ of reindeer husbandry, the Association of Co-operatives. The current maximum number of reindeer in Finland has been set at just over 200 000. The numbers of reindeer per co-operative and owner (500 at maximum) are likewise strictly restricted in Finland. This poses serious obstacles for young reindeer herders who wish to start reindeer husbandry in the co-operatives in which the maximum number of reindeer is full. In Finland, young reindeer herders are entitled to the starting subsidies, but only a few young Sámi wish to carry out reindeer husbandry into future due to the low profitability of the livelihood. However, the reindeer meat markets are growing and there are a lot of potential economic prospects for those who seek for better profits from meat production.

The main encroachments in Finnish Sápmi include forestry, mining, gold panning, flooding and infrastructure. While the authorities have accused reindeer herders of overgrazing, the pastures available have decreased and fragmented during the last decades. The revised Mining act (2011) is crucial for the protection of reindeer husbandry as it prohibits any mining activities that endanger Sámi culture. Also the growing predator populations threaten the viability and profitability of reindeer husbandry.

The economic situation among reindeer herders in Norway varies greatly. The income of individual reindeer herders consists of the production of meat and raw materials such as skins, bones and horns, and account for about 50% of the income. Additional sources of income include financial subsidies and compensation. More than 50 % of the costs in the industry are related to the costs of running and maintaining mechanical equipment (Diedut, *Analyse av den Sámiske reindriften økonomiske tilpasning*, nr 4, 2006, Sámi Instituhtta, Norden). The economic support includes activity supports, production bonuses, early slaughter supplements, calf slaughter payments, district support, special transition assistances and other payments, and amounted to 97 million NOK (10.1 M Euro) year 2008/2009. The stated support for early slaughter and calf slaughter to promote a certain type of herd structure so that it consists of more productive animals in relation to limited pasture availability. The purpose of district support is to give districts more responsibility with the help of increased economic activity freedom and it will also be used for emergency preparation in the case of poor reindeer grazing conditions (Foreskrifter til Reindriftsavtalen 2008/2009 m.m., Reindriftsforvaltningen, Alta 2008).

One of the largest threats to Sámi reindeer husbandry over the last 50 years is the huge increase in encroachment from e.g. as mining, wind power development, infrastructure and hut-building areas. More than 30 % of Norway's reindeer pastures have been lost due to encroachment and exploitation (report "Inngrep i reinbeiteland" 2004), and UNEP's estimates show that if encroachment continues at the same pace then within 50 years, traditional reindeer herding, with some exceptions, will not be able to continue in the way it does today. (Inngrep i reinbeiteland, biologi, jus og strategier i utbyggingsaker, Norges landbrukshøgskole, NINA, Sámi Instituhtta, 2004) ([www.reindriftno.no](http://www.reindriftno.no)).

The most extensive predators in Sámi herding areas are wolverine, lynx, eagles and bear. All these species are protected, thus compensation of lost reindeer to predation is awarded, but the documentation requirements seem unreasonable to herders. (Resursregnskap for reindriftsnæringen, reindriftsåret 2006/2007, Reindrifftsforvaltningen 2008) ([www.rovviltportalen.no](http://www.rovviltportalen.no))

In addition to different industrial activities, climate change is likely to add new sets of stresses. Sámi reindeer husbandry is performed in a climate affected by the Gulf Stream at the coast, which leads to relatively mild winters. The consequences of climate change already observed by herders are thus related to increased fluctuation between raining and freezing in winter. This creates an ice layer on the ground, reducing reindeer's access to the underlying pasture (ACIA 2005, Sverige inför klimatförändringarna – hot och möjligheter SOU 2007:60, Hansen et al). Such rain-on-snow events are predicted to cause major challenges to Sámi reindeer husbandry in the future.

## **SDWG EALLIN Workshops in Sápmi: Tromsø, Kautokeino, Umeå and Jokkmokk**

### **6.2.2 Yamal Nenets Autonomous Okrug (Russia)**

Nenets, Khanty herders, Sel'kup and Komi herders

<b>Reindeer husbandry in Yamal</b>	
Location	North-West Siberia
Herders	14,000 people practicing traditional lifestyles
Reindeer	Ca. 600,000
Area	770,000 km <sup>2</sup>
Organization of reindeer husbandry	1. Large reindeer herding enterprises (with reindeer owned collectively or by the state) 2. Private <i>obshiny</i> (communities) 3. Private households
Migration	Main pattern: coast in summer, inland winter, long migration distances (up to 1000 km. per year)
Landscape/biome	Tundra, forest tundra, taiga
Climate	Summer temp: +12 Winter temp: -22 (Salekhard, Benestad 2008)
Specific characteristics	Very traditional herding Largest single area of reindeer herding in the world
Main challenges	The worlds largest gas production – 90% of Russia gas total
Main possibilities	Reindeer herding is the primary livelihood

The Yamal-Nenets Autonomous *Okrug*/District (YNAO) in North-western Siberia, Russia is the world's largest area of reindeer husbandry. The YNAO covers about 750,000 km<sup>2</sup> of tundra and taiga. Approximately 14,000 indigenous people, primarily Nenets, but also Khanty, Sel'kup and Komi-Izhma practice traditional livelihoods in YNAO, with reindeer herding being

the core (The III International Arctic Forum, 2013). In 2013 the entire domesticated reindeer herd of the region comprised 700 000 animals, that is roughly speaking half the total number of domesticated reindeer in Russia, and 1/4 of the world's population (ibid.). The Yamal Peninsula is one of the places where traditional large-scale nomadic reindeer husbandry is best preserved. The herders maintain close connections to their reindeer on a year round basis, migrating in traditional way with sledges and reindeer up to ca. 1000 km a year. This makes reindeer central to the social, cultural, spiritual and economic life of the herders in YNAO, and around half the population of the Yamal Peninsula, over 5,000 people, practice nomadic reindeer husbandry here. Reindeer are used for meat production, clothing traditional handicraft production and transportation.

At the same time, the Yamal-Nenets AO holds the worlds' largest natural gas reserves. The region delivers 90% of Russian gas production, making the industrial development of hydrocarbon resources of the YNAO play a key role in Russia's energy strategies. The Yamal peninsula, where until recently there was no transport or other infrastructure, is now being rapidly developed. This includes a net of facilities for drilling, extraction and transportation of oil and gas, including railways and pipelines, and housing for new comers and additional infrastructure (Degteva and Nellemann 2013). The production from the Bovanevskoye field started in 2012 and other major field developments are underway. As a result reindeer husbandry in this region is meeting new and expanding challenges, but also opportunities.

The main concern of reindeer herders in this region is rapid industrial development and associated social changes and loss of grazing land, pasture quality and availability. Additionally the lands used by herders in their annual migration cycle have different legal status. This complicates obtaining official permission for land use, and as a result threatens traditional reindeer herding land uses. Currently reindeer husbandry in the YNAO is organized in three structures: 1) large reindeer herding enterprises (the former Soviet state agricultural organizations), which are the official pasture land users; 2) private herders, who are organized as legal *obshchiny* (communities) and inform the state about pasture use; 3) private herders (so-called individual households), who are not a part of any legal entity. Since pastures in the Yamal municipality are officially rented to large reindeer herder enterprises, private herders do not have a legal right to use the pasturelands for their traditional livelihood. At the same time, there is no legal prohibition or restrictions for any reindeer herder to use the pastures. Consequently, in Yamal it is the private herders (particularly the individual households) who have fewer opportunities to represent their interests regarding land loss issues or political and economic welfare, and thus are the most vulnerable to both the loss of grazing land and political control of reindeer husbandry (UN report E/C.19/2012/4). However, the traditional governance system of reindeer husbandry in Yamal remains the basis for solving potential conflicts regarding the use of land between the herders up to the present day (Degteva 2014). In comparison with many other reindeer regions in the World, the herders in the Yamal-Nenets AO have a lot of freedom to develop their livelihood based on their own knowledge and traditions, when it comes to reindeer migration and herd structure, social organization and economic development (ibid.). This has been the foundation for building and strongly maintaining indigenous reindeer herding livelihoods in this region.

#### **SDWG EALLIN Workshops in Yamal: Salekhard**

### 6.2.3 Sakha Republic (Russia)

#### Even, Evenki, Dolgan, Yukagir & Chukchi herders

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##### Reindeer husbandry in Sakha Republic (Yakutia)

Location	West Siberia, Russia
Herders	Evens, Evenki, Dolgan, Yukagirs and Chukchi herders, in total 2200
Reindeer	ca. 200,000
Area	804 000 km <sup>2</sup> (25 % of entire Sakha republic )
Organization of reindeer husbandry	State or public owned reindeer with herders organized <i>obshinas</i> 10% private herders
Migration	Diverse
Landscape/biome	Tundra, mountain, taiga
Climate	Summer temp: +17 Winter temp: -37 (Yakutsk, Benestad 2008)
Specific characteristics	Traditional and diverse
Main challenges	Low income
Main possibilities	Potential to increase the number of reindeer in forest and tundra area

The Republic of Sakha (Yakutia) is the largest region of the Russian Federation. It accounts 1/5 of the Russian Federation and has a territory of 3,1 million km<sup>2</sup>. The natural landscapes and climatic conditions of Sakha are very wide, including high Arctic, sub-arctic, mountain-taiga and taiga ecosystems. Correspondingly there are 4 types of reindeer husbandry in Sakha Republic and 5 distinct indigenous reindeer herding peoples: Evens, Evenki, Dolgan, Yukagir and Chukchi – all of whom were represented at SDWG EALLIN workshops.

Currently there are approximately 200 000 reindeer, herded by over 2200 peoples in the Republic who work and migrate full time with the reindeer. Various state and public bodies primarily own the reindeer, but nearly 10% are held privately (Ministry of Agriculture of the Republic of Sakha (Yakutia), 2010).

Some 25% (804 000 km<sup>2</sup>) of the entire Republic is considered as reindeer pastures, with the vast majority of reindeer pastures being in the forestry zone of the Republic (75%). In agricultural lands there are 15% and in the protected areas about 9% (the State National Report, 2009). The forestry lands are under the federal management, while lands of agricultural designation are under the management of local authorities.

**Chukchi herders:** Chukchi herders live in the high Arctic tundra far north of Yakutia, near the East Siberian Sea. Including the Chukchi herders of Chukotka, there are nearly 16 000 Chukchi, with the majority living in small rural villages. Chukchi practice both taiga and tundra reindeer husbandry, differing in clothing, some practices and transportation usage. The tundra form have large herds, often several thousand animals, and long migration routes between open tundra in summer, and more sheltered areas in winter.

**Yukagir herders:** In the same region along the Kolyma and Indigirka River north of Yakutia, also a small number of Yukagir herders are found. In total they account for only about 1500 people, together with the herders of Magadan and Chukotka. Traditionally Yukagir have been nomadic and semi-nomadic wild reindeer hunters in tundra and taiga areas. In the tundra regions herders also started to practice small-scale reindeer herding primarily for transportation purposes

**Dolgan herders:** The Dolgany live in the north-western part of the Republic of Sakha (Yakutia) and in the Taymyrskiy Autonomous Okrug, numbering 7330 people. Many still live semi nomadically and practice reindeer husbandry different in scale, migrating between winter pastures at the tundra areas and summer pastures in the forest tundra of the main river basins.

**Even herders:** Eveny are a very widely distributed people, which apart from being found in North and East Sakha (Yakutia), also live in Khabarovskiy Kray, the Chukotka Autonomous Oblast, Kamchatskaya Oblast and the Magadansky Oblast. There are approximately 20 000 Eveny, and about half of them live in North East of Yakutia. Traditionally Eveny combined semi-nomadic reindeer herding and hunting. Even though collectivization in the 1930's undermined nomadism and traditional structures, it has continued until today. Eveny herders ride reindeer and used dogs as sledge animals. The Eveny reindeer are known to be large, long-legged and strong. Due to the lack of infrastructure, reindeer are to a large extent used as transportation today. The Eveny speak their own language, which is one of the Tungusic languages. They are close connected to the Evenki.

**Evenki herders:** Evenki are the most widespread of the Tungus speaking peoples and can be found from the coast of the Sea of Okhotsk in Russia's Far East, throughout south-eastern Siberia, and up the entire length of the Yenisei River to the tundra regions of the Taimyr Peninsula. With the most residing in Yakutia, in total the Evenki number about 50 000. Evenki also ride their reindeer. Evenki reindeer husbandry is small in scale, with the number of reindeer ranging from a few animals up to 20-30 animals per family. Reindeer are mainly used for transportation and milk production, and wild reindeer are hunted for meat. Evenki herders are traditionally nomadic, with summer pastures in watershed areas and winter pastures in the river basins. Nomadism is crucial for the Evenki herding culture, but due to Soviet collectivization many nomads were forced to settle. Recent decades have seen increased mining extraction, pipeline construction and industrial forestry in the southern parts of Yakutia and this has been disastrous for some Evenki herders.

**SDWG EALLIN Workshops in Yakutia:** Yakutsk, Kolymskoe

### Evenki Reindeer Husbandry in China

Location	Genhe county, North East China
Herders	47 (among them only 2 women and 5 men between 18-35 years)
Reindeer	800 according to EALLIN participants
Area	
Organization of reindeer husbandry	State owned reindeer with herders employed and settled from Aoluguya
Specific characteristics	Settled due to closing of the Russian-Chinese border
Main challenges	Limited pastures, low income, not allowed to hunt, settled
Main possibilities	Potential to develop a market for tourism

Reindeer husbandry in China is limited to a small region in the Genhe county, in the North East of the country. According to official statistics there are 234 Evenki engaged in reindeer husbandry across 20 families herding approximately 1000 reindeer. However, some local herders report that only 47 Evenki are actively involved in daily reindeer herding practice. These are the few surviving of what had been a larger Evenki population of nomadic hunters who used reindeer for transportation to migrate distances of hundreds and even up to thousands of kilometers. Since time immemorial Evenki reindeer herders and hunters moved freely across the territory, which is now divided by the Russian-Chinese border. With the establishment of a strict border regime between China and Russia, Evenki nomadic families were cut off from each other. In the 1960s the Chinese authorities relocated Evenki further inland, first in Alonson, then Manqui and finally building the settlement of Aoluguya. In 1967 the state purchased all reindeer and collectivized them. Herders were provided a salary and took care of their previously privately owned reindeer.

Evenki reindeer herding in China as well as other taiga reindeer husbandry among south-Siberian reindeer-herding peoples is characterized by a rather small number of reindeer used for transport and milk production. Chinese Evenki reindeer herding is conducted in a very traditional way. However, according to traditions Evenki mostly benefit from hunting both for subsistence and fur trading. In China, herders' no longer have the opportunity to hunt due to legal restrictions resulting from security considerations and nature protection policies (Herders communication at the WRH Aoluguya Congress). Herding families live on a government minimum allowance per month and income from the sale of antlers for the Asian pharmaceuticals market. New equipment such as solar lights, satellite ground receiving equipment and vehicles are used. The Evenki language is not used among the youth, who daily speak Chinese. But a new Evenki language course has started at the local school, and elders are involved in the production of an Evenki textbook.

Evenki youth are worried for the future of reindeer herding and for the very existence of their

people in China. The main concerns are related to the limitation of reindeer pastures and the decreasing number of reindeer. Herd health and diversity, as well as the economic situation of herders are further linked concerns. Some efforts are being undertaken to develop small-scale tourist activities in the clans closest to the largest city of the region, Genhe. One of the important efforts taken by Chinese government to strengthen herders' spirit, and knowledge was the organizing of the World Reindeer Herders Congress in Aoluguya, where Chinese Evenki could feel a belonging to the larger reindeer peoples' family and learn that herders from various countries have to struggle to improve and maintain their livelihood. However, local Evenki youth believe that only a comprehensive long-term governmental program could bring a real breakthrough into the current decline of reindeer husbandry in China. Such a program among other elements should include education relevant for reindeer husbandry; veterinary support; and most importantly encouraging Evenki youth to engage in reindeer husbandry by assisting them to buy reindeer. This would tackle the problem of high unemployment among the Evenki and help ensure the future of reindeer husbandry and Evenki people in China.

**SDWG EALLIN Workshops in China: Aoluguya**

6.2.5 *Mongolia*  
 Dukha reindeer herders

Dukha Reindeer Husbandry in Mongolia	
Location	North Mongolia, on the southern slopes of the Sayan Mountains
Herders	Dukha herders. App. 200 nomadic herders & 300 settled herders
Reindeer	1500
Area	20,000 km <sup>2</sup> at elevations of between 1850 and 2100 metres.
Specific characteristics	Southern most reindeer husbandry in the world
Main challenges	Few reindeer, loss of pastures due to national parks
Main possibilities	Potential to develop a market for tourism and achieve right to pasture in the national parks.

In Mongolia, on the southern edge of reindeer's natural habitat (51-52° north), Dukha reindeer herders herd their reindeer on the transition between the taiga and steppe biomes. This takes place along the borders of the Russian autonomous republics of Tuva and Buryatia, on the southern slopes of the Sayan Mountains, with summer temperatures as high as 40°C. The Dukha people, a sub-group of the Russian Todsjin-Tuva people, are the smallest ethnic minority in Mongolia. They currently include about 200 nomadic reindeer herders and approximately 300 people. Dukha reindeer husbandry is characterized by small herds, where a typical herding family owns 20-150 reindeer. A sustainable number would be 50-70 reindeer per family, while many herds are below this sustainable level owning as few as five individuals. In total, about 40 families herd approximately 1500 reindeer in Mongolia (UNEP

Mongolia report 2011). The Mongolian herding traditions are ancient, and it is possible that it was in the Sayan Mountains that the domestication and herding of reindeer started several thousands years ago. Traditionally, the Mongolian taiga reindeer herders had small herds used for transportation and milk production, and only occasionally they slaughtered reindeer for consumption. Hunting for meat and fur/skin is an important part of the Dukha herders livelihood.

The main challenges of the Mongolian reindeer herders are related to the market economy and the competition for the land. Government subsidies for salaries and other services have disappeared after the fall of the communist regime, affecting the income of the herders. The lost of pastureland is strongly connected to the establishment of national parks, in which herders are not aloud to herd their reindeer. Though the Dukha people have no formal ownership or possession of the taiga. This makes the Mongolian reindeer herders vulnerable to the increasing tourism and mining. Further Dukha people have no community members in elected positions at any level of government, they have limited access to legal council and information about civil and human rights, and their language (*Mongolian Reindeer Tuvan*) as seriously threatened.



*EALLIN Jokkmokk. Pic: ICR*