

WP 9 Adapting to environmental change

INTER ↔ ACT





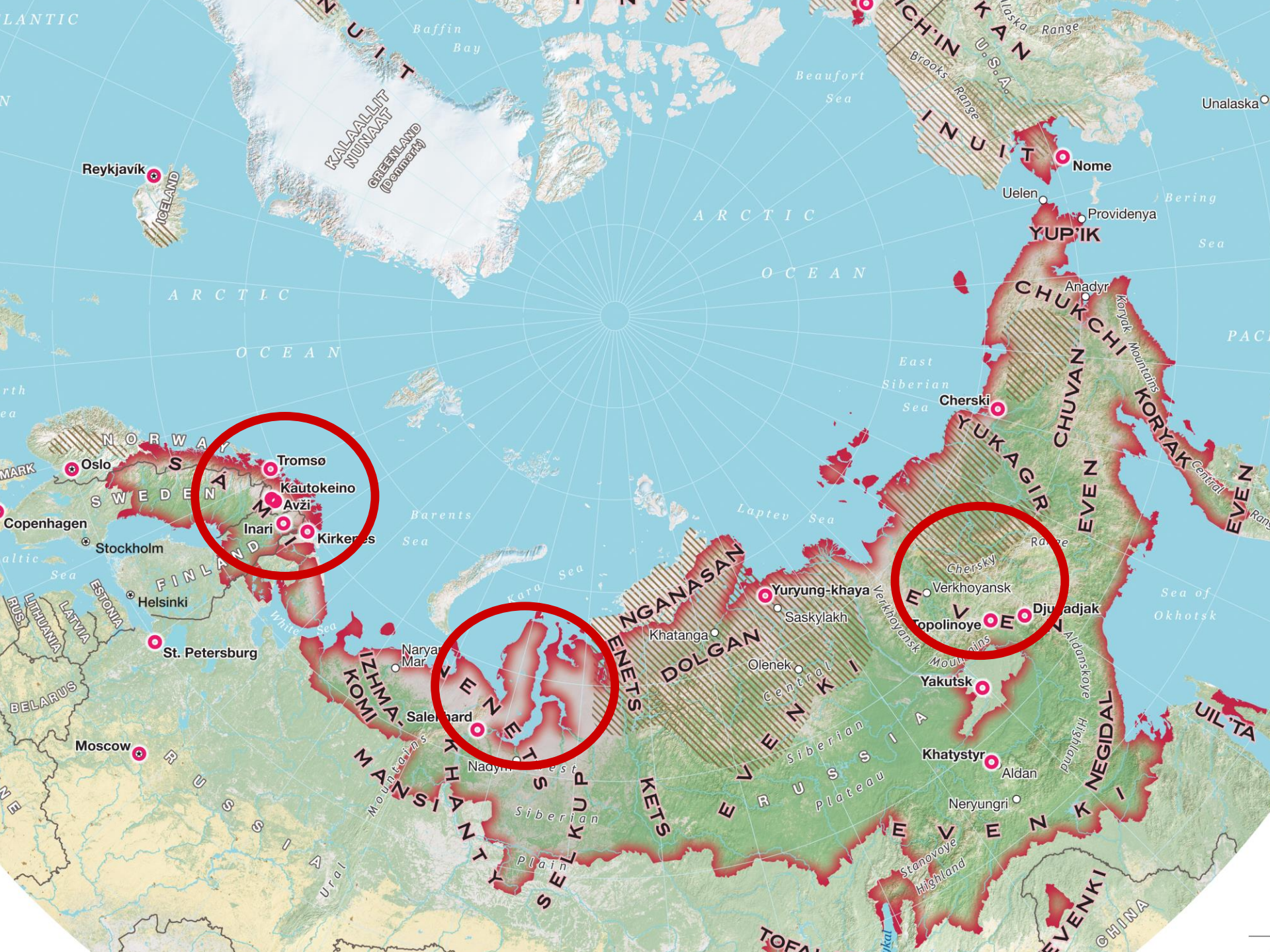
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International Centre for Reindeer Husbandry
Saami University of Applied Science
UIT Arctic University of Norway
NEFU North Eastern Fedral University Yakutsk Rus



International Centre for Reindeer Husbandry
Международный Центр Оленеводства
Riikkaidgaskasaš Boazodoalloguovddáš







How stations are going to work with indigenous peoples communities??



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WP 9: We aims to identify best practices for local communities, station managers and researchers to work together to identify drivers of environmental/ecosystem change that require adaptation and to develop a standardised process based on contrasting case studies that can be generally applied to local communities in the vicinity of research stations.



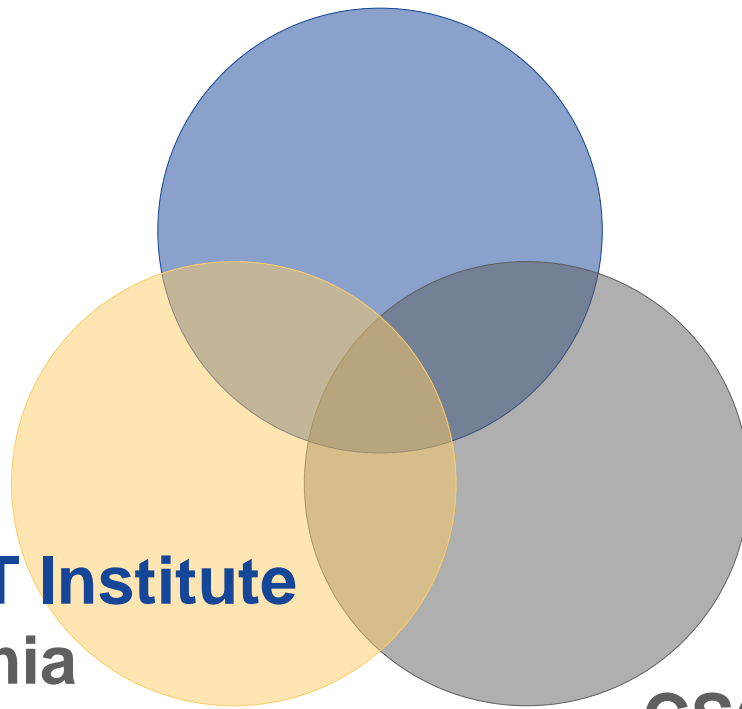


International Centre for Reindeer Husbandry





International Centre for Reindeer Husbandry



UArctic EALÁT Institute
Academia



WRH

CSO/ IPO/ NGO



UEI Partners



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University of the Arctic Institute for Circumpolar Reindeer Husbandry



**FONDATION
PRINCE ALBERT II
DE MONACO**



Inuvik

Ammarnäs
Mittådalen

Kautokeino
Inari

Anadyr
Kanchala

Naryan-Mar
Khorey-Ver

Khralovo
Yar-Sale
Nadym

Uryung-Khaya
Saskylah

Olenek Topolinoe

Khatystyr (*3)
Iengra

Implemented Workshops

Sat. imagery
by NASA





YOUTH THE FUTURE OF REINDEER HERDING PEOPLE



Degteva and Nellemann *Pastoralism: Research, Policy and Practice* 2013, 3:15
http://www.pastoralismjournal.com/content/3/1/15

Pastoralism
A SpringerOpen Journal

RESEARCH

Open Access

Neenets migration in the landscape: impacts of industrial development in Yamal peninsula, Russia

Anna Degteva^{1,2,3} and Christian Nellemann^{4*}

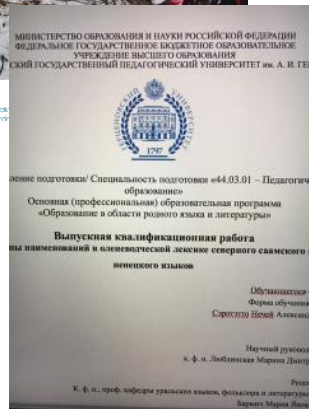
Abstract

Worldwide, traditional pastoralists are facing challenges of industrial development and competitive land use interfering with their nomadic lives. The Yamal peninsula in western Siberia, a homeland of nomadic Nenets herders, has been subjected to the boreal forest gas field industrial development since the 1980s. We quantitatively assess how industrial development impacts Nenets migration routes and camp sites and discusses implications for their quality of life. In cooperation with herders, we mapped 21 migration routes and followed two Nenets herder brigades for 15 weeks in July 2008 to August 2009 providing insight into both the social and physical challenges facing Nenets herders. Terrain ruggedness, willow cover, migration routes and camp (chumi) sites were recorded on 2 x 2 km grid cells on topographic maps. Rugged terrain with willows (51% of the study area), which is land particularly suitable and valuable for reindeer husbandry, contained nearly 61% of all migration routes. All clusters (>8 km²) of rugged terrain were used for grazing, migration and camp sites, reflecting few Nenets migration in the Yamal landscape. These bottlenecks, used by three to six different reindeer brigades, are crucial for the herders, while competition for land with industrial developers within these areas is particularly high. The development of gas fields in the Yamal peninsula is small, but for the three herding units migrating through these



State Steering and Traditional Ecological Knowledge in Reindeer-Herding Governance Cases from western Finnmark, Norway and Yamal, Russia

Ellen Inga Turi



Using Traditional Knowledge in Unpredictable Critical Events in Reindeer Husbandry

– The case of Sámi reindeer husbandry in Western Finnmark, Norway and Nenets reindeer husbandry on Yamal Peninsula, Yamal Nenets AO, Russia

Rávdná Biret Márvá Eira
Thesis submitted for the degree:
Master of Philosophy in Indigenous Studies
Faculty of Humanities, Social Sciences and Education,



REINDEER HERDING, TRADITIONAL KNOWLEDGE AND ADAPTATION TO CLIMATE CHANGE AND LOSS OF GRAZING LAND



CHAPTER 4

What factors build or erode resilience in the Arctic?

LEAD AUTHORS: Miriam Hulrich, Garry Peterson and Juan Carlos Rocha

CONTRIBUTING AUTHORS: Marcus Carson, Douglas Clark, Bruce Forbes, Grete K. Hovelsrud, Svein D. Mathiesen, Ashley Perl, Allyson Quinlan

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Key messages

HUSBANDRY TRENDS 2030 PETROLEUM DEVELOPMENT DRY IN THE BARENTS REGION

THE INTERNATIONAL CENTRE FOR REINDEER HUSBANDRY



EALÁT REINDEER HERDERS' VOICE

Reindeer herding, traditional knowledge and adaptation to climate change and loss of grazing land



EALLIN – Training of Future Arctic Leaders 2012-2015:

In all, over 160 reindeer herding youth from Norway, Sweden, Finland, Nenets, Yamal, Sakha, Mongolia, China etc. has participated.

ЕАЛЛИН 2012-2015:

В проекте приняло участие более 160 представителей оленеводческой молодежи из Норвегии, Швеции, Финляндии, Ненецкого автономного округа., Ямало-Ненецкого автономного округа, Монголии и т.д.



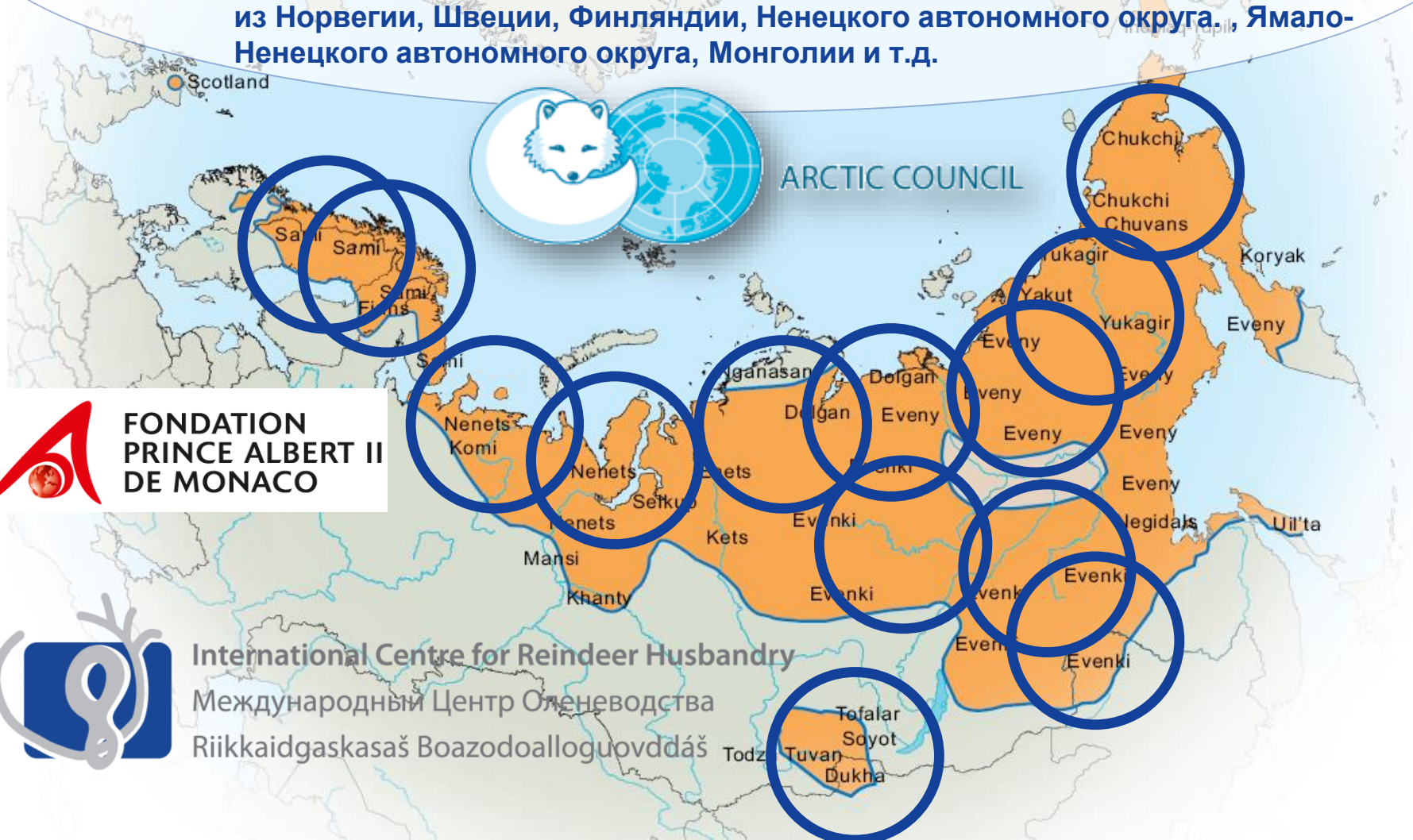
ARCTIC COUNCIL



International Centre for Reindeer Husbandry

Международный Центр Оленеводства

Riikkaidgaskasaš Boazodoalloguovddáš



SDWG EALLU Next Steps 2016-



E A L Á T
P R O J E C T

REINDEER HERDING, TRADITIONAL KNOWLEDGE AND ADAPTATION TO CLIMATE CHANGE AND LOSS OF GRAZING LAND



Ассоциация «Оленеводы Мира»
Association of World Reindeer Herders



A PART OF THE IPY EALAT CONSORTIUM. THE EALAT PROJECT (IPY # 399), «REINDEER HERDERS VULNERABILITY NETWORK STUDY: REINDEER PASTORALISM IN A CHANGING CLIMATE. AN ARCTIC COUNCIL SUSTAINABLE DEVELOPMENT WORKING GROUP PROJECT LED BY NORWAY AND ASSOCIATION OF WORLD REINDEER HERDERS (WRH).





ARCTIC COUNCIL



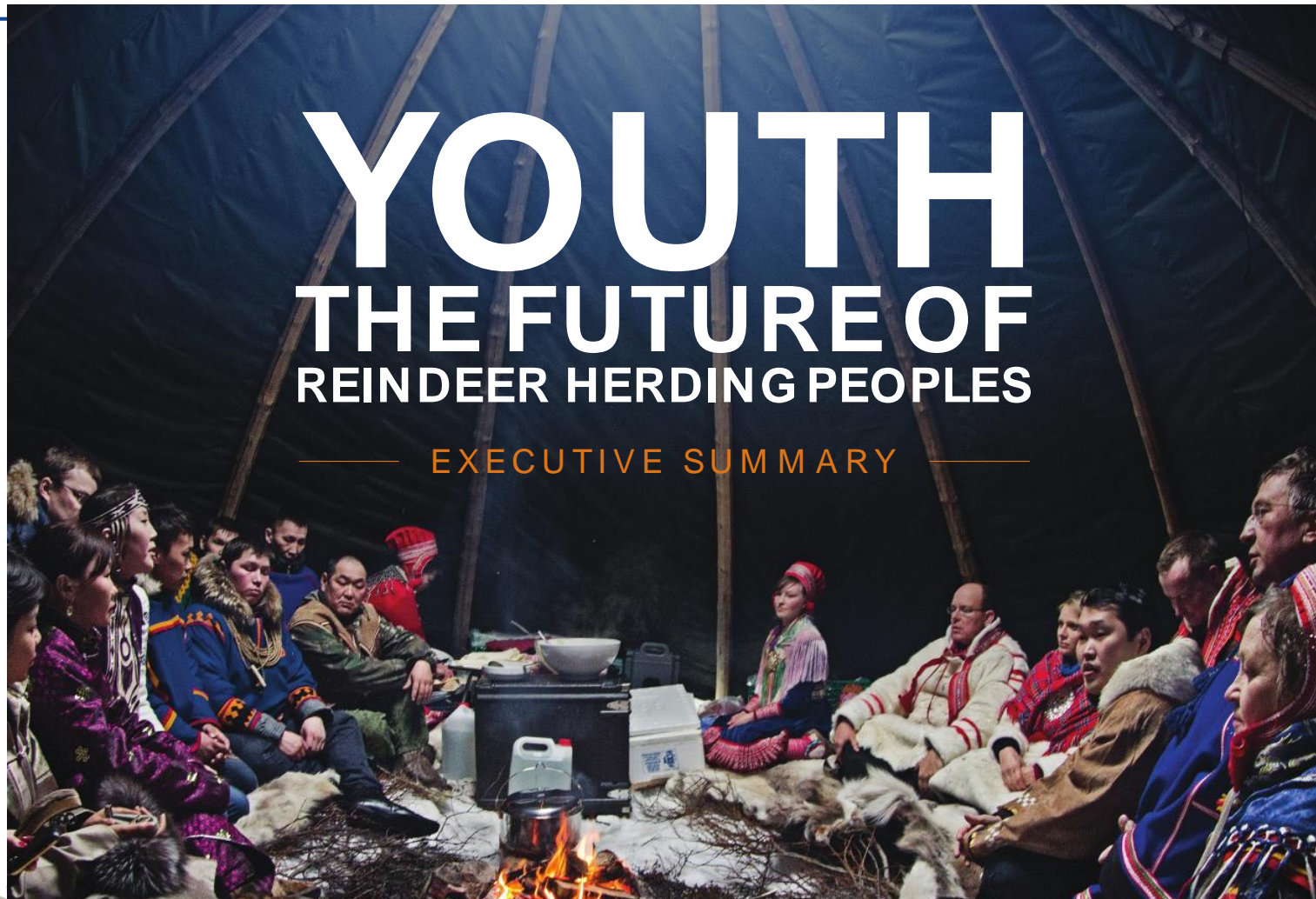
Ассоциация «Оленеводы Мира»
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International Centre for Reindeer Husbandry
Международный Центр Оленеводства
Riikkaidgaskasaš Boazodoalloguovddáš

YOUTH THE FUTURE OF REINDEER HERDING PEOPLES

EXECUTIVE SUMMARY



International Centre for Reindeer Husbandry
Международный Центр Оленеводства
Riikkaidgaskasaš Boazodoalloguovddáš

Nordic Council of Ministers

Arctic Council

ЕАЛН Reindeer Herding Youth Project 2012-2015



PRINCE ALBERT II
OF MONACO
FOUNDATION



INDIGENOUS YOUTH, ARCTIC CHANGE & FOOD CULTURE
FOOD, KNOWLEDGE AND HOW WE HAVE
THRIVED ON THE MARGINS

EALLU



ARCTIC COUNCIL



Ассоциация «Оленеводы Мира»
Association of World Reindeer Herders



International Centre for Reindeer Husbandry
Международный Центр Оленеводства
Riikikaidgaskasat Boazodoallgoovoddis

AN ARCTIC COUNCIL SUSTAINABLE DEVELOPMENT WORKING GROUP
REPORT FROM THE EALLU PROJECT



Nomadic Herders:

Enhancing the Resilience of Reindeer Herders' ecosystems and livelihoods



Svein D. Mathiesen, professor, phd



Ассоциация «Оленеводы Мира»
Association of World Reindeer Herders



International Centre for Reindeer Husbandry
Международный Центр Оленеводства
Riikkaidgaskasaš Boazodoalloguovddáš





Arctic Station, West Greenland.

Kevo Station

Kaibosovo Station, Siberia. (Leading partner: TSU)



The main aims of the workshop are:

1. To bring researchers, local administrators and local peoples together to exchange information on extreme weather events, general climate change and their impacts.
2. To learn from the dialogue a) best practices of working across sectors b) how to respond to local concerns through appropriate adaptation strategies and c) how such actions can enrich the knowledge of local people in areas outside northern Siberia d) how the knowledge of northern local people outside Siberia represented through INTERACT can enrich the knowledge base in Siberia.



Objectives

- The overall aim of this WP is to produce an inspirational guide book for research station managers and local communities to develop a deeper mutual understanding of how to work together to build integrated local observation systems enabling local communities to respond to the challenges of present and predicted environmental change. The guide book will include a general section on key steps in the process for developing a dialogue between local communities, researchers and station managers, identifying perceptions of what is driving the need for adaptation, what information is needed to adapt, and how to develop an integrated local monitoring strategy. This general section will be followed by thematic case studies from contrasting communities presented in a standardized format.



Arctic Lavvu Dialogue

A IPY Legacy



UArctic
Institutes



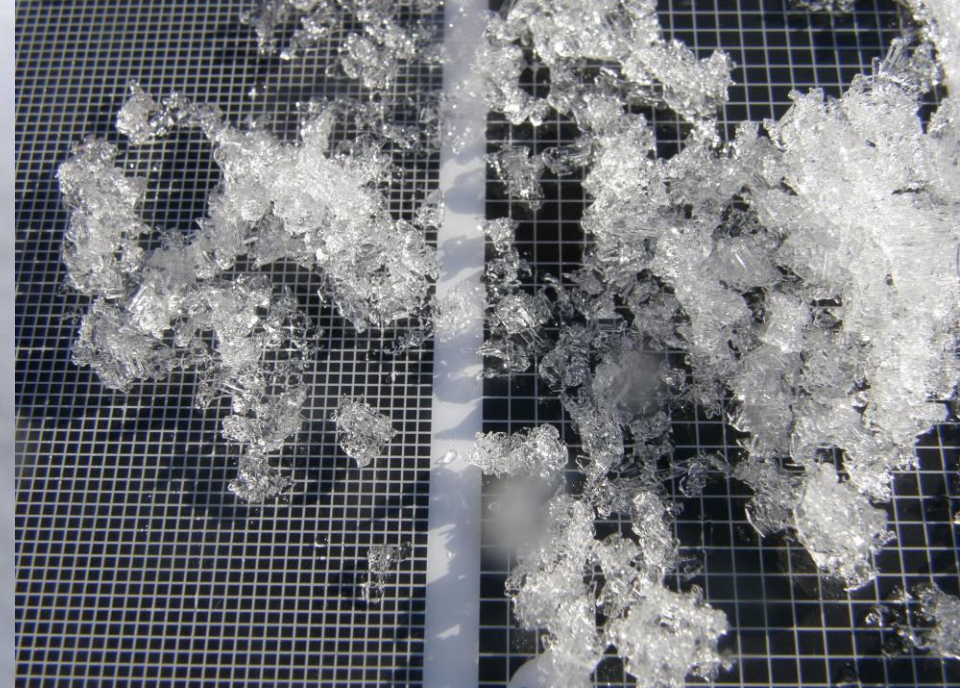


UNIVERSITY
OF THE ARCTIC



Training of future Arctic indigenous leaders





seanáš “granular snø på bunnen av snøpakken.



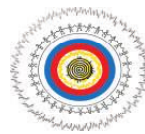




Tasks

- ❑ Task 9.1 Leading the design of standardized procedures to guide the case studies, to supervise the consultations and to compile the case studies into the guide book. (Leading partner: ICR)
- ❑ Task 9.2 Adapting to climate change and ensuring sustainable use of living resources. Location, Arctic Station, West Greenland. This case study would focus on marine and terrestrial resources. (Leading Partner: AU)
- ❑ Task 9.3 Adapting reindeer husbandry to vegetation change and snow cover changes. Location, Kevo Station. (Leading partner: ICR).
- ❑ Task 9.4 Forestry, hunting and fishing tourism, agriculture and potential new land uses in a warmer climate. Kaibosovo Station, Siberia. (Leading partner: TSU)





OTTAWA TRADITIONAL KNOWLEDGE PRINCIPLES

WORKING DEFINITION – TRADITIONAL KNOWLEDGE: ¹

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.

PREAMBLE

These fundamental principles on Traditional Knowledge will strengthen the Arctic Council and advance its objectives by supporting the active participation of Permanent Participants. Traditional Knowledge has been formally recognized by the Arctic Council as important to understanding the Arctic in numerous Ministerial Declarations, including the 1996 Ottawa Declaration on the establishment of the Arctic Council. The “...role of Arctic indigenous peoples and their Traditional Knowledge in the conservation and sustainable use of Arctic biological resources” was also emphasized in the Tromsø Declaration (2009). Furthermore, in 2013 the Kiruna Declaration 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.” Permanent Participants represent Traditional Knowledge holders and are integral to the inclusion and use of Traditional Knowledge in the work of the Arctic Council. These fundamental principles represent the foundation for the long term vision and framework for incorporating Traditional Knowledge in Arctic Council activities.

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.



International Centre for Reindeer Husbandry

Международный Центр Оленеводства

Riikkaidgaskasaš Boazorpolitiikkavuođđas

The following working definition has been adapted from the ICC and GCI TK definitions and forwarded for use by the Arctic Council. This definition is not intended to replace other definitions endorsed and used by individual indigenous





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Ethical guidelines for handling traditional knowledge at the International Centre for Reindeer Husbandry

The International Centre for Reindeer Husbandry (ICR) has a special responsibility looking after the traditional knowledge (TK) of reindeer husbandry, and shall collect, analyse, store and share information of relevance to reindeer husbandry including both TK and scientific knowledge (SK)¹.

All researchers working in the North have an ethical responsibility toward the people of the North, their cultures, and the environment².

TK in this context is defined as *"knowledge and practices acquired and rooted in the traditional way of living in the reindeer husbandry, accumulated and preserved through generations, in an always changing life environment"*. TK is multifaceted, and skills derived from thousands of years of careful observations, scrutiny and survival in a complex ecosystem readily lends itself to the in-depth studies of basic principles of both natural³ and social sciences.

Knowledge is considered "traditional" because of the way it is gained, within traditional cultures. It does not necessarily have to be old, but can arise and be continually updated and revised even today as a result of cultural or environmental changes⁴.

TK belongs to the people and the societies where it was created and is protected according to custom and international law. The TK of reindeer husbandry should consequently be managed according to the practice of the respective cultures.

The following represents ICR's own ethical standard for handling TK and the knowledge carriers of TK (indigenous peoples), and for how TK and SK should be integrated. These rules apply to all projects where new knowledge is to be produced and/ or compared, and where results are to be published in any form. This includes research projects and projects related to documentation of TK.

1. The value of TK:

- 1.1. TK is of equal value as SK. The same applies for the different systems of producing, organising and transmitting knowledge in indigenous and scientific communities. TK is more than simply a source of empiry for researchers.
- 1.2. In addition to the cultural value of TK, it also includes an instrumental value. That is to say that TK has essential practical value for the carriers of such knowledge in their day-to-day activities and subsistence, and shall be respected as such.
- 1.3. TK has the same value as other professional knowledge, and qualified reindeer herders shall receive the same compensation for their efforts in projects etc. as senior scientific workers do. They represent the state-of-the-art knowledge in their field, and shall be respected as such.

2. Ownership of TK:

- 2.1. We realize the explicit right of reindeer herders to both preserve their TK and determine how it should be used. TK carriers shall play a central part in shaping projects and shall be involved



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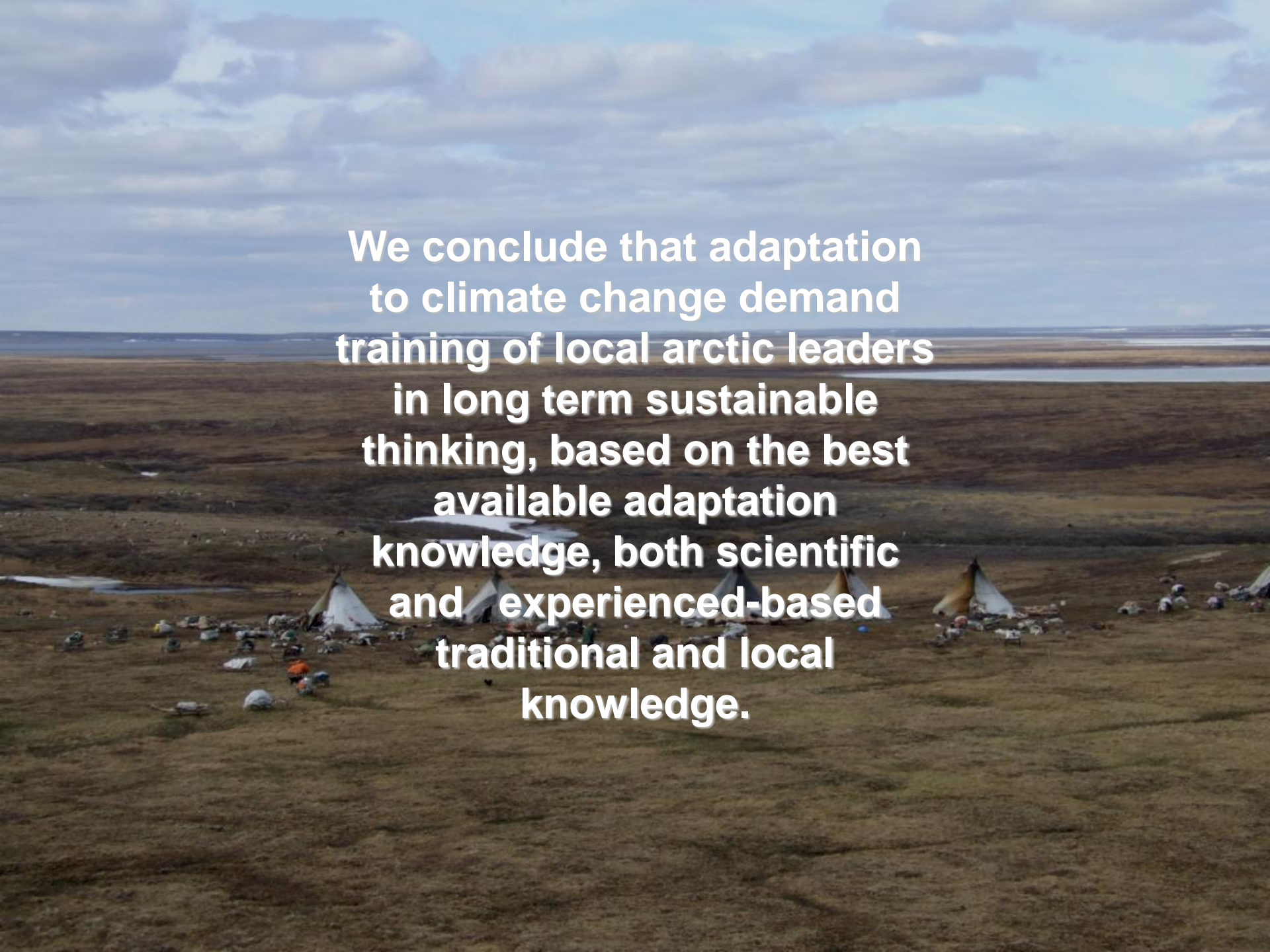
AGREEMENT ON ENHANCING INTERNATIONAL ARCTIC SCIENTIFIC COOPERATION



□ Article 9 *Traditional and local knowledge*

- 1. The Parties shall encourage Participants to utilize, as appropriate, traditional and local knowledge in the planning and conduct of Scientific Activities under this Agreement.
- 2. The Parties shall encourage communication, as appropriate, between holders of traditional and local knowledge and Participants conducting Scientific Activities under this Agreement.
- 3. The Parties shall encourage holders of traditional and local knowledge, as appropriate, to participate in Scientific Activities under this Agreement.





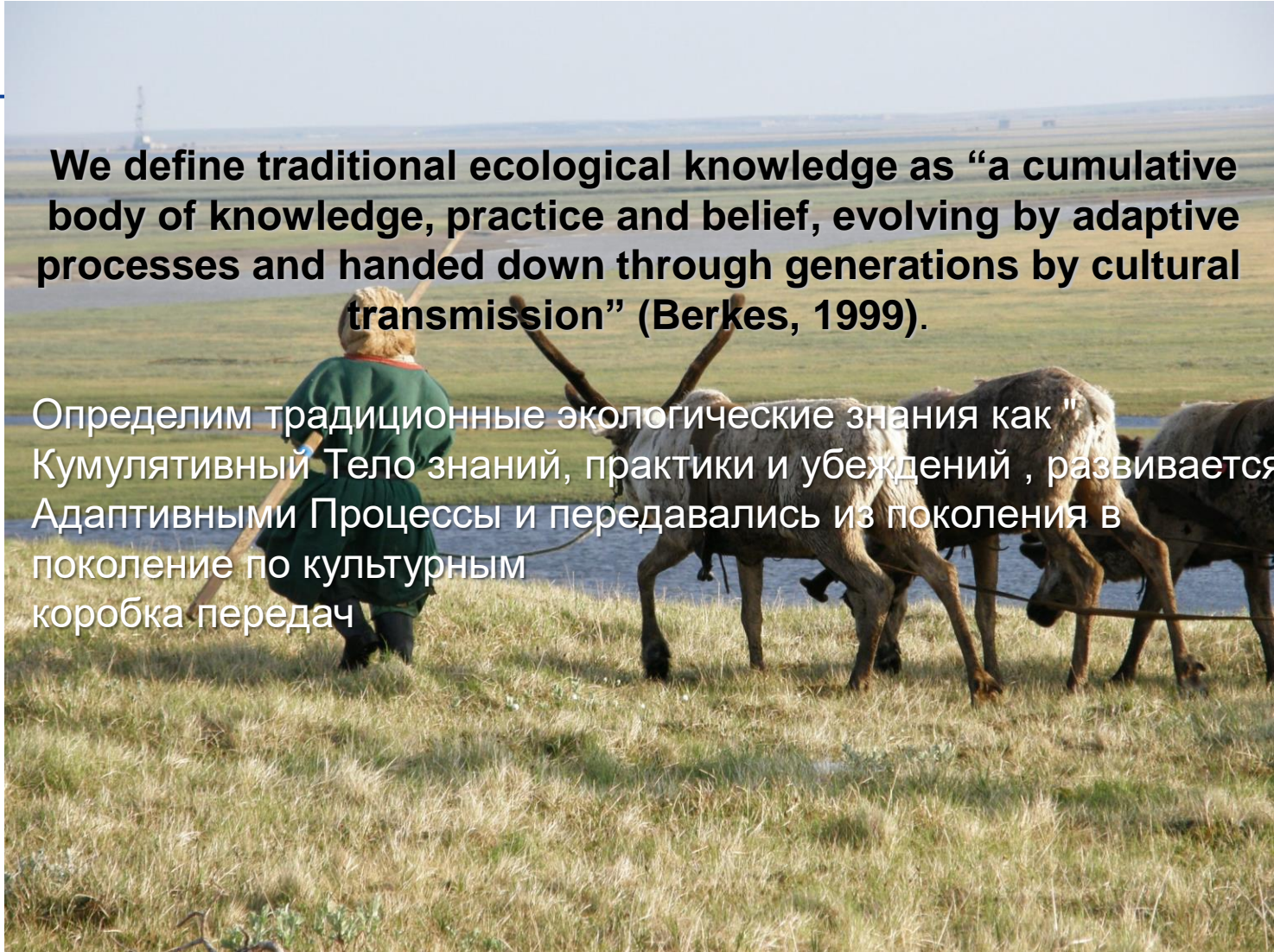
**We conclude that adaptation
to climate change demand
training of local arctic leaders
in long term sustainable
thinking, based on the best
available adaptation
knowledge, both scientific
and experienced-based
traditional and local
knowledge.**

”

**InterAct guide to
increased cooperation between
researchers and communities in
the Arctic**





A photograph of a person wearing a green parka and a fur hat, seen from behind, herding a group of reindeer across a vast, open, grassy landscape. The reindeer are dark-colored with large antlers. In the background, there is a body of water and a distant industrial structure, possibly an oil rig, under a clear sky.

We define traditional ecological knowledge as “a cumulative body of knowledge, practice and belief, evolving by adaptive processes and handed down through generations by cultural transmission” (Berkes, 1999).

Определим традиционные экологические знания как "
Кумулятивный Тело знаний, практики и убеждений , развивается
Адаптивными Процессы и передавались из поколения в
поколение по культурным
коробка передач

