

### 1. Projekttitlet m.v.

Projekttitlet:	Nordisk Ressourceforvaltning	
Projektnummer:	NA -	Journalnummer i NMR: (124)-2014-Nordisk ressourceforvaltning
Projektets afslutnings- dato iflg. kontrakt:	31/12 2017	Evt. ny aftalt afslutningsdato:
Projektkoordinatør i NMR:	Helge Paulsen	

### 2. Forvaltningsorgan

Forvaltningsorgan:	Departementet for Fiskeri og Fangst
Ansvarsperson:	Postboks 269
Adresse:	3900 Nuuk, GRL
Tlf./e-mail:	+299 34 53 44 apn@nanoq.gl
Projektleder:	Finn Danielsen
Tlf.: (direkte)	+45 27 11 64 75
E-mail:	fd@nordeco.dk

### 3. Projektets resultater

Har projektet nået målet, som er fastlagt i projektmandatet/projektplanen (sæt ét kryds):	ja <input checked="" type="checkbox"/>	nej <input type="checkbox"/>
<p>This was a three-year project. The objective was to improve the use of indigenous and local knowledge (ILK) to inform democratic decision-making on the management of natural resources in the Arctic.</p> <p>Project responsibility lay with the Greenland Department of Fisheries and Hunting (APN). The project facilitator was NORDECO. There were 20 project partners from eight countries, see the project's website <a href="http://www.nordres.org">www.nordres.org</a>. The Steering Committee comprised representatives of APN, Swedish Environmental Protection Agency, County Governor of Troms, Finnish-Swedish Transboundary River Commission, The Environment Agency of the Faroe Islands, Danish Ministry of Environment, Inuit Circumpolar Council Greenland, and Yukon River Inter-Tribal Watershed Council.</p> <p>As originally conceived, this project applied for a larger budget than was obtained. Regardless the subsequent reduced financing; the project achieved all its three objectives. Below is a brief assessment.</p> <p><b>Objective 1:</b> "Further development and testing of standard templates to incorporate ILK into decision-making on the use of resources".</p> <p>Led by local project partners, the project has tested and developed standard templates to incorporate ILK into decision-making on the use of resources in Greenland, Finland and Norway. In addition, the project has assisted the University of Faroe Islands with related efforts in the Faroe Islands on a no-cost basis.</p>		

In **GREENLAND**, tool development was led by the Department of Fisheries and Hunting in cooperation with the Greenland Institute of Natural Resources, Greenland Fishermen and Hunters Association, and NORDECO. The focus was on wild populations of reindeer and muskoxen. These are valuable resources that could potentially be managed at the local level within the existing legal framework. If reindeer and muskoxen can be managed effectively by community members, this would likely facilitate the development of local management regimes for other resources. Four standard templates were developed and tested in South Greenland (Arsuk, Nanortalik, Isortoq, Tugtutoq): (1) minimum counts for community assessment of populations of reindeer and muskoxen; (2) harvest calculator (software and guidelines) enabling local stakeholders and managers at any level to determine 'what-if' scenarios regarding future harvest regimes for reindeer and muskoxen herds; (3) Natural Resource Councils (format and guidelines) for community members to report the status of resources and proposed management actions to local government authorities; and (4) management plans for agreements between local stakeholders and the government on local management of the natural resources of an area.

In **FINLAND**, the project's tool development was led by the Snowchange Cooperative in cooperation with Skolt Sámi and Finnish-Karelian peoples. The project undertook a reconnaissance of existing tools for ILK that communicate and inform decision-making in Finland. The project then tested the Piniakkanik Sumiiffinni Nalunaarsuineq (PISUNA) template for the river fishery. It aimed at facilitating river restoration and other landscape management actions that addressed site-specific situations. The testing was undertaken in Näätämo Basin (North Finland) and Jukajoki Basin (East Finland). In both areas, the fishermen found the templates useful to document and communicate observations of fish resources, harvest, uses of the drainage basin, weather changes, and limnological water quality. Nevertheless, the fishermen stressed that the use of workshops, interviews and mapping were also important to convey their deeper relationships and interaction with the river. The results were presented for the project partners at the International Project Workshop in Greenland. As a follow-up, with funding from other sources, six Finnish fishermen will visit Disko Bay in Dec. 2017.

In **NORWAY**, the project tested the use of ILK for improving indigenous Saami food systems. The International Centre for Reindeer Husbandry had already begun working to improve the sustainable economy of small rural communities through increased use of ILK. Their perspective was the development of ILK standards for improved production and processing of reindeer-based food. The project documented reindeer herders' indigenous knowledge standards on Saami (1) slaughtering processes and (2) meat-smoking practices. These ILK standards contribute to strengthening the Saami's indigenous food systems.

In the **FAROE ISLANDS**, hare hunting in the outfield landscapes is of significant cultural value. Although the sustainability has been questioned, there have been no population assessments. With funding from other sources, the University of the Faroe Islands has established a web-based database and a Facebook group. Here, hunters report their catch and discuss their experiences. The project has documented that the tools capture vital information, and promote local participation in the stewardship of the outfield landscapes.

**Objective 2:** "Improved capacity to use ILK".

The project has developed and undertaken a range of formal and informal training exercises, lectures, webinars, exchange visits and other capacity-development activities in the use of the new tools for incorporating ILK into decision-making. These activities have involved staff from government agencies as well as research institutes, civil society organisations and community members from all the eight participating countries.

In 2016, a two-week training course, "Convention on Biological Diversity Article 8j", was undertaken in Kautokeino with lectures, literature reading, practical exercises, oral presentations, field work and a 'lavvu dialogue'. The course was established by the International Centre for Reindeer Husbandry and followed by homework by the participants in their local communities. A total of 27 persons successfully passed the examinations.

**Objective 3 & 4:** “Communication of the experience” and “Learning from practice”.

The project has led to, or contributed to, ILK about natural resources being increasingly incorporated into decision-making procedures in a number of contexts. In Greenland, the quotas on muskoxen in the Ivittuut area, allocated by the Government are based on community members’ annual minimum counts of the muskoxen population (2015, 2016, 2017). The community members’ count information was subsequently used by the authorities to decide the harvest quotas. In Finland, ILK about river resources has guided management actions on river restoration in Kissapuro Basin. In Norway, increased attention to the ILK that informs Sami food systems has contributed to increases in the sustainable economy of indigenous livelihoods. We expect greater use of the standardized ILK reporting templates over time owing to initiatives that arose from this project. For example, the International Workshop in Nuuk resulted in the development of many new activities, as did other national and international networking. All served to disseminate the project materials to a wider audience of users.

Project outreach included presentations and contributions to discussions at: Arctic Frontiers Conf. Tromsø; Nordic Seminar Nuuk; Nordic Workshop at the Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES) Uppsala; The Nordic Food Festival ; British Council’s side-event at Arctic Circle Conf. , all in 2015; Government of Quebec’s side-event at the Arctic Circle Conf. ; Nordic Seminar Nuuk; British Counsel’s Workshop Denmark; Community meetings in Kola and Khomi, Russia; and multiple events of the International Centre for Reindeer Husbandry, all in 2016; International Arctic Assembly Panel Fairbanks; Seminar on traditional knowledge for Arctic food systems Fairbanks; Seminar on indigenous cultural ‘revitalization’ in Umeå, Sweden; Seminar in Jokkmokk, Sweden; Community workshops in Khomi and Yakutia, Russia; Aborigin Forum Summit for indigenous peoples leaders ; EU Workshop in Brussels, all in 2017, and at multiple other meetings of practitioners and scientists. Noteworthy are also two workshops with 10 students from the Reindeer Herders School in Kautokeino on the use of traditional knowledge in resource management. Some of the project’s presentations led to discussions among parliamentarians in the EU and the UK on having ILK ‘heard’ in discussions about management decisions.

Key written outputs of the project included one book chapter on engaging stakeholders for landscape stewardship published by Cambridge University Press; one book on how traditional knowledge improves Saami food systems published by the Sustainable Development Working Group of the Arctic Council (<https://oaarchive.arctic-council.org/handle/11374/1926>); a policy brief on the use of community knowledge and observations for decision-making developed in consultation with the Secretariat of the Nordic Council of Ministers; minutes from the International Workshop in Nuuk in Dec. 2016; printing and distribution of one Tema-Nord report (<http://norden.diva-portal.org/smash/record.jsf?pid=diva2%3A791816&dswid=7377>); recommendations for the Convention on Biological Diversity ([http://media.wix.com/uqd/8d7574\\_869904b775da441896aa91d49d28daad.pdf](http://media.wix.com/uqd/8d7574_869904b775da441896aa91d49d28daad.pdf).); and one Wikipedia article ([https://en.wikipedia.org/wiki/Participatory\\_monitoring](https://en.wikipedia.org/wiki/Participatory_monitoring)).

The project led to media stories, press releases; radio interviews, and many newspaper stories. The project provided substantial inputs to the Greenland Government’s contribution to the Indigenous People and Local Communities Work Programme of the CBD, the Greenland Government’s presentation at the UN Council’s headquarters on the occasion of the 10<sup>th</sup> anniversary of the indigenous peoples’ agreements; and the Scoping Study for the Nordic IPBES assessment.

#### **4. Nordisk Nytte**

The project's common Nordic activities have been undertaken under the auspices of Nordic Council of Ministers' funding. The project has contributed to strengthening Nordic cooperation and enhancing Nordic influence internationally, and the project activities have been more cost-effective than if the same activities had been undertaken at a national level:

##### **THE PROJECT'S CONTRIBUTION TO STRENGTHENING NORDIC COOPERATION**

The project has initiated new Nordic cooperation on formats and approaches for ILK informing natural resource governance. As a result of the project, civil society organisations, government agencies, scientists and the private sector in the Nordic countries are increasingly working together on improving the use of ILK to inform governance of resources. Through workshops, exchange visits, joint paper-writing, webinars and e-meetings, the Nordic partners have begun to work together and exchange their experiences and learn from each other. Moreover, the project partners have become able to use their limited financial and professional human resources more effectively, avoiding duplication of efforts and wasted resources.

For instance, within the key primary sectors of fisheries, hunting and reindeer herding, the project has initiated new cooperation on the use of ILK to inform democratic resource management decisions between representatives of the private sector, community members, government agencies, and scientists in North Scandinavia (Norway, Sweden, Finland) and Greenland (and, to some extent, also with partners among indigenous and other civil society organisations in Arctic Russia, Canada and Alaska). This new Nordic network and cooperation will continue beyond the lifetime of the project.

##### **THE PROJECT'S CONTRIBUTION TO ENHANCING NORDIC INFLUENCE INTERNATIONALLY**

The project has used specific Nordic competence, at the forefront of its field. The project partners have internationally spearheaded the development of reporting templates and standards for the use of ILK to inform decision-making on natural resource management. These new tools are interdisciplinary: (1) they are based on methods from the "interface" between natural and social sciences; (2) they seek to bridge the gap between ILK and management by promoting evidence-based resource management; (3) finally, they strengthen the link between local resource management and the work of the national authorities. The project has helped consolidate this leading position and encouraged the transfer and practical application of ILK across the Nordic countries and the Arctic. The new tools will be valuable for anyone working to encourage participatory Arctic resource management.

The project has contributed to increasing Nordic influence internationally: (1) it has helped to increase the Nordic influence in the Arctic in the key primary livelihood sectors of fishing, hunting and reindeer husbandry. Tools for using ILK to inform decision-making have long been a priority for the Arctic Council but progress has been minimal. This has changed. The project is successful and is leading to several new initiatives across the Arctic; (2) the project is contributing important case studies on how, in practice, ILK can inform government decision-making, thereby adapting livelihoods to the effects of climate change through enhanced "adaptive" natural resource management. The project has thus also helped to enhance the competitive power of Nordic "know-how" on climate and the environment; (3) the project has also, through its documented case studies and its communication activities, contributed Nordic "fingerprints" to the implementation of several key international forums. These include the UN conventions on indigenous people, the Arctic Council's Sustainable Development Working Group, the Convention on Biological Diversity (CBD), and the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES). One of the functions of the IPBES is to bring the different knowledge systems, including ILK, into the science-policy interface. Likewise, Aichi Target 18 of the CBD states that, by 2020, traditional knowledge should be integrated in the implementation of the Convention.

##### **THE PROJECT'S COST-EFFECTIVENESS**

The project activities have been more cost-effective than if the same activities had been undertaken at a national level. Specifically, the project activities would have been impossible, or extremely difficult, to carry out at the national level. This project was undertaken by equal-level partners under the auspices of the Nordic Council of Ministers. Thus, it was able to test the standard formats for reporting ILK to inform decision-making across a range of socio-cultural contexts simultaneously in several countries. The project was therefore able to cost-effectively generate results and lessons with broad international inference. The project led to several international publications, including a chapter describing and comparing the experiences from Greenland, Finland and the Faroe Islands in a high-profile book published by Cambridge University Press.

## 5. Ligestilling

The project did not have any specific gender equality perspective integrated within its project components. However, the project contributed to promoting women's representation, access to resources, and rights in relation to the use of ILK to inform natural resource management in the Arctic. Regardless, the fishing, hunting and herding rural settlements in the Arctic are often dominated by men. To encourage a more balanced representation in project implementation, women were actively encouraged to participate. In several instances where the project has tested ILK reporting formats, both men and women were actively involved in discussions and analyses of findings, and in the important closely-related decision-making processes. The project's one-week course "Convention on Biological Diversity Article 8j" in Kautokeino, Norway, was attended by 15 women and 12 men.

## 6. Informationsformidling

Hvilken formidlingsform er anvendt i forbindelse med projektet (sæt kryds – gerne flere)	Trykt <input checked="" type="checkbox"/>	WEB <input checked="" type="checkbox"/>	Arrangement <input checked="" type="checkbox"/>
	Kontakt til pressen <input checked="" type="checkbox"/>	Markedsføring <input type="checkbox"/>	Andet: See pg. 3.

The project has condensed the project's standards for the use of ILK to inform democratic decision-making on natural resource management into a policy brief. We have inserted the text of the policy brief below. The first key message is: why it is important to use ILK in decision-making processes. The second is: how you can in practice incorporate ILK using relatively simple tools and reporting formats.

The primary target group for the policy brief are the Nordic ministries (Fisheries, Agriculture, Forestry, Environment) and ICES and NAFO, which are the important international fisheries agreements for the Northeast and Northwest Atlantic fisheries. These key institutions make decisions on resource management that directly impact community members' livelihoods on a daily basis in the Arctic portion of the Nordic region. The policy brief can be used to inform Nordic governments' discussions on the Convention on Biological Diversity, Aichi Target 6 on marine resources, the FAO marine forum, the UN Global Ocean Assessment, Blue BioEconomy, Small Island States, Arctic Council, the UN Sustainable Development Goals, and on the follow-up to the Paris climate agreement. The policy brief will be available in English, Scandinavian/Greenlandic and Russian.

Most importantly, this project, with its tools for enabling ILK to inform decision-making on resource management, has received very wide exposure among indigenous peoples' organisations and government agencies concerned with the rights of indigenous peoples worldwide.. On the occasion of the 10-year anniversary of the UN agreements on indigenous peoples' rights, the representative of the Government of Greenland in the UN General Assembly Hall presented Greenland's work in this field as a demonstration of how Greenland is attempting to give indigenous and local community members a 'voice' in decision-making on natural resources of importance to indigenous peoples' livelihoods. UN-link to Greenland's presentation: <https://papersmart.unmeetings.org/media2/14684034/greenland.pdf>.

The tools developed by this project are relevant for dissemination among government agencies involved in natural resource management in all eight Arctic countries, and specifically those agencies involved in the primary livelihood sectors of fishing, hunting and reindeer husbandry.

**POLICY BRIEF.** Below is the draft text of the policy brief on the use of ILK to inform democratic decision-making on natural resource management in the Arctic. The text is under review by the project partners.

Main Text Of The Policy Brief

Title: Good Decisions Dependent On Indigenous And Local Knowledge

#### BACKGROUND

Arctic people observe the environment year round. Their knowledge and understanding are critical for effective management of the renewable natural resources.

From polar explorers coping with extreme conditions by using *Traditional and Local Knowledge* to herders, fishermen and hunters managing their businesses, intimate knowledge of the environment is fundamental to survival for people who depend on natural resources for their livelihood (Figure 1 – Traditional Knowledge Improves Food Systems case).

Across the Arctic today, local people are active in over 150 *Community-Based Observation Programmes* that involve various organisations, including community groups, all levels of government, universities, schools and industry. These diverse programmes all contribute to adaptive resource management in a rapidly changing Arctic.

#### HOW IS INDIGENOUS AND LOCAL KNOWLEDGE USED FOR DECISION-MAKING?

New tools developed in the Nordic countries enable communication of observations and recommendations on natural resources from indigenous and local people to authorities (Figure 2 – Rivers Restored case). In Greenland for example, the *Piniakkanik Sumiiffinni Nalunaarsuineq* (PISUNA) approach involves interested communities in establishing a local *Natural Resource Council* comprised of local hunters and fishermen (Figure 3 – Quicker Decisions case). The council decides which species and resource uses should be observed. During their hunting and fishing activities, the community keep track of their observations of the species and resource use. Every quarter (three months), the local council summarises and analyses these data, and thereafter discusses possible management interventions. Any proposed management interventions and supporting data in the form of perceived trends are forwarded to the local municipality. The hunters and fishermen use matrices that encourage self-interpretation and validation of the observed changes in resources, while simultaneously promoting discussion and consensus on perceived trends and relevant resource management actions.

## ADVANTAGES

In recent years, use of indigenous and local knowledge for decision-making has emerged as a powerful approach that can achieve multiple objectives. Use of indigenous and local knowledge makes government decision-making more responsive to local situations. Faster detection of changes in the environment and faster communication of these changes to local decision-makers can help small communities develop economically and survive within environmentally sustainable limits. Moreover, local people become mobilised to take an active part in the management of 'their' resources. This builds trust between local people and decision makers and facilitates sustainable development.

## HARNESSING THE POWER OF COMMUNITIES

New technologies enable people in remote communities to collect data and communicate their management proposals with more accuracy and precision than ever before (Figure 4 – Digital Solutions case). For example, a harvest calculator equips community members with the capacity to explore 'what-if' scenarios regarding future harvest regimes for local herds of muskox and reindeer (Figure 5 –Harvest Calculator case). Likewise, icon-based searchable databases on the internet enable easy access and use of local knowledge on trends in resources and management proposals, not only by other community members but also by the government decision-makers and international organisations (Figure 3 – Quicker Decisions case).

## OVERCOMING BARRIERS, BUILDING OPPORTUNITIES

One barrier to maximising the potential of indigenous and local knowledge for decision-making has been the perception that information from local people is subjective and anecdotal. Today, a growing body of literature demonstrates that where indigenous and local knowledge was systematically gathered, data collected by community members are comparable to those of professional scientists.

Another barrier is that some government agencies and international organisations are unwilling, or unable, to incorporate local information into their management decisions. Regardless, indigenous and local knowledge can assist government agencies and local authorities adapt decision-making to local realities in a changing Arctic environment.

## CASE EXAMPLES IN THE POLICY BRIEF

(FIG. 1 case)

### TRADITIONAL KNOWLEDGE IMPROVES FOOD SYSTEMS

Over millennia, the Arctic indigenous peoples' food systems have nourished people and enriched communities. The International Centre for Reindeer Husbandry, in cooperation with the Association of World Reindeer Herders, have documented the traditional knowledge and diversity of traditional food systems in reindeer herder communities in the Circumpolar North. The findings have been set out in a book entitled "*EALLU - Food, Knowledge and How We Have Thrived on the Margins*", published by the Arctic Council's Sustainable Development Working Group in 2017.

[www.reindeerherding.org](http://www.reindeerherding.org)

(FIG. 2 case)

### RIVERS RESTORED, FISH RETURNED

In Finland, participatory monitoring among fishermen facilitates river restoration and other landscape management actions that address site specific situations. The monitoring reveals important observations on the salmon fishery, on problems faced when fishing, on the weather and river conditions, on fishing areas, and on fishing methods. Further, the information documents that restoration efforts are successful in Kissapuro Basin and guides management. This work is led by the SnowChange Cooperative in cooperation with Skolt Sámi and Finnish-Karelian peoples.

[www.snowchange.org](http://www.snowchange.org)

(FIG. 3 case)

### QUICKER DECISIONS WITH LOCAL KNOWLEDGE

Greenlandic fishermen and hunters document trends in living resources and propose management decisions. With 2-3 keystrokes, decision-makers can access trend-information and management proposals at PISUNA-net, a searchable web-based database. This programme helps link observed resource use and environmental changes to management action.

[www.pisuna.org](http://www.pisuna.org) and <https://eloka-arctic.org/pisuna-net>.

(FIG. 4 case)

#### DIGITAL SOLUTIONS FOR OUTFIELD MANAGEMENT

Hare hunting in the outlying land of farms is of significant cultural value for people of the Faroe Islands. The sustainability has been questioned, yet no population assessments exist. The University of the Faroe Islands has established a web-based database and a Facebook group. Here, hunters report their catch and discuss their experiences. Every year, 4,000-9,000 hares are reported shot. The technology captures vital information and, at the same time, promotes local participation in the stewardship of the outfield landscapes.

[www.haran.fo](http://www.haran.fo)

(FIG. 5 case)

#### HARVEST CALCULATOR

A new calculator, available in Greenlandic, Danish and English, enables local stakeholders and managers at any level to examine 'what-if' scenarios regarding future harvest regimes for reindeer and muskoxen populations. The calculator models future population levels of each herd, including uncertainty, based on abundance data and assumptions regarding future harvest levels and demographic rates.

## 7. Projektregnskab

Angiv regnskabsperiode for hele projektregnskabet Startdato: 1/1-15 Slutopgørelsesdato: 31/12-17		Valuta: DKK	
		Budget	Regnskab
Indtægter	Midler fra Nordisk Ministerråd	499.998	333.332
	Andre indtægter	0	0
	<i>Indtægter i alt (A)</i>	499.998	333.332
Udgifter	Løn, sociale afgifter m.m.	179.994	197.993
	Rejser	240.349	206.179,10
	Resultatformidling, inkl. trykning	4.350	5.033,21
	Evaluering	9.450	9253,39
	Overhead	0	0
	Andre udgifter (meetings/conferences)	65.855	78.840,92
	<i>Udgifter i alt (B)</i>	499.998	497.299,62
	<i>Projektets økonomiske stilling pr. slutopgøret, i alt (A-B)</i>	0	-163.967,62
	<i>Projektmidler rekvireres jf. rekvisition</i>		163.967,62

#### Bemærkninger til regnskabet

1. Overall, we have followed the budget. It has however been necessary for the implementation of the project to slightly increase the wages (<10%) by transferring funds from the other budget-lines and without exceeding the total eligible costs. The reason is that the efforts to build capacity and develop institutional sustainability of the project took more staff-time than expected.

2. Although not envisaged at project conception, there has been an own contribution of DKK 104.283 mainly salaries to timely and successfully attain the project's objectives.

The detailed signed accounts are enclosed.

*Hvis der i projektets mandat eller bevillingsbrev er en større specifikation af, hvad projektmidlerne kan anvendes til, skal den økonomiske slutrapportering udspecificeres på samme vis i et vedlæg, som indsendes i stedet for at udfylde ovenstående skema. Vedrørende revision og opbevaring af regnskabsmateriale henvises til pkt. 6 i standardbetingelserne for Nordisk Ministerråds projektkontrakter.*

## 8. Andre forhold

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## 9. Underskrifter

For forvaltningsorganet (**se. pkt. 6 i  
standardbetingelser**)

Projektleder

21. marts 2018, Martin Enghoff

21. marts 2018, Finn Danielsen

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*Dato, Underskrift 1 (Tegningsberettiget)*

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*Dato, Projektleder*

21. marts 2018, Anne Grethe Foldschack

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*Dato, Underskrift 2 (Økonomiansvarlig)*

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