

**BASIC PROGRAMME DATA (FOR THE USE OF THE NORDIC COUNCIL OF MINISTERS' SECRETARIAT ONLY)**

DINA ref. no.

Budget heading

PLANET

PEOPLE(S)

PROSPERITY

X

PARTNERSHIPS

**BASIC PROJECT DATA**

1. Project title	"Arctic User Knowledge Network: From Local to Global" (Arktisk Netværk for Brugerviden: Fra Lokalt til Globalt)	
2. Organisation	Nordisk Fond for Miljø og Udvikling (NORDECO) Skindergade 23, 3. sal; DK-1159 København K; CVR: 1548 0378	
3. Signed by	Name: Martin Enghoff	Tel.: +45 2711 9032
	E-mail: me@nordeco.dk	
4. Project manager	Name: Dr.scient. Finn Danielsen	Tel.: +45 2711 6475
	E-mail: fd@nordeco.dk	
5. Start date	1 June 2019	
6. End date	30 January 2020	
7. Total project budget (DKK)	709,410 (incl. self- and co-funding, excl. in kind contributions)	
8. Amount applied for (DKK)	499,317	
9. Resubmission	Yes: <input type="checkbox"/>	No: <input checked="" type="checkbox"/>
10. Scandinavian summary	<p>Projektet vil igangsætte et transatlantisk samarbejde, der giver fiskere og andre ressourcebrugere en stemme i de internationale organer, der rådgiver de arktiske myndigheder om ressourceforvaltning og klimatilpasning. Det sætter små afsidesliggende bygder i stand til at overleve på bæredygtig vis. Projektet vil etablere en dialog mellem ressourcebrugernes interesseorganisationer, bl.a. Sammenslutningen af Fiskere og Fangere i Grønland og Nunavut Wildlife Management Board i Canada, og de internationale forvaltningsorganer NAFO, ICES, CITES, og NAMMCO. Målet er at udveksle erfaringer og stimulere til øget praktisk brug af lokal viden i forvaltningsorganernes rådgivning. Projektet vil føre til styrket kapacitet, bedre værktøjer, og et netværk, der fremmer nyskabende politikker om robust brug af lokal viden i de internationale organer. Projektet ledes af NORDECO og har desuden deltagelse af Stockholm Resilience Center, Sverige, og Senter for Nordlige Folk, Norge.</p>	
11. English summary	<p>The project will initiate transatlantic cooperation, giving fishermen and other resource users a voice in the international management bodies that advise the Arctic authorities on resource management and climate adaptation. This will enable small remote settlements to survive in a sustainable manner. The project will establish a dialogue between the interest organizations of small-scale Arctic resource users, amongst others the Association of Fishermen and Hunters in Greenland, and the Nunavut Wildlife Management Board in Canada, and the international bodies NAFO, ICES, CITES, and NAMMCO. The aim is to exchange experiences and stimulate increased practical use of local knowledge in the management bodies' advisory services. The project will lead to enhanced capacity, better tools, and a network that supports innovative policies for robust use of local knowledge in the international bodies. The project is led by NORDECO with the participation of the Stockholm Resilience Center, Sweden, and Center for Northern People, Norway.</p>	
12. Date and signature	Date: 24 Jan. 2019	Signature:

## A: PROGRAMME OBJECTIVE(S)/PURPOSE

13. What is the background to the project?

**What and who initiated this project?** This project builds on the Greenland Ministry of Fisheries and Hunting's PISUNA programme (see below) whereby experienced fishermen and other resource users systematically document and discuss their observations of the environment and propose management interventions to the authorities. Similar initiatives have been commenced in Canada and the other six Arctic countries. Although the fishermen and resource users increasingly spend time and resources on communicating their knowledge and observations of the environment to the government agencies, this information is often not being used for decision-making.

**What makes it interesting and politically relevant?** International agreements and Arctic Council declarations emphasize the importance of engaging community members and indigenous and local knowledge in decision-making on natural resource management and climate adaptation. In recent years, several initiatives have been taken on cross-fertilizing indigenous and local knowledge with scientific knowledge. The Nordic Council of Ministers has been a frontrunner in terms of supporting innovative Nordic and Arctic transdisciplinary efforts in this field. Important progress has been made e.g. in developing and establishing documentation and communication tools. Nevertheless, government agencies' decision-making on quota-setting and resource management still do not fully consider the indigenous and local knowledge often because they are informed by international management bodies.

Among the international management bodies of greatest importance to the lives and livelihoods of Arctic resources users are: NAFO (The Northwest Atlantic Fisheries Organization), ICES (The International Council for the Exploration of the Sea), CITES (The Convention on International Trade in Endangered Species of Wild Fauna and Flora), and NAMMCO (The North Atlantic Marine Mammal Commission).

While the international management bodies are also supposed to incorporate indigenous and local knowledge into their advice to governments, this rarely happens in practice. Advances in online platforms have made it possible to share community-produced observations across sites and scales of decision-making but such tools are not being fully used by the international management bodies. The challenges are further described in the TemaNord Report *Local Knowledge and Resource Management* (2015:506.; 84 pg.) and in *Wildlife Management Summit Report* (ICC 2018; Ottawa, Canada; 33 pg.).

**Have you conducted specific research in advance of the project e.g. meetings with stakeholders?** Three key meetings have been held where the proposed activities have been discussed, the Circumpolar Inuit Wildlife Management Summit, Ottawa, Nov. 2017; the PISUNA eX-Changing Knowledge Workshop, Aasiaat, Nov. 2017; and the INTAROS Community-Based Monitoring Workshop in Quebec City, Canada, in Dec. 2017.

**Who took part in the planning?** The project aims and activities were discussed and agreed during physical meetings and Skype discussions involving the five project partners and representatives of PISUNA and local communities in Disko Bay, Greenland.

**Does the project build on previous activities?** The project builds on NCM's previous initiatives to incorporate indigenous and local knowledge into decision-making on natural resources, particularly the grant to NORDECO and partners for the project "Opening Doors to Native Knowledge" (2009-2011; DKK 1,490,000). This grant helped initiate and develop Greenland Government's PISUNA (*Piniakkanik Sumiiffinni Nalunaarsuineq*) programme and its web-based searchable database PISUNA-net. The PISUNA initiative has not been evaluated by external agencies but an internal review rated it favourably (2013). PISUNA has been awarded the Nordic Council Environment Prize (2018). The project also builds on the NCM co-funded "Nordic Resource Management" (NUNAVIS; 2015-2017; DKK 1,500,000, sectors Arctic, Environment, Fish); and "eX-Changing Knowledge" (2017-2018; DKK c. 600,000).

14. What overall problem does the project help to solve?

The project is initiated by and reaches out to small stakeholders among resource users in the Arctic. It will provide them with a voice in decisions made by international management bodies on natural resources of central importance to their lives and livelihoods. Today the international bodies that advise the Arctic authorities on resource management rarely incorporate indigenous and local knowledge. As a result, although

mechanisms have been set up for communicating indigenous and local knowledge and observations to the authorities, this information is often not used for government decision-making.

The underlying problem is that the international management bodies advising the governments are not aware of how to meaningfully and effectively incorporate indigenous and local knowledge in their advisory services to the authorities. Among some scientists in these bodies, there may also be scepticism as to the reliability of information provided by non-academics with potentially vested interests. The project will ameliorate this by establishing, to our knowledge for the first time in the world, a forum where representatives of resource users, scientists, and international management bodies exchange experiences and discuss and agree upon how to incorporate indigenous and local knowledge in the advisory services to the authorities in practice.

**Relations to priority subject areas.** The project contributes directly to the priority themes of the NCM Programme for the Arctic 2018-2021, particularly its focus on (i) Peoples ("Indigenous peoples"; "health and social conditions"; "international cooperation"; "peaceful, inclusive and democratic societies"), (ii) Planet ("sustainable exploitation of marine resources"; "recognition of the importance of biodiversity and change"; "adaptation to climate challenges and resilient communities"), (iii) Prosperity ("innovation and entrepreneurship"; "local business opportunities"; "the importance of culture"; and "food culture and food exports"); and (iv) Partnerships ("networks"; "exchange of experiences").

The project also contributes to:

The NCM Vision Statement: By strengthening democracy, human rights and sustainability, and by working towards mitigating "real issues with a direct impact on the people of the Region";

The Icelandic Presidency: By focusing on the ocean, blue growth, bio-economy, and SDG #13 and #14;

The NCM Programme on Environment and Climate: By enhancing protection and sustainable use of the oceans and developing innovative solutions to restore ecosystems;

The NCM Strategy for Sustainable Development: By working towards viable ecosystems, adapting to the changing climate, and promoting sustainable use of the earth's resources.

Moreover, the project can be seen as a follow-up to very successful activities piloted by the NCM Arctic Cooperation Programme (PISUNA; NUNAVIS; and eX-Changing Knowledge) while at the same time not replicating any existing or previous cooperation.

15. What similar projects are being implemented under the auspices of the Nordic Council of Ministers (NCM)?

Based on dialogue with the Secretariat of the NCM (Oct.2019), there is no other ongoing or proposed initiative that promotes international cooperation to enable resource users to obtain a voice in the international management bodies that advise the Arctic authorities. In the past, a number of related initiatives have been supported by the NCM, and the activities build on these (Section 13).

## **B: REGIONAL/LOCAL EMBEDDEDNESS, SUSTAINABILITY, EQUALITY, CHILDREN AND YOUNG PEOPLE**

16. In what ways does the project involve people and stakeholders residing in the Arctic? Also, in what ways will the project be driven by local/regional demand and ownership?

The project directly involves people and stakeholders residing in the Arctic in dialogue meetings and an experience-exchange workshop. Moreover, it initiates a new transatlantic network among resource-user interest organizations engaged in ensuring that Arctic user knowledge on climate and the environment comes into play in the international management bodies.

**Nordic synergy.** There are large synergies to be gained from implementing the project as a Nordic collaboration: (i) At the moment, the few efforts among civil society organizations to incorporate local knowledge on climate and the environment into the decision-making of international bodies are being undertaken in a fragmented and piecemeal manner. There is no coordination or common approach being taken, little collaboration between resource users' interest organizations, and therefore a high risk of duplication of effort and wasted time and resources. (ii) Likewise, there is little exchange of experiences between those working on incorporating local knowledge into international decision-making. This is unfortunate, as Nordic and Arctic organizations, from a global perspective, possess some of the most advanced theoretical and practical experiences in using local knowledge to inform government decision-

making. (iii) Moreover, the huge potential for significantly scaling up and extending the existing local and national experiences across the world is not being utilized. The guidelines for management bodies on obtaining and using resource user knowledge that will be developed by the project may also be useful for other international management bodies internationally (beyond NAFO, ICES, CITES and NAMMCO), even beyond the Arctic. (iv) The project boosts Nordic competitiveness and influence at international level to establish robust and innovative solutions to the climate and environment challenges. (v) Finally, the project enhances Nordic skills and creates common, cost-effective Nordic-Canadian solutions to challenges of great importance to small-scale producers, which constitute an important economic sector in the Arctic.

17. How does the project contribute to Agenda 2030 and the 17 sustainable development goals (SDGs)?

The project contributes especially to the key SDG commitment to 'Leave No One Behind' and to:

- SDG #13 Climate Action (13.1 resilience; 13.2 integrate climate change measures into national governance; 13.3 capacity); and
- SDG #14 Life Below Water (14.2 healthy ecosystems; 14.4 regulate harvests; 14A increase scientific knowledge; and 14B access for small-scale fishers to marine resources).

The project ensures economic, environmental and social sustainability: (i) Economic sustainability, by enhancing tools that enable small remote Arctic settlements to survive in a sustainable manner; (ii) Environmental sustainability, by shortening the time between observation and decision-making, adapting management interventions to the changes in the distribution of Arctic living resources resulting from global climatic changes; (iii) Social sustainability, by promoting the inclusion of the poorest and most marginalized groups' voices on climate and the environment into international decision-making on attributes of great importance to their livelihoods.

18. How does the project contribute to improving equality between men and women?

The project will, through its promotion of the views and insights of all resource users, contribute to the promotion of gender equality. The transatlantic collaboration that will emanate will comprise a multitude of activities in communities and will include workshops and communication. During the process, the collaboration will seek to involve both men and women in communicating local knowledge of climate and the environment and in the important associated decision-making processes on natural resource management. The civil society strengthening activities related to decision-making processes will explicitly address both male and female participation.

19. How does the project contribute to improving children and young people's rights and living conditions?

During the project's experience-exchange workshop, there will be particular emphasis on developing capacity among young people in documenting climate and environment knowledge and observations for informing decision-making.

### C: OBJECTIVES AND SUCCESS CRITERIA

20. What are the project's overall goals?

To develop transatlantic cooperation between Arctic small-scale resource users, and exchange experiences on enhancing the use of local knowledge to inform decision-making in international management bodies, thereby improving local business, sustainable exploitation, and resilience.

21. Describe the project milestones? Respond by completing Table 1

22. What are the project's success criteria? Respond by completing Table 2

Table 1: Description of project milestones

	Description
M1	Enhanced exchange of experiences among resource users, scientists, and government agencies in the Nordic countries and the Arctic on the practical use of local knowledge to inform decision-making in international management bodies
M2	Improved practical arrangements for collaboration on using local knowledge to inform international management bodies
M3	Increased understanding of how local knowledge can inform international management bodies among national and international decision-makers responsible for managing natural resources

Table 2: Description of the project's success criteria, data and assumptions/prerequisites

	Success criteria	Data and, if appropriate, method of verification	Assumptions/prerequisites
Milestone 1	<p><u>1.1. Strengthened capacity.</u> The documented experiences of local knowledge being used to inform international management bodies in the Nordic countries and the Arctic will have been collated, analysed and discussed at at least 12 dialogue meetings (Mth. 3) and at one international workshop with 15-20 participants (Mth. 5). This will have led to a strengthened human and organizational capacity to initiate activities related to using local knowledge to inform natural resource management among key research and educational institutions, indigenous organizations, civil society organizations and government agencies in the countries involved.</p> <p><u>1.2. Better tools.</u> Methods of using local people's knowledge of climate and the environment for informing international management bodies are beginning to be used by at least 3 international management bodies and made universally applicable (Mth. 8).</p>	<p>1.1 Reports from dialogue meetings</p> <p>1.2 Lessons learned report, final report</p>	Management bodies willing to use local knowledge on climate and environment
Milestone 2	<p><u>2.1. Improved network.</u> An international transatlantic collaboration with resource users, scientists and government institutions who are engaged in enabling local knowledge to inform international management bodies (Mth. 5). The partners in the collaboration will work together on the cross-fertilization of ideas and development of joint initiatives to strengthen efforts at all levels on using local knowledge to inform international management bodies.</p>	<p>2.1 International workshop</p> <p>2.2 Workshop evaluation report (feedback forms)</p>	-
Milestone 3	<p><u>3.1. Inputs on using local knowledge to national and international policies.</u> Lessons learned on using local knowledge to inform international management bodies are beginning to be incorporated into key policies in climate, environment and development efforts in the Nordic countries, the Arctic and beyond (Mth. 8 and onwards).</p>	<p>3.1 Workshop proceedings</p> <p>3.2 Concept document for network, financing plan</p> <p>3.3 Guidelines for resource users on sharing knowledge; Guidelines for management bodies on obtaining and using resource user knowledge</p> <p>3.4 Policy brief</p>	As for Milestone 1

## D: DELIVERABLES AND ACTIVITIES

23. Which expected deliverables (end products and services) and activities must be delivered/completed for the project milestones to be reached, and when? Respond by completing Table 3

24. What quality requirements are there on the expected outcomes/deliverables and who is responsible for quality assurance? Table 4

Table 3: Timetable for deliverables and activities

De- live- rable	Mile- stone	Description of deliverables and activities	Date of delivery
D1	M1	<p><b>Deliverable 1: Reports from dialogue meetings</b></p> <p>Activity: Stakeholder consultations, led by the resource-user interest organizations</p> <ul style="list-style-type: none"> <li>• Review of international management bodies in which it is particularly important to incorporate local knowledge on climate and the environment in the Arctic and the Nordic countries.</li> <li>• Identification of key interested participants in discussions and practical use of local knowledge for informing international management bodies among communities and the public and private sectors in each country.</li> <li>• Dialogue meetings and Skype discussions with key stakeholders.</li> </ul> <p>Identification of the current possibilities for: (i) resource users to feed their data and observations into international management bodies, and (ii) representatives of international management bodies to access and use data and observations from resource users.</p> <ul style="list-style-type: none"> <li>• Identification of which common activities are needed among key stakeholders to scale up the incorporation of local knowledge into the decision-making of international management bodies.</li> <li>• Review of potential financial partners for the collaboration (government and international bodies and private institutions).</li> </ul>	Mth. 3 (Aug. '19)
D2	M1	<p><b>Deliverable 2: Lessons learned report</b></p> <p>Activity: Development of workshop materials</p> <ul style="list-style-type: none"> <li>• Development of workshop materials, describing key lessons learned and tasks ahead for developing international transatlantic collaboration.</li> <li>• Describe existing activities on incorporating local knowledge into the decision-making of international management bodies, and key lessons to date that will ensure the direction of the discussions at the international workshop.</li> <li>• Identify problems to be addressed and to be discussed at the workshop.</li> <li>• Formulate objectives, outputs, target groups, activities and institutional set-up for the international transatlantic collaboration for discussion and agreement at the workshop.</li> <li>• Identify linkages to national and international strategies, and to ongoing and earlier related initiatives.</li> </ul>	Mth. 4 (Sep. '19)
D3	M2	<p><b>Deliverable 3: Workshop convened, and workshop evaluation report</b></p> <p>Activity: International workshop on incorporating local knowledge into the decision-making of key international management bodies</p> <ul style="list-style-type: none"> <li>• Purpose of the workshop: (1) To exchange lessons learned, and (2) To agree on how to proceed in developing international transatlantic collaboration on incorporating local knowledge into the decision-making of key international management bodies.</li> <li>• Workshop participants: Representatives from community-based monitoring and management initiatives in the Nordic countries and Arctic, indigenous peoples' organizations, civil society/private sector/research/education institutions, government representatives, representatives of key international management bodies, potential financial partners for the collaboration (1-2 persons; not charged to project), facilitators.</li> <li>• Workshop programme: Presentation of existing experiences of incorporating local knowledge into international decision-making, discussion of the international transatlantic collaboration, group discussions on the basis of the</li> </ul>	Mth. 5 (Oct. '19)

		workshop background papers. Discussion of key topics identified during the stakeholder consultations, e.g. the role and responsibility of each partner institution, and the sustainable financing of the collaboration.	
D4	M3	<p>Deliverable 4: <b>Workshop proceedings; concept document for network</b></p> <p>Activity: Workshop proceedings, and detailed concept for collaboration</p> <ul style="list-style-type: none"> <li>• Preparation of workshop proceedings and a detailed proposal for the international transatlantic collaboration on incorporating local knowledge into international decision-making. This activity includes revision of the documents described under Deliverable 2 on the basis of the workshop discussions and agreements.</li> <li>• In addition, the following materials will be developed: Budget and work plan for the international collaboration, overall and for the 1st year; time schedule for the activities of the collaboration, and financing plan.</li> </ul>	Mth. 7 (Dec. '19)
D5	M3	<p>Deliverable 5: <b>Guidelines</b></p> <p>Activity: Guidelines prepared, produced and disseminated</p> <ul style="list-style-type: none"> <li>• Guidelines for resource users on sharing knowledge with international management bodies.</li> <li>• Guidelines for international management bodies on obtaining and using resource user knowledge.</li> <li>• Preparation of video footage and social media articles with the guidelines.</li> </ul>	Mth. 8 (Jan. '20)
D6	M3	<p>Deliverable 6: <b>Policy brief</b></p> <p>Activity: Policy brief prepared, produced and disseminated</p> <ul style="list-style-type: none"> <li>• A policy brief will be developed. The topic of the policy brief will be Nordic and Arctic experiences of incorporating local knowledge into the decision-making of international management bodies to solve climate and resource challenges.</li> </ul>	Timed with conferences

Table 4: Quality of deliverables

#	Quality requirements on delivery	Proposed quality controller*
D1	Reports from dialogue meetings: total of 10-15 pg., B/W	B. Lyberth (KNAPK)
D2	Lessons learned report: 30-50 pg., B/W	F. Danielsen
D3	Workshop evaluation report: Feedback forms	F. Danielsen
D4	Workshop proceedings, concept for network: 50 pg.	F. Danielsen
D5	Guidelines: 15-30 pg. incl. icon-based illustrations	Draft: F. Danielsen; Final: M. Tengö (SRC)
D6	Policy brief: 5-10 pg., illustrations in colour, succinct message	M. Tengö (SRC)

\*Abbreviations and a description of the persons are provided in Section 27.

## E: COMMUNICATION

25. Who are the project's 3–5 key stakeholders? See Table 5.

26. What are the project's key messages and how should they be communicated? See Table 6.

Table 5: Key stakeholders

Priority	Stakeholder	Attitude to project	Implications for the project
1.	Small-scale Arctic resource users	Although they document their knowledge of resources, this knowledge is often not used by government agencies; it is overruled by international bodies' advice, which rarely incorporates local knowledge	Representatives facilitate dialogue meetings and workshops, and develop guidelines and policy brief
2.	Scientists in international management bodies who advise governments on attributes of key importance to the lives and livelihoods of Arctic resource users (NAFO, ICES, CITES, NAMMCO)	'Reluctant' or 'unable' to incorporate local knowledge into their advice to government agencies. Reluctant because of doubts as to the reliability of local knowledge; unable because of limited access to appropriate tools* and know-how	Participation in the project's dialogue meetings and workshop. They will also be invited, as resource persons, to review the guidelines and policy brief
3.	Staff in government agencies setting quotas and taking other government natural resource management decisions	Often keen on incorporating local knowledge into decision-making in line w/national policies, and beginning to get access to local knowledge, yet the advice from international bodies overrules this	As above

\*Greatly benefitting from recent advances in online platforms for sharing community-produced observations across sites and scales of decision-making; e.g. PISUNA-net (<https://eloka-arctic.org/pisuna-net/en>), SIKU, eNuk, MacKenzie Data Stream, and SIZO-net.

Table 6: Key messages

Stakeholder/target group	Key message	Media	Effect	Person responsible*
Scientists in international management bodies who advise governments on natural resource management of key importance to Arctic resource users.	The project will widely publicize successful examples and lessons learned from the practical use of local knowledge to inform international decision-making.	<u>Scientists/ government staff:</u> Reports, guidelines, policy briefs (possibly academic papers; conferences).	<u>Long-term impact:</u> Local knowledge is incorporated into decision-making by international bodies.	Initiation: F. Danielsen
Staff in government agencies setting quotas and taking other natural resource management decisions.		<u>Resource users:</u> Guideline, public meetings in e.g. PISUNA; video footage.	<u>Short-term impact:</u> (i) Scientists of the international management bodies able, and willing, to obtain and use resource users' knowledge.	Follow-up: M. Tengö (SRC)
Small-scale Arctic resource users, and participants in Arctic community-based monitoring programmes.		<u>The wider public:</u> Video footage, social media, newspaper articles, project website.	(ii) Resource users able to contribute to international decision-making.	As above
		The project will seek to publish the final report in the TemaNord series.		B. Lyberth (KNAPK), J. Akearok (NWMB), T. A. Eriksen (SNF)

\*Abbreviations and a description of the persons are provided in Section 27.

## F: NORDIC PARTICIPATION AND ORGANISATION

27. Describe the Nordic participation/Nordic partners.

In this section, background information is provided on: (i) Nordisk Fond for Miljø og Udvikling; (ii) Association of Fishers and Hunters in Greenland; (iii) Senter for Nordlige Folk; (iv) Stockholm Resilience Centre; and (v) Nunavut Wildlife Management Board.

(i) Nordisk Fond for Miljø og Udvikling (NORDECO, Greenland/Denmark) is a Danish non-profit foundation. It is member of the University of the Arctic and of the GEF-CSO Forum (Global Environment Facility Civil Society Organization Forum). The Foundation has the declared goal of supporting local conservation and development initiatives in remote communities. NORDECO's head office in Copenhagen, Denmark, supports a core team of senior biologists and anthropologists. The organization has a long history of working with research, capacity building and technical assistance in community-based natural resource management in terrestrial and coastal areas and wetlands, including >15 years' experience with developing and testing participatory resource monitoring. Globally, NORDECO has spearheaded the development of bottom-up approaches to natural resource monitoring and management, where local people or local government staff are directly involved in data collection and interpretation, and where monitoring is linked to the decisions of local people, using methods that are simple, cheap and require few resources. Such approaches can help generate transparency, accountability and local ownership in sustainable development initiatives. With local partners, NORDECO has developed and helped institutionalize locally-based resource monitoring programmes in the Philippines and Tanzania. Both programmes are in the process of being scaled up to national levels. Web: [www.nordeco.dk](http://www.nordeco.dk).

In Greenland, NORDECO has assisted the government in establishing community-based natural resource monitoring in five communities in North West Greenland. The PISUNA approach involves interested communities in establishing a local Natural Resource Council comprising local hunters and fishermen. The council decides which species and resource uses should be observed. During their hunting and fishing activities, the community members keep track of their observations of the species and resource use. Every quarter (three months), the local council summarizes 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. With 2-3 keystrokes, decision-makers can access the community members' trend-information and management proposals at PISUNA-net, a searchable web-based database. The PISUNA programme helps link observed resource use and environmental changes to management action. Web: <https://eloka-arctic.org/pisuna-net/> and [www.pisuna.org](http://www.pisuna.org).

Dr.scient. Finn Danielsen is Senior Ecologist at NORDECO. He has pioneered capacity building and research on simple, community-based natural resource monitoring. His publications on participatory environmental monitoring and ecosystem services are among the most cited in their field and have contributed to changes in national and international policies. With many partners, Mr Danielsen facilitated the Greenland Government initiative to establish community-based monitoring, PISUNA. Web: <https://scholar.google.dk/citations?user=sOL2970AAAAJ&hl=da&oi=ao>.

(ii) Association of Fishermen and Hunters in Greenland (KNAPK) represents the interests of full-time fishermen and hunters in Greenland. KNAPK has local branches in 72 communities. Since 2009, KNAPK has been co-developing the PISUNA approach for connecting observed resource use and environmental changes to management action. In 2017, KNAPK agreed with other civil society organizations in the Arctic to: "Develop an analysis of how international forums such as CITES, IUCN, etc. affect communities' and Inuit rights in order to determine strategic points of influence and opportunity (and)... develop a strategy to influence international processes and decision-making. Share and continue to develop processes for utilizing Inuit Knowledge (IK) in management practices and push for recognition and equity of IK, including developing reports based on IK through an Inuit ecosystem approach to management". The present proposal contributes to this effort. Cand.scient. Bjarne 'Ababsi' Lyberth is a biologist with KNAPK and member of the Circumpolar Inuit Wildlife Committee. Web: [www.knapk.gl](http://www.knapk.gl).

(iii) Senter for Nordlige Folk (SNF, Norway) is an international non-profit organization representing Saami and other indigenous people and communities living in the North. The principal goals of SNF include to develop, maintain and promote Saami, indigenous and other northern peoples' cultures; and to contribute to increased

knowledge and recognition of indigenous people of the North. Mr Terje Ansgar Eriksen is director, and Nils Mikal Pedersen is acting manager. Web: <https://www.senterfornordligefolk.no>

(iv) Stockholm Resilience Centre (SRC, Sweden) is an international centre at Stockholm University that advances transdisciplinary research for governance of social-ecological systems. Dr Maria Tengö, PhD is senior researcher. She has been spearheading international efforts on co-production of knowledge, cultural ecosystem services, local and indigenous knowledge, management practices, and institutions. Web: <http://www.stockholmresilience.org/about-us.html>.

(v) Nunavut Wildlife Management Board (NWMB, Canada) is an Institution of Public Government established in accordance with the Nunavut Land Claim Agreement. NWMB is the main instrument of wildlife management in the Nunavut Settlement Area (NSA) and is a co-management Board that consists of nine appointed members. The Board and its partners combine the knowledge and understanding of wildlife managers, users, and the public to make decisions concerning the management of wildlife in Nunavut. The NSA spans more than 1.9 million square kilometres and 43% of Canada's ocean coastline. The vision of the NWMB is "conserving wildlife through the application of Inuit Qaujimagatuqangit and scientific knowledge." The NWMB mission is to conserve wildlife and wildlife habitat for the long-term benefit of all Nunavut residents while fully respecting Inuit harvesting rights and priorities. Mr Jason Akearok is director of NWMB. Web: <https://www.nwmb.com/en/> and <http://nlca.tunnjavik.com>.

28. How is the project organised?

Nordisk Fond for Miljø og Udvikling (NORDECO) will have overall responsibility for project implementation. The day-to-day work will be led by NORDECO in collaboration with the project partners. NORDECO has a significant track record of international project management, including activity and financial management. The project activity planning will include monthly meetings and online discussions between the partner institutions. The project will be supervised by a Project Steering Committee (PSC) which will be tasked with providing overall guidance and supervision of project activities within the framework of the approved Project Proposal. The PSC will comprise one person appointed by each of the Nordic governments' agencies responsible for the management of living resources (proposed). One person from NORDECO will chair the PSC. The PSC will meet at the beginning, after 3 months, and at the end, either physically or via Skype. To ensure the active and constructive role of all partners in this project, the different project tasks will be divided between the individual participating countries and institutions, see Table 8. The Project Manager's CV is provided in App. 2.

Table 7: Participating countries (min. three Nordic, alternatively two Nordic + min. 1 non-Nordic country)

<input checked="" type="checkbox"/>	Denmark (DK)	<input type="checkbox"/>	The Faroe Islands (FO)		
<input type="checkbox"/>	Finland (FI)	<input checked="" type="checkbox"/>	Greenland (GL)		
<input type="checkbox"/>	Iceland (IS)	<input checked="" type="checkbox"/>	Sweden (SE)		
<input checked="" type="checkbox"/>	Norway (NO)	<input type="checkbox"/>	Åland (AX)		
<input checked="" type="checkbox"/>	Other	Country: <b>Canada</b>			
<b>Project partners will be identified from FI, IS, and FO</b>					

Table 8: Proposed responsibility plan.

Proposed Responsibility Plan		NORDECO	KNAPK	SNF	SRC	NWMB
1	Stakeholder consultations					
2	Development of workshop materials					
3	International workshop					
4	Workshop proceedings, concept document					
5	Guidelines					
6	Policy brief					
7	Project Steering Committee					

Green = Responsible (overall, or within one country); Orange = Participant; Blank = Not involved.

Abbreviations: KNAPK= Association of Fishermen and Hunters in Greenland; SNF= Senter for Nordlige Folk (Norway); SRC= Stockholm Resilience Centre (Sweden); NWMB= Nunavut Wildlife Management Board (Canada).

## G: RISK ASSESSMENT

29. What are the *main* risks in terms of the project's implementation and expected outcomes? See Table 9.

Table 9: Risks

Risk	Probability	Possible impact	Preventative measures
International management bodies may be unwilling to use local knowledge on climate and the environment	Low probability. Scientists working for the international management bodies have expressed interest in efforts to incorporate local knowledge into decision-making. International policies support this; the world's countries have agreed that, by 2020, the knowledge of local communities should be integrated into the implementation of the Conv. on Biol. Diversity (Target 18)	Limited. May potentially delay the achievement of Milestone 3	The project will focus on four management bodies (NAFO, ICES, CITES, NAMMCO). A delay with one of these will not seriously impact achievement of the project's overall milestones

## H: REPORTING, COMPLETION AND EVALUATION

30. How and how often should reports be submitted about progress and outcomes?

Report	Type	Purpose	Timing	Recipient
Reports from dialogue meetings	Outcome	Report on the outcome of the stakeholder consultations	Mth. 3	Project management, partners, PSC
Lessons learned report	Outcome	Background material for the international workshop	Mth. 4	Workshop participants, partners, PSC
Workshop evaluation	Progress	Summarize the feedback received from the workshop participants	Mth. 5	As above
Final report with workshop proceedings, guidelines and policy brief	Outcome	Report on the achievement of the project's milestones, challenges and opportunities, and key tasks ahead	Mth. 8	NCM, partners, PSC and workshop participants

Abbreviation: PSC, Project Steering Committee

31. How will the project be phased out? Describe here the project's exit strategy, including how the outcomes and experiences are expected to be used after the programme ends.

Sustaining the outcomes. The outcomes of the project will be sustained in four ways: (i) Technically. The skills and experiences obtained will enhance the functionality of existing government and international management body staff with natural resource management responsibilities and support the Arctic authorities' efforts towards further involving local knowledge and observations in their decision-making. In addition, the project will use a participatory approach to project activity planning and implementation, thus encouraging 'ownership' of the project activities. (ii) Financially. The project will advance a broad international network among interest organizations of Arctic resource users on the practical use of local knowledge to inform decision-making in international management bodies. The partners have substantial previous experience with the funding environments in the European Union, the Nordic countries, and North America, enhancing the likelihood of attracting further funds to sustain the operations of the network after this project ends in January 2020. (iii) Organizationally. The project will work through well-established institutions including several that

have a long track record of strong engagement in natural resource monitoring and management, and who will continue to work in this area beyond the project, thereby enhancing the sustainability of the project results. (iv) Process-wise. The project activities will be developed at a slow pace, paying sufficient attention to capacity building, and whenever possible using approaches which can be maintained locally with minimal recurrent costs.

Exit strategy. A number of actions will be taken to ensure long-term benefit from the investment: (i) Through the experience-exchange workshop and media outlets, incl. a video footage, social media and newspaper articles, the successful examples and lessons learned from the practical use of local knowledge to inform international decision-making will be widely promoted and the project will encourage more partners to enroll in the network (ongoing, from the launch in June 2019); (ii) The guidelines will be sought incorporated into the Key Results Areas of the international management bodies NAFO, ICES, CITES, and NAMMCO (mainly Jan. 2020 and onwards, although this process may already be initiated at the dialogue meetings, Aug. 2019); (iii) The lessons learned report and guidelines will be made freely available for use by scientists and educators in the UArctic (Arctic regions; Jan. 2020), the Global Citizen Science Partnership (mainly temperate areas; Jan. 2020), and the Participatory Monitoring and Management Partnership (mostly tropical regions; Jan. 2020; PMMP is co-led by Finn Danielsen; [www.pmmpartnership.com](http://www.pmmpartnership.com)); (iv) The existing and new network partners will be encouraged to adjust the guidelines and media outputs from the project to suit natural resource management and management bodies in their area and for the natural resources they are using (>Jan. 2020).

How will this project secure future funding? The partners have already applied for additional funding for future activities and will continue to seek external funding during 2019-2020. Secured operational funding includes: (i) INTAROS Work Package 4 will fund NORDECO-led dialogue meetings and communication about the network (DKK 177.634; 2019). (ii) The Board of NORDECO has decided to support 0.5 mth/yr proposed Arctic User Knowledge Network coordination by Finn Danielsen for 3 years (2019-2021; board meeting 30 May 2018). Additional funding sought includes: (i) Discussions with the Global CEO Alliance about industry collaboration in capacity development and communication within the umbrella of the Global Citizen Science Partnership, where Finn co-leads the Community Advisory Board. (ii) Inclusion of the operational funding of the network in a proposal led by University of Tromsø for the EU H2020 call "LC-CLA-07-2019" (early 2020 onwards). After three years, we envisage that the international management bodies will have incorporated the use of local knowledge into their Key Results Areas in the Arctic; the proposed network has achieved its objective and it will cease its activities (May 2021).

### 32. How will the project be evaluated?

During the project, progress will be evaluated on an ongoing basis by assessing the deliverables. The project direction will be adjusted accordingly. Project progress will also be evaluated mid-term (Mth. 5), and at the end of the project. For evaluation purposes, the project will examine the achievements in terms of the milestones, see below. The parameters will be assessed by using multiple choice scorecards among a representative group of participants in the workshop before the meeting and, again, towards the project end.

After the project, to ensure that the experiences and knowledge gained during the project process will be utilized and further communicated, we will closely monitor and document examples where local knowledge is used to inform NAFO, ICES, CITES, NAMMCO and, if possible, other international environmental management bodies in the Nordic/Canadian Arctic. Likewise, we will gauge the number of other international management bodies (beyond this region) that access and begin use the guidelines. Successful examples will be widely communicated by the network through the use of the partners' existing media outlets (e.g. social media, community meetings, conferences, and, if possible, academic papers).

Mile-stone	Parameters to be assessed
M1	<p>(i) The number of concrete experiences of using local knowledge to inform international management bodies that have been collated and discussed at the dialogue meetings and the international workshop – as well as the extent to which documentation of the impacts on resource management is made publicly available from the experiences.</p> <p>(ii) The degree of detail provided in the description of approaches to using local people's knowledge to inform international management bodies during the meetings and the workshop.</p>

M2	(iii) The number of cross-fertilized ideas and joint initiatives to strengthen efforts on the practical use of local knowledge to inform international management bodies that emanates from the dialogue meetings and the international workshop.
M3	(iv) The number of concrete examples where inputs on using local knowledge to inform international management bodies from this project are beginning to be incorporated into key policies in climate, environment and development efforts.

## I: APPENDICES

33. List the attached appendices in Table 10.

Table 10: List of appendices	
No.	Name of appendix
1	Budget
2	Curriculum Vitae of the Project Manager
3	Project description
4	Timetable
5	Communication plan

Kindly notice that the Project Description, Timetable, and Communication Plan have been incorporated into the application form. In the present application these appendices are therefore in practice redundant.