



CAPARDUS - Capacity-building in Arctic standardization development

Coordination and Support Action under EC Horizon2020
Grant Agreement no. 869673

Project coordinator: Nansen Environmental and Remote Sensing Center

Deliverable 2.1

Dialogue with Greenland Actors

Report from workshop 22 February 2021

Type: Report

Start date of project: 01 December 2019 Duration: 36 months

Due date of deliverable: 31 May 2021 Actual submission date: 29 October 31 2022

Lead beneficiary for preparing the deliverable: NORDECO

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Version	DATE	CHANGE RECORDS	LEAD AUTHOR
1.0	15/10/2022	Draft	FD

Approval	Date: 17 Oct 2022	Sign. <i>Stein Sandv</i> Coordinator
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DISSEMINATION LEVEL		
PU	Public, fully open	X
CO	Confidential, restricted under conditions set out in Model Grant Agreement	
CI	Classified, information as referred to in Commission Decision 2001/844/EC	

EXECUTIVE SUMMARY

The climate change and its consequences in the Arctic leads to new requirements for planning and decision-making based on scientific and economic data, assessments and predictions. A prerequisite for good planning is access to data and information of relevance to people living and working in the Arctic. Community-Based Monitoring (CBM) programmes that build on resource users' local knowledge and observations (LK) are evolving across the Arctic, and these initiatives provide complementary data to the scientific observing systems.

In Greenland, the Ministry of Fisheries and Hunting has established the PISUNA (*Piniakkanik Sumiiffinni Nalunaarsuineq*) programme whereby experienced fishermen and other resource users systematically document and discuss their observations of the environment and propose management interventions to the authorities. Although the fishermen and resource users 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.

International agreements and Arctic Council declarations emphasize the importance of engaging community members and LK in decision-making on natural resource management and climate adaptation. In recent years, several initiatives have been taken on cross-fertilizing LK with scientific knowledge. Nevertheless, Greenland government agencies' decision-making on quota-setting and resource management still do not fully consider the LK often because they are informed by international management bodies. Among the international management bodies of greatest importance to the lives and livelihoods of Greenland fishermen and hunters are NAMMCO (The North Atlantic Marine Mammal Commission) and CITES (The Convention on International Trade in Endangered Species of Wild Fauna and Flora). While the international management bodies are also supposed to incorporate LK 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.

Here we summarize the presentations and discussions at a workshop held 22 February 2021. In recent years, several initiatives have been taken to further integrate LK with scientific knowledge. The current status is, however, that government agencies' decision-making on quota-setting and resource management still do not fully consider LK in several cases because such decisions are taken on the basis of advice from international management bodies. The international management bodies base their work on inputs from scientists in the different countries. In practice, there is limited LK flowing to these management bodies and there is limited use of whatever LK finds its way to the international management bodies. While the international management bodies are supposed to incorporate LK into their advice to governments, this rarely happens in practice.

From the workshop discussions, it was clear that international and national bodies claim that LK is relevant. Inclusion of LK is often stated as a requirement in the various agreements, objectives or legislation related to these bodies. This being said, however, it is also clear from the discussions that ensuring the actual use of LK for management decision-making is a major challenge in most decision-making processes. Even if there are, in some areas, structures promoting LK, actually implementing it is reportedly not easy and not successful in many cases. In Greenland, there are now movements (with a new executive order) towards ensuring a more structured and legally-required use of LK. As is the case now in most of the Arctic, there are bits and pieces of LK feeding into the national and international level. Being invited as a guest to speak at meetings or to occasional dialogue meetings is not the same as ensuring structured and continuous input of LK into management decisions. There is a major challenge in translating nice ideas into practice. It can probably only be done if LK systems are funded and legally-required and with proper legal backing.

Possible actions to promote the further incorporation of LK and its greater influence in various management bodies include:

- 1) Develop structured and systematic collection of LK through CBM programmes nationally, knowledge that is legally required and considered equally important to the management processes as input from scientific studies.
- 2) Develop explicit demand within the various national and international management bodies for the incorporation of CBM/LK data into all biological population assessments.
- 3) Explicitly mentioning the involvement (or absence) of CBM/LK data in various assessment reports related to living resources.
- 4) Ensure better, continuous, legally-required and structured dialogues between holders of LK and scientists. Encourage joint analyses to be undertaken and published in reports.
- 5) Through international management bodies push (a) for more coverage in time and space by CBM programs, and (b) to make more LK available in web-based, searchable databases.
- 6) International management bodies should promote the value of LK by showcasing the use of LK and demonstrating how to use the information in a way that is scientifically credible and acceptable to peers.
- 7) Further involve users/hunters in relevant committees, not just as observers but as real members; and further involve users/hunters in surveys and in national government delegations.

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1. Introduction

The climate change and its consequences in the Arctic leads to new requirements for planning and decision-making based on scientific and economic data, assessments and predictions. A prerequisite for good planning is access to data and information of relevance to people living and working in the Arctic. Community-Based Monitoring (CBM) initiatives are evolving across the Arctic, providing complementary data to the scientific observing systems.

CAPARDUS is a H2020 project with focus on developing guidelines and standards in research, resource exploitation and management, shipping, tourism and community planning in the Arctic. The project contributes to develop, demonstrate, and widely circulate good practices. The project involves scientists, economic actors, local communities, managers and regulators. Workshops and dialogue meetings are used to discuss how the social-environmental systems are changing Arctic communities.

In Greenland, a number of dialogue meetings and other collaborative activities have been co-organized by the project. The activities have included:

- planning and coordination meetings, and seminars for sharing of lessons,
- training exercises,
- preparation of outreach materials,
- formulation of policy brief,
- digital platform development,
- organization of a book launch event,
- joint presentations at conferences,
- preparation of a collaborative podcast, and
- organization of a workshop.

These activities have involved community members and representatives and staff of civil society organisations, the academe, as well as the private and public sector. Specifically, the project activities have involved the following actors: staff or volunteers of Qeqertalik Municipality; the PISUNA Natural Resource Committee in Attu, Disko Bay; Ministry of Fisheries and Hunting; Ministry of Science and the Environment; KNAPK (Association of Greenland Fishermen and Hunters); ICC Greenland; Ilisimatusarfik / University of Greenland; Greenland Climate Research Centre; Greenland Institute of Natural Resources; Oceans North Greenland; UArctic; and the eight EU-funded Arctic projects with community engagement activities (INTERACT, Nunataryuk, Arctic PASSION, JustNorth, EcoTip, Face-It, ArcticHubs, and Charter).

Here we summarize the presentations and discussions at a key workshop held 22 February 2021. The context for this workshop is that in Greenland, the Ministry of Fisheries and Hunting has established the PISUNA (*Piniakkanik Sumiiffinni Nalunaarsuineq*) programme whereby experienced fishermen and other resource users systematically document and discuss their observations of the environment and propose management interventions to the authorities. Although the fishermen and resource users spend time and resources on communicating their knowledge and observations of the environment to the government agencies, this information is however often not being used for decision-making.

International agreements and Arctic Council declarations emphasize the importance of engaging community members and resource users' local knowledge (LK) in decision-making on natural resource management and climate adaptation. In recent years, several initiatives have been taken on cross-fertilizing LK with scientific knowledge. Nevertheless, Greenland

government agencies' decision-making on quota-setting and resource management still do not fully consider the LK often because they are informed by international management bodies.

Among the international management bodies of greatest importance to the lives and livelihoods of Greenland fishermen and hunters are NAMMCO (The North Atlantic Marine Mammal Commission) and CITES (The Convention on International Trade in Endangered Species of Wild Fauna and Flora). While the international management bodies are also supposed to incorporate LK 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.

Together with KNAPK, the CAPARDUS project therefore organized a workshop to discuss the value of including resource users' LK in the activities of those international environmental agreements that are directly influencing the lives and livelihoods of Greenlandic and Arctic communities. The specific aim of the workshop was to exchange experiences and to encourage greater practical and more systematic use of LK such as from CBM programs in the management bodies' advisory services. The meeting participants came from Greenland, Canada, Alaska, Sweden and Denmark as well as from NAMMCO (North Atlantic Marine Mammal Commission) and CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora). Co-funding for the workshop was provided by the Nordic Council of Ministers Arctic Cooperation Program and INTAROS. The outcomes of this meeting serve as key background material for the CAPARDUS workshop to be held in Aasiaat 28 November to 2 December 2022.

2. Summary of workshop presentations

The workshop was held to discuss the value of including resource users' local knowledge (LK) in the activities of some of the international agreements relevant to Greenland and Arctic communities. The workshop was originally intended to be held in Nuuk but, due to the pandemic, it was run virtually. It took place on 22 February from 14.30 to 17.30 CET. This time of day enabled participants from Greenland, Scandinavia and North America to all attend. The meeting was held in Greenlandic and English (Zoom, separate channels with simultaneous translation). A participant list is available below.

The international management bodies of greatest importance to the lives and livelihoods of Greenland and Arctic resource users include: NAMMCO, CITES, as well as JCNB (*Joint Commission on Narwhal and Beluga*), NAFO (*Northwest Atlantic Fisheries Organization*), and ICES (*International Council for the Exploration of the Sea*). In recent years, several initiatives have made great strides to further connect user knowledge with scientific knowledge. The fact is, however, that government agencies' decision-making on quota-setting and resource management still does not fully take user knowledge into account. This is often because the government agencies' decisions are taken on the basis of advice from international management bodies. The international management bodies base their work on inputs from scientists in the different countries. In practice, there is limited user knowledge flowing to these management bodies and what little does make its way there is poorly used. While the international management bodies are supposed to incorporate user knowledge into their advice to governments, this rarely happens in practice.

List of participants

<i>First name</i>	<i>Surname</i>	<i>Institution</i>
Amalie	Jessen	Greenland Ministry of Fisheries, Hunting and Agriculture
Augusta	Jerimiassen	Greenland Ministry of Fisheries, Hunting and Agriculture
Bjarne	Lyberth	Greenland Ministry of Science and Environment
Charlotte	Winsnes	NAMMCO
Esben	Ehlers	Greenland Ministry of Science and Environment
Fern	Wickson	NAMMCO
Finn	Danielsen	Nordic Foundation for Development and Ecology
Geneviève	Desportes	NAMMCO
Inaluk	Jacobsen	ICC Greenland
Jason	Akearok	Nunavut Wildlife Management Board
Jessica	LeFevre	Alaska Eskimo Whaling Commission
Kuupik	Kleist	ICC Greenland
Mana	Tugend	NAMMCO
Maria	Tengö	Stockholm Resilience Centre
Martin	Enghoff	Nordic Foundation for Development and Ecology
Michael K.	Poulsen	Nordic Foundation for Development and Ecology
Nicolai L.P.	Scherdin	NAMMCO
Olivia	Lee	University of Alaska, Fairbanks
Parnuna P.E.	Dahl	Oceans North
PâviâraK	Jakobsen	Qeqertalik Municipality
Per Ole	Frederiksen	Attu PISUNA Natural Resource Council
Pernilla	Malmer	Stockholm Resilience Centre
Steen	Christensen	Greenland Ministry of Fisheries, Hunting and Agriculture
Søren Stach	Nielsen	Oceans North
Yuan	Liu	CITES Secretariat

The workshop took place in accordance with the following programme. After each presentation, there was a short discussion:

1. Presentation of workshop and objectives.
2. Presentation on “Arctic User Knowledge in Practice in Greenland” by Amalie Jessen, Head of Department from the Ministry of Fisheries, Hunting and Agriculture.
3. Presentation on “User Knowledge in NAMMCO’s Advisory Work” by Fern Wickson, Scientific Secretary at NAMMCO.
4. Presentation on experiences from “The Alaska Eskimo Whaling Commission and the Communities of the Western Arctic Bowhead Whale Stock” by Jessica Lefevre, Legal Adviser to the Alaska Eskimo Whaling Commission (AEWC).
5. Presentation on “CITES and User Knowledge” by Yuan Liu, Programme and Communications Officer with CITES.
6. Presentation on the “ICC position on Indigenous Knowledge” by Kuupik Kleist from ICC Greenland.
7. Presentation on “Knowledge of and with Indigenous Peoples and Local Communities in the Convention of Biological Diversity (CBD) and the Intergovernmental Science Policy

- Platform on Biodiversity and Ecosystem Services (IPBES)” by Pernilla Malmer and Maria Tengö, researchers at the Stockholm Resilience Center.
8. Presentation on “Conserving Wildlife through the Application of Inuit Quajimajatuqangit (Knowledge) and Scientific Knowledge” by Jason Akearok, Director of Nunavut Wildlife Management Board.
 9. Summary of presentations, discussions and conclusion.

Each of the presenters was asked to explain: 1) *How their institution works to bring LK into decision-making and advisory work.* 2) *What plans their institution has to further strengthen the involvement of LK in the future.*

The workshop addressed the knowledge held by users, local communities and Indigenous Peoples in Greenland and the Arctic. In the following, the various workshop participants use different terms to describe this. The most commonly used term in the workshop was “user knowledge”. While different terms may be used, however, it is generally considered to be covering the same type of knowledge.

The powerpoints presented at the meeting are all available for download at the link: <https://www.uarctic.org/organization/thematic-networks/collaborative-resource-management/> (see under the heading “Past activities”).

A. The first presentation was by Amalie Jessen, Head of Department from the Ministry of Fisheries, Hunting and Agriculture. The title of her presentation was “Arctic User Knowledge in Practice in Greenland”. The presentation was about how the Ministry is seeking to bring user and hunter knowledge into its decision-making and advisory work.

Jessen stressed that the hunting laws in Greenland stipulate that hunter and user knowledge must be included in hunting management. The Ministry is working on a new executive order for the collection of hunters’/users’ knowledge. This executive order will be important when actually practising the collection and production of hunters’/users’ knowledge. A hunting council has also been established which provides inputs for hunting management. Public hearings are also undertaken. Community consultations are being undertaken as well as information campaigns. The Ministry is being provided with substantial information from hunters/users. This includes inputs from hunters relevant to Greenland’s participation in intergovernmental bodies. KNAPK is invited to form part of Greenland’s national delegations to a range of international bodies.


It is challenging to ensure that local/user knowledge is being used in balance with science-based management advice in order to influence management decisions and provide advice nationally as well as provide inputs into international management bodies. This is because of a lack of structured written information from locals/users. There is a more pressing need than ever for more structured and organized collection and also for a more structured use of hunter and user knowledge in decision-making processes. The PISUNA initiative is something that the Ministry is proud of. But, at the same time, it is important to recognize that it is only working in a few settlements and with few people. There is a need for an initiative that covers the whole of Greenland. This is something that the new executive order will seek to address.

They know that there is a lot of frustration among hunters regarding the biological advice provided. This underscores the need for more systematic collection of hunters’ knowledge. The Ministry has started some more structured consultations with hunters in some communities, and

they are obtaining a lot of important information from these hunters. The Ministry wants to extend this type of consultation to other areas and other species.

The Ministry's plans for further strengthening the involvement of hunters and local knowledge include revising the hunting laws to give equal weight to science and hunters'/users' knowledge in the decision-making process. This also relates to the above new executive order (PAIKA). There will be a need for dialogue and communication with hunters and their associations to implement this plan. This should include face-to-face consultations and exchanges of experience as well as regional and national written and digital reporting of hunters'/users' observations and knowledge on wildlife. Dialogues also need to be organized between hunters and scientists. The option of using digital meeting platforms should be further explored.

2) What are the Plans of the Ministry to further strengthen the involvement of HUNTERS AND LOCAL KNOWLEDGE in the future



 NAALAKKERSUISUT
 GOVERNMENT OF GREENLAND

- **The Legal basis to be strengthened BY;**
 - Revision of the Law of Hunting; equal weight for the science and hunters / users knowledge in the decision making processes
 - Introduction of a new executive order (PAIKA)

- **DIALOG and COMMUNICATION**
 - The experiences of the dialog and exchange of information in Tasiilaq, Ittoqqortoormiit and Qaanaaq worked
 - To work both on traditional way with face to face community consultations, and

 - To form both written and **DIGITAL reporting system** of hunters and users observations and knowledge on wildlife – regional and country-based

 - To organize **dialog between hunters, managers and scientists / researchers** to identify where they can learn from each other, in stead of arguing with each other as we see it today
 - **Corona lessons: Virtual meetings work (for the most – but not always)**

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Jessen said that during a meeting between the Ministry and the KNAPK Chair, it was agreed that there was a need for better structured and better organized collection of hunters' knowledge. This would result in a more balanced input for municipal and government-level decision makers. Science is important but not enough. The process should be based on structures and organizations and lead to long-term possibilities for comparison.

Questions to Amalie Jessen: Is it possible to see the draft executive order? Not at the moment due to the upcoming election. Who developed the executive order and is it possible to provide input? The draft executive order was developed by the Ministry. Input will be possible at a later date. Bjarne Lyberth: Does the draft executive order plan for any payment to participating hunters? This is not yet decided.

B. Presentation by Fern Wickson, Scientific Secretary at NAMMCO, on "User Knowledge in NAMMCO's Advisory Work". NAMMCO is an intergovernmental organization providing advice on marine mammal management in the North Atlantic. NAMMCO serves all four

member countries (Norway, Iceland, Greenland and the Faroe Islands) and their different uses for marine mammals. NAMMCO provides advice based on requests from its members. Knowledge and observations go through a process of knowledge synthesis and committee review before advice is then given. User knowledge in NAMMCO has seen many different developments, including an early idea of establishing a joint assessment committee, something that never materialized. A user knowledge working group was subsequently established, which operated for a couple of years. In 2003, a large conference was held on User Knowledge and Science in Management Advice. NAMMCO has since firmly established that ecosystem-based management needs to include biological and socio-economic aspects, and this also therefore applies to the management advice NAMMCO provides (Fig. 1).



Figure 1. NAMMCO diagramme

NAMMCO is now in a position where there are different avenues being used for incorporating user knowledge into decision-making and advisory work. A member can include representatives from user organizations on their delegation to the Council. Other organizations from outside member countries, such as Indigenous Peoples' organizations, can participate as observers in the Council meetings. User organizations can participate in management committees through national delegations and make presentations, and user knowledge is a permanent item on the agenda of management committee meetings. Users are significantly involved in the Committee on Hunting Methods. In the scientific committee/working groups, users can be involved in research projects and in survey planning. NAMMCO does, however, recognize that further steps need to be taken to ensure better inclusion of user knowledge in the NAMMCO processes.

NAMMCO's future plans for further strengthening user knowledge are not yet concretely developed. NAMMCO's Secretariat do, however, envisage a range of possible ways to strengthen the inclusion of user knowledge. These include: notifying organizations of NAMMCO's work plans for species assessment; developing Memoranda of Understanding with a range of different organizations so that there are more formal agreements on information sharing and collaboration; encourage the expansion and use of observational databases (such

as PISUNA-net); call for inputs to working groups; receive and use more structured user knowledge inputs (Traditional and Local Knowledge, TLK) into working groups; have user representatives participate as observers in working groups/scientific committee meetings; have user representatives be actual participants in working groups; enhance research collaboration between users and scientists; develop joint research programmes; have all member countries nominate user representatives (TLK members) to the Committee on Hunting Methods and also have all member countries include the same representatives in the national delegations; re-activate the user knowledge working group; host dialogue forums to build more understanding and trust; hold vision workshops to establish shared goals and plans; establish a committee to assess socio-economic and cultural impacts with the aim of informing the advisory process; NAMMCO could ultimately work on pursuing integrated assessment and advice.

There is a question as to the extent to which all these possible ways of improving user knowledge incorporation should be applied at national and/or NAMMCO level. Lastly, Wickson stressed that whatever the Secretariat proposed, it would ultimately need to be approved by NAMMCO's Council.

Questions: Per Ole Frederiksen asked how the collaboration between NAMMCO and the Ministry of Hunting and Fisheries in Greenland took place in practise in relation to resource use in East Greenland. Amalie Jessen from the Ministry explained that KNAPK is invited to NAMMCO's annual meetings, where they are given the opportunity to make a statement on their knowledge. The Ministry has also undertaken consultations in East Greenland, where hunters were able to present their knowledge on narwhal hunting. Jessen also stressed that NAMMCO was only providing advice and that decisions are taken nationally.

C. Presentation by Jessica Lefevre, Legal Adviser to the Alaska Eskimo Whaling Commission (AEWC), on experiences from "The Alaska Eskimo Whaling Commission and the Communities of the Western Arctic Bowhead Whale Stock". Lefevre started by giving some background to the AEW. The AEW is formed of the 11 villages in Alaska that are involved in bowhead whale hunting. Since 1977, the bowhead subsistence harvest has come under the jurisdiction of the International Whaling Commission (IWC). The legal system that people in Alaska live under is much less friendly than in many other places around the world. It is not even clear if the people of Alaska have the right to hunt marine mammals. This is only something that is *de facto* recognized by the government. The major work of the AEW is thus to promote collaboration between hunters and scientists in order to build an argument for establishing legal hunting rights. The presentation was focused on the relationship between hunters and scientists. There are no formal management structures in Alaska with legally-established involvement of the local Indigenous population. In cooperation with the US government, the AEW is contributing practically to the local management of bowhead whale subsistence hunting. Over the years, this cooperation has improved. The AEW is now serving as an adviser to the US delegation to the IWC, although this is only an informal arrangement. The management of the bowhead whale stock relies on scientific research.

Despite the legal challenges, hunters in Alaska have enjoyed great success in ensuring that local knowledge is being provided as the foundation for scientific research (on the bowhead whale). The reason for this success dates back to IWC pressure on scientist censuses of the stock which showed (erroneously) that the stock was being extirpated. Local knowledge proved that this was wrong and highlighted the weak scientific understanding of the behavior and status of the bowhead whale. Luckily, the local government at that time had access to critical financial resources that could be used to hire expertise, including local expertise using visual and acoustic

observations. This showed that the stock was healthy and growing. This was essential in trying to preserve cultural and food security aspects in villages dependent on bowhead whale hunting. The whaling captains taught the scientists about the bowhead whale's behavior. On this basis, new census methods for bowhead whales were developed. It was years before scientists were able to establish that local knowledge was actually accurate in terms of bowhead whale stocks.

The AEW's work has shown that, since the 1980s, oil and gas exploration along the coast has changed the migration patterns of the whales. As a result of these industrial activities, whale hunting has become more difficult and dangerous. Harvesting of bowhead whales diminished sharply due to this changed migration pattern. Political pressure from the AEW and others resulted in research into the impact of industrial activities on the whales. Initial research showed that there was no impact but the hunters knew this was not the case. With their own funding from local/regional government resources, further research was undertaken. This focused on bowhead whale migration in the presence of industrial activities. This time, hunters were involved in research design. This involvement in study design was extremely difficult to accomplish in practice. It took a few years, with lawsuits and changing of laws, to ensure user involvement in study design. The reaction of migrating bowhead whales to noise from the oil and gas activities, which was first rejected, eventually proved to be undoubtedly true (as had been claimed by the whale captains all along).

Lefevre explained the difference between native hunters' understanding of the marine ecosystem and that of Western scientists. This is similar to the difference between knowing the entire ecosystem and knowing only pieces of it. The whaling captains and other hunters now participate in study design and in data collection as well. Research results are presented to IWC. Through the insistence on having research undertaken together with local users, the AEW is therefore contributing to directing user knowledge towards the international management body of the IWC.

The AEW is putting significant efforts into ensuring exchanges between users/hunters and researchers. This is done partly through four annual meetings between marine scientists and hunters. The objective is to influence marine ecosystem management and ensure researchers are exposed to the local realities of the area. Future meetings are planned to ensure further co-production of knowledge between local experts and Western science researchers. As in all of the AEW's work, the aim is still to obtain US recognition of AEW and for it to become a legally-supported management body not only for whale harvesting but also water/marine environment use.



Figure 2. Indigenous people harvesting bowhead whale

D. Presentation by Yuan Liu, Programme and Communications Officer with CITES on “CITES and User Knowledge”. This presentation on CITES’ engagement with Indigenous Peoples and Local Communities’ Knowledge (or User Knowledge) is the CITES Secretariat’s first experience of this. It means that looking at how Indigenous Peoples and Local Communities (IPLC) knowledge influences the decision-making processes in CITES is something very new to the organization. Liu’s presentation addresses two questions: How is CITES working on local/user knowledge? And what plans does CITES have in this regard? The focus will be on the first question as there are currently no plans in this regard. CITES represents the fundamental international law on trade in wildlife. The presentation stressed that CITES is a treaty and not an organization in its own right, and that actions are based on decisions taken by the parties to CITES. It is the Conference of Parties and the Standing Committee that take decisions in CITES. The committee on plants and the committee on animals are advisory committees. One party has one vote and all interaction with CITES or representation of views has to be directed through the respective national CITES representatives. This may seem a long process but this is how it works.

IPLC knowledge is being addressed at strategic, global, national and local level. On a strategic level, the CITES Convention and resolutions recognize the importance of considering traditional knowledge and livelihoods when addressing CITES listed species. In CITES’ strategic vision for 2021-30, Goal 2 stresses that the best available information should be generated to support CITES decisions and that such best available information includes having access to the relevant knowledge of Indigenous Peoples and local communities. This statement is something new in the CITES context. It is an important adjustment of direction.

Attempts to establish a Rural Communities Committee at CITES level, and to give such representative organizations a legally-recognized role, have never been agreed. Most CITES

parties consistently believe that whatever IPLC involvement there is should be driven by the national level only and that local communities should be represented only by national representatives. Furthermore, attempts to make local knowledge and socio-economic considerations a part of the CITES listing criteria were also never adopted by the parties.

However, at Conference of Parties (COP) 18 in 2019, there were resolutions that encouraged national parties to engage in processes with local communities to prepare inputs from the respective countries to the COP of CITES. There were also resolutions that encouraged countries to include representatives from local communities in the official delegations to CITES. A Standing Committee Working Group on Engagement of IPLCs was also established. This Committee will work on how best to engage IPLCs in the CITES processes. It will develop non-binding guidance for the parties on how best to consult with IPLCs to improve their involvement in the CITES processes. It will draft recommendations in this regard for the next COP (COP 19).

At national level, Liu mentioned a number of countries that have taken steps to ensure different ways of engaging IPLCs and using IPLC knowledge in national processes related to CITES. However, the steps vary greatly from country to country. Countries are not yet following any guidance from CITES.

At local level, a good number of livelihood programmes or case studies have been undertaken where IPLCs are directly involved in various forms of production, use and trade of CITES regulated species and products. In these cases, there are several good examples of improved livelihoods and increased sustainability of the targeted species.

E. Presentation by Kuupik Kleist from ICC Greenland. Kleist's presentation was cut short due to technical issues and in the interests of time. ICC believes that the issue of local knowledge is very important. ICC would like to stick to the term "Indigenous knowledge" rather than traditional or local knowledge as they believe it is more fit for the purpose. One of ICC's activities has been in the Northwater Polynya where Indigenous knowledge has been gathered. It has played an important role in the management recommendations developed for the area. ICC works at national and international level and, being an NGO, ICC has no formal decision-making power but is working with the governments of Greenland, Canada and Denmark.

Based on work within ICC, the organization has developed recommendations in relation to Indigenous knowledge, namely: establish a set of procedures or checklist to ensure safeguarding of Indigenous knowledge in research collaboration; local/Indigenous populations' involvement (in research collaboration) should be timely and in harmony with the seasons; develop formats for standard contracts (in research collaboration) that establish issues such as duties, rights, payments etc.; ensure (in research collaboration) that survey results and reports are properly shared with local communities; and, more generally, promote the inclusion of Indigenous knowledge in regulations and laws.

Kleist concluded with the observation that, every year, despite the fact that there is an advisory body to the government that includes user representatives (Fangstrådet), there is a strong argument for quotas on a number of species. Views regarding the size of these quotas vary sharply between users and scientists and politicians. A better solution needs to be found in this regard.



Figure 3. Recommendations from INUIT

F. Presentation by Pernilla Malmer and Maria Tengö, researchers at the Stockholm Resilience Center, Stockholm University on “Knowledge of and with Indigenous Peoples and Local Communities in the Convention of Biological Diversity (CBD) and the Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services (IPBES)”. The focus of the presentation was on how Indigenous and local knowledge and scientific knowledge can work better together and especially ensure that Indigenous and local communities are better included in this conversation and collaboration. The presentation included “How CBD is seeking to bring user knowledge into decision-making” and “Suggestions on what could be done in the future to strengthen user knowledge in CBD”.

The CBD has, from the very beginning, stressed the important role that Indigenous and local communities play in the management of biodiversity and ecosystems. A range of spaces has been created for IPLC input, including the International Indigenous Forum of Biodiversity, Community-Based Monitoring and Information System, Local Biodiversity Outlooks etc. On a formal level, IPLC is generally given a fairly strong role within the CBD. The evidence base for the CBD needs to be strong and, in this respect, the IPBES has been created. The IPBES states that “Indigenous, local and scientific knowledge are complementary sources of evidence for sustainable management of biodiversity”. Creating the evidence base under IPBES includes procedures, participatory mechanisms and institutional arrangements for inclusion of IPLC knowledge. Within IPBES, the value of Indigenous land management systems is recognized.

A key point is how to design the interface between IPLC knowledge and scientific knowledge - in order to obtain a better and broader understanding of the biodiversity and ecosystem status and development. It is here that the Multiple Evidence Base (MEB) approach is being used. The MEB approach underpins the work of CBD and IPBES and is very much the way of working within IPBES. This approach has been co-developed by a range of different organizations, including some Indigenous organizations. Fundamentally, the MEB states that

there are many different sources of evidence that can contribute towards an enriched picture. Knowledge systems are often complementary. You need to bring these knowledge systems together to get the widest picture of the situation. The MEB approach also stresses that it is not scientific knowledge that forms the gateway to talking about other knowledge systems. Different knowledge has to be given equal weight. Each knowledge system should be allowed to contribute on its own terms. Different knowledge systems should be given room for their own interpretation and presentation.

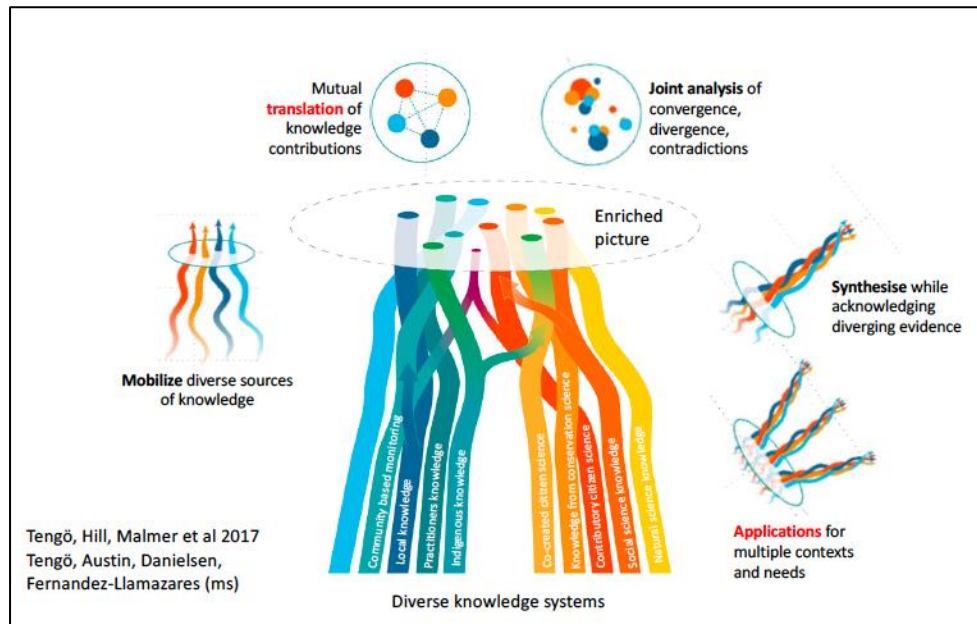


Figure 4. Illustration of diverse knowledge systems

Key steps in the MEB approach involve coming to a mutual understanding of the issues. This understanding can be reached through different types of dialogue and meetings. The next phase is then to develop different ways of knowing while respecting and recognizing: 1) that there are different ways of knowing; and 2) that the different knowledge systems are in charge of their own knowledge. The third step is then a collaborative interpretation of knowledge and a joint understanding of where the findings of the different knowledge systems converge, diverge or contradict each other. Ways of resolving possible divergence and contradiction can then be developed. Guidance has been developed for the MEB approach and it very much stresses the need for dialogue. Mobilizing the different knowledge systems is essential, translation between different knowledge systems is very important, and actual application is crucial. Transparency in how the different knowledge is used for management decision-making is also of major importance. There must be clarity as to how management decisions are made and on what knowledge they are based. On-site dialogue between researchers and IPLC knowledge holders is considered an effective way of implementing MEB.

Future needs in terms of strengthening IPLC knowledge in relation to the CBD should include: strengthening the role of IPLC in developing and implementing the Global Biodiversity Framework; actual implementation of the community-based monitoring system in which IPLC contributions are visible; implementation of the important dialogue between different actors and knowledge systems; and full and effective participation of IPLC in National Biodiversity Strategies and Action Plans, including in their implementation and monitoring.

G. Presentation by Jason Akearok, Director of Nunavut Wildlife Management Board on “Conserving Wildlife through the Application of Inuit Quajimajatuqangit (Knowledge) and Scientific Knowledge”. Akearok sought to answer the two questions on how NWMB is addressing the promotion of user knowledge and what plans it has for the future. The NWMB is the main instrument for wildlife management in the Nunavut area, although the relevant Minister has the final say. NWMB seeks to ensure the best possible sustainable management of wildlife in Nunavut. It has a mandate to promote Inuit knowledge in this regard. NWMB’s primary functions include participating in wildlife research and setting quotas for allowable harvests, as well as providing management input and advice to a range of different area-based developments and land uses, and providing training and education in wildlife management. NWMB makes decisions based on best available knowledge, including Inuit and scientific knowledge.

Akearok stressed that, when decisions are to be taken, NWMB seeks close dialogue with the respective communities in Nunavut. The final say rests with the Minister. In practice, this means that, for some of the internationally regulated species (polar bear etc.), NWMB’s initial decisions may be rejected by the Minister. Some of the local Inuit organizations have taken the government to court (ongoing process) on issues regarding polar bear hunting quotas. The local organizations claim that the government has not properly considered local Inuit knowledge when reducing hunting quotas. There is thus a general frustration with the fact that Inuit knowledge may be disregarded in the Minister’s final say. Furthermore, NWMB recognizes that the form and level of development of Inuit knowledge coming from different parts of Nunavut is sometimes difficult for NWMB to translate into management decisions and proposals, let alone present to the relevant Minister as a basis for NWMB management proposals. This is an issue of the resources and capacity of the different Inuit organizations and is something that needs to be addressed.

NWMB is focused on wildlife management. There are a number of challenges in terms of how different developments of a non-wildlife nature (but which have an impact on wildlife) are addressed by other mandated agencies. Even though there is a requirement for Inuit knowledge to be included in development decisions, this does not necessarily happen. The result is local frustrations with some development projects.

New opportunities for promoting Inuit knowledge include expanding the existing community-based monitoring network with more participants. Another opportunity lies in expanding the existing community-based monitoring network with participants from groups who are themselves evaluating and interpreting their own information before it is passed on rather than just passing on raw data to scientists. NWMB is also seeking to support more community-led research projects that build on Inuit knowledge. NWMB is further seeking to strengthen its own capacity in terms of addressing and responding to Inuit knowledge.

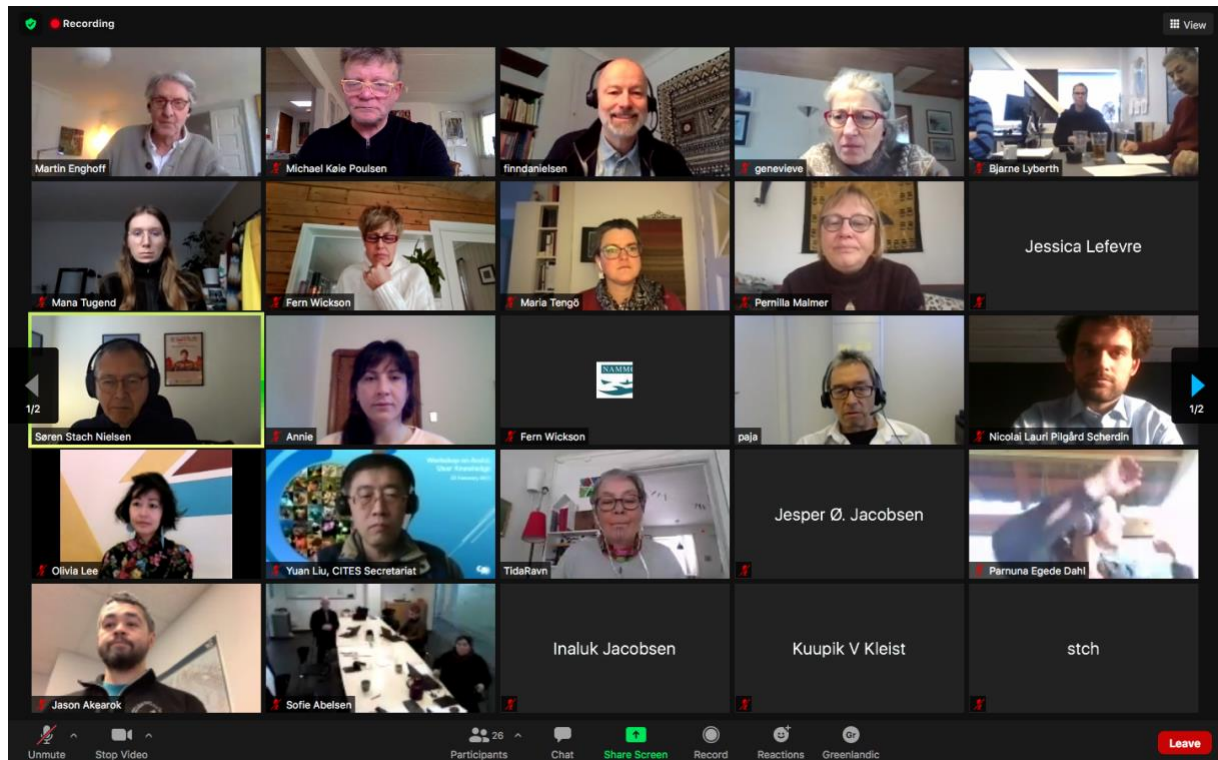


Figure 5. Photo of the workshop participants

3. Discussion and conclusion

The organizers summed up what we had heard in terms of presentations and asked what actions would be the most important to take forward in the future in order to strengthen user knowledge. Questions from the participants were then encouraged, which included the following:

Per Ole Frederiksen: Very good to be participating in a meeting without the need to travel. In relation to the presentation on the CBD and IPBES, it is crucial that the knowledge is combined. A comment: in Greenland, there is a need for far more discussion on how to involve user knowledge. Need to combine knowledge and put it into one. Much has been proposed to the responsible bodies in Greenland in terms of user knowledge, but the users do not feel that they are being listened to. User knowledge needs to be far more highlighted in decision-making generally and in changing regulations. Much more respect needs to be given to user knowledge. Amalie Jessen responded in relation to Greenland: due to the parliamentary elections, the Ministry cannot share anything related to the upcoming executive order but there will be a possibility for all parties concerned to provide comments at a later date. The Ministry will also seek to discuss this in its possible community consultations.

The workshop participants were then asked: What do you as participants in the workshop feel are the key actions to take forward in order to promote the use of local/user knowledge?

Geneviève Desportes from NAMMCO: A major problem is that there is no good dialogue. The conversation is polarized. NAMMCO has tried but failed to get good dialogue between users/hunters and scientists/managers, perhaps because the organization is not good at managing such dialogues, or perhaps because the dialogues are difficult to manage.

Jessica Lefevre: Experience from Alaska shows that just putting scientist and hunters in the same room to talk is not fruitful. They start from very different worldviews. They talk at cross-purposes. They tend to leave such meetings more frustrated than they began them. What has been more successful is to force scientists and their funders, through legal means and legislation, to give hunters the room to review and edit research plans. And that hunters are likewise given the power to insist on changing and influencing research proposals and study design while also ensuring they are at the table when interpretation of research data is undertaken. User knowledge thus gets into published documents that includes both scientists and users. This is the only way to get anybody to listen to the users. It is therefore not just a matter of consulting but of structured and legally-required participation that will give results in terms of promoting the use of local/user knowledge.

PåviâraK Jakobsen: His experience is that scientists and users talk at cross-purposes. Scientists have their own dialogue. The hunters and fishers are regarded as having no knowledge. Too often, the hunters and fishers are just regarded as non-educated. The fact is that scientists do not understand their way of life and how fishers and hunters are able to survive in this environment. People that live on the land are the first ones to see the changes that are happening in the environment.

Søren Stach Nielsen: Collaboration between scientists and users is possible but over the last 15-20 years there has been more talk about how to ensure this collaboration than actually doing it or testing it in practice. It will not work if local users come with their knowledge and scientist with theirs. It has to be integrated and combined into one paper or document. Actually doing this (the full integration) is the only way forward and ensuring that it is integrated into the analysis as well is the only way of getting government to take action on it. Dialogue is the only way, and it is not going to be easy. There will be failures.

Trying to wrap up the many inputs into the workshop, Martin Enghoff concluded that many international management bodies and national bodies say that user knowledge is highly relevant. Inclusion of user knowledge is often stated as a requirement in the various agreements and objectives of legislation related to these bodies. It is, however, also clear from the workshop discussions that ensuring that user knowledge is actually used in management decision-making is a major challenge for most processes. Even though there are structures promoting user knowledge in some areas, their actual implementation is reportedly not easy and not successful in many cases. We see more talk than practice. In Greenland, there is now a move (with the new executive order) towards ensuring a more structured and legally-required use of user knowledge. As is now the case in most of the Arctic, these are mere 'bits and pieces' feeding into the national and international level. Being invited as a guest to speak at meetings or to occasional dialogue meetings is not the same as ensuring structured and continuous input of user knowledge for management decisions. The major challenge lies in translating nice ideas into practice. This can only be done if user knowledge systems are funded and legally-required (with the right legal support).

Based on the workshop exchanges, a list of possible actions that could be taken to promote further incorporation of user knowledge into management bodies includes:

- Develop structured and systematic national systems for collecting user knowledge; this should be legally-required and be considered as equally important to the management processes as input from scientific studies.

- Develop explicit demand from within the various national and international management bodies for the incorporation of community observing data into all biological population assessments.
- Explicitly mention the involvement (or absence) of community observing data in various assessment reports related to living resources.
- Ensure better, continuous, legally-required and structured dialogue between holders of user knowledge and scientists. Promote joint analyses that are published in reports.
- Through international management bodies, push: (a) for more coverage in time and space of community observing programs; and (b) to make more user knowledge available in web-based, searchable databases.
- International management bodies should promote the value of user knowledge by showcasing the value of user knowledge and demonstrating how the information can be used in a way that is scientifically credible and acceptable to peers.
- Further involve users/hunters in relevant committees (not just as observers but as real members) and in surveys and national government delegations.

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This report is made under the project
Capacity-building in Arctic standardization development (CAPARDUS)
 funded by the European Commission Horizon 2020 program
 Grant Agreement no. 869673.



Project partners:

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