



**CHARTER 4<sup>th</sup> General Assembly Minutes  
-final meeting-**

**12<sup>th</sup>-14<sup>th</sup> November 2024, Rovaniemi, Finland**



## Tuesday 12.11.2024

Many had arrived in Rovaniemi already on Monday 11.11.2024, and side meetings had been arranged. Tuesday also started with time for side-meetings (or an excursion to Santa Claus).

The official part of the meeting started after lunch in the Arktikum. During the opening we had approximately 50 people around Europe (and even from northern America) in the meeting room. During the three days more than 70 people attended - including consortium, sister projects, Arctic Centre and local collaborators. In addition to researchers, the administration side of the project coordination also attended the meeting, as well as communication experts within the project, and from Arctic Centre and Arktikum Science Centre. Planning and preparations were carried out by **Leena Leppänen, Philip Burgess, Jenni Katermaa, Sirpa Rasmus, Markku Heikkilä, Anne Raja-Hanhela, Henri Wallen and Bruce Forbes**. During the run up to the meeting, especially finalizing the CHARTER exhibition was a significant task.

In the opening session, the local coordination team welcomed the visitors. **Osmo Rätti** from the Arctic Centre also welcomed CHARTER group to Rovaniemi and to the final project meeting, and **Bruce Forbes**, the project PI, gave his opening speech. Both reminded us about difficult conditions during the beginning of the project because of COVID-19, and because of the war in Ukraine – and also reminded about reaching some of the ambitious goals we set in 2019.



The first scientific session was titled “Data and tools”, and was arranged so that short talks brought us from the past to the present day, and even into future. **Marc Macias-Fauria**, UCAM, has been leading WP4 on biodiversity changes at centennial time scales. **Andrew Martin** updated us about the huge task of creating the Holocene Arctic Biodiversity Map (database). After this, **Richard Bradshaw and Mari Kuoppamaa**

(UNILIV) talked about the millennial vegetation history of northern Fennoscandia: what happened and why. In the “recent past and present day section we heard several talks including those by **Mariana García Criado** (UEDIN) on Arctic plant biodiversity changes, by **Helena Bergstedt** (BGEOS) on trends and linkages across the Arctic based on satellite records, by **Dorothee Ehrich and Juan-Ignacio Ramirez** (UiT) on Herbivore co-occurrences and predator occurrences, by **James Speed** (NTNU) on cascading vertebrate diversity patterns and primary productivity across the terrestrial Arctic, and finally by **Timo Kumpula** (UEF) and **Tarmo Virtanen** (UH) on land cover transitions at decadal time scales. The “future” section had two talks: by **Gaelle Veysiére** (UCL) explaining some modelling results; quantifying rain on snow events from station data, reanalysis and bias-corrected future predictions, and by **Sirpa Rasmus** (LAY) explaining the workshop facilitation tool called “Dreams and surprises”.





After coffee (with posters brought by several CHARTER researchers) we continued with a session on “lessons learned and research gaps; monitoring and data sharing”.

**Kai Bischof** and **Simon Jungblut** brought greetings from the FACE-IT and ECOTIP projects, and listed research gaps from their point of view. The fact sheets produced by projects CHARTER, ECOTIP and FACE-IT were also mentioned (<https://www.charter-arctic.org/charter-fact-sheets/>). This was followed by a short presentation on the Arctic PASSION project by **Adam Stepien** (LAY; see also <https://arcticpassion.eu/blog/EDBs>) and on the MountResilience project by **Pasi Rautio** (LUKE).

**Sanna Hast** from the Reindeer Herders’ Association, Finland, reminded us about linkages between knowledge and power. Knowledge is used also for political purposes. Facts are needed to support arguments, or to make counterarguments against certain political aims (related to reindeer herding). One example mentioned was reindeer grazing and its impacts on carbon sequestration into the soil (where there is not enough knowledge to give recommendations), or negative impacts of grazing on certain vegetation. Positive impacts of grazing ignored in policy making. She also mentioned that knowledge is adaptation. Winter changes are already well understood. What about changing summers? Herders are already observing impacts on pastures, drought, new parasites. In the planning for adaptation, knowledge on changing summers is needed. Another research gap is the impact of mining dust on grazing environment.



*Sanna Hast (Reindeer Herders' Association, Finland), Simon Jungblut and Kai Bischof (FACE-IT), Ioanna Merkouriadi (FMI) and Jakob Assmann (UZH) in the panel on Tuesday.*

After these short talks, a **panel discussion** was facilitated by **Isabel Barrio** and **Leena Leppänen**, with some speakers and also with two CHARTER researchers added to the panel: **Jakob Assmann** (USZ) and **Ioanna Merkouriadi** (FMI).

The panel was first asked about the most critical knowledge gaps, thinking about terrestrial Arctic/ northern Fennoscandia. Answers listed the impacts of warming summers, needs for refugia (strict conservation), and data collection on snow.

The group discussed about ways forward, the use of data and knowledge, and the difficult question of reaching decision-makers.

We need to make knowledge comparable across the region - more locally relevant results, and input from Indigenous populations are needed. The coastal environment starts way more inland than we realize - the terrestrial-coastal-maritime connection needs to be remembered.

We know a lot already - we even know what should be done – we need to reach decision makers and need sociologists to better reach people. On the other hand, decision making is only loosely based on facts. Researchers need to think more about what the implications of these facts are. We don't know what to do, only based on facts. An issue of how to communicate the research findings, and to whom. We need to be very aware about who we are talking to and who is listening.

Decision makers are actually interested. Many of them feel the need for knowledge, and that it is not accessible. Many corporations want to do better but often don't know how. We have that power of knowledge and should use this.

It would help to create understandable, tangible scenarios for example to Regional council of Lapland, or to Svalbard, some decades to the future. What will the weather be like? Vegetation? Possibilities for livelihoods? Food production? Is it a nice place to live? Locally tailored approach is the key. Allocate funds for communication! Seek out partners who have feet in other communication channels, join forces when possible. And school kids! That is a place to start.

Use the policy briefs produced! Use fear – how costly it will be if actions are not taken, and how there will be land-use conflicts if matters are not addressed. Use connections that have been made – and think who are the right people (focal points) to reach. Personal connection is important. For example, when you annually visit the EU Arctic Forum, at some point they start answering mails. “Knowledge is power, be proud to use it!”

The cross-border collaboration in monitoring and data sharing was also discussed. In some fields (marine science) this comes more naturally than in some others. It is important to have shared protocols, open access to instrumentation, etc. Monitoring efforts should also be separated from project funding – this would require a “bigger cake”; more funding to do both long-term monitoring AND research project work. Pan-arctic organizations are important. Initiatives like CAFF and ICARP need to be utilized better. More cross-disciplinary work is needed, including various knowledge systems, TEK, to better understand each other. When it comes to modelling and observation work, connecting the scales is important.

In the end of the discussion, Bruce mentioned that several points made in the conversation reminded him about RENMAN recommendations, made 20 years ago.

Finally, the **CHARTER exhibition** with photos but also with summaries on research work and findings was opened! Because of the high tourism season, many eyes will see at least part of that exhibition.

For dinner, the bus took us to Raitola reindeer farm to meet (and let's be honest, also eat) some reindeer. Later, back in town, we heard DJ Tundra and the CHARTER house band at Kauppapyhtiö.





### Wednesday 13.11.2024

Wednesday started with a meeting of the Expert Advisory Group (for Markku Heikkilä, Bruce Forbes and Sirpa Rasmus), or time for side meetings (for others). Before lunch, open data management issues were also discussed.

After lunch, the second scientific session was opened. In this session WP3 and WP6 topics were presented (local views, co-producing knowledge, public dialogue). **Otto Habeck** (UHAM) talked about future(s) or reindeer herding, **Roza Laptander** (UHAM) about contemporary reindeer herding in Yamal and difficulties, challenges and solutions, and **Teresa Komu** (UO) about meanings of "success" in reindeer husbandry. **Hans Tømmervik** (NINA) has been working at the interface of many WPs in CHARTER, and talked about Arctic land use and biodiversity management practices: links between local livelihoods, albedo, and climate. Presenting WP6 scenario work, **Simo Sarkki** (UO) talked about "wild logic" scenarios: land use governance and reindeer herding, and



**Jussi Eronen** (UH) presented the policy brief titled “Tensional dreams - Policy options for a sustainable Arctic” (see: <https://www.charter-arctic.org/policy-briefs>).



After these talks, **Otto Habeck** and **Sirpa Rasmus** hosted a discussion session titled “Co-management in land-use, co-creation in science”. First, we heard of the lessons learned in three other Horizon-funded projects, largely concentrating on livelihoods, land-uses and decision-making. **Pasi Rautio** (LUKE) told about project ArcticHubs, **Tanja Joonas** (LAY) project JUSTNORTH, and **Pavel Tkach** (LAY) the on-going project Arctic PASSION. Finally, **Enni Similä** (Sámi Council) talked about the ReCap ASáp project.

Pasi reminded about the value of finding co-workers among local people, and among decision makers. Tanja explained how national authorities need understanding of meanings and lifestyles in the north; legislation will not solve all the problems. In land-use projects, early consultation and dialogue is necessary, as well as more transparency. Tanja also mentioned the project REBOUND which will continue the work of JUSTNORTH.

Pavel listed several lessons learnt: use mass media channels for better marketing of the results; use plain language! Mayors and administrators want plain language, and maps. Even if the project is about natural sciences, municipalities want to know what the implication to the society is. Social sciences are needed, and economic understanding. The project presented by Enni is a concrete example of a locally led process. The project works in Sápmi, and aims at acting, not reacting to climate change. It is for example about fostering leadership, learning from futures research, creating knowledge hubs, piloting “Boahteagat jurdagat”. There will be a “Lavdan Arena”, event in Kautokeino next summer, and they will organize the first Sámi science week.

These short talks were followed by a **panel discussion**. Pavel and Enni were invited to stay in the panel, and we invited also herder **Juhani Lakela** from Kemin-Sompio herding district, and **Teresa Komu** and **Tim Horstkotte** from CHARTER team. Juhani represented especially local experiences on collaborating with research projects.

We started with a question “what has worked for you, what not”, what have you learnt.

Juhani had learnt that we need to know more about weather, now and in the future, to be able to adapt. Tim had seen that collaboration has worked between reindeer herders and scientists. People are welcoming, and open and patient to scientists; there is responsibility to give back. In Sweden, there has been successful collaboration in that sense that it is understood that reindeer grazing is needed to maintain the open mountain landscape. Teresa also had felt welcomed, and trusted. She reminded about the importance of meeting other people as a human being and being decent; being willing to understand and respect other perspectives. Enni mentioned several earlier projects with co-creation, with herders all over Sápmi documenting changes observed, with Sámi Council also involved from the beginning. Pavel mentioned again concrete examples and solutions: in the interview with Luleå municipality, they expressed the interest to see concretely what other cities are doing to adapt to climate change.

Otto raised the question of “othering” the policymakers. How could we interact with decision-makers in a better way?

Pavel reminded that policymakers are also often part of local communities; communities are involved in policy making. Small municipalities often rely on local input, as they do not have big resources. Research projects should pay attention to these small remote municipalities. There local communities and policy makers are often on the same line. Enni felt that from Sámi perspective, it seems that policymakers and scientists are on the same line, often, and not necessarily with locals. Deatnu fishing agreement being one example. No local Sámi input was included into decision making related to recent prohibiting fishing. After the process had been investigated afterwards, it had been found out that the consultation had been poor and Indigenous knowledge was missing. Juhani raised the Sokli mine case. It has been discussed since 1970s. Mine would be in the middle of the Kemin-Sompio winter pastures. First the motivation to open it was employment, then green transition. Tim felt that othering is dangerous, we need to aim at collaboration and information flow. He was not sure about the impact of his research; he had been asked for example 'What use will this be to me if it comes to a court case?'. Should a scientist think this way? In any case, our findings may be used in court cases.

Final question was: What could be the next step that could be taken, so that the situation in the North gets somehow, somewhat better?

Teresa noted that she is an anthropologist, and anthropology is not about making things better, but about understanding – but perhaps better understanding can make things better? Juhani stated that the knowledge is there. Now what is needed are the tools to

use the knowledge. Pavel repeated: understandable knowledge, practicality. Enni mentioned existing ethical guidelines and roadmaps to Arctic research, valuing traditional knowledge as an equal knowledge base. Tim had the final word: herder had told him that “because we are so few, we think we are wrong”. But local knowledge is critical, we need to increase the tolerance towards different knowledge systems, and respect others. Local people can proudly present their point of view.



*Pavel Tkach (LAY, Arctic PASSION), Enni Similä (Sámi Council, ReCap ASáp), Teresa Komu (OU), Juhani Lakela (Kemin-Sompio herding district) and Tim Horstkotte (UmU) in the panel on Wednesday.*

The last session on Wednesday was called **legacy session**, and we asked: What did we learn? How to move forward, possibly together? There were some talks about methods, approaches and processes that will continue long after CHARTER: **Jeff Kerby** (AU/UCAM) talked about drone and satellite analyses to scale landscape vegetation change across the tundra domain, **Heidrun Matthes** (AWI) about her experiences when translating between practitioners’ knowledge and climate modelling, **Jakob Assmann** (UZH) about outcomes of the “Arctic Biodiversity Futures” workshop at the World Biodiversity Forum in Davos, summer 2024, and **Andrew Martin** (UCAM) continued with the topic of Holocene Arctic Biodiversity Map, and how to move forward with it.

There was discussion especially about the Davos workshop. Workshop participants listed that it is important to educate, amplify (local voices), monitor (scalable, comparable data), assess (business solutions, decision-making), and rethink. Jakob felt that thinking about steps towards better, towards action, and positive pathways is needed. When there is inspiration through potentially positive futures, actions are also taken. They have already now seen some new initiatives.

Experiences of early career researchers were also asked. We heard at from **Leena Leppänen**, **Mariana García Criado**, **Helena Bergstedt** and **Jeff Kerby**. The inclusive approach (having events and responsibilities for ECRs) had been valued. Practical lessons had been

learned, like leadership, and working in interdisciplinary teams. These were seen as beneficial for future careers. An enthusiastic atmosphere and intellectual curiosity were mentioned, as well as diversity of perspectives, and learning to appreciate the skill to explain difficult things in understandable and interesting way.



*Mariana García Criado and Helena Bergstedt sharing some early career experiences.*

After an early career get-together, evening continued at Valdemari with dinner, some speeches, some live music and some more DJ Tundra.



## Thursday 14.11.2024

The last meeting day started with a brunch, and the closing session was started with “loose ends” – project manager **Sirpa Rasmus** listing things like reporting and final review, remaining to be done before CHARTER officially finishes on 31<sup>st</sup> Jan 2025. Also, a survey that will be used to assess our “science-policy dialogue” was explained

**Markku Heikkilä**, our Expert Advisory Group chair and science communicator mentioned a policy event that will be had in Helsinki on 8<sup>th</sup> January 2025. The main content will be the WP6 policy brief, and researchers and collaborators will discuss the tensional issues when aiming at sustainable future. The model and material is available, and it would be good to have this sort of events also in Norway and in Sweden – material can be translated!

Rest of the closing session was filled with stories.

**Juhani Lakela** (Kemin-Sompio herding district) told a travel story. After being interviewed by Teresa Komu, he was also invited to participate the Arctic Ungulate Conference that was held in Anchorage, Alaska, in May 2023. During this trip Juhani had made contacts with local herders, and later arranged a trip during which he supported local herding work. This interesting story raised a lot of questions for example related to management practices and predator situation in Alaska. In conclusion, this seems like a beginning of an interesting process and knowledge-sharing between continents. Like Juhani put it: “Teresa set the ball rolling” – this is an example of unplanned effects of participation in a research process.

**Philip Burgess** and **Irina Wang** shared their StoryMap process story, explaining how it is to create StoryMaps so that they become powerful tools to really tell the story starting with research work and findings, and using different language to different audiences. Irina reminded how design is important part of the process, not an add-on. Several StoryMaps were shown: the Rain-on-Snow one, the climate visualization one (with experiences of herders and fishers included), the palsa mire one, the one about drones, and the one about reindeer feeding.

In the discussion it was noted that because they are powerful tools, it is important to consider which facts are used, and how they are presented. For example, Andrei Marin (NMBU) reminded about the power of maps and stories: they may have side effects, they may be used also for other purposes than original ones.

In future projects, enough person months (preferably to more than one person) need to be budgeted. Translations of material will be needed, especially to northern Sámi (or other local languages). And we need to be sure we take good care of our relationship with local people, value them, because there is legacy in the way we treat our “informants”. Future generations of scientists will have difficult times in collaborating, if we do our work badly.

**Nicolas Gunsley**, the chief executive producer of the Arktikum Science Centre, told his “Arktikum Science Centre exhibition story” and how it has been to collaborate with a large research project like CHARTER. He also acknowledged the important role of **Leena Rantamäula**, between the exhibition planning and CHARTER team.

Nicolas stated that having project content as a permanent part of the exhibition is important. His perspective is that audience is interested in “modern” visual content, but also more traditional photos-and-text posters. Both are useful. For the Science Centre, it has been crucial that communication expertise has been found within project. They have also enjoyed working together from the beginning of the project (communicating more the research work, and topics, not “just” results). His final request was: please share your photos and other visual material – science communication can use these in many ways to promote science.

Finally, **Bruce Forbes** closed the official part of the meeting.

What comes to using our results and having an impact; we know we have done great work, but still, at this point we feel that we are really poor at getting our message through. It is clear that dissemination will continue and new frontiers in knowledge sharing have been opened. There are open questions like translating some of the material, and some recommendations we got from our Expert Advisory Group (“use the policy brief material as a tool to facilitate dialogue, locally and with policy-makers”). Communicating is everything.

Bruce was delighted to see such a big crowd in the room. He mentioned the legacy of the project, and for example the importance of having sister projects and herders represented in the meeting room together with CHARTER researchers. “Well done guys, thank you again!”

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More stories and photos here: <https://www.charter-arctic.org/> and here: [https://www.flickr.com/photos/arctic\\_centre/albums/72177720321999861/](https://www.flickr.com/photos/arctic_centre/albums/72177720321999861/). Slides are found in CHARTER Eduuni: <https://tt.eduuni.fi/sites/luc-charter/SitePages/Home.aspx>

Photos in this document: Jenni Katermaa, Philip Burgess, Leena Leppänen, Sirpa Rasmus



*Four years, hundreds of photos. (Photo wall of the meeting room)*