

“School of Arctic Dialogue”

Final Report

**2024 Calotte
ACADEMY**

Environmental Security vs Military Security

Rovaniemi – Luleå / Boden – Kautokeino – Hetta – Inari / Ivalo – Sodankylä

November 11-17, 2024

<https://calotte-academy.com>

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Foreword

by Prof. Lassi Heininen
Chair & Co-founder of Calotte Academy

At the turn of the 1980s-1990s, there was an inspiring sense of a “New North” in terms of ideas, cooperative initiatives for disarmament, peace, sustainability, and innovative political and academic arrangements by Indigenous peoples, local governments, scientific society, as well as of a certain idealism of a ‘raise’ of civil societies. As a result, new forums / networks for open discussions and knowledge-building - locally, regionally, nationally, internationally – were established. One of them was the Calotte Academy, the first Academy took place in May 1991 at Jeera in Inari, Lapland.

Since 1991, the Academy has been arranged annually in different locations in the European Arctic and Sapmi. As an international traveling symposium on Northern/Arctic issues and a “School of Dialogue”, with unorthodox methods, to foster academic and policy-oriented dialogue, it has become a unique platform for learning & studying, sharing experiences & knowledge, as well as for embodiment.

Albeit, a rich history the present matters most. The theme of the 2024 Academy was selected with a purpose to show the antagonism between environmental protection, in particular climate change mitigation, and competitive, militarized national security with securitization of science and a society. In addition of its relevance, the theme was timely due to hot wars in Ukraine and Sudan, and constant warfare with bombardments in Gaza and Lebanon. Interestingly, as the negotiated funding was terminated the postponed Academy took place parallel to COP15 in Montreal and COP29 in Baku.

Yet, the sense of “New North” was motivated by, and partly accelerated, the thaw and stability-building between East and West, it included a social need and readiness for a dialogue, between different stakeholders across sectoral and national borders, due to a growing concern on a state of the Arctic environment under the pressure of long-range pollution. A week’s journey in November 2024 in an Arctic landscape without snow, and through the ‘archipelago’ of US & NATO military bases (not allowed to visit) convinced the international & interdisciplinary group of early-career researchers on the antagonist reality of today: While, the environment and human security (e.g. Indigenous food safety) is put into a danger due to the (human-made) climate crisis, the military (controlled by security establishments) has become a substitution of the ecological catastrophe.

All this indicates both a social need and readiness for this kind of a unique, flexible platform for open discussion, knowledge-building and embodiment. Even though the Calotte Academy might act in a margin, freedom of science is respected and implemented, as well as new and experimental can be found there, if there is courage to search for them.

By these words, it is my pleasure to thank the participants of the 2024 event for their open-minded attitude to attend and share their thoughts, as well as the Academy’s co-coordinators for their patience and valuable assistance for the organization. Finally, I would like to thanks the co-organizers – Saami Education Institute (SAKK), International Center for Reindeer Herding Husbandry (EALÁT), Department of Media Studies at University of Stockholm, and Northern Policy Society – for their irreplaceable academic, political and professional support, and the sponsors – NAPA and UTAC – for their much needed financial support.

About the Idea of the Calotte Academy

The Calotte Academy is an annual traveling symposium and international forum in Europe's North Calotte region, designed to promote interdisciplinary discourse, and implement the interplay between senior and young researchers to train and supervise early-career scientists in circumpolar Arctic studies. It is a "school of dialogue" and participatory by nature with an idea to share knowledge and experiences with communities, and foster academic and policy-oriented dialogue among members of the research community and a wide range of other northern stakeholders. It is also an interdisciplinary brainstorming meeting to bring researchers and other experts from different fields, regions and countries together to discover and implement new methods and applications.

The Calotte Academy is for established researchers and early-career scientists (ECS), particularly PhD candidates and post-docs, with different academic and/or knowledge backgrounds to participate and present their work in the 2024 Calotte Academy.

Procedures of the Calotte Academy

The Calotte Academy is structured so that there are academic sessions with scientific presentations and brainstorming discussions in each location, as well as a public session, based on invitations, in one or two of the locations. Since dialogue and application of science are the most important goals of the Calotte Academy, it is recommended to remember and apply the open-ended nature of dialogue and how to cross disciplines, sectors and other borders. A fundamental precondition for this is to have enough time for questions, comments and open discussion as well as enough patience for listening to others' argumentation.

Following these principles, the sessions are structured the way that each **presentation** is allocated altogether 30-40 minutes out of which a **maximum of 15 minutes** is reserved for the presentation and the rest for questions, comments, and open discussion.

The Academy is also an interdisciplinary brainstorming meeting for scholars and other experts from different fields and disciplines all over the circumpolar North to discover new methods and plan possible research project(s), as well as to know more about the aims and activities of the TN on Geopolitics and Security. In addition to academic sessions, there is a devoted session for research plan/project design, fund-raising and other more practical issues of research; and second, a possible role-play game (a simulation of international negotiation) on a state of Arctic governance and geopolitics, where each participant has their role.

About the 2024 Calotte Academy

The theme of the 2024 Calotte Academy, “Environmental Security vs Military Security”, is inspired, on the one hand, by the ‘world (dis)order’ of mounting multi-crises with two-fold, partly controversial, realities: Grand challenges of the ecological catastrophe accelerated by the mass-scale utilization of resources vis-à-vis great power rivalries with a growing arms race, new East-West tensions with tit-for-tat, and political inability of states to efficiently manage the climate crisis; and on the other hand, by the complex and intensifying interplay between environmental and military security in the Arctic, where climate change and geopolitical tensions intersect in profound ways. The Arctic is experiencing rapid environmental transformations due to global warming, which not only threatens the local ecosystems and livelihoods, but also opens new strategic interests as previously inaccessible areas become navigable and resource-rich.

This creates an urgent need for balancing environmental security—protecting the fragile Arctic ecosystem and addressing climate impacts—with military security, as nations vie for influence and control in the region amidst a backdrop of global power shifts. Furthermore, this underscores the necessity for Arctic stakeholders—both state and non-state actors, Indigenous communities, international organizations and civil societies—to navigate the delicate equilibrium between preserving environmental stability and managing escalating military presence. It invites discussion on the Arctic as a region where sustainable security approaches must be redefined to address both environmental imperatives, and the new realities of security threats and risks.

In general, the 2024 Academy continues the interdisciplinary, multi-theoretical and multidimensional discussion on perceptions, visions of, and discourses on Arctic development, governance, geopolitics and security in globalization. As well as, it continues the discussion on the future of the region and its peoples and communities, by describing, analyzing and debating different—cooperative, competitive and conflicting—perceptions, discourses and trends, as well as the impacts of their interrelations/complexities in globalization. A special focus is on the environment & climate change, geopolitics & security, development & governance, and related issues, as well as their combinations in the successful transformation of the Arctic, from confrontation into geopolitical stability, based on constructive cooperation, and in that of the unprecedented situation, as the pan-Arctic cooperation has not, yet, been able to return to business as usual. All presenters were asked to take into consideration, in their presentation, the achieved state of constructive cooperation, based on common interests, and how to maintain geopolitical stability and continue the successful cooperation, when the Arctic region is facing the climate crisis and great power rivalries.

The Calotte Academy 2024 is co-organized by the Northern Policy Society, the Saami Education Institute (SAKK), the International Center for Reindeer Herding Husbandry (EALÁT) (in Norway), and the Department of Media Studies at University of Stockholm (in Sweden), in cooperation with UArctic’s Thematic Network (TN) on Geopolitics and Security.


For more information, please reach out to Prof. Lassi Heininen (lassi.heininen@arcticpolitics.com), Prof. Laura Junka-Aikio (laura.junka-aikio@ulapland.fi), and the Academy’s co-coordinators, PhD Candidate Zhanna Anshukova (zanshuko@ulapland.fi), and PhD Candidate Tom Gabriel Royer (troyer@ulapland.fi).

PROGRAM

Calotte Academy 2024

11—17 November 2024

Rovaniemi – Luleå / Boden – Kautokeino – Hetta – Inari / Ivalo – Sodankylä

[New!]  Follow us in real-time thanks to our Polarsteps map! <https://bit.ly/ca24map>

Sunday, 10 November in Rovaniemi

18.00—22.00 *Come together & welcoming*

Before the trip, participants gathered in a cozy club room to enjoy refreshments, share stories, and exchange experiences. The meeting created an opportunity to connect and prepare for the journey ahead. Participants from previous Calotte Academies also joined the gathering and shared valuable insights and perspectives.

Monday, 11 November in Rovaniemi

08.30—08.45 *Driving from Rovaniemi Bus Station to the University Campus*

1st Session: “Securitizing Science and a Society - Re-militarizing the Arctic?”

09.00—13.00 *University of Lapland’s Campus, room A141*

- Opening words by Lassi Heininen
- Matti Nojonen, “Emerging securitization narrative and academic freedom”
- Miyase Christensen, “Arctic geopolitics and the role of (mis)information in a polarized communication ecology”
- Marco Dordoni, “Securitizing the High North: A New Priority for NATO”
- Laura Junka-Aikio, “There is plenty of space, and it doesn’t bother the civilians.”
Militarization of Lapland and Sápmi in the framework of colonialism”

(Rapporteurs: Zhanna Anshukova and Tom Gabriel Royer)

The first session of the Calotte Academy 2024 started with Prof. Lassi Heininen (University of Helsinki) giving the opening remarks, emphasising the resilience of the Calotte Academy, especially as it has faced several organisational hurdles this year. The Calotte Academy is the oldest event of its kind in the Arctic, organised since 1991 – well before the Arctic Eight countries met for the first time. Prof. Heininen also emphasised the importance of engaging in fruitful discussions after each presentation.

Next on the stage was Matti Nojonen (University of Lapland), presenting “Emerging securitization narrative and academic freedom”, especially in the context of Chinese studies. Because of the securitization trend, there is increasing caution about working with China. Matti underlined the need for critical voices in the media. As limits are put on academic cooperation with Chinese institutions, the principle of equality is in question and the risk of self-censorship is high.

The securitization trend therefore raises ethical legal and practical questions about the boundaries of academic freedom. Matti concluded with the words of Literary Nobel Prize winner Czesław Miłosz: “In a room where people unanimously maintain a conspiracy of silence, one word of truth sounds like a pistol shot”. The discussion took various directions.

During the discussion, the topic of international cooperation was raised. There was also one question about the participation of researchers with Russian affiliation in some conferences. Then one comment was referring to war in Iraq and support from Europe leading to a discussion about losing the habit of practising the freedom of speech and lack of independence. Later during the discussion, Trump’s unpredictability was mentioned in the context of the future political situation. After that, one of the participants commented decolonizing of researchers’ thoughts. The final thought from the audience was a case of teaching a course on human-induced climate change and the question of whether the lecturer should also take into account the considerations of the deniers of the climate change.

The next presenter was Miyase Christensen (University of Stockholm), with the topic of “Arctic geopolitics and the role of (mis)information in a polarised communication ecology”. The presentation focused on the complex geopolitical and communication dynamics shaping the Arctic region. Key points included the rising strategic importance of the Arctic due to climate change, which is opening new resources and shipping routes. Major state actors like Russia, China, and the United States are more and more involved in Arctic affairs, often using media and information channels to influence public perception, territorial claims, and policy narratives.

The presentation highlighted the role of media in shaping both global and regional perceptions, especially in the case of security and national interests in the Arctic. It emphasised how countries use media to support their geopolitical ambitions. They are framing their activities as security measures while sometimes engaging in disinformation campaigns that make international cooperation more difficult. It was also mentioned that their stakeholders, including corporations, NGOs, and indigenous groups, also utilise media to shape Arctic narratives.

The presenter emphasised the need for transparent and accountable information systems to resist misinformation and to promote fact-based reporting. The presentation concluded by exploring how media and information governance can be strengthened to ensure a stable, cooperative Arctic future.

Many different ideas were discussed, including critical minerals, Arctic security, the idea of sustainability, the Sámi experience, colonialism and national sovereignty. AI and truth were also mentioned. One of the participants shared their thoughts that sometimes a crazy, invented idea gets millions of views on social media platforms. Another participant stressed that there is too much dependence on technology today. Then there was the idea that the media could take a story in a different direction. One of the last thoughts was about the connection between social media and the military and NATO.

The third presentation was given by Marco Dordoni (University of Perugia) on the topic of “Securitizing the High North: A New Priority for NATO”. The presentation examined NATO’s evolving role and strategies in the Arctic, focusing on security challenges and responses to growing Russian influence in the region. The presenter provided a very structured overview of NATO’s concerns, including the militarization of the Arctic by Russia, especially around the Kola

Peninsula. Russia's nuclear and naval buildup was discussed, as well as hybrid threats such as cyberattacks, GPS jamming, and disinformation campaigns. Together, these elements point to a complex security environment.

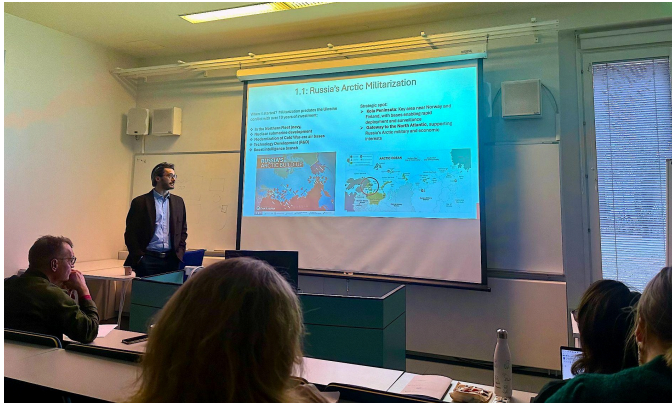


Photo: Zhanna Anshukova

NATO's expansion with the recent inclusion of Finland and Sweden was also mentioned, bringing seven of the eight Arctic states under NATO's umbrella. This expansion is intended to counterbalance Russian presence near sensitive areas. There was a slide about the icebreaker capacity demonstrating the significant number of Icebreakers in Russia.

The presentation was concluded by addressing the need for cooperation among NATO members, including non-Arctic states, emphasising that Arctic security transcends

regional borders and necessitates both political and military collaboration. The session posed questions about the alliance's potential future role in maintaining security and stability in the Arctic.

The discussion started with the example of Portugal-NATO exercises leading to the idea that the focus of NATO is security. The next question discussed was about the fact that the Arctic has always been one of the priorities of Russia, for Russia's future. Lassi Heininen followed suit, by emphasising that Putin is not the sole character shaping this priority, but the whole Russian security establishment is doing so. At the end, one of the participants shared the idea of the importance of remembering that the whole Arctic is Indigenous land.

Laura Junka-Aikio's (University of Lapland) presentation was entitled "There's plenty of space, and it doesn't bother the civilians". A quote that reflects the military's attitude to the consequences of militarisation in the Arctic. She argued that the militarisation of the Arctic should not only be seen as a reaction to, or a consequence of, the situation in Ukraine, but that it should be put into a wider context and discussed in terms of its consequences, which are rarely mentioned. NATO's arrival in the Arctic is seen as an opportunity. However, the new transport infrastructure projects are being made according to military needs, not broader public needs. Laura reminded us that this is Sámi land and that development is now taking place on a military basis, without public discussion. The perspective of colonialism is therefore relevant to Finnish Lapland, because militarisation is similar to appropriation and assimilation. In addition, the idea of mastering nature has been essential to the militarisation of the Arctic. Moreover, in other areas, such as Canada, militarisation has made indigenous peoples dependent on the infrastructure that has been created. The Sámi people are trying not to antagonise the military.

During the discussion, the issue of the train project in Lapland was raised. This train was mainly wanted by the mining industry, which is why the tourist industry was also reluctant, fearing side effects. There was an exchange of thoughts about the environmental impact of military activities and whether there are any studies to ensure that they do not affect the health of civilians. Laura took the opportunity to mention a video made by the Finnish Defence Forces in Rovajärvi, near Rovaniemi. The video is called "Tuli lähtee | Fire at will" (<https://www.youtube.com/watch?v=P5TQKhF6IX0>) and shows the Arctic nature, before showing

weapons being fired at it. Ultimately, the concluding argument was that the concept of security is currently being limited to military security.

The first session ended in the afternoon with a presentation by Lassi Heininen, whose slideshow consisted mainly of maps showing conflict dynamics in the Arctic. He began his presentation by asking how many armed conflicts have occurred in the Arctic since 2022, and the answer was zero. His slide of a map of the Arctic Ocean without sea ice illustrated bathymetric efforts to introduce the issue of Russian sub-vessels diving into a depth of 4000 metres, with Russia relying on the argument of extending its EEZ. Lassi then recalled the war at the end of the First World War in the Kola Peninsula, naval warfare with Nazi submarines. He stressed that there are many different activities in the Arctic, which makes it “a bit messy”, with different claims to sovereignty. According to him, the Arctic is the perfect place to operate. That is why it has been militarised for some time, and the infrastructure is still there today. For example, the coverage of the Thule radar is important for the USA, unfortunately to the detriment of the Inuit people. Then, on the subject of nuclear submarines, Prof. Heininen explained that during the Cold War, the USA and the USSR admitted to each other that they had the capability and agreed to a balance. Moreover, the split of the USSR created 4 nuclear powers instead of one; later, fear of the split of the Russian Federation arose. That is why the USA supported the Kremlin against the Chechens. In fact, in Lassi’s words: “National security doesn’t have a price”.



Photo: Santa Claus Village

13.00—14.30 *Lunch break*

14.30—16.00 *Visiting Santa Claus Village*

Participants had the chance to experience the atmosphere of tourism in the Arctic, exploring numerous souvenir shops and other attractions. They could also send a postcard with a special stamp, stating that it was sent from the Arctic Circle. For those who wished, there was an opportunity to meet Santa Claus himself. The visit offered a first-hand experience of the world of Lapland tourism.

16.00—20.30 *Driving from Rovaniemi to Luleå*

Tuesday, 12 November in Luleå & Boden

2nd Session: “Alternative Approaches to (Arctic) Security”

09.00—13.00 *2nd Session at Luleå Technical University, Room A110*

- Welcoming words by Prof. Athanasios Migdala, ETS Institute at LTU
- Rea Fraser, “The Military as a landowner: the case study of Punta Vigia”
- Zhanna Anshukova, “Sexuality as a threat”
- Caterina Monni, “Arctic security: Balancing hybrid strategies and nuclear challenges”

- Lassi Heininen, “Environmental security as ‘must’ vis-a-vis military security as a ‘substitution’ of”

(Rapporteurs: Mirikka Ollila and Celine Rodrigues)

The second session was held at the Lulea Technical University (LTU) starting with the welcoming words by Prof. Athanasios Migdalas, ETS Institute at LTU affirming that receiving Calotte Academy will open the discussion to opportunities and possibility of research projects focusing on risk management, logistics in the Arctic, joining Sweden, Finland and Norway. Taking into consideration that Finland and Sweden are NATO members, the region is even more important for strategic reasons and it also means that “infrastructure is not enough to take on the burden of activity” in professor's words. The professor also mentioned that the military activity in the region is destroying land where mushrooms are cultivated due to military exercises in those places/areas/fields.

Next, Rea Fraser, the President of the Spanish NGO “Straight Up,” opened the Tuesday session at the Lulea Technical University with her presentation about the military as a landowner, focusing on Punta Vigia as a case study. Fraser started her presentation with a short background of the area of the case study, which includes 18 abandoned military bases, owned by the Spanish Ministry of Defense. Due to the military sector unintentionally being the environmental steward of the land they hold; the area has been so far saved from the increasing pressure of development.

However, with rising prices in the Spanish housing market and a surge in tourism, near-natural areas such as Punta Vigia have come under the magnifying glass of land developers. Fraser interestingly draws a link between the so-called 'tourist invasion' and the development of military land, highlighting the former's interest in selling off its sites to escape the risks to public safety posed by the deteriorated infrastructure. However, the so-called emptiness of the abandoned areas, and the military's willingness to sell them, is tempting the country's developers to expand their operations.

Fraser used the rest of his presentation to give examples of dialogue-based and youth-inclusive land-use redevelopment of abandoned military sites. One example was the so-called youth exchange, which comprised young people at risk of social exclusion. The aim was to give young people opportunities to participate in the civil process, from which they are nowadays in many cases cut off, as well as to enable the reclaiming of shared space. Ultimately, land use issues, even in the context of abandoned sites, boil down to power and its use.

At the end of the presentation, Fraser shared the following questions, which can be applied to several different contexts, including Arctic exploitative land use issues:

1. Who are the decision-makers?
2. Who is consulted, who consults?
3. Who officially and unofficially represents the environment?

The discussion included following topics (Q&A):

Q: How can young people get involved in meaningful activities, and why is this important?

A: Fraser highlighted that young people often feel their voices are ignored, which can lead to an

increase in extremist views. By involving them in community projects, like revitalizing abandoned natural areas, they can express their aspirations and develop skills, creating a foundation for their future.

Q: The project focuses on youth, but does it include migrants as well?

A: Yes, the project fosters intercultural dialogue to combat polarized narratives. It involves regional cooperation and uses various media platforms, such as radio, to bring diverse communities together. A key focus is on humanizing borders and promoting inclusivity.

Q: How do you encourage young people to participate in such projects?

A: Trust is built through consistent, ground-level engagement. Free training programs and opportunities provided by EU youth initiatives play a crucial role. Organizers meet young people where they are—often in public spaces—and hold informal conversations over shared meals. These efforts also help demonstrate the importance of youth participation to the broader community.

Q: Why do investors get priority when the army sells public land?

A: Investors often take the lead because they have the financial resources and influence to negotiate deals. However, this highlights a lack of regulations to balance private interests with public needs. Large-scale land-use changes should prioritize the public interest, not just profit.

After that, Zhanna Anshukova presented the research “Sexuality as a threat”: Power, discourse and regulation” through the lens of the author Michel Foucault, who explains the relation between power and sexuality. As mentioned by Zhanna, power is everywhere, that includes in discourse and knowledge, it is not only present in politics. It can be repressive and productive. It is through power discoursed that we shape our identities, that we “learn” to accept things as “normal”. It should be underlined that discourse is a tool of power, language, it is a way to enforce what is going on, what we define as acceptable or deviant, what should be hidden or suppressed.

When it comes to sexuality, Zhanna affirms that law are created to govern population, states have found a way of regulating peoples’ bodies, what matches biopower Foucaults’ idea. Sexuality is synonym of reproduction and health and it is necessary to go back to the Victorian Era, according to Michel Foucault, with morality enforcing power. Zhanna also added that sodomy laws, which control deviant behaviors, existed until the 20th century, and are still in place in our societies nowadays.

Regarding the Arctic context, many colonized regions adopted sexual norms imposed to colonial powers in order to show power. In the map showed (which became inaccurate right after its publication in 2020 due to changes in the law in some countries), it was possible to see the places in the region where it is possible to express its own sexuality such as Greenland and where it is not possible as it is the case of Russia, where the LGBTQ community/movement is considered an extremist organization. This community is seen as something bad for children because it affects their health. This also applies to the use of the rainbow flag which is considered a threat e.g. in Russia and China. Facing that, it is considered that the Arctic is not that safe for sexuality freedom.

As pointed out by Michel Foucault, state sponsored discrimination, as it keeps moral norms and traditions, whatever that means today, it tells people what is safe and what is not.

At the end of the discussion it was clear that the Arctic is a multicultural place, it is a diverse society and that the Me Too movement works differently for men, in a society that dictates how women should look like in their countries or if they are allowed to buy and/or use condoms.

In her presentation, Caterina Monni, a Doctoral student from the Foscari University of Venice, provided an in-depth overview of Arctic security, highlighting hybrid strategies and nuclear perspectives. Monni emphasized that future Arctic security strategies must address both civilian and military applications of nuclear power amid expanding geopolitical tensions and states' Freedom of Action.

Key factors shaping the Arctic's status include re-militarization, sovereignty disputes, environmental protection, and resource management. The region presents a complex interplay of actors, from indigenous communities to multinational corporations, challenging conventional boundaries. Therefore, Caterina's insights centered on four key points:

- A unified approach is essential to managing risks in the Arctic as human activities intensify governance challenges.
- Balancing sovereignty with environmental obligations is critical, raising the need for a potential new Arctic legal framework.
- Principles of peaceful exploration could limit states' Freedom of Action in the high-risk Arctic environment, with space law serving as a potential model.
- Ensuring a safe and peaceful nuclear energy landscape in the Arctic requires global collaboration.

The discussion included following topics (Q&A):

Q: Are hard and soft laws applicable only to nations, or do they also apply to companies and organizations?

A: Hard and soft laws are not limited to nations; they also affect companies and organizations. For example, the peaceful use of nuclear energy raises global concerns about pollution risks. To address this, we need to view regional environmental challenges from a global perspective. Soft law principles, such as guidelines on energy use, should be translated into regulations to ensure they are implemented effectively.

Q: Who is responsible for sustainable development, and who benefits from it? How can rhetoric influence or hinder Arctic environmental protection?

A: Sustainable development is a shared responsibility, aiming to ensure peace and safety. Unsafe practices are inherently unsustainable. In the Arctic, extreme environments require secure and sustainable solutions, such as advanced nuclear technologies like full breeder reactors. These innovations could provide sustainable energy while minimizing risks.

Q (Comment): While we must mitigate harmful contamination from nuclear power, we must also prioritize sustainable development. Focusing on liability could help, and frameworks like space law might reduce disputes and promote international cooperation.

A: Environmental risks vary by region, so sustainability must be addressed with specific responsibilities. The Arctic, for example, might evolve into a global common area due to increased activities. Preventative measures, such as global cooperation and liability frameworks, are essential to avoid conflicts and ensure sustainable development.

During the last presentation, Lassi Heininen's "Environmental security as must vis-à-vis military security as a substitution" recaptures the work done for 20 years in this field mentioning that it was his teacher who called the attention to what Lassi was writing, being unaware of the impact of what he was transmitting at the time: that military destroy environment. It is a topic that failed to be funded, though always coming back to it and now it is time to develop the topic in a more accurate way.

Professor Lassi considers that topics such as arms race and the war in Ukraine should be part of the COP Agendas, or at least be proposed even if at the end there would be no result.

It was in the 1990's that the interest on those interrelated issues emerged. It was new and caught NGO's attention. Back then, Greenpeace was against nuclear weapons at sea, nuclear submarines, nuclear tests and the United States stopped them.

The research on the topic of military impact on environment goes back to the 1970's, presenting a list that goes from 1976 to 2015.

Throughout the presentation Lassi Heininen recalled the 1993 White Paper considered the first comprehensive report, in which Russia revealed the information of nuclear waste. This should alert to sea and water pollution in the Arctic Ocean, with pollution moving North. Another relevant topic is fisheries, as it seems, according to Lassi, that it is important to know what is going on.

An additional and relevant theme is the measurement of CO2 emissions considering that the calculation is done without considering the emissions from the military side which corresponds to 5% of CO2 emissions.

During the discussion, it was clear that the environment and military should be looked at more attentively and the question to be raised should we pay the price of the destruction reinforcing the need to be on the agenda at COPs.

13.00—14.30 Lunch

14.30—16.00 Visiting Gammelstad Church Town (UNESCO World Heritage Site)

The visit included a walk around the picturesque church and its surroundings, with an opportunity to step inside. The group also explored the unique small cabins, traditionally painted in dark red, which contribute to the town's historic charm. Another point of interest was the site of the former port, marked by a metal sculpture of a ship. This is a reminder of the port's historical significance, as the land has since risen, causing the sea to recede and leaving behind fields and forests in its place. The excursion offered a fascinating glimpse into the region's history and evolving landscape.



Photo: Zhanna Anshukova

16.00—17.00 Visiting the downtown and meeting point of Stegra Boden

In the city of Boden the plan was to visit the Meeting Point of Stegra Boden, a central office space. Upon arrival, however, the door to the meeting point was found to be closed. This unexpected turn marked the conclusion of the brief visit to the site.

17.00—22.00 Driving from Luleå to Hetta



Photo: Zhanna Anshukova

Wednesday, 13 November in Hetta & Kautokeino

08.00—09.30 Driving from Hetta to Kautokeino

3rd Session: “The Arctic Yearbook Presents I: Indigenous Food Systems: Indigenous Peoples in Arctic Politics – while forgotten.

increasing self-governing and para-diplomacy”

09.30—12.00 3rd Session at Čoarvemátta



Photo: Eleni Kavvatha

- Anders Oskal, Secretary General of the Association of World Reindeer Herders and the Executive Director of the International Centre for Reindeer Husbandry in Guovdageaidnu/ Kautokeino, Norway, “Introduction to NOMAD Indigenous Food Lab”
 - Mirikka Ollila, “Uncovering power dynamics in contested extractivist narratives in Saam’ jiemn’n’e (Kola Peninsula)”
 - Adam Kočí, “Greenlandic paradiplomatic relations in a postcolonial context”
 - Eleni Kavvatha, “EU Environmental Security and Indigenous Peoples in the Arctic: The EU Critical Raw Materials Act”

(Rapporteurs: Michaela Louise Coote and Rae Fraser)

Lassi Heininen, Opening Remarks

Heininen highlighted his delight to be welcomed back to Kautokeino and this time to the new Kautokeino skole remarking that Calotte Academy students have been

warmly invited to the Sámi village of Kauteneino for many years; however this year there is an exceptional shortage of snow. This session considered Indigenous Peoples (IPs) in Arctic politics (which was an Arctic Yearbook publication theme last year) and Heininen encouraged the students to consider exploring the link between the Calotte Academy and the Arctic Yearbook in future years.

Presentation 1. Anders Oskal, Indigenous Food Systems

Oskal began the session by highlighting the sometimes cited notion that there are many Arctics - the Nordic Arctic, the Russian Arctic and the North American Arctic emphasising the importance of the Arctic for both natural resources and geopolitical reasons. Oskal highlighted that for him, there is a different truth - the Indigenous Arctic. This Indigenous Arctic consists of around 60 groups of IPs and thus is both extremely diverse and represents a homeland for many people. Anders highlighted that not everybody sees the world from the same lens but instead - we see the world how we are. This is important for IPs because Sami live a unique way of life - often following their reindeer like their ancestors for thousands of years.

Sami is an original nomadic culture which is about manoeuvring in an unpredictable environment. In terms of food systems, Oskal highlighted that this creates a unique relationship between humans and reindeers - called the social contract. This social contract states that without reindeer, humans cannot exist and visa versa. On one side of the coin we have intensive agriculture which requires a great deal of human control and lack of animal autonomy and on the other side; reindeer herding where man cannot have control over nature.

Oskal highlighted that there are several security challenges for reindeer herding, particularly from a comprehensive security perspective including climate change, wildfires, increasing human activity and infrastructure development, globalisation including land encroachment and many other factors. Oskal explained that the ones most impacted by these challenges are those who are most dependent on the land. Oskal utilised a metaphor to explain this. He said, "we have been hit by the same train twice, once by climate change and the second time by climate mitigation".

Oskal then highlighted the role of sustainable science in food security. Oskal highlighted that science builds societies and thus it is important to consider where science takes place and what will be left after the funding has one? He argued it is important to consider that none of us have 'perfect' knowledge systems and we must keep growing to meet societal and environmental needs. Oskal explained the overlapping spheres between scientists and reindeer herders with an area in the middle for potential collaboration. Oskal then explained the fundamental role of transboundary institutions such as the Arctic Council in balancing Traditional Indigenous Knowledge and modern science. Food security is a very important issue and Oskal explained some of the benefits of reindeer herding vis-a-vis modern agriculture including being sustainable, having the potential to produce a surplus and being high on animal welfare. Oskal returned to the concept of the importance of embedding knowledge to create Sami's own society. Oskal was particularly proud of the NOMAD Indigenous food lab which is a transportable lavvu including a state of the art kitchen which was created in collaboration with Bocuse d'or. Unfortunately, Oskal could not present the lavvu today as it was at the Norwegian Parliament where a vote with the outcome to apologise to Sami for the damaging and hurtful assimilation policies which led to many violent activities. Oskal expressed the importance of the NOMAD food lab in this in order to create a Sami space for these discussions.

Presentation 2: Mirkka Ollila, Uncovering power dynamics in contested extractivist narratives in Kola Peninsula

Mirkka Ollila presented her research on power dynamics in the emerging lithium industry in Russia, focusing on the Kola Peninsula. Her work examines the narratives and practices surrounding resource extraction, particularly how these affect indigenous Sami communities and the environment. She emphasized the importance of self-awareness in studying these topics, given her non-Sami background.

Ollila highlighted the shift in Russia's lithium strategy after the war in Ukraine and resulting sanctions. Previously reliant on imports from South America, Russia turned to its domestic reserves, with about 20% located on Sami land. Lithium, described as "the new oil," has become critical for green technologies and military applications. The Kolomozerskoye deposit is now being developed, with mining set to begin in 2026.

The mining company claims adherence to international standards, including the Free, Prior, and Informed Consent (FPIC) process, framing their actions through narratives of sustainability and responsibility. However, Ollila's analysis revealed limited transparency and inclusion in these dialogues. Despite severe environmental impacts predicted—such as water pollution and disruption of ecosystems—there has been little Sami resistance beyond compensation and mitigation efforts.

In the discussion, Ollila and others critiqued sustainability narratives, arguing that resource extraction remains fundamentally unsustainable. Comparisons were drawn to similar cases in Sweden, where negative portrayals of indigenous practices serve to justify extraction. Economic growth was identified as the dominant justification for such activities in Russia, often overriding other concerns. Activism in Russia against these projects remains challenging, but resistance exists in subtler forms.

Ollila concluded by questioning why an authoritarian state like Russia engages in greenwashing, suggesting it may reflect an attempt to align with global trends despite its contradictions. Her research underscores the need to critically examine how narratives of sustainability and development are used to legitimize resource extraction.

Presentation 3. Adam Kočí, Greenlandic Paradiplomatic Relations in Post-Colonial World

Kočí began by highlighting the importance of Greenland to the Danish realm through the statistic that Denmark will lose 97% of its territory if it loses Greenland. Kočí then gave an overview of the colonisation of Greenland as he explained that Greenland has experienced double colonisation - originally by the Vikings and later, after they disappeared by Denmark. Kočí highlighted that the most destructive era experienced in Greenland was the post-colonial phase beginning around 1953 for IPs way of living as their Indigenous Knowledge Systems (IKS). As part of the historical overview, Adam also explained that the Home Rule Act was an important milestone in the history of Greenland's sovereignty however; it is important to note that Denmark still has responsibility for security matters of foreign relations.

Kočí gave an overview of Greenland as a 'foreign actor' which includes a mixed identity as Arctic, Nordic, Indigenous Peoples, American and Asian. Kočí highlighted that the way Greenland operates with different aspects of their identity are different but may include through organisations,

the military or cultural relationships. In terms of their autonomy as actors, Kočí explained that for the most part, Greenlanders are part of the Danish delegation and share a consulate in all countries, except Reykjavik.

Kočí visited Greenland for data collection purposes in order to let the “Greenlanders speak” in his research which included interviewing various actors in regards to their identity as international actors and their opinions on international activity that is happening around Greenland, impacting Greenlanders. The logic for choosing Greenland as a case-study was highlighted which included the countries strategic and resource importance, colonial legacies, dynamic state of Arctic geopolitics and the territory size located in a harsh climate/environment. Some of the actor groups that Kočí researched included politicians, civil servants, members of Greenlandic representatives abroad, researchers and individuals from the Ministry of Resources, Greenland. Kočí concluded that his research highlighted that the most important aspect of paradiplomacy for Greenlanders was not sovereignty per se but included fundamentally an economic element and necessarily implies some path to reconciliation. Some of Kočí’s research questions included: How did Danish colonisation influence the development of the Greenlandic paradiplomacy; What are the legal foundations of Greenlandic paradiplomacy and How is the Greenlandic paradiplomacy institutionalised?

As part of an introductory overview of his thesis, Kočí then went on to delve deeper into the concept of paradiplomacy aka parallel diplomacy which he described in the case of Greenland, can be understood as “proto-diplomacy”. Kočí stressed that paradiplomacy is an evolving concept which requires further development. Kočí highlighted the importance of his research stems from the important need to extend the geographical scope of the studied cases of paradiplomacy, filling a needed research gap and allowing the application of Kuznetsov's framework to the case of dependent territory. Kočí has edited Kuznetsov's framework of paradiplomacy to include national postcolonialism and the Greenlandic perspective in a historical context to involve political partnership.



Photo: Zhanna Anshukova

In the discussion, the primary emphasis was on the definition of paradiplomacy highlighting that it is a comprehensive concept which can include multiple actors and multiple factors. Kočí responded that he had attempted to take this into account by editing Kuznetsov's framework however there is more work that can be done to unravel the concept of paradiplomacy to its fullest.

Presentation 4 - Eleni Kavvatha, EU Environmental Security and Indigenous Peoples in the Arctic EU Critical raw Materials Act

Kavvatha described her project as provocative due to challenges in securing funding while based in Brussels. Her research traces the evolving relationship between the EU and the Sami, focusing on the impact of recent EU legislation. She highlighted the 2024 EU Critical Raw Materials Act, which prioritizes domestic resource extraction for security reasons, fast-tracking mining permits.

While celebrated in Brussels, these policies have sparked concern among the Sami, who foresee increased exploitation and environmental damage. For example, the Kiruna mining operations demonstrate the costs imposed on Sami communities for the green transition. The EU's narrative that Sami people must contribute reveals a disconnect between policy and the realities on the ground.

The Act represents another threat to Sami livelihoods, alongside other encroachments like western wind farms on reindeer grazing land, which the Norwegian Supreme Court recently deemed illegal. Kavvatha argued that the fast-tracking of projects without adequate consultation, compensation, or long-term studies leaves the Sami without control over their lands and futures.

She emphasized the need for better statistics on the impact of EU policies on minority groups, more research funding, and ethical guidelines for EU research involving the Sami. Many EU decision-makers and researchers, she noted, have no firsthand experience with Sami communities, further widening the gap between policy and reality. Kavvatha also advocated for supporting Sami entrepreneurship and fostering communication links to ensure the Sami voice reaches decision-makers.

In discussions, Kavvatha and others explored how industry lobbying shapes EU policy, often at odds with sustainability goals. The paradox of pursuing a green transition through unsustainable means was a recurring theme. She also critiqued the EU's history of prioritizing industry interests over indigenous rights and questioned whether the EU's engagement with the Sami amounts to genuine dialogue or mere photo opportunities.

12.00—13.00 Lunch

13.00—17.00 Excursion to Čoarvemáttá – Sámi National Theatre Beaivváš, the Sámi High School, and the Reindeer Herding School

After the lunch, the participants listened to the welcoming joik of the musical artist Inger Marie Nilut. The Academy visited the school's various handicraft study rooms, where students have the opportunity to learn a range of skills, including sewing traditional clothing, knife carving, reindeer slaughtering... and e-sports!

17.00—18.00 Driving from Kautokeino to Hetta



Photo: Zhanna Anshukova

Thursday, 14 November in Hetta & Ivalo

5th Session: “The Vision That Became Reality’ – the cooperative ‘BEAR’ with closed borders!”

09.00—11.30 5th Session at Town Hall of Enontekiö

- Urban Wråkberg, “Research on the Euro-Arctic borderland under shifting politics”
- Gerald Zojer, “Digitalisation and environmental security: The Corporeality of Cloud Computing”
- Tatiana Petrova, “Save the Calotte Academy! - a workshop”

(Rapporteur: Marco Dordoni)

Urban Wråkberg, “Research on the Euro-Arctic borderland under shifting politics”



Photo: Zhanna Anshukova

Professor Wråkberg began his presentation by recounting his past experiences collaborating in Russia. Initially, these collaborations were fruitful and faced no obstacles. However, after the start of the Ukraine war, his image was prominently featured in a report by a Russian media outlet, leading to tensions at his Norwegian university. Opinions within the institution became divided, and the university advised him to cease his collaborative efforts with Russia. In June 2024, Professor Wråkberg organized a workshop in Russia, inviting representatives from both Western academia and Russian institutions. The event became controversial, as he was perceived as the central figure of the workshop. The University of Tromsø (UiT), where he worked, criticized his decision to organize the event, and the incident sparked a broader debate within the academic community. While some colleagues defended his actions, others condemned his conduct, highlighting the polarizing nature of his approach to international collaboration during a time of geopolitical

tension. Professor Wråkberg concluded his presentation with the assertion that the Euro-Barents cooperation was under significant threat and that conducting research in such a climate had become nearly impossible. He argued that Nordic institutions had become increasingly susceptible to media-driven fears. He also stressed that international networking and fieldwork were essential for establishing credibility in academia and should be a shared responsibility among scholars. Wråkberg warned that severing ties with regions in conflict weakened research by eliminating opportunities to observe critical developments. He also dismissed the need for intervention by Norwegian security services to maintain the credibility of collaborations with Russia. During the discussion, participants reflected on institutional behavior and questioned whether strategic decisions influenced who was included or excluded from interviews.

Gerald Zojer, "Digitalisation and environmental security: The Corporeality of Cloud Computing"

The Zojer's investigation focused on the environmental impact of cloud computing, challenging the mainstream perception that it is both economically and ecologically efficient. While widely marketed as a cost-effective and eco-friendly solution for hardware and software needs, the research highlighted significant environmental concerns often overlooked in popular discourse. Electricity demand emerged as a critical issue. Most data are stored in facilities across the United States, Europe, and China. In Europe, data centers accounted for approximately 4% of total electricity consumption. Despite advances in storage efficiency, the electricity demand for data centers was projected to double between 2022 and 2026. This increase was attributed to the rapid growth of data centers and the development of new technologies such as artificial intelligence.

Water consumption was another area of concern. A significant portion of water use, estimated at 50%, was dedicated to cooling data centers. These facilities were often constructed in water-stressed regions, prompting a gradual shift towards cooler northern areas for future developments. While some European Union regulations addressed energy efficiency, ecodesign for data storage products, and due diligence requirements (e.g., Directive EU 2023/1971 and Directive EU 2024/1760), water usage received relatively little attention. Projections estimated that by 2030, data usage in Europe would consume 3 liters of water per capita daily, a fourfold increase from 2020 levels. The study also revealed that end-user devices contributed the most to environmental impact, accounting for 57% of total greenhouse gas emissions associated with information and communication technologies (ICT). This underscored the need for comprehensive policies addressing the broader environmental footprint of the digital ecosystem.

After the presentations Tatiana Petrova announced "Save the Calotte Academy! - a workshop" which was held on the way to Ivalo.

11.45—16.00 *Driving from Hetta to Ivalo*

16.00—18.00 *Visiting UTAC*



Photo: Janne Seurujärvi

(Rapporteur: Christine Gawinski)

After a long drive from Hetta, we had a well-deserved stop at UTAC's renowned winter testing facility in Ivalo, Sápmi, located roughly 300 km north of the Arctic Circle. This specialized location, the northernmost of its kind globally, allows year-round testing of automobiles under consistent winter conditions—a crucial advantage for speeding up development processes without needing to travel across continents to simulate cold climates. The facility offers both outdoor and indoor testing environments, including five indoor test tracks. These controlled indoor spaces allow precise testing in temperatures ranging from 15°C up to -40°C, using only natural snow, to ensure consistent conditions year-round.

During our tour of the facilities, we visited an indoor snow and ice track, where tests on traction control, stability, and braking performance can be performed.

While enjoying warm drinks and a yummy dinner in UTAC's traditional wood hut, we learned more about the firm's activities and testing grounds. The facility's secure, access-controlled design allows for high confidentiality, which is critical given the early-stage prototypes and sensitive data handled here. In the winter season, UTAC operates 1200 hectares of outdoor proving grounds, including the Ivalo Airport Proving Ground and the expansive Mellatracks, with nearly 100 seasonal employees and a dedicated permanent staff. In a Q&A session, UTAC representatives shared insights on the environmental considerations, energy-saving measures, and the rise in electric vehicle (EV) testing, with 75% of vehicles tested indoors now being EVs. They also discussed their contributions to the local economy, ongoing efforts to partner with regional universities, and the logistical operations required to transport tyres and vehicles to this remote facility.

18.00—19.00 Driving from Ivalo to Inari

Friday, 15 November in Inari

10.00—11.00 Juutua Trail and Laavu (BBQ) at the Jäniskoski Rapids

This excursion involved a visit to a path that goes through the landscapes of Inari. Participants followed the trail to the Jäniskoski Rapid with the rushing waters. At a laavu, a traditional Finnish lean-to shelter near the rapids, there was an opportunity to enjoy a BBQ. The experience combined outdoor exploration with a touch of Finnish tradition.

11.00—12.30 Visiting Siida—Sámi Museum and Nature Center

Next, the group visited the Siida Sámi Museum and Nature Center, where they learned more about the rich culture of the Sámi people and northern nature. The museum provided a deeper understanding of life in the Arctic, both past and present.

12.30—13.45 Lunch



Photo: Zhanna Anshukova

6th Session: “Two Mediterraneans: the Southern vis-a-vis the Northern One” (in Inari)

14.00—18.00 *Lassinkota (SAKK, Sámi Education Institute)*

- Celine Rodrigues: “The connection of North Atlantic and Arctic Oceans in the 21st century & Portugal in the Arctic: challenges of maritime and human securities”
- Marco Ghisetti, “The Nordic Mediterranean. A regionalizing paradigm for the Arctic”
- Marlene Payva, “Rethinking the ocean environment amid polycrisis: UNCLOS and the Arctic”
- Christine Gawinski, “Are small copepods the winners of an ice-free Barents Sea?”

(Rapporteurs: Eleni Kavvatha and Raymond Ruhaak)

Celine Rodrigues: “The connection of the North Atlantic and Arctic Oceans in the 21st century and Portugal in the Arctic: challenges of maritime human securities.”

Celine’s presentation revolved around the way the Arctic region can become an opportunity for Portugal by focusing on foreign policy, defense and maritime strategies.

The presentation attempted to justify the Portuguese relation to the Arctic. The Arctic has a typical relation with the Atlantic and 1998 is an important year since Portugal managed to put the ocean as atopic in political documents. Portugal needs to reposition itself in a geopolitical level at the intersection of the Atlantic and the Arctic based on maritime security and human collective security. Portugal needs to be involved in the region as a founding member of NATO and a member of the EU. Celine will attempt to develop some scenarios, based on global trends and security defense reports from both Arctic and non-Arctic countries to justify why the Arctic is relevant to Portugal and why Portugal should be considered an Arctic actor. The research is framed by what Celine calls as “Trinity”, which is described as connecting Green Theory, maritime security and human security. Celine also sees the Copenhagen School as being at the core in connecting different aspects of security, or that which can be tied to security, together.

The dialogue revolved around the interconnection between human and maritime security. The role of environmental activism was also questioned but it seems that it is not as prominent in this specific case. Feedback revolved around the justification of why Portugal should be interested in the Arctic and how Portugal can provide in terms of expertise or ocean conservation experience. How much does Portugal have responsibility in the Arctic being the first biggest maritime colonial power? Where is the element that is very important to Portugal? The real connection? Continental shelf. It should be in the scenarios. Portugal has done a lot of research on the continental shelf. Celine was encouraged to focus on expertise on continental shelf in order to solidify its importance for the Arctic.

Marco Ghisetti, “The Nordic Mediterranean. A regionalism paradigm for the Arctic”

Methodology of geopolitics, not international relations, not power politics. In this case it is a specifically designed methodology which tries to map the functioning of a region by analyzing the powers to which it is exposed. Marco will try to “read” the Arctic region as a Mediterranean space and for this region the presentation started by explaining that there are four or five Mediterranean regions and not only the Mediterranean Sea. The research paper aims to outline the main features of the regionalism paradigm used by geopolitics with regard to the other mediterranean regions

and make an analogy with the Arctic, trying to evaluate whether the Arctic could be studied like the way we study the Mediterranean Sea, since they seem to share similar characteristics.

The presentation concluded by the statement that the Arctic will not be a Mediterranean Sea at list in the short term, but the toolkit of studying the Mediterranean Sea can still be applied to a certain extent. The discussion revolved about the creativity of the idea that there are many Mediterranean regions. There was also a question related to space and how space exploration could assist this debate.

Marlene Payva, “Rethinking the ocean environment amidst polycrisis: The Law of the Sea and the Arctic”

Marlene presented on the critical subject of how the Law of the Sea applies to the oceans and marine life. She explained how the law is designed for human exploitation to help spur economic growth. International law is designed in a hierarchical manner with humanity valued above all other life. This systematically has led to environmental issues, especially in the high seas, which lies beyond any country’s jurisdiction (more than 200 nautical miles from any coast). Thus, in these areas the law instigates a first come, first serve mentality, due to anthropocentric protection of the marine environment in the present.

The International Law of the Sea has been developed to regulate rights among all those that those marine resources, focused on protecting the rights of one exploiter over another. The precedence of the formation of these laws started when Hugo Grotius, who has been called the Father of International Law, developed his “Free Seas Theory” to defend the interests of the Dutch East Indian Company. This “Free Seas” has been the long-lasting foundation of the Law of the Sea, although today its application is narrower. Marlene makes the case that such international laws help push forward the Anthropocene, as these laws have instigated more intensive exploitation of the ocean. These same priorities have been reflected in the (1982) to the United Nations’ Convention on the Law of the Sea (UNCLOS). The document also gives very sparse guidance in how this exploitation is to proceed, while the United States had not signed the agreement. The Arctic, due to the impacts of climate change, resulting, among other things, in melting of sea ice that facilitates accessibility to the Central Arctic Ocean, making it especially vulnerable to increased intensive exploitation.

During the Discussion period, Marlene explained that more ecological-based law and jurisprudence focusing upon the rights of nature has developed in a few countries, such as Ecuador, New Zealand and Colombia. These developments have had some success but are a work in progress, as there are many complexities in implementing such national laws or court decisions that are not supported by jurisdictions outside these nations. The discussion also highlighted that the present case law mainly focused on compensation (payments) between humans for environmental damages and that other life in Arctic ecosystems are not part of the equation. Marlene then elaborated more on need for protection of all species and components of nature in order to enter into a post-Anthropocene era that respects, protects and preserves more-than-human life and ways of being. The intensively unsustainable, exploitive cycles may be avoided through international law that protects all species and such laws are effectively administered and enforced. However, if the law continues to follow the hierarchical human-centred approach to nature that protects humanities’ right to consume at an unsustainable rate, then it is

difficult to see any other outcome but the continued escalation of the Anthropocene and its devastating ecological effects.

Christine Gawinski “Are small copepods the winners of an ice-free Barents Sea?”

This paper investigated how differences in sea ice cover between the course of the years 2018 – 2019 affected the quantity and the contribution of different species to the copepod secondary production in the Barents Sea. Why study small copepods in the Arctic? The research project argues that small copepods are understudied because of sampling biases and that it is also important that they are studied as they might be useful in studying the food chains. It is also essential for us to better understand the Arctic ecosystem, especially its smaller components. Additionally, phytoplankton, as primary producers, supply half of the oxygen in the sea, which affects copepods, as secondary producers. Climate change is having a very significant impact on phytoplankton, which thereby affects life along the food chain, including copepods.

The discussion revolved around further research and studies that look into combined effects of different factors that impact these organisms and subsequently the food chain. Christine also noted that smaller species tend to adapt better to environmental stress, as they are more able to adapt to available food sources, which also tend to be of the smaller variety. Accordingly, large copepods may be more affected by the environmental impacts from climate change than small copepods.

Saturday, 16 November in Inari

7th Session: “Arctic Cooperation and Militarization vis-a-vis De-securitization - Russian perspectives” (in-person & on-line)

9.00—11.00 *Lassinkota (in-person & on-line) (SAKK, Sámi Education Institute)*

- Yulia Zaika, “Disaster-related maxims of science diplomacy in the Arctic: Is there a place for peace at the edges of conflict?”
- Rea Fraser, the findings from “Save the Calotte Academy! - a workshop”

(Rapporteur: Caterina Monni)

In an online session of the Calotte Academy, Prof. Lassi Heininen introduced Larissa Riabova from KSC-RAS (Kola Science Centre of the Russian Academy of Sciences) in Murmansk, Russia. Heininen emphasized the need for cooperation with Russian researchers despite geopolitical challenges, noting that online platforms offer a way to continue exchanges. He highlighted KSC-RAS's significant role in Arctic research, particularly in Apatity, a scientific hub, and Nikel, an industrial center focused on metal extraction. Heininen reflected on the concept of borders, suggesting that the real divide is not physical but geopolitical, particularly between Russia and NATO countries.

Larissa Riabova introduced KSC-RAS, a leading Arctic research institution founded in 1930. She explained that the center covers a wide range of disciplines, from natural sciences to social issues, with a strong focus on Arctic studies. She highlighted the institute's commitment to

international collaboration, mentioning colleagues Ludmila Ivanova and Alina Cherepovitsyna, who work to foster cooperation across geopolitical barriers. Larissa noted that since 2020, borders have become more cultural than geographical, stressing the importance of building networks for continued scientific exchange.

During the Q&A session, Larissa emphasized the need for ongoing joint publications and collaboration within the current framework. She also noted that Russian Arctic research continues to focus on pan-Arctic cooperation, especially with countries like India, Latin America, and the BRICS bloc. Heininen added that Russia's active role in Arctic marine logistics is crucial to these efforts. The audience stressed the importance of maintaining personal connections and resisting media narratives that hinder scientific exchange.

In response to a question about the economic situation in Nickel, Larissa acknowledged small business activity in the region, particularly in tourism and sports, while noting that trade continues across the border into Norway. The session emphasized the ongoing need for international cooperation and the resilience of Arctic research despite geopolitical challenges.

Presentation by Yulia Zaika: Disaster-Related Science Diplomacy in the Arctic: Is There a Place for Peace at the Edges of Conflict?

Yulia Zaika explored disaster-related science diplomacy in the Arctic, highlighting the intersection of environmental challenges, geopolitical tensions, and scientific cooperation. She emphasized the Arctic's rapid warming—over twice the global average—and the need for transboundary collaboration to address climate-driven risks and disasters. Zaika promotes Open Science Discussion (OSD) and participatory observation to foster inclusive dialogue, sharing her work on journalism's role in science diplomacy through articles and editorial contributions.

Zaika, an IPCC participant (2021–2023), detailed the Arctic's vulnerability, data gaps, and the interruption of long-term monitoring programs, including Russia's exclusion from key research planning for ICARP IV and the upcoming International Polar Year. She linked disaster diplomacy, which addresses immediate risks, with science diplomacy, focused on long-term cooperation, proposing frameworks inspired by ASEAN and CARICOM to strengthen Arctic collaboration.

The discussion addressed diverse topics, including challenges in aligning global risk perceptions and consensus. Zaika stressed the need for diplomacy and fieldwork to bridge gaps, while Lassi Heininen highlighted the High North Talks, a post-2022 initiative involving researchers from Russia, China, and others, aiming to separate science from geopolitics. Heininen also emphasized the role of young scientists in decision-making, urging them to focus on mastering methodologies and creating opportunities.

Other topics included Russia's pivot to Asian partnerships, influenced by Western disengagement, and Arctic trade route shifts from Kirkenes to Murmansk. Participants discussed psychological barriers, such as media narratives about Chinese and Russian nationals, and the need to counteract these perceptions to enable collaboration.

Zaika concluded by emphasizing the urgency of aligning disaster and science diplomacy to address Arctic vulnerabilities, calling for proactive engagement to bridge geopolitical divides and foster sustainable cooperation.

After the presentations Rea Fraser presented the findings from “Save the Calotte Academy! - a workshop”.

11.00—13.30 *Lunch*

8th Session: “The Arctic Yearbook Presents III: Global & Planetary Approaches to the Arctic”

13.30—16.00 *8th Session at Lassinkota (SAKK, Sámi Education Institute)*

- Tom Gabriel Royer, “Navigating Environmental and Military Security Challenges in the Era of Space Commercialization: A Focus on Commercial Spaceports in Northern Europe”
- Raymond Ruhaak, “The Unearthing of our Global Minds: An Exploration into the Western Foundation for Unsustainable Natural Resource Extraction Through Disconnecting People from the Natural Environment”
- Michaela Louise Coote, “Untangling the Environmental Protection-Development Nexus: A Case Study of Arctic Cooperation”
- Mini-Launch of The Arctic Yearbook 2024

(Rapporteurs: Marlene Payva and Marco Ghisetti)

Tom Gabriel Royer (PhD Candidate, University of Lapland)’s presentation was titled: Navigating Environmental and Military Security Challenges in the Era of Space Commercialization: Focus on Commercial Spaceports in Northern Europe.

Royer started his intervention by defining a spaceport - a critical hub where spacecraft are tested, launched, stored, and maintained (Mineiro 2008). He highlighted that Elon Musk is redefining the notion of spaceports as associated with commercial activity, even though there is



Photo: Zhanna Anshukova

still no precise definition of what a spaceport is. Royer explained that the operation and use of commercial spaceports constitutes a space activity (Takaya 2024) and several states are implementing policies to set rules and regulate space activities. Also, rocket manufacturers are targeting space also for defence strategies.

In this scenario, the concept of Earth-Space Sustainability is emerging. It brings to the attention that there are environmental limits to the space sector’s growth (Miriaux 2022), e.g. the environmental impact of space activities, causing, inter alia, marine pollution.

From a Multispecies Justice perspective, Royer also made the case of the impact of space activities in the Arctic, e.g. in Andøya, Norway, and Kiruna, Sweden, which are causing extensive marine pollution and harm to the well-being of non-human species, such as reindeer in the Arctic.

He then questioned whether regional legal frameworks could compensate for the shortcomings of the international ones.

Taking into account the existing system of Arctic governance, Royer also questioned whether the Arctic was “militarised but not weaponized”, and whether there is space weaponization. He explained that outer space could be weaponized and also militarised, and provided the example of the United States’ launch of military satellites to space.

The following discussion asked whether ice pollution is possible. Royer explained that there are no yet studies about the pollution of ice by space activities. But, theoretically, ice can in fact be polluted. Also, ice is important because it can be detrimental for planes and other engines.

He also pointed out the rocket launches from Scotland, which threaten to force Icelandic air traffic companies to redirect plane routes, causing additional greenhouse gases emissions and fuel needs by planes.

Another question was: what if we stopped sending humans to space? Royer answered that there would be less need for emissions, resources, and food. He said that to know and advance knowledge on space, we can refer to the “blind way” philosophy in space policy: knowing things by touching (only), so not necessarily by sending humans or through environmentally harmful human activities. Royer highlighted that there should be a balance between space activity and environmental concerns.

In relation to a question on previous cases of pollution by space activities, Royer referred to a case where Russia caused contamination of Canadian soil in 1978 due to radioactivity. Russia was sued by Canada, which asked for monetary compensation for the environmental damage caused.

Also, in relation to a question on the colonisation of outer space and adopting a Multispecies justice approach to outer space, Royer answered that there should not be a presumption that a planet is inhabited. So, on attempts to colonise, for example, Mars, Royer said that it should not be considered Terra Nullius. He also explained that we can take inspiration from Belgian law that introduces the offence of ecocide, which includes the pollution of outer space.

Another question was whether there is a way that the Law of the Sea can benefit from the Outer Space Treaty provisions in benefit of the environmental protection of the Arctic. Royer answered that they both are self-functioning treaties and, thus, deal with considered different topics separately. However, he stressed that the Convention on International Liability for Damage Caused by Space Objects develops the liability in the Outer Space Treaty and, for e.g., enshrines a provision that does not explicitly include environmental damage. Yet, we can interpret space law in a way they include damages, such as, impairment of health, life of living beings, and eventually include non-humans therein.

As for the question, what do you think of NATO launching rockets to space? Royer replied that NATO space activity in the Arctic is growing. Already in 1963, NATO had already expressed its interest in the Arctic. But operated from far without operating on the ground. Now, there is space-based technology, the Arctic and NATO are closer since 2023.

Raymond Ruhaak (Honorary Visiting Fellow, University of Sussex)’s presentation was titled “The Unearthing of our Global Minds: An Exploration into the Western Foundation for

Unsustainable Natural Resources Extraction Through Disconnecting People from the Natural Environment”.

Ruhaak began by stating that he is an historical geographer, and that he will look at the roots of the problems. He made four key assumptions. First, humanity is rooted in cultural geography, communities lived in their local ecosystem and within there their culture was intrinsically tied to the environment they lived in. Second, culture adapts and changes alongside the environment and economic production. Third, action follows thought. Fourth, one’s analysis must take into consideration the energy and innovation of scale, socio-economic complexity and the environment.

Indeed, the human experience has always relied on the local natural environment for sustenance and knowledge, but the rise of unsustainable trading economies strained this relationship. It was this that eventually led to a widespread intensification of natural resource exploitation, both within territorial boundaries and in foreign lands, often enforced through military coercion. Consequently, regional insecurity escalated, fostering a cycle of unsustainable resource extraction to finance military expansion and defend against neighbouring threats. The cycle concerning the economic factors of production seeking for the maximisation of the outputs is the following one: Several inputs are required to foster the process of production, which results in outputs emphasising on the added value of material goods and services. These outputs, on their part, demand more-than-before inputs to foster a new but wider process of production, thus repeating the cycle but on a larger scale.

Ruhaak stressed the role played by social institutions in developing collective actions. He noted that a few can rule over the many provided their control is institutionalised. In fact, institutionalisation is necessary to achieve routine collective goals, and the masses comply because they are embedded within the collective. However, the increase in size of the scale of organisation puts greater stress on the environment and to those who are less successful in assessing what is happening locally and thus adapting to the local changes. This is why large corporations and countries struggle and fight each other. Moreover, greater institutionalisation implies greater detachment from what is local and natural. An example is provided by the erosion rates of the last 3.000 years in Turano, Italy and Central Europe since 600 CE, which was significantly parallel to the increase in size of social cohesion.

Case in point, Europe’s deforestation and erosion increase with socio-economic complexity and activity of scale can be traced to the Roman Empire. This political actor began building a large-scale bureaucracy: something that was eventually mirrored also by another main political actor in Europe, the Catholic Church. In fact, while at first there was diversity in Christianity, that ended with Constantine’s Council of Nicea, which marked the beginning of materialism as a legitimisation of the Church. The faithful followed the authorities’ interpretation of sacred text and thus the increase of bureaucratic size and complexity. The sanctity bestowed on materialism as a divine security marked the perception that material wealth is a greater value to society. This conceptualisation gained momentum with the beginning of the mass media age marked by the Lutheran Protestant Reformation. Shortly after, the Enlightenment set a new cognitive era which stressed specialisation of knowledge to understand component parts, building blocks that were seen as tools for construction or destruction of the subject of interest, eventually starting the next stage of cognitive disconnection from nature.

Ruhaak's proposal for reversing this process is to scale down the risk of environmental disconnection and socio-economic change, through the direct observation of subject or phenomena being studied within their context in order to take precedence over data with limited or no content. Moreover, it might be useful to diminish the scale of energy within greater localisation, thus diminishing the complexity and the size of bureaucracy and institutions.

The following discussion explored the connection between religion in general and Christianity in particular as vehicles actually useful to connect to, and not disconnect from, the natural environment. Case in point, some religious movements preach a frugal lifestyle. Moreover, some religions encourage a sense of fear and respect for the natural environment, not the disconnection or exploitation of it. However, while there is probably some truth in these claims, it is also clear that historically religion played a fundamental role in encouraging the formation of large institutions and the exploitation of the environment.

The discussion also debated some claims on the allegedly irreversible collapse of industrial civilisation, such as that made by NASA ten years ago, which eventually was proven false. Indeed, while numerous claims concerning an impending disaster are contentious, they nonetheless prove that there is a need for more localised control. In fact, people living in local areas are more aware of the changes happening as compared to large institutions. Hence, the need to decrease the scale and the energy used by the institutions and localise them appears to be confirmed.

Michaela Louise Coote (PhD Candidate International Relations, University of Lapland)'s presentation was called "Untangling the Environmental Protection-Development Nexus: A Case Study of Arctic Cooperation"

Coote's main claim was that the environmental governance regime, the environmental protection and environmental development need to be approached together. In fact, she stressed that environmental governance regime and environmental development are held up by both material and immaterial factors thus creating a self-supporting nexus where environmental protection cannot exist without proper development.

Indeed, while the issue of environmental degradation is self-evident, there have nonetheless been some "wins" when an attempt to tackle it was made. A good example is provided by the decision to ban ozone depleting substances in 1987 as part of the Montreal Protocol as well as the increased global designation of marine and terrestrial protected areas. Notwithstanding these successful attempts, global warming and human encroachment habitats have not stopped. Moreover, issues such as the loss in biodiversity and the increase in invasive species, the potentially risky projects such as deep sea mining (which could be seen as operating outside of the established environmental protection mechanisms such as precautionary principle) have even worsened.

Coote stressed that it must be understood that environmental governance is implemented using scientific evidence when steering decisions, but there are several powerful interests at play. First of all, there are the interests of the epistemic communities; secondly, there are the interests of intergovernmental organisations and non-state actors such as NGOs and other international political organisations in maintaining the already existing environmental governance regime.

Coote underlined the importance of Functionalism, for it highlights that environmental governance regime decrees utilising actors as orchestrators. Indeed, a functionalist approach

allows us to understand to what extent these and other multidimensional actors move away from an interest-based and paradigmatically embedded regime for reasons of environmental protection and indigenous sovereignty. In fact, a scientific cooperation approach depends on epistemological and ontological factors which are not temporally or spatially fixed, thus underling that the environmental governance regime holds a certain degree of social order which creates hierarchies including different ways of knowing and behavings. Functionalism refers to a set of theories highlighting that if states work together on matters of shared importance – such as environmental protection and development – their cooperating will lead to a peaceful cooperation as an alternative to war. Functionalist theory highlights the role of institutions acting as loose formations of state, and critical functionalist analysis questions the role of non-state actors within these practices. Examples of functionalism in environmental governance include the creation of an environmental governance regime where states cooperate on shared issues such as science and technology and environmental protection-development.

She underlined how in the Arctic the Kirkenes Declaration highlighted the environmental governance regime which was used to integrate Russia into a neoliberal framework. In fact, The Kirkenes Declaration is the most striking example of how the Arctic environmental regime subjugates environmental protection under environmental development, which highlighted the focus of economic development in co-op as a need to make peace. The Kirkenes Declaration was reaffirmed in 2013, further reducing environmental protection to point four: after the economy, finance and knowledge. Additionally, the Kirkenes Declaration highlighted the role of civil society in the functioning regime.

However, there is an economic side which acts sort of a get out clause for environmental protection. This is highlighted, for example, in the Stockholm Declaration by Brazil, where it was stated that environmental development and security should not be superseded by



Photo: Zhanna Anshukova

environmental protection priorities. Moreover, the economic imbalance is highlighted in the early seeds of the Arctic environmental governance regime, as it was already pointed out by Gorbachev.

Coote's conclusions are the following ones. First, the creation of a governmental regime to suit pluralistic actors is a fundamental aim of environmental governance rather than sustain development or environmental protection per se. Second, whilst Arctic environmental decision-making attempts to fulfil environmental objectives, the environmental protection regime also is used as a framework of other types of cooperation, often of a technocratic or economic type. Third, whilst civil society, scientists and international political organisations highlight the need to protect the environment, the continuous inclusion of environmental development objectives alongside (or over) environmental protection highlights an imbalance impacting environmental

security. This is where the environmental protection-development nexus comes in: the actors buy into the idea that environmental protection must entail environmental protection and vice versa.

The following discussion focused on whether or not environmental protection is actually incompatible with economic development, especially when it comes to industrialisation, or whether or not economic protection is incompatible with sustainable development. Coote replied that thinking of industrial development as *eo ipso* incompatible with environmental protection would be like knocking down the tower we are already living in, hence a functionalist approach that manages to keep the two concepts together would be like fixing it while we are in it, thus offering a preferable option.

The discussion also focused on whether or not there are other ways to interpret environmental protection, for example when it comes to the indigenous people, who are usually pushed away from their land when it comes to environmental development. The answer is that this is a matter of embedded spaces, and that more studies are to be done in this field.

Sunday, 17 November in Sodankylä

08.45—12.00 Driving from Inari to Sodankylä

12.00—14.30 Visiting the Sodankylä Townhall

(Rapporteur: Zhanna Anshukova)

At the Sodankylä town hall building, the participants were offered traditional refreshments and drinks. After the break, the Academy participants were presented with the exhibition "Climate Change in Lapland's Nature." It explores the impacts of climate change on Lapland's unique ecosystems and highlights how rising temperatures and changing precipitation patterns affect wildlife, habitats, and human activities. Topics include the shifting ranges of species like reindeer and birds, the role of butterflies as climate indicators, and strategies for mitigating climate change through sustainable practices.



Photo: Driver of the Calotte Academy bus

After the exhibition, Dr Stéphanie C. Lefrère gave a presentation highlighting Sodankylä's climate action initiatives, including reducing emissions, promoting biodiversity, and improving energy efficiency. The Sodankylä Climate Roadmap 2035 aims to achieve carbon neutrality by 2035, reducing emissions by 80% from 2007 levels by 2030. Key strategies involve encouraging sustainable resource use, particularly in mining and forestry, and supporting biodiversity through reforestation and habitat restoration. Adaptation measures address climate risks, while the municipality fosters community participation through workshops and awareness events. Emphasis was also placed on the importance of transitioning to renewable energy and preserving local ecosystems for the benefit of present and future generations.

14.30—17.30 Driving from Sodankylä to Rovaniemi

Abstracts

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Sexuality as a Threat

In societies around the world, perceptions of sexuality have been entangled with systems of power and control, shaping the discourse on what is considered to be acceptable and what is labelled as deviant. This exploration investigates the concept of "sexuality as a threat" through the analytical framework provided by Michel Foucault's theories of power, discourse, and governance. Michel Foucault's analysis gives insights into how societal perceptions of sexuality have influenced systems of security and control across different historical and cultural contexts. Discourses surrounding sexuality, characterized by norms and moral judgments, have been instrumentalized by authorities to regulate and manage populations, framing certain sexualities as risks to societal order.

Drawing on Michel Foucault's insights, this examination highlights contemporary manifestations of "sexuality as a threat". Many countries implement laws and policies that criminalize or stigmatize diverse sexual expressions, referring to notions of security and public morality. This securitization of sexuality reflects broader power dynamics and state interventions in private life.

Through the examples, the examination seeks to demonstrate the specific instances of state-sponsored discrimination and control related to sexuality, illustrating how security concerns shape governance practices. By critically engaging with Michel Foucault's conceptual framework, this exploration aims to deepen our understanding of how sexuality becomes entangled with systems of security and regulation within modern societies.

Ultimately, this exploration advocates for a critical examination of the intersections between sexuality, power, and security, urging for the protection of sexual rights and freedoms as fundamental human rights in the face of regulatory and disciplinary measures.

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Continuation of scientific cooperation between Russia and other Arctic countries irrespective of political conflicts

As the global political and economic scenario is changing dynamically towards multipolarity, we see rising geopolitical conflicts and disagreements. Among the numerous negative consequences, one of the worst sufferers have been the domain of Science. In this regard, today the topic of Arctic and climate change crisis demands substantial attention and government as well as social intervention. With rapid increase in global temperature, polar ice is witnessing an alarming melting rate and it is predicted that by 2040, we will be witnessing ice free Polar summers. Given the present situation, we might not have to wait till 2040 as it will occur much earlier. The Arctic is a vast region spread across the continents of Asia, Europe and North America with Russia owning a majority share. Negative impacts of climate change unfortunately does not respect national boundaries and affects everyone all around the globe equally. In this aspect, its very important to understand and realize that participation of Russia in global Arctic affairs especially related to science and research cannot be ignored or isolated. Political problems and conflicts are temporary and will definitely change in future but the loss of lives and other catastrophic effects of climate change will not only

leave a permanent mark on our lives but also will prove fatal for our future generations. In this regard, I believe that cooperation between Russia and European/North American Arctic countries should continue neutrally without any regard to political problems. This cooperation will assure long term sustainability not only for us but for our future generations. I would like to focus on cooperation in domains such as sharing of climate data, technology, ease of mobility for researchers and scientific workers and importance of mutual participation in international and regional scientific conferences. Even if there are barriers in physical movement, there should be ample chances for scientists from different Arctic countries to participate online. The idea is not just to ensure progress of scientific research but also to maintain the sovereignty of the Arctic states in their respective Arctic territories which is ensure overall Arctic security and especially for indigenous populations.

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Arctic Geopolitics and the Role of (mis)information in a Polarized Communication Ecology

The Arctic region is central to geopolitical, environmental, and security concerns as climate change and other global drivers of change open new avenues for resource extraction, shipping, and territorial claims. This presentation explores how various state, private, and NGO and other actors operate within a shared yet clashing communication ecology to shape narratives and policies related to the Arctic. "Communication ecology" refers to the complex network of media, political platforms, and channels through which information is created, circulated, propagated and interpreted. In this context, security and securitization are highly critical concepts. Countries with strategic interests in the Arctic often seek to securitize the region, framing it as a domain of competition and potential conflict. Disinformation and misinformation play pivotal roles in this process. For instance, some states have employed disinformation campaigns to assert exaggerated territorial claims and downplay the environmental risks of oil and gas operations in the Arctic. Others, despite not being Arctic nations but major players, have used strategic narratives to frame themselves as having legitimate interests in the region, seeking to justify increased involvement in Arctic affairs and emerging shipping routes. Non-state actors, such as NGOs and citizen groups, work to counter these influences, advocating for transparency, sustainability, and collaboration. The presence of competing interests and narratives within the same communication ecosystem creates challenges for governance and policy-making, particularly in a region as fragile as the Arctic.

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Paper Title Untangling the Environmental Protection-Development Nexus: A Case Study of Arctic Cooperation

The environment is facing multiple stressors which has dangerous repercussions for humanity's potential to thrive and survive. Supported by scientific evidence, scientists and policy-makers question whether current environmental governance is able to meet challenges associated with the Anthropocene. The international environmental governance regime has been built upon the understanding that environmental protection and development should be approached together using a cooperative international framework for holistic environmental decision-making. This is based on evidence highlighting the interconnectedness of the human, social, economic, political and environmental spheres. In the absence of factors to mitigate bias

between protection and development incentives, this has led to environmental decision-making that often subjugates environmental protection below development objectives. Science and governance do not stand alone but are impacted by socio-material factors that have a wide geographic and temporal matrix. These factors span the science-policy interface to include past histories, possible futures, power-based hierarchies, individual motivation, geopolitical factors, epistemologies and ontologies. This thesis explores a spectrum of the Arctic science-policy interface through case-studies using a multidisciplinary Critical New-Materialist analysis in order to ascertain why there is a gap between environmental protection and development in Arctic environmental governance. The consideration of material and immaterial matter as connected through rhizomatic flows and concepts as assemblages iteratively existing within these flows allows for new avenues for analysing basic categories of thought including relationships between subjects/objects, agency/structures, science/politics and concepts/practice. The thesis argues that in environmental governance - the beliefs, concepts, practices and approaches spanning across the science-policy interface solidify a widely accepted concept of an environmental Protection-Development (EP-D) nexus which includes rationalities of materialism and extractivism which are prevalent within anthropocentric ontologies. This EP-D nexus is orchestrated by a variety of actors and maintained through artefacts, structures and practices in the science-policy interface. Despite its interdisciplinary roots borrowing particularly from Science and Technology (S&T) studies, this work sees itself as situated within the field of International Relations (IR) and also the sub branch of IR - Geopolitics. This is based on definitions which consider IR as inherently interdisciplinary and Geopolitics as a 'gathering place' of ideas.

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Securitizing the High North: A New Priority for NATO.

The Arctic has emerged as the hot topic of the year, drawing attention due to concerns about climate change, hybrid threats, subsea infrastructure, and growing commercial interests in Arctic shipping. This heightened interest has propelled the region into the spotlight in academic circles and the media, with awareness increasing among practitioner communities and public services worldwide. The intersection of expanding military interests, rapid technological advancements, and the profound impact of climate change signals an increasingly contested High North.

From being a region detached from global political dynamics, characterized as a zone of peace (Gorbachev 1987) and a territory of dialogue (Tass 2014), to becoming the most likely territory of the next conflict and a critical focal point in safeguarding collective defense due to the increasing Russian capabilities and the effects of climate change.

For NATO, the High North represents a critical focal point in safeguarding collective defense, given the escalating Russian capabilities and the effects of climate change. NATO remains steadfast in its commitment to preparing the Alliance to address contemporary and future challenges, particularly in the Arctic region.

My paper will aim to present a portion of my research project, highlighting the initial results achieved after a year and a half of work. It aims to shed light on the drastic changes in terms of agenda setting and perception of priority that the Arctic has undergone between 2013 and 2023 in the eyes of NATO.

To support this thesis the paper will perform a qualitative and quantitative analysis of how references to the High North and threats in the region, which were almost completely absent, now have a place in the most relevant strategic documents of the Atlantic Alliance.

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The Military as a Landowner: The Case Study of Punta Vigía

The Strait of Gibraltar separates Europe from its North African neighbors and has long been a geopolitical hotspot. The Spanish Ministry of Defense acts as landowner of 21 military bases in the area, 18 of which are abandoned. Through the case study of “Punta Vigía” we examine the Spanish Ministry of Defense’s position as a landowner and unintentional environmental steward of the land they hold.

Tourism has driven intense development of the coastal lands of southern Spain. The areas occupied by the Ministry of Defense have been exempt from development pressure, leaving a patchwork of natural spaces unintentionally protected under its jurisdiction. However, the abandoned sites present risks to public safety. The Ministry of Defense has no budget for required maintenance and is motivated to free itself from legal and financial obligations.

The case study of Punta Vigía follows the history of one such abandoned base, subject of a proposal to concede the military base to a private entity under the premise it will become a private school. The base is located in land currently zoned exempt from development with strict rules for any modifications. It also falls within a Natural Park and an UNESCO biosphere reserve. Current events suggest it will now fall into the hands of a private developer.

Public interest is an undetermined legal concept in Spain. In the case of Punta Vigía interpretations of public interest such as education, environmental protection, and the creation of employment are measured by decision makers at distinct levels of government. However, the question of environmental stewardship is only addressed within the context of the Natural Park, not the Ministry of Defense. Their unintentional role as a protector of natural spaces is not recognized.

This case is ongoing; architectural plans are under evaluation to determine if zoning changes will be approved. The criteria used by decision makers is not transparent, but of importance as the proceedings are followed closely by other developers and will set precedent for private entities seeking undeveloped tracts of land in southern Spain.

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Are small copepods the winners of an ice-free Barents Sea?

The Barents Sea is an extremely productive fishing ground, due to the high biomass of large, lipid-rich *Calanus* copepods, that form the basis of the diet of many commercially and ecologically important fish species. The Barents Sea is among the Arctic regions with the fastest decline in sea-ice cover, which exposes its marine ecosystems to environmental changes that can have fundamental impacts on all compartments of the food web. Secondary production, defined as the biomass increase of primary consumers (e.g. copepods) feeding on primary producers (e.g. phytoplankton) within a specific area and time (e.g. mg C m⁻² d⁻¹), is essential for understanding energy transfer in the food web. In this paper (<https://doi.org/10.3389/fmars.2024.1308542>) we investigated how differences in sea-ice cover between two years (2018 and 2019) affected the quantity and the contribution of different species to total copepod secondary production in the Barents Sea.

We expected to find a higher quantity of copepod production in the summer with reduced sea-ice cover, due to a hypothesized extended period of primary production and consequently higher food availability for

copepods. However, our results suggested no significant interannual differences in the quantity of copepod production. We found significant spatial differences in copepod production, with the highest production occurring on the Barents Sea shelf. Our study shows that if environmental conditions (e.g. the presence of sea ice or water temperature) change to an appropriate extent in a habitat from year to year, this will affect the copepod community composition and its production. Smaller copepods (<2 mm) were more important for copepod production during the summer with less sea-ice cover and in habitats characterized by higher water temperatures, while large copepods were more important in the summer with extensive sea-ice cover and in habitats with lower water temperatures. Our study suggests that even though the quantity of copepod production might not differ in years with contrasting sea-ice cover, the shift towards smaller organisms may affect the food quality and availability for planktivorous organisms, e.g. fish, and ultimately lead to food web changes.

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The Nordic Mediterranean. A Regionalizing Paradigm for the Arctic

As the Arctic as a region “opens up” to the world’s south and the tensions between Russia and the other Arctic countries “spiral down”, the High North is most likely to increase in importance in great power politics and to play roles previously unknown to it. Because of this, a growing need for a paradigm capable of grasping and assessing the local and global consequences of the transformations occurring within the Arctic has been felt in academia.

With this in mind, this paper intends to ponder and, whenever possible, forecast the future geopolitical roles that the Arctic is likely to play through a “regionalizing” paradigm. It intends to do so by focusing on the geographical characteristics of the Arctic and on the ongoing changes occurring in the Arctic geographies of power. Specifically, the paper will draw upon the works of the authors (such as Admiral Giuseppe Fioravanzo), who claimed that, from a geostrategic and geopolitical point of view, the Arctic is a potential Mediterranean Sea. Indeed, should the ongoing climate and geographical changes transform the Arctic into a Mediterranean Sea de facto, then the geopolitical and geostrategic functioning of the Arctic as a unitary region may be forecasted by applying to the region the regionalizing paradigm already used in regard to the other Mediterranean Seas.

First, this paper will outline the main features of the regionalizing paradigm used by Geopolitics with regard to the other mediterranean regions, and overview the claims that consider the Arctic to be a Mediterranean Sea. Secondly, it will apply to the Arctic region the regionalizing paradigm of Mediterranean geopolitics. In conclusion, it will ponder the particular geopolitical characteristics of a would-be Arctic Mediterranean and assess whether or not this paradigm can work for the Arctic region.

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“Environmental security as ‘must’ vis-a-vis military security as a ‘substitution’ of”

In the 2020s world politics, with multiple crisis, seems to be consisted of two parallel realities: Most of people, civil societies, NGOs and researchers are concerned about the ecological catastrophe, as pollution kills millions (beings), climate change threatens nations and societies, and loss of biodiversity is accelerated. In contrast, most of states, as well as heads of states, supported by security establishments,

concentrate on less relevant issues, such as great power rivalry, arms race, bloc-building with enemy pictures, securitization, as substitutes for environmental protection and climate change mitigation. Here 'military security' as the mainstream concept, has overtaken security discourses among political and economic elites, technocrats, media, and part of meritocracy, albeit the military causes a threat by its environmental degradation. Whereas, 'comprehensive security', with a more holistic approach and worldview, is put into a margin, albeit the climate crisis is the biggest security threat to modern societies. This presentation on the one hand, discusses different aspects and concepts of security - from traditional (national, unilateral, competitive) military security to comprehensive security (including environmental and human security) - in the context of world politics. On the other, it analyzes an importance and sensitiveness of 'agency', ie. actors / owners of security, in security studies. It concludes by applying, according to planetary thinking, the climate crisis as a new 'discipline for disciplining' that environmental security is a 'must'. While emphasizing military security is a reaction to, and a substitution of, the ecological catastrophe in the context of the unified state system which is (been) a fundamental obstacle to the efficient management of global environmental challenges.

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EU Environmental Security and Indigenous Peoples in the Arctic: How the EU Critical Raw Materials Act aims to bring environmental security in the EU but fails to sufficiently include the Sámi

The European Union's Critical Raw Materials Act, launched to complement the European Green Deal, and enacted in March 2024, represents a pivotal moment in the continent's transition towards sustainability and decarbonisation. However, its implications for indigenous communities, particularly the Sámi people, remain largely unexplored. This project seeks to investigate the multifaceted impacts of the EU Critical Raw Materials Act on the traditional lands, livelihoods, and cultural heritage of the Sámi. The primary objective of this research is to assess how the EU Critical Raw Materials Act influences the socio-economic, cultural, and environmental dynamics within Sámi territories. By conducting a comprehensive analysis, we aim to provide insights into the complexities surrounding resource extraction policies and their effects on indigenous rights and sustainable development. The project includes a critical analysis of the provisions and implications of the EU Critical Raw Materials Act, with a particular focus on its alignment with indigenous rights frameworks and sustainability goals. This involves examining key amendments introduced by the European Parliament and assessing their effectiveness in addressing concerns raised by Sámi representatives and environmental advocates. The case of the Kiruna mine will be discussed, as the newly proposed expansion to extract rare earth minerals is facilitated by the Critical Raw Materials Act and in the case of the Arctic is motivated not only by climate concerns but also by geopolitical and financial interests, driven by competition for raw materials and land for commercial activities. This project seeks to contribute to academic discourse on the intersection of environmental policy, indigenous rights, environmental security and sustainable development. By bridging theoretical frameworks with empirical evidence, it aims to deepen our understanding of the complex dynamics shaping resource governance in contemporary Europe.

*This project also has an aspect discussing increased military presence in the region, endorsed by the EU as well as Norway. Norwegian security policy needs to address the potential challenges and opportunities arising from this resource competition.

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”There is plenty of space, and it doesn’t bother the civilians.” Militarization of Lapland and Sápmi in the framework of colonialism

Northern Finland, consisting of Lapland province and parts of the Sámi homeland region, Sápmi, is being heavily militarized following Finland’s NATO membership and the Defense Cooperation Agreements with the US. For now, the change is most visible on the level of land use, for instance in the form of large and intensive military training exercises and new infrastructure projects that relate mainly to military justifications and concerns. Despite their significant impact on local lives, livelihoods, regional development and Sámi Indigenous rights, local and Sámi perspectives on these developments have so far been largely missing from public debate. In this article, I seek to address the silence, and to build ground for critical decolonial approaches on Nordic militarization, centering attention especially on the social impacts of military land use, on the colonial geographies of militarization, and on efforts to challenge them. Towards the end of the article, I focus attention briefly on two concrete cases: first, on the local struggles that are currently taking place in Naarmankaira and Pyhä-Kallio reindeer herding district within an area that overlaps with Rovajärvi shooting ground, which is a large military training area in southern Lapland; and second, on the questions and issues that emerged in the context of the Nordic Response, a large cross-border NATO military exercise that was held across the Sámi homeland region in Spring 2024. The article concludes that militarization in Northern Finland relies on, and reproduces colonial discourses, structures, practices and power relations that have been central to the region also historically. These include the reproduction of the region as terra nullius, sidelining local and Sámi voices and rights, promoting settler colonial land appropriation, and advancing forms of regional development which align with interests and objectives defined in far-away centers of power, instead of social and cultural diversity and sustainability.

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Greenlandic Paradiplomatic Relations in a Postcolonial Context

The foreign relations of substate units are referred to as paradiplomacy, although independent states may perceive paradiplomacy as a threat to their sovereignty. The same concerns are held by the Danish about Greenland, a self-governing territory of the Danish Realm. This former Danish colony can become the first independent state in the Arctic with a predominantly indigenous population. One of the keys to gaining independence may be developed foreign relations. The Greenlandic government (Naalakkersuisut) can conclude international agreements concerning its own country and fields of responsibility it has taken over. However, Greenland’s foreign policy is still in the hands of Denmark and this situation raises several contentious issues. The general research aim of this paper is to comprehensively evaluate Greenland’s paradiplomatic activities. To achieve the research aim, we work with the concepts of paradiplomacy and postcolonialism, a critical school of thought concerned with the consequences of colonization. To organize the structure of the paper and pose our research questions, we use Kuznetsov’s explanatory framework of paradiplomacy (2015). The framework has not yet been tested in the case of Greenland or any other Arctic sub-state unit. We use a range of sources, including personal interviews with Greenlandic stakeholders and experts from the University of Greenland, which were conducted in Nuuk during an internship. We conclude that Kuznetsov’s framework is a suitable and effective tool to research the paradiplomacy of dependent territories. However, we recommend extending it to include the historical perspective or the question of the

political partisanship of the examined region. The most obvious evidence of Greenlandic paradiplomacy is how the Greenlandic foreign policy institutions function at the parliamentary and governmental levels. The existence of representative offices abroad thus demonstrates the ability of Greenlanders to shape their foreign policy and is sometimes seen as "diplomatic training" for future independence. In foreign relations, Greenlanders are surprisingly less interested in cultural and political ties but are taking a primarily pragmatic and economically oriented approach. In conclusion, the most important consequence of Greenlandic paradiplomacy may not be political independence, but a prosperous, sustainable, and diversified economy free of dependence on Danish subsidies.

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' Militarization ' of the Arctic: Russian and Western perspectives

During the Cold War the Arctic served as an area for strategic nuclear deterrence between the Soviet Union and the US and was militarized to that end. After M. Gorbachev had proclaimed the region a 'zone of peace', the military dimension was overshadowed by the environmental one for a couple of decades. However, discussions about 'militarization' of the Arctic reemerged in the late 2000s when Russia and Canada, followed by other Arctic states, resumed military activities in the High North. This has gradually raised concerns of all regional players resulting in mutual accusations and growing political tensions. The issue has become more acute in recent years, especially in light of the European security crisis escalation in early 2022.

The main watershed line in the Arctic militarization debate can be drawn between the Russian and other Western perspectives, namely those of the NATO member states. The latter, observing military developments in the Russian Arctic, label them as a provocative and aggressive 'military buildup' and express concerns about Moscow's potential military power projection across the region. The former rejects such accusations by stressing that it has been mostly revitalizing the military infrastructure abandoned after the dissolution of the USSR, rather than extending it, and that these actions are solely aimed at protecting the nuclear facilities in the Kola peninsula and commercial shipping along the Northern Sea Route. Nevertheless, Russian military activities in the Arctic are considered hostile by other Arctic nations which is reflected in their strategic documents and threat assessments and incentivizes them to develop military capabilities in the High North.

Using narrative analysis, the article examines how the Arctic states perceive the military activities of one another and represent their own. Special focus is made on how the term 'militarization' itself is defined and operationalized. It further analyses how these perceptions affect foreign policy and defense decision-making in respective countries which, in their turn, influence the military and political dynamics in the region.

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Arctic Security: Balancing Hybrid Strategies and Nuclear Challenges

The current utilization of hybrid methods aims to maintain control over adversaries, thereby preserving an asymmetry in Freedom of Action (FoA), relevant for strategic objectives but intersecting with global issues. This dynamic is particularly evident in both the Arctic region and nuclear contexts, where the dual nature of nuclear assets—civilian and military—adds complexity to the geopolitical landscape. Climate change and technological advancements further exacerbate this complexity, accelerating the expansion of FoA among individual states.

The Arctic's complex dynamics involve various stakeholders, including states, multinational corporations, local communities, and indigenous populations, blurring conventional borders. This fluidity presents challenges in balancing national security interests with international cooperation, requiring comprehensive approaches that transcend traditional boundaries. However, significant shortcomings hinder adaptation to global changes, encompassing issues in international law, state political capacity, scientific advancements, diplomacy, and regional security. Rectifying these deficiencies demands interdisciplinary collaboration.

This report explores nuclear operations in the Russian Arctic, addressing safety and security concerns. Using analytical methods, including future scenario analysis, it navigates the complexity of the region's nuclear landscape in a new nuclear era. Integrating a human-centric approach, considering sensory aspects and environmental connections, provides a comprehensive understanding of the socioeconomic and security impacts of nuclear activities in the region.

Amidst the extreme Arctic environment, the analysis confronts the delicate balance between historical legacies and emerging challenges, aiming to unveil the underlying complexities and move beyond perceived paradoxes.

In the dynamic Arctic region, characterized by both the potential for nuclear activities and the vulnerabilities associated with them, comprehensive approaches addressing both nuclear security and safety are imperative. These approaches not only mitigate immediate threats but also promote sustainable management of nuclear assets, ensuring the region's resilience and security.

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Emerging securitization narrative and academic freedom

The Russian invasion of Ukraine in 2022 and the rise of China catalyzed a powerful "securitization" narrative in the West, which has, in turn, influenced academic freedom and intellectual discourse, especially in subjects concerning Russia and China studies, security policy, and international relations. The narrowing of academic freedom is partly driven by political, public and diplomatic pressure on universities to align with government stances against Russia and China. This overwhelming securitization environment can and has not only stifled research critical of Western strategies (incl NATO's role) in the region, but has forbidden working together with Russian academics and limited academic collaboration with China. Consequently we are losing insights into the trajectories of Russian and Chinese society. We in the academic community face a paradox: while universities should do critical work on our own societies and policies and advocate for freedom of speech and critique authoritarianism abroad, we are facing a new normative environment where open domestic discourse are threatened to be silenced under the pressure of securitization discourse.

This securitization trend raises ethical and practical questions about the boundaries of academic freedom in current geopolitical crisis and whether these constraints, though intended to “protect” national security, may ultimately harm the democratic values we cherish and eventually provide propaganda tools for authoritarian rulers of exposing our “double standard” practices of promoting freedom of speech whilst silencing critical voices.

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Uncovering power dynamics in contested extractivist narratives in Saam’ jiemn’n’e, the Kola Peninsula

How well are mining companies’ strategies to promote the “green” transition in the Kola Peninsula, the easternmost region of Saam’ jiemn’n’e, the homeland of the Indigenous Saami people, understood? Following the onset of Russia’s full-scale invasion of Ukraine, Russia’s lithium carbonate imports from South America faced disruptions due to anticipated Western sanctions. Lithium is vital for the energy transition, especially for battery production, but has also significant value for military technology, making countries like Russia with large reserves increasingly geopolitically important. To counter falling imports, Russia accelerated the development of its domestic lithium production. The Kolmozerskoye deposit, the country’s largest lithium source, is located on the Kola Peninsula within Saami Indigenous land. Since 2022, it has been developed under the “Polar Lithium” joint venture by mineral giant Norilsk Nickel and state-owned Rosatom. This project claims alignment with international standards, at least in its public-facing communications. Even before receiving an official license in 2023, the company started dialogues with Saami and other reindeer herders in 2022 to gain a social license to operate. However, these eWorts have sparked criticism from Kola Saami and other locals. They question the transparency and content of the dialogues, the composition of company-formed working groups, and the project’s true commitment to local socio-cultural and socio-ecological welfare. Norilsk Nickel promotes the project as part of Russia’s “green” transition and energy security, emphasizing sustainability but neglecting the cultural significance of the region for the Saami. Public dialogues tend to take a positive tone, without addressing the Saami’s longstanding concerns over industrial intrusion into their cultural lands. Given Russia’s colonial history with Indigenous populations and the Saami’s enduring struggle with extractive projects in their territories, it’s essential to examine the social biography and power dynamics in ventures like Kolmozerskoye. Often, these initiatives prioritize extraction over Indigenous rights and environmental preservation. In this presentation, I will delve into these issues, outline the approach to my research despite restricted field access in Russia, and share preliminary findings on the implications of this “green” mining project for the Kola Saami.

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Rethinking the ocean environment amidst polycrisis: The Law of the Sea and the Arctic

Climate change impacts on ecosystems are ‘approaching irreversibly’ in the Arctic region (IPCC 2023) - warming nearly four times faster than the rest of the globe. Year 2023 has been the sixth warmest year since 1900 in the Arctic, with the warmest summer ever recorded. In the ocean, temperatures continue

warming trends, sea ice extent continued to decline, presenting one of its lowest levels recorded since more than forty years, and rising sea levels have inundated terrestrial permafrost surrounding the Arctic ocean (ARC 2023). This Arctic reality reflects the paradox of climate change: it affects the most those (humans and non-humans) who contributed the least to the problem – which is the corollary of relentless human behaviour based on a pernicious relationship with nature, reflected in our (human) laws.

Law traditionally represents (ocean) nature as an object of instrumental function to satisfy human needs oriented to (economic) development. This anthropocentric understanding of nature rooted in law legitimises harmful human activity and policies oriented to exploit its resources. In this context, it is essential to interrogate basic notions on nature incepted in law, and how such notions and assumptions facilitate widespread harmful human activity contributing to climate change? The international law of the sea (LOS) is at the core of Arctic governance. Hence, this paper will focus on the law of the sea and its implications for Arctic (ocean) governance. It will interrogate what are the notions and assumptions of ocean nature and the relationship human-nature in the LOS? How these notions and assumptions have evolved to become the basis of the LOS? Whose views on the ocean have prevailed over others, such as those from Indigenous Peoples? From a Critical Arctic Studies and multispecies justice perspective, this paper aims to reflect on these questions taking as case study the Arctic region and the application of the LOS in this context, and explore how LOS emerging law developments could assist in rehabilitating the LOS, and advancing a post-anthropocentric relational approach to ocean nature in a context of polycrisis.

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"Save the Calotte Academy" Interactive Learning Café

The focus of the workshop is to explore creative solutions to secure the future of the Calotte Academy. We will start with a brief overview of the Calotte Academy's current situation, the goals for the workshop, and the importance of saving the Academy. Each participant will share what the Academy means to them.

Participants will be divided into three groups, with each group assigned to one topic table. Each table will have a designated facilitator responsible for guiding the discussion and taking notes on key ideas and insights. Each group will rotate between the three topic tables, discussing a different question for 20 minutes (20 minutes per round, 60 minutes total).

Preliminary Topics:

1. Funding for New Arctic Adventures with the Calotte Academy
2. Broadening Horizons: Friends of the Calotte Academy and Global Connections for Greater Impact
3. Bringing the Methodology of the Calotte Academy to Your Local Community (Don't copy, but apply)

At the end, we will compile a collective summary of our discussions and provide some closing reflections.

Please bring all your creativity and imagination—there are no limits to the ideas you can share!

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Navigating Environmental and Military Security Challenges in the Era of Space Commercialization: Focus on Commercial Spaceports in Northern Europe

The rise of space commercialization has significantly elevated the importance of commercial spaceports, particularly in northern Europe, including Norway, Sweden, and Scotland. These regions are witnessing a surge in commercial space projects, driven by the projected trillion-dollar industry and the aspirations of numerous states and companies, both large and small, to explore terrestrial orbit and beyond, including the Moon. Notwithstanding their pivotal role in this burgeoning industry, commercial spaceports are already exhibiting adverse environmental impacts, both on Earth and in space, raising profound ethical concerns. Moreover, this phenomenon challenges previous notions that only a small number of states are directly affected by space launches, and may open the way to new political dynamics, especially in the context of global securitization trends. In the context of the European High North, where commercial space endeavours are burgeoning, understanding the role of space law in addressing these challenges becomes increasingly imperative. Questions arise: How can space law navigate the legal complexities posed by commercial spaceports to ensure the enduring sustainability of space activities? What does existing literature reveal about the regulation of commercial spaceports? What is the most pressing legal and ethical issue for their continued operation? Addressing these inquiries necessitates a multifaceted approach that integrates environmental and military security considerations. How could space law frameworks evolve to encompass the myriad challenges posed by commercial spaceports, particularly in regions experiencing rapid growth in space commercialization? To what extent could the discourse extend beyond terrestrial concerns to encompass posthuman aspects, ensuring that the environmental impacts are comprehensively addressed? Collaborative efforts among nations are essential to establish robust regulatory mechanisms that uphold environmental sustainability while safeguarding national security interests. By exploring these intertwined environmental and security challenges, this presentation advocates for a more holistic and sensitive approach to space exploration—an 'astronomy of degrowth'—that prioritizes sustainability and security amidst the transformative era of space commercialization.

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The connection of North Atlantic and Arctic oceans in the 21st century: challenges of maritime and human securities. Portugal in the Arctic. Scenario thinking (2023-2035).

The goal of this research is to evaluate how the Arctic region can be an opportunity for Portugal, adding the region in official documents related to defence and maritime strategies as well as foreign policy. Recurring to the prospective analysis with scenarios within the 2023-2035 timeline, the nexus climate change-ocean-security is developed, showing also that Portugal finds itself at the crossroad between climate change, oceans and the closeness of the Arctic. The foreseen new maritime routes connect North Atlantic and Arctic basins, unveiling challenges for maritime and human securities in the respective regions. This research is framed in what I call: Trinity by connecting Green Theory, maritime security and human security. Facing new challenges and changes in the 21st century, Portugal needs to reposition itself at a geopolitical level (at the intersection of the Atlantic and Arctic) as a global coproducer of maritime security

acknowledging positions of the Republic of China and the Federation of Russia in both geographical areas in this century. To be a fully co-developer of global maritime security and leader on ocean governance, Portugal needs to be aware of the possible and plausible changes to happen in the next decade and that can affect its sovereignty. As a founder member of NATO and member of the European Union, there is, not only a national responsibility, but also a collective responsibility in working for collective security. The scenarios to be presented shall give the necessary information, based on global trends and security/defence reports from Arctic and non-Arctic countries (already released) to sail North, being in the Arctic and define an action plan for the Arctic region as published in Resolution n°76/2023.

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The Unearthing of our Global Minds: An Explora on into the Western Founda on for Unsustainable Natural Resource Extraction Through Disconnecting People from the Natural Environment

The human experience has long relied on the local natural environment for sustenance and knowledge, but the rise of unsustainable trading economies strained this relationship. This led to a widespread intensification of natural resource exploitation, both within territorial boundaries and in foreign lands, often enforced through military coercion. Consequently, regional insecurity escalated, fostering a cycle of unsustainable resource extraction to finance military expansion and defend against neighboring threats.

This paper argues that the period from Roman Empire to the European colonial laid the foundation for an expanding global intellectual transition disconnecting people from their local environment that paved the way for the unsustainable large-scale, trade-based economy. This economic change fostered short-term wealth and consolidated political and military dominance over vast territories. This shift from local environmental knowledge in favor of sanctioned written texts and numerical analyses, facilitated the compartmentalization of knowledge, divorcing it from its contextual richness and excluding valuable perspectives such as indigenous knowledge systems.

The Protestant Reformation illustrated the power of mass media through the advent of the printing press and the subsequent Enlightenment established academia as the intellectual authority for the trade-based economy, epitomized by what John Murdock termed the "natural philosophy without nature" paradigm. In this intellectual milieu, the dynamic and interdependent processes of nature were replaced by static and isolated conceptual frameworks, wherein tangible values such as monetary worth and quantifiable measures took precedence over ecological considerations. This conceptual shift laid the groundwork for economic theories that disregarded the environmental consequences of resource extraction, culminating in the colonial laws, systems, and institutions that continue to shape modern economic practices.

By elucidating this historical trajectory, this paper underscores the imperative of reconciling economic and cultural imperatives with ecological sustainability. It highlights the enduring legacy of colonial economic paradigms and underscores the need for an intellectual paradigm shift towards more ecologically sound economic practices to ensure the actions of human societies are constructively part of the natural world.

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Research on the Euroarctic borderland under shifting politics

The presentation will explore the dilemmas of doing research in social sciences and the humanities on the Norwegian, Finnish and Russian high north borderland under rapid change in national and university policies. While belief has recently all but evaporated in most media and in national governments in e.g. the Barents Region 1993-2022 cross-border alliances among “locals”, and regional institutions, modelled on among other EU neighbourhood policies, faith was high for some decades in local peace-work governed discretely by robust top-down funding and political promotion. Among the components of this were cross-border interaction on regional level by “people-to-people” partnerships. This is now seen as highly problematic, stamped by some situated in central offices as naïve and counter to the security interests of extended NATO memberships, given war in central Europe. Is this manoeuvring the necessary flip-side of a responsible top-down take on university research and education? Somehow lost in the present new-old “security from above” concern and the blame-game towards previous serious as well as opportunistic Barents-work, are people still residing under the pressure of outmigration in the Euroarctic, and those who take seriously the Euroarctic collective memory -- dating far back to similar times of conflict that were brought north from the south.

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Disaster-related maxims of science diplomacy in the Arctic: Is there a place for peace at the edges of conflict?

Climate change is taking an increasing toll. It is influencing weather-related natural disasters. If weather extremes become more frequent or more intense, losses will increase unless specific mitigation measures are implemented. Specifically, the regions north of the Arctic Circle experience a sharp rise in temperature more than twice as high as the average global increase. Such well-known statements became usual for many audiences the last years. Disasters do not consider geopolitical borders nor conflicts. Climate change forced processes have been studied by world scientific community for many decades. And now the community is approaching the next International Polar Year 2032-33 through the multi-year planning process for the Fourth International Conference on Arctic Research Planning (ICARP IV) that engages Arctic researchers, Indigenous Peoples, policy makers, residents and stakeholders from around the world to collegially discuss the state of Arctic science, the place the Arctic occupies in global affairs and systems. During this process the most urgent knowledge gaps and Arctic research priorities and needs for the next decade will be considered and avenues to address these research needs to navigate towards the next IPY. Looking back starting 1995, the ICARP process has climate change and its consequences on Arctic agenda for 30 years already.

Disaster-related science diplomacy (“disaster diplomacy”)—an emerging and powerful theme within science diplomacy—is an approach to enhance disaster resilience while simultaneously reducing conflicts and fostering cooperation between states where relations might otherwise be strained. Effective disaster diplomacy combines official conflict-resolution efforts led by governments with peer-to-peer exchanges between scientists and nonacademic disaster experts, such as practitioners and local knowledge holders.

However, we cannot suggest that disaster diplomacy is a prominent factor in conflict resolution. Instead, disaster-related activities often influence peace processes in the short-term—over weeks and months—provided that a non-disaster-related basis already existed for the reconciliation. Disaster-politics interactions have been studied for decades, but usually from a specific political framing, covering a specific geographical area, or from a specific disaster framing.

The current Russia-Ukraine conflict has a tremendous influence on Arctic dialogue thus the future of Arctic science which will certainly have its direct impact on climate research. By being an active participant of several ICARP processes and previous IPY, author tends to find answers to the following questions in this investigation:

1. What is the future of the ongoing ICARP and upcoming IPY 2032-2033 within the current state of Arctic dialogue considering the retrospective experience?
2. Can the environmental processes, hazards and consequent disasters induced by the continuous climate change influence the dialogue and in which way?
3. Can we overcome the political ambitions of superpowers in the face of global disaster(s) related to climate change?

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Digitalisation and Environmental Security: Tackling the Corporeality of Cloud Computing

The ongoing digital transition of business operations, governmental services, or that of everyday life activities of ordinary citizens goes in hand with shifting digital services and applications into the cloud, which leads to a growing demand for data centres. While digitalisation and particularly cloud computing is often promoted as a technological means for a green transition, the resource demand and associated environmental impacts of the information and communications technology (ICT) sector is increasing, with some estimates predicting that the sector may account for 14 % of the total global annual greenhouse gas emissions by 2040 if unchecked.

This paper explores the dynamics of the environmental impacts of digitalisation and especially that of cloud computing, since it has become one of the main drivers of the growing resource demand of digitalisation, not at last due to the popularity of adopting artificial intelligence (AI). It questions the role of changing user behaviours and that of the ICT industries regarding the impact of cloud computing, and analyses governmental response toward the associated challenges on European level. Due to the absence of strict environmental legislation but a legal framework that so far mostly relies on self-regulation of the industry, this paper will also shed light on the corporate social responsibility of both data centre operators and industries that utilise cloud computing.

From Scholars' Journey to the North into a School of Dialogue: 33 Years of Calotte Academy

This is a short version of a written Calotte Academy's history, the completed version has been published in November 2021 as a part of the book "Selected Articles of Calotte Academy – A traveling northern symposium on science and politics" (eds. Heininen and Huotari). As history is often told chronologically, the story starts from the first event and goes towards the present time. Each annual academy, divided into three phases, is briefly described including theme(s), route, locations and feelings, as well as a summary of presentations & discussions. After this retrospective overview the aims, methods, procedure & structure of the Academy are analyzed, and finally, outcomes & achievements specified and discussed. In a nutshell, the Calotte Academy is an annual international, traveling symposium and interdisciplinary academic seminar on Northern & Arctic issues with high expertise and policy orientation, as well as strong educational & training components.

The 1st event took place in May 23-24, 1991 at Jeera (of Saami Education Institute) in Inari, Finnish Lapland, and since then it has been arranged annually. This makes the Academy one of the oldest still running international academic institutions on circumpolar northern issues, and the oldest with sessions located in the Arctic region. Born and raised in Inari, and acted as Inari's special higher education component, it is a perfect example of the interplay between science, politics and business, and a 'Global-Local' interference.

The Academy has, so far, been surprisingly resilient, as it has continued as an international scientific seminar and school of dialogue on a wide variety of overarching themes of circumpolar & Arctic studies addressing globally, regionally and locally relevant issues, concerns and problems.

Three Phases & Several Places

When looking chronologically the annual events of the Academy, it is possible (not planned in the beginning) to recognize the following phases within the (first) 30 years:

At 1st phase (1991-1999/2000): The Academy was established to act as a seminar of Tampere Peace Research Institute's international research project, and a platform for public discussion on relevant issues, covering security, ecology and sustainable development, between scholars and local & regional stakeholders, and also educate younger generation of journalists;

At 2nd phase (2001-2011): It acted as an international forum for scientific and policy-oriented dialogue on relevant issues – globally, regionally and locally – among members of research community and wide range of other stakeholders, and served as a regional sub-forum for the NRF & it's Open Assemblies, and an interdisciplinary seminar for international organizations (e.g. Barents Press) and new institutes (e.g. Barents Institute);

At 3rd phase (2012-): The Academy became mature enough to act as an annual traveling symposium & 'school of dialogue' for early-career scientists (PhD candidates and post docs) from the Arctic 40 States and Central Europe, as well as served as a forum for UArctic Thematic Network on Geopolitics and Security and Arctic Yearbook brainstorming.

Among the Academy's co-organizers are Sámi Education Institute, Municipality of Inari, Arctic Centre & Faculty of Social Sciences at University of Lapland; Barents Institute & Department of Sociology, Political Science and Community Planning at University of Tromsø, The

Arctic University of Norway; Luzin Institute for Economic Studies of RAS at Kola Science Centre & Faculty of Geography at The Lomonosov Moscow State University; and NRF & TN on Geopolitics and Security. It has been financially supported by Norwegian Barents Secretariat, Nordic Council of Ministers, International Arctic Science Committee, and Municipality of Inari, as well as by in-kind support of co-organizers.

Aims, Methods, Procedure & Structure

Though substance is the most important thing, it matters what kind of procedure & structure is there - in the case of the Calotte Academy it is simple and non-bureaucratic. This unorthodox & flexible format is neither common in the scientific community nor easily taken by established academic & funding institutions.

As a unique academic 'school of dialogue' the Academy's aim and efforts are to create, promote and enhance a lively dialogue with communicators' commitment & certain prerequisites and rules. To implement this the sessions are structured based on an 'open dialogue', which is interpreted as a cumulative process with an open-ended nature and inclusivity, to engage others' arguments, and focus on the issue domain. Further, there is time enough for open discussion after each presentation, as well as patience among the participants to listen to others' argumentation (having expertise in other disciplines, fields and knowledge).

Each annual event consists of a core group of open-minded people and talented minds, who are interested in substance and motivated, as well as committed to open-minded dialogue. In each location, there is an active local audience.

The Academy is no exclusive club, as participants are equal as presenters - no keynote speakers – and selected based on an open call for application. No registration fee, instead of a small grant to support traveling and accommodation of early-career scientists, mostly PhD candidates.

Outcomes & Achievements

The Calotte Academy sessions in the European Arctic use to serve as platforms for scientific and other expert presentations, as well as open and lively discussions between different stakeholders. This 'transdisciplinarity' has been successful in implementing the social relevance of science, and being attractive for early-career scientists.

As numerous outcomes of the three phases in the first 30 years of Calotte Academy: 28 annual events in 19 locations in Finland, Norway, Russia, Sweden and Sapmi with a few hundred active participants representing more than 25 nationalities. Altogether almost 600 presentations in 160 sessions, covering 41 all relevant northern and arctic issues and themes, and innumerable number of comments and counterarguments, questions and answers in discussions after each presentation.

Based on the presentations and discussions Final Reports are written, also published at Arctic Yearbook, and eleven scientific books & proceedings published (English or Finnish).

More importantly, the Academy has become a method with a strong educational component (without official duties) to implement an open and cumulative dialogue with focus on an issue, allocated time, and mutual confidence & respect. As well as, its aims, methods and experimental nature has made it an open, democratic forum for academic & policy-oriented activities, an

alternative model for conventional academic gatherings (often lacking of time and patience for open discussion).

A participatory approach and by nature synergistic, not against anyone or anything (except maybe narrow-minded thinking & bureaucratic structures) has been taken as a welcome addition to the spectrum of existing platforms, fora, means & methods. According to the aims and based on the methods, procedure and expertise there is a certain philosophy of the Academy consisting of participatory approach and inclusivity, implemented by open discussion as a cumulative process between relevant stakeholders; critical approach across disciplines of science and expertise, implemented by the double Interplay: between science, politics and business, and Western science & Indigenous knowledge; respect towards knowledge-building, and that an attitude matters, when building a process which is cumulative & exponential; and finally, flexibility and economical efficiency in organization.

Conclusions

Though small and rare, the Academy has been successfully acting as a school of dialogue between stakeholders, a platform & sub-forum for international research projects & conferences, and a springboard for international organizations & brainstorming meetings. As an open, independent & autonomous entity, it is implementing synergy between different expertise and stakeholders, as well as between existing organizations and networks. All in all, around the Academy there has been born an 'Ecosystem' consisting of among others Northern Research Forum & Open Assemblies, TN on Geopolitics and Security & sessions at Arctic Circle, Arctic Yearbook and GlobalArctic Project & Handbook.

In the turbulent times of world politics, when facing wicked and complex problems and being in a multi-dimensional crisis, to lean on high expertise and use unorthodox methods are needed. Behind is an understanding that our modern societies, including northernmost societies, benefit of having constant interplay between science, politics and business – that the social relevance of science is taken literally -, and that there are new & fresh ideas, and those who produce new scientific knowledge, as rapid progress and fast changes are accelerated by crises. The Calotte Academy with serious efforts & experiences to enhance open discussion, and share knowledge and experiences with local communities, as well as bravery to believe in a dialogue as confidence building measure, deserves to be recognized and its experiences heard and studied.

Selected Articles of Calotte Academy – A traveling northern symposium on science and politics

The book *Selected Articles of Calotte Academy – A traveling northern symposium on science and politics*, edited by Lassi Heininen and Jussi Huotari, and published by the Thematic Network on Geopolitics and Security, was launched during the 2021 Calotte Academy. The publication consists of 54 scholarly articles from the annual academies in 1991-2019, and the Academy's written history.

A digital copy of the book is accessible at <https://arcticpolitics.com>

About TN on Geopolitics and Security

The Thematic Network (TN) on Geopolitics and Security, established and approved in 2009, is one of the academic & expert networks of the University of the Arctic. The main aim is to combine the two focus areas – Studies on Geopolitics, and Security Studies -, and based on that to draw up a holistic picture on Arctic geopolitics and Northern security, as well as to identify and analyze major changes of them. Another aim is to promote 'interdisciplinarity', to implement the interplay between research and teaching as well as the discussion between young and senior scholars, and to promote the interplay between science and politics, and that between scientific and traditional knowledge(s).

Research interests and themes

In the context of the Thematic Network 'Geopolitics' include issues, such as "How geopolitics is present, and implemented today in the Arctic, in general and in strategies & policies of states and Indigenous peoples' organizations"; "Changes in the Arctic, and major forces / drivers behind them"; Indigenous point(s) of view of Geopolitics?"; "What is the importance and role of TNCs, and that of SOEs in the Arctic?"; "The globalized Arctic in world politics and the global economy?".

Correspondingly, studies on 'Security' include issues, such as "Who are subjects of (Arctic) security?"; "Military strategies and defence policies in, and impacts of regional crises on, security of the Arctic"; "Environmental and Human Security in the Arctic"; "Resource extraction, the global economy, national interests, climate change and global governance – a new Arctic (security) nexus or Arctic Paradox".

Main goals

For to implement the aims and long-term purposes, as well as to promote interdisciplinary discourse on the two focus areas, the TN on Geopolitics and Security (see TN's website: <https://arcticpolitics.com>): Firstly, publishes annually The Arctic Yearbook – the first volume was launched in November 2012 and the next one in October 2022 (see: <https://arcticyearbook.com>); Secondly, co-organizes the annual international traveling symposium and doctoral school, Calotte Academy, and organizes panels on Arctic security and geopolitics at the annual Arctic Circle Assembly (in Reykjavik, Iceland), and its own brainstorming meetings back-to-back to international conferences; Thirdly, makes initiatives for, as well as coordinates and runs, international research projects on IR, Geopolitics and Security studies, such as "The Global Arctic", an international expert network and project producing, e.g. the MOOC of the Global Arctic; and international book projects, e.g. *The Arctic – a region of strategies and policies. Avoiding a new Cold War* (funded by the Valdai Discussion Club in 2014 – available at www.valdaiclub.com), and *The Handbook of the Global Arctic* (by Springer in 2019).

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Arctic Yearbook

The Arctic Yearbook is intended to be the preeminent repository of critical analysis on the Arctic region, with a mandate to inform observers about the state of Arctic geopolitics and security. It is an international and interdisciplinary peer-reviewed open access publication, published online at <https://arcticyearbook.com> to ensure wide distribution and accessibility to a variety of stakeholders and observers. The 2024 Arctic Yearbook “Arctic Relations: Transformations, Legacies and Futures” will be officially launched on 18 November 2024 at Dartmouth College, USA.

Editor

Lassi Heininen, University of Helsinki

Managing Editors

Heather Exner-Pirot, University of Saskatchewan and

Justin Barnes, Fellow at Polar Research and Policy Initiative

Editions

Arctic Yearbook 2012: “Arctic Policies and Strategies”

Arctic Yearbook 2013: “The Arctic of the Regions vs. the Globalized Arctic”

Arctic Yearbook 2014: “Human Capital in the North”

Arctic Yearbook 2015: “Governance and Governing”

Arctic Yearbook 2016: “The Arctic Council: 20 Years of Regional Cooperation and Policysaping”

Arctic Yearbook 2017: “Change and Innovation in the Arctic: Policy, Society and Environment”

Arctic Yearbook 2018: “Arctic Development in Theory and Practice”

Arctic Yearbook 2019: “Redefining Arctic Security”

Arctic Yearbook 2020: “Climate Change and the Arctic: Global Origins, Regional Responsibilities?”

Arctic Yearbook 2021: “Defining and Mapping the Arctic: Sovereignties, Policies and Perceptions”

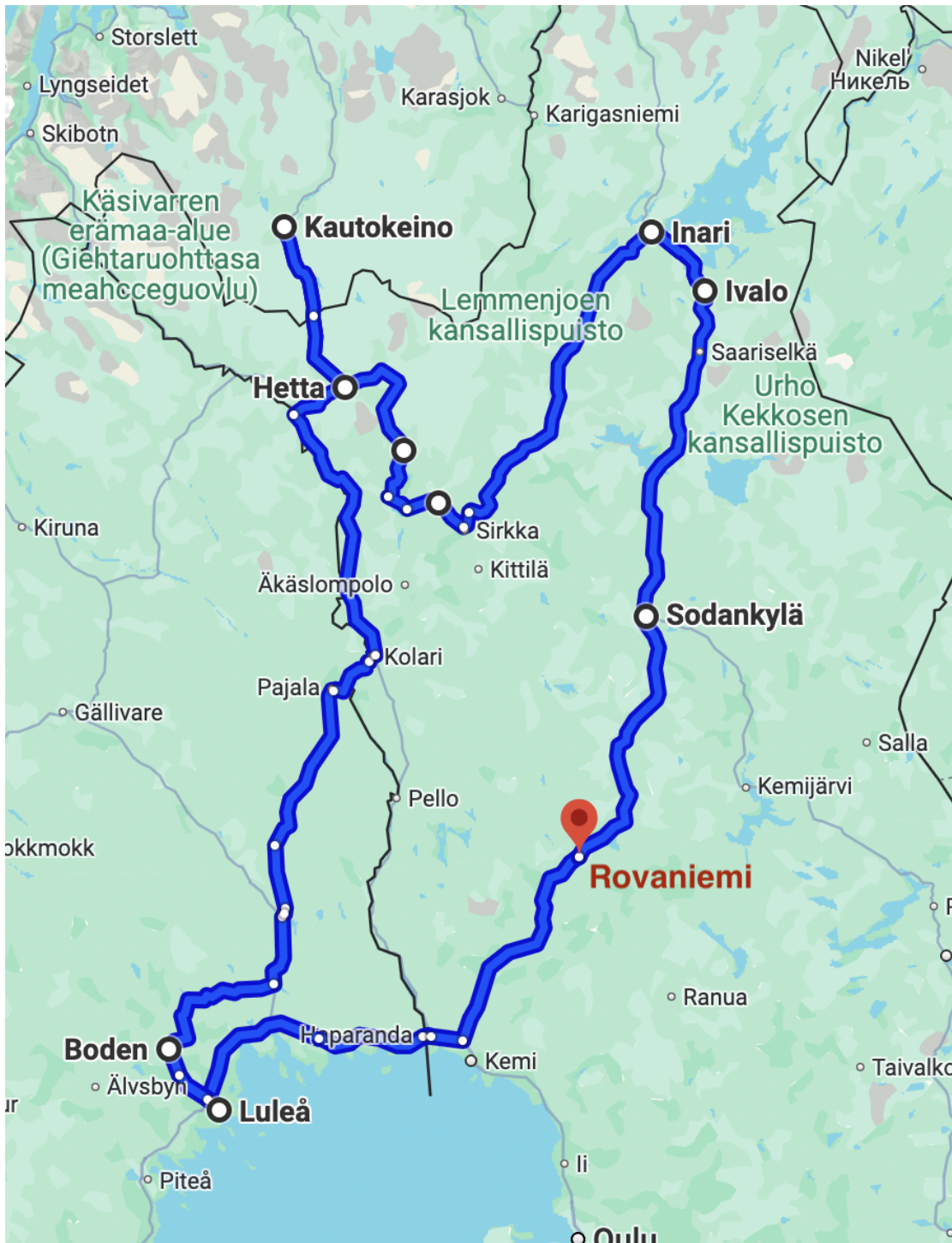
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