



Arctic Futures Symposium 2021 Executive Summary

In spite of the ongoing challenges presented by COVID-19, the Arctic Futures Symposium 2021 was held as a hybrid event both online and in-person to a limited audience in Brussels at the Martin's Brussels EU Hotel.

The symposium was held as a series of webinars over two successive days starting at 1:00 pm Central European Time (GMT+1) on 6 December and continuing at 1:30 pm CET on 7 December.

Three panel discussions on Arctic Governance took place on Day 1, led by Arne Holm (Editor-in-Chief of High North News), Romain Chuffart (Fellow at The Arctic Institute), and Marie-Anne Coninx (Former EU Ambassador at Large for the Arctic). The second day of the symposium addressed a range of other pertinent Arctic issues including youth engagement and capacity-building, Arctic resilience, and sustainability in Arctic business. The moderators of these panels - Sveinung Eikeland (Vice Rector of UiT i the Arctic University of Norway) Mike Sfraga (Chair of U.S. Arctic Research Commission and Director of the Wilson Center Polar Institute), and Mads Qvist Frederiksen (Director of the Arctic Economic Council) - led diverse panels with speakers who discussed the challenges and opportunities they face in their everyday lives.

Below is a detailed summary of each of the panels. In addition to this written summary, recordings of each session are available on the International Polar Foundation's YouTube channel at: https://www.youtube.com/channel/UCAo5lcdnM3CKw8Fw_Rpa0Rw

Monday 6 December 2021

Welcome from the organizers:

- **Nicolas Van Hoecke** (Managing Director a.i., International Polar Foundation)
- **Piet Steel** (Vice-President, Belgian Polar Secretariat; Director, IPF Board; President Corporate, EU-Asia Centre)

Opening keynotes:

- **Ailish Campbell** (Ambassador of Canada to the European Union)
- **James P. DeHart** (U.S Coordinator for the Arctic Region)
- **Mike Sfraga** (Chair, U.S. Arctic Research Commission; Director, Wilson Center Polar Institute)
- **Rolf Einar Fife** (Ambassador of Norway to the European Union)

To kick-off the Arctic Futures Symposium, representatives from the International Polar Foundation (IPF), Nicolas Van Hoecke and Piet Steel, welcomed everyone online and in-person and thanked all the participants, speakers, moderators, partners and IPF team for their contributions to the symposium, and especially their flexibility due to COVID-19 restrictions. Piet Steel finished his opening remarks with an emphatic reminder about the importance of the symposium given the many challenges the Arctic is facing, including climate change.

Following the welcome, Canadian Ambassador to the EU Ailish Campbell introduced Canada as one of the pre-eminent Arctic states, highlighting the importance of the Arctic region to Canada's national identity. She discussed the Arctic and Nordic Policy Framework, released in September 2019 by the Government of Canada. The Policy Framework is designed to make indigenous Arctic and Northern communities strong, healthy and safe. As a testament Canada's commitment to reconciliation with its indigenous peoples, the framework was co-developed by federal, provincial, territorial, and most importantly, indigenous partners. The framework therefore reflects the priorities of people living in Canada's North and puts their future into their hands. Ambassador Campbell emphasized that the leadership and traditional knowledge of indigenous peoples cannot be underestimated and needs to be central to future efforts in the Arctic. The framework also emphasizes supporting youth with a view to developing resilient and healthy communities. It enables opportunities for Arctic and Northern youth to participate in and benefit from Canada's international Arctic agenda.

To this end, Canada's international priorities related to the Arctic are:

- Working to strengthen their leadership in the Arctic Council, particularly with work on the human dimension. An example of this is the Permanent Secretariat to the Arctic Council Sustainable Development Working Group, which has been established in Québec.

- Defining the outer limits of Canada's continental shelf in the Arctic Ocean and resolving boundary issues in accordance with international law.
- Developing greater cooperation with non-state actors in the Arctic and deepening cooperation with Arctic states on indigenous and socio-economic issues.

Under the EU-Canada Strategic Partnership Agreement, Canada's diplomatic mission to the EU recently held a formal consultation regarding security and defense issues. They concluded that climate change is making the Arctic more accessible, resulting in increased economic and geopolitical activity driven by the region's geostrategic position and natural resources. Based on discussions with the EU, Canada emphasized that they must collectively work together to ensure that development in the Arctic continues in a sustainable and peaceful manner in line with the traditional knowledge of those who live there. The key challenges related to climate change are to protect biodiversity and ensure sustainable livelihoods for those who live there. Other important priorities include infrastructure, connectivity gaps, and economic and social development globally. Ambassador Campbell concluded with a commitment to continue strategic dialogues with the EU and other partners, including conversations on infrastructure, a digital development agenda, and healthcare. The fundamental goal underlying Canada's approach to the Arctic is to ensure that the region remains a zone of peaceful cooperation.

U.S. Coordinator James P. DeHart followed up by restating the impact of climate change on the Arctic, highlighting that as a result, the Arctic is warming three times the average global rate, the region is becoming a "busier" place. For example, fisheries are moving north, there is more commercial shipping, the tourist industry will continue to push north, nations will seek to establish greater military presence, and resource extraction will grow. Because of these reasons, there is a potential for geopolitical competition in the region. Therefore, the focus should be on continuous cooperation in the future, so the Arctic remains a peaceful region. He goes on to mention three important and relevant principles from the new Interim National Security Strategic Guidance issued in March 2021 by President Biden, which guides the U.S. approach to the world. The following principles shape the U.S. approach to the Arctic;

1. The U.S. will uphold international laws, rules, and institutions,
2. They will revitalize alliances and partnerships.
3. They will connect domestic renewal in the U.S. with their foreign policy efforts; DeHart noted that you cannot be successful overseas if you are not strong at home, and vice versa.

Regarding these points he pointed out that the Arctic is already a region with strong rules and an existing governance framework. This starts with the recognition of the sovereignty of Arctic states and includes, notably, the United Nations Convention on the Law of the Sea (UNCLOS), which provides for the management of marine resources. The region also benefits from strong institutions like the Arctic Council, which provides a forum for strong cooperation between Arctic states and indigenous peoples. He provided the examples of the recently agreed 10-year Strategic Plan for the

Arctic Council, which places climate change at the forefront of future activities and the wide enthusiasm towards Russia's assumption of the Arctic Council Chairmanship.

Regarding revitalizing U.S. alliances in the Arctic, DeHart highlighted how the Arctic Council does not, and should not, cover military issues and accordingly the U.S. continues to rely on strong military alliances such as NATO and NORAD. This allows the U.S. to retain a strong deterrence posture and DeHart reaffirms NATO's existence as a defensive alliance.

In relation to domestic renewal, DeHart emphasized the relationship between investing in Alaska and projecting U.S. influence globally. The President recently signed the Infrastructure & Jobs Bill that will bring benefits and investment to Alaska, and this should connect with foreign policy objectives. For example, maritime transportation infrastructure such as ports and other support for vessels, and communication infrastructure to benefit local communities as well as vessels abroad. Overall, the U.S. recognizes the need to be present in the Arctic (the newly opened U.S. Consulate in Nuuk, Greenland is an example) and they welcome collaboration with the EU, especially to implement the Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean.

Dr. Mike Sfraga, as the new Chair of the U.S. Arctic Research Commission and Director of the Wilson Center Polar Institute, introduced the Arctic Research Commission, noting how the Commission overlaps with the issues James P. DeHart mentioned, especially the emphasis on international cooperation. He introduced the term "The New Arctic" to describe the current dynamics in the region and the new policy implications of connecting science, policy, the economy, and the environment. He spoke about "The New Arctic" as an integrated, interdependent, and recognized region that is no longer emerging but already interweaved into the global order. However, the region still requires coordination, support, and funding to achieve its goals. Among the important institutions in the region besides the Arctic Council, he mentioned the International Arctic Science Committee (IASC), and especially the Arctic Coast Guard Forum, which serves as one of the best examples of cooperation between the eight Arctic states. Many of these institutions are focused on research, science, and cooperation in the face of external challenges such as climate change.

The Arctic Research Commission, established in 1984, has seven commissioners that represent Alaskan native communities, industry, and the academic and research communities. It is an independent US federal agency that advises the President directly. There are five overarching duties. The Commission has been tasked to establish the national policies, priorities, and goals necessary to construct a federal program plan for basic and applied scientific research with respect to the Arctic which includes related policies. They give guidance to the Inter-Agency Arctic Research Policy Committee (IARPC) to help create a five-year Arctic research plan. The five current goals (to be updated in Q1 2022) have a lot of overlap with EU policy:

1. To advance all Arctic infrastructure (ports, railroads, broadband etc.).
2. To assess Arctic national natural resources.

3. To observe, understand and forecast Arctic environmental change (focus on research).
4. To improve community health and well-being.
5. To enhance international scientific cooperation.

In conclusion, he stated that the U.S. Arctic Research Commission plays a role domestically and internationally, reporting directly to the President and the Congress with the aim of shaping, supporting and advancing Arctic science research.

Ambassador Rolf Einar Fife gave the Norwegian point of view, saying that we should look at the Arctic as a multifaceted region since Norway has a relatively densely populated Arctic region, unlike the common conception of the Arctic as empty. At the same time, we shouldn't look at the Arctic as a region in need of help but as a region offering opportunities and solutions. For decades the Arctic states have led the way in putting forward multilateral frameworks to manage issues of common concern in the Arctic by advancing science-based and inclusive practical solutions to real problems. Speaking about governance, the network of Arctic cooperation involves local governments, local communities, indigenous peoples, science communities and civil society at large, in addition to non-Arctic actors. We should recognize and support these efforts. Besides that, he agreed with previous keynotes speakers regarding growing Arctic geopolitical tensions and emphasized the importance of focusing on Arctic youth and capacity-building in the future. Providing sustainable livelihoods within the green economy, digitalization, and resilience for the people living in the Arctic are at the core of Norwegian Arctic policy.

In his remarks, he also mentioned that the previous Norwegian government established an Advisory Youth Panel for its recent White Paper on the Arctic. Key factors highlighted by this panel included: education, job opportunities, culture, sports, infrastructure, diversity, and local ownership. He also highlighted that in 2024, the Norwegian city of Bodø will be the first European capital of culture located North of the Arctic Circle. This provides a unique opportunity to strengthen the connection between the Norwegian Arctic and the rest of Europe.

Finally, he moved to the topic of Arctic resilience and in this regard he put to the fore people living and working in the Arctic for generations. For example, resilient governance facilitates practical cross-border collaboration, and traditional knowledge underpins an understanding of the environment. He tied this to more contemporary challenges in relation to climate change and noted the importance of the European space program, Galileo system, and EGNOS program.

Regarding the Arctic as a more sustainable place to do business, he agreed that the Arctic shows a great potential for contributing to green growth. In the case of Norway, potential growth sectors include renewable energy and maritime activity. Partnership with the EU is also particularly important, including a strategic energy partnership to cut emissions and create jobs. He highlighted new business areas such as offshore wind power, which represents Norway's largest renewable energy export. He concluded that the Arctic is a diverse region that offers practical solutions to global challenges.

Panel 1: Governance in the Arctic (part 1)

Moderator:

- **Arne Holm** (Editor in Chief, High North News at the High North Center, Nord University)

Panelists:

- **Nikolay Korchunov** (Chair of the Senior Arctic Officials; Ambassador-at-Large for Arctic Cooperation, Ministry of Foreign Affairs Russian Federation)
- **Morten Høglund** (Senior Arctic Official, Ministry of Foreign Affairs of Norway)
- **Louise Calais** (Ambassador for Arctic Affairs, Ministry for Foreign Affairs of Sweden)
- **Pétur Ásgeirsson** (Senior Arctic Official, Ministry for Foreign Affairs of Iceland)

Moderator Arne Holm introduced the topic of Arctic governance, noting that it has been 25 years since the creation of the Arctic Council and that four nations in the Arctic Council are represented in his panel discussion.

Russian Ambassador Nikolay Korchunov started with an international relations point of view highlighting that Arctic governance arose in the 1990s as nations became more aware of the disproportionate effects of climate change in the region, thus highlighting the need for sustainable development. Since climate change knows no borders, the Arctic Council is fundamental and operates as a high-level consensus-based forum that facilitates cooperation and focuses on both environmental protection and sustainable development. Since its establishment, the Arctic Council has not only developed into a forum for intergovernmental cooperation, but also for knowledge, development, policy recommendations, and concrete actions. Because of climate change, the work of the Arctic Council is increasingly important to develop a positive agenda and coordinate joint action to secure a prosperous future for all inhabitants.

The Council's work has contributed to international treaties and conventions such as the following legally binding agreements:

- International Convention on Maritime Search and Rescue
- Agreement on Cooperation on Marine Oil Pollution Preparedness and Response
- Agreement on Enhancing International Arctic Scientific Cooperation

The Ambassador attributed the uniqueness of the Arctic Council to three factors: the role of Permanent Participants, the consensus-based decision making processes of the Arctic Council, and its bottom-up approach to decision-making.

In conclusion, he addressed the importance of improving cooperation on a sustainable basis on topics of critical importance for the Arctic. He highlighted how the participation of indigenous actors has withstood tensions from outside the region and allowed progress to be made regarding important topics for Arctic governance such as wildfires, COVID-19 and the degradation of

permafrost. Finally, the Arctic Council is extremely efficient in dealing with and discussing soft-security issues. Ambassador Korchunov then fielded a question from Arne Holm and reaffirmed the partnership and cooperation of nations in the Arctic through the Arctic Council, which operates as a true multilateral forum that engages multiple stakeholders across the region.

Senior Arctic Official Morten Høglund agreed with the speech of Ambassador Rolf Einar Fife, who addressed Arctic policies in Norway. Following the theme "Governance in the Arctic," he stated that the Arctic is well-governed. However, some challenges (old and new) need to, and will be, addressed within the existing mechanisms. The UN Convention on the Law of the Sea (UNCLOS) provides a legal framework for all activities in the Arctic oceans and, in Norway's view, existing international law provides a predictable framework for addressing present and foreseeable challenges. Despite there being a few unresolved jurisdictional issues in the Arctic, the Arctic can be characterized as a region of widespread cooperation. Where cooperation may fall short, international legal frameworks provide guidance.

Mirroring the remarks of Ambassador Korchunov, he continued that there are various institutions addressing issues in the Arctic, but the Arctic Council is the only official forum for political cooperation at a governmental level that also includes indigenous peoples as Permanent Participants. Regarding cooperation, he reiterated the consensus-based decision-making structure in the Council and mentioned that all eight Arctic foreign ministers attended the Arctic Council ministerial meeting in Reykjavik in May 2021. The Arctic Council has evolved during its existence and there is a strong commitment from all Arctic states, as well as indigenous groups, to make a sustainable future for the region. New areas of cooperation have been added, new working and expert groups have been established, a Permanent Secretariat has been established in Tromsø, and the list of observers has grown, highlighting the evolving nature of the Council and its ability to tackle current and upcoming challenges. He believes that the way decisions are made in the Arctic Council build trust and establish crucial networks for joint action.

He then fielded a question relating to how Norway is preparing for the assumption of the Arctic Council Chairmanship following Russia's term, noting how cooperation is vital since there are many stakeholders across Norway that benefit from engagement with the Arctic Council.

Swedish Ambassador Louise Calais claimed that there is a well-functioning cooperation framework within the Arctic Council due to three reasons: the strong will of all Arctic states to cooperate and tackle cross-border challenges, a legal framework that is in place and respected (e.g. UNCLOS, IMO Polar Code), and the nature of the cooperation as being inclusive of states and non-state actors such as observer groups and indigenous organizations. Besides the Arctic Council, she also highlighted the importance of Barents Euro-Arctic Council (BEAC). She also mentioned the success of the ministerial meeting in Reykjavik and expressed her thanks to the Russian Chairmanship that showed its ambitious plans for the implementation of the strategic proposal adopted by the Arctic

Council. Finally, she welcomed international cooperation with non-Arctic states and actors in the future, but reiterated that the existing legal framework within the Arctic must be respected.

According to Iceland's Senior Arctic Official Pétur Ásgeirsson, while the governance structure in the Arctic is fundamentally different from other parts of the world since large parts of the central Arctic region are outside of the borders of the eight Arctic states, international laws and treaties still apply. Beyond that there is an extensive network of international and regional agreements that provide a further basis for governance in the Arctic. He highlighted the UNCLOS, the Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean, and the International Code for Ships Operating in Polar Waters (IMO Polar Code) as examples. He repeated what was already said about the Arctic Council with regard to governance in the Arctic, reiterating that it is the most important circumpolar forum for the Arctic nations as it includes representatives of Arctic indigenous peoples and a growing number of observers, as well as Permanent Participants.

He reaffirmed the significance of the adoption of the 10-year Strategic Plan for the Arctic Council as it has the potential to focus and improve the execution of the Council's long term goals. This Strategic Plan has 49 numbered goals in seven categories: Arctic climate, healthy and resilient Arctic ecosystems, a healthy Arctic marine environment, sustainable sources of development, knowledge and communication, and a stronger Arctic Council. At the Arctic Council ministerial meeting in Reykjavík, the Parliament of Iceland approved and updated policies on matters concerning the Arctic, setting out 19 points that should be implemented within five years.

He concluded his speech by highlighting that it is important that the Arctic remains a region of peace, stability, and constructive international cooperation.

In the Q&A part of the discussion, moderator Arne Holm first put to the other panelists the point brought up by Senior Arctic Official Høglund, who expressed that there is no need to revisit and restructure governance in the Arctic, and asked if they agreed. Ambassador Nikolay Korchunov agreed that there are no serious changes needed within the Arctic Council and that the only change might be the greater involvement of the Permanent Participants and indigenous peoples to ensure that the Arctic Council adopts a more holistic approach that is attuned to the social issues on the ground. Here, he mentions that the Russian Chairmanship is committed to achieving these goals within the existing cooperative structure. In any case, there are also some minor adjustments happening in the Arctic Council already to adapt to contemporary challenges. Senior Arctic Official Pétur Ásgeirsson agreed, but added that there is some work to be done on agreements and negotiations on fish stocks in the Arctic areas.

Another question expressed concerns about the oceans: would the panelists argue that all that is needed for marine environmental management, in terms of a governance framework for the Central Arctic Ocean, is already in place, in particular in areas beyond national jurisdiction? Ambassador Nikolay Korchunov answered that there is already a view, within the Arctic Council, on the central

Arctic region and that there is also the Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean. This was a very serious step and the next stage is to ensure the implementation of this agreement. In this way, he affirms that the Arctic Council is the catalyst of such agreements. Senior Arctic Official Morten Høglund followed up on the aforementioned agreement and added that there will be new issues that will need to be addressed in the future. Responsible science-based management of fish stocks is a key Norwegian objective and regional cooperation is central to this. He provided two existing examples of cooperation based on scientific input: the Joint Norwegian–Russian Fisheries Commission and the North East Atlantic Fisheries Commission.

Most of the issues they have talked about have a global impact. As such, this begs the question: should observer states be more involved in the work of the Arctic Council on global issues? Ambassador Louise Calais answered that those in the Arctic Council want more observer engagement in the working groups, both with their expertise and financial resources. Ambassador Nikolay Korchunov added that they welcome the constructive and balanced engagement of non-Arctic states and organizations. However, it is important that the activities of observer states in the entire Arctic Council should reflect existing dynamics and not create any dividing lines. Nonetheless, international cooperation is important and that includes not just the work of observer states in the Arctic Council, but also in the Arctic more widely.

Given the current efficiency of the Arctic Council, how will new challenges be handled (not requiring changes in the structure of the Council)? For example, how would the Arctic Council handle the situation of a cruise ship with thousands of people that runs into trouble in a remote location, such as north of Svalbard? Ambassador Nikolay Korchunov recalled a similar case that happened in 2018, and in response to that event, they took notice of the issue and, within the EPPR Working Group, together with the Arctic Coast Guard service, they redoubled their attention to such issues going forward. He admitted that something like that could happen again with rising cruise ship expeditions in the High North. To tackle such issues, Arctic states should coordinate more effectively. To this end, one of the priorities of the Russian Chairmanship is the effective management of risks and challenges (including ecological ones) associated with increased human and economic activities in the region. Senior Arctic Official Morten Høglund agreed and added that the cruise industry is trying to adhere to safety standards, and not just to attract customers.

The next question was “What importance do Russia, Norway, Iceland, and Sweden give to the Arctic Economic Council and its capacity considering the socio-economic issue of the Arctic?” Ambassador Nikolay Korchunov argued that all the representatives from the Arctic Council presenting at the AFS are considering sustainable economic development in the Arctic, with a specific focus on the benefits to its inhabitants. Here, they see a growing necessity to speed up their support for sustainable corporation in the region. Therefore, there is a greater need for cooperation between the Arctic Council and Arctic Economic Council. Senior Arctic Official Morten Høglund added that one of the main priorities is to keep people living in the Arctic, make sure that

they have a livelihood, ensure businesses can thrive, and enable economic activities to be sustainable and profitable. For these reasons, the Arctic Economic Council is vital.

The last question challenged the statement that there is no need for further changes in the governance structure of the Arctic since it was suggested by a member of the audience that many areas are not covered. For example, the IMO Polar Code 1 does not fully cover the environment yet. Senior Arctic Official Morten Høglund answered by providing the example that Norway has prioritized work on agreements to ban marine litter. Even though it has not been reached yet, it doesn't mean that there is a need to critique the governance structure of the Arctic. Each of the Arctic countries has different policies regarding their own issues (for example, fisheries) and that must be respected in order to facilitate cooperation. He repeated that there is no problem in the governance structure of the Arctic, but that a lot of work remains to be done on many important issues.

Regarding organizations such as the IMO and UNEP mentioned by the member of the audience, Ambassador Nikolay Korchunov added they are already observers in the Arctic Council. As such, they are involved in the activities of the Arctic Council and their views are taken into account. Regarding IMO Polar Code 1, there is an information forum for the best practices and implementation of the Polar Code within expert groups on shipping.

Panel 2: Governance in the Arctic (part 2)

Moderator:

- **Romain Chuffart** (Research Associate and Leadership Group Member, The Arctic Institute)

Panelists:

- **Thomas Winkler** (Arctic Ambassador, Kingdom of Denmark; Head, Department of Arctic and North America, Danish Ministry of Foreign Affairs)
- **Rebecca Lynge** (Greenland Representative to the Arctic Council, Department of Foreign Affairs, the Government of Greenland)
- **Margretha Jacobsen** (Senior Arctic Official of the Faroe Islands in the Arctic Council)
- **Heidi Kutz** (Senior Arctic Official and Director General for Arctic, Eurasian and European Affairs, Global Affairs Canada)
- **Louis J Crishock** (Senior Arctic Official, US. State Department)

Moderator Romain Chuffart introduced the topic of Arctic governance, noting that this panel discussion presents an opportunity to reflect on the evolution of the Arctic Council.

Danish Ambassador Thomas Winkler opened the panel discussion by stating how significantly governance has evolved in the Arctic; Arctic states themselves have evolved their attitude towards

each other and towards a cooperative governance of the region. Ambassador Winkler highlighted three historical points in the evolution of governance in the region: Firstly, for the Kingdom of Denmark, the Ilulissat Declaration 2008 introduced the Arctic region to the international agenda and empowered the coastal Arctic states to take important action. The second important milestone was the Arctic Council Ministerial Meeting 2021 in Reykjavik which concluded with a very strong and ambitious declaration and the first overarching strategy for the Arctic Council. Finally, he noted the significance of the ongoing Russian Chairmanship and the recent meeting in Salekhard where all the Arctic states declared that they are ready to move forward together in order to promote positive and sustainable developments in the Arctic.

Greenland's Rebecca Lynge also looked at changes in the Arctic over the past 25 years. She noted how many things have changed such as accessibility, geopolitical relationships, integration with international trading networks and mechanisms, and associated resource extraction growth. Alongside these changes, the Arctic Council has also increased its growth and importance to match the increased need for collaboration and dialogue. As such, Arctic cooperation today encompasses all aspects of life and activity in the region. She highlighted the Arctic Council's agreements and treaties and finds that the cooperative composition of the Council is very unique, as it facilitates the active and inclusive participation of indigenous Permanent Participants and participation of non-Arctic states and actors as observers. Here, the human dimension is pivotal to the Arctic Council.

The Faroe Islands' Senior Arctic Official Margretha Jacobsen built on the themes that were already mentioned. She agreed that Arctic governance has come a long way since 1996 and the governance structure has evolved in the right direction. Climate change has been followed by increased opportunities, interest, and engagement from communities in the Arctic. Despite some instances of worry, the governance instruments have provided stability, direction, and cooperation. It is reasonable to argue that today's Arctic governance is strong, visible, well-established, and subject to international law. Here, the region has evolved into a functioning, rules-based environment. The Arctic has recently committed to an ambitious strategy and to a vision of peace and sustainable prosperity for the people of the Arctic region. She also highlighted other multilateral agreements such as the Ilulissat Declaration and the binding agreements on Search and Rescue, Oil Spill Prevention, Arctic Scientific Cooperation, and Unregulated High Seas Fisheries. These agreements exemplified the science-based approach to good governance in the Arctic. Here, the Faroe Islands had the honour of hosting the negotiations during the final rounds of the Unregulated High Seas Fisheries Agreement in 2008.

She concluded her speech by stating that a rapidly changing region with alarming challenges calls for strong governance and as such, there are many reasons to celebrate 25 years of collaboration. She affirmed that the decision to increase collaboration with Observer Groups under the Icelandic Chairmanship should continue going forward.

Canada's Senior Arctic Official Heidi Kutz repeated that the Arctic has a long history of being a peaceful and stable region grounded in internationally-agreed rules and norms. Canada played an important role in the creation of the Arctic Council 25 years ago, and she agreed with Rebecca Lynge's comment that the structure of the Council: the inclusion of the Arctic states and indigenous organizations is central to its governance success. She also highlighted the Arctic Council Strategic Plan and its importance with regard to deeper cooperation.

She referred to the Council's role in the establishment of a number of organizations, such as the University of the Arctic, the Arctic Coast Guard Forum, and the Arctic Economic Council. She also mentioned the range of multilateral agreements concluded under the auspices, or with the support of, the Arctic Council. This reinforces the role of the Arctic Council as a vital convening forum.

Importantly, the scientific work that the Arctic Council has conducted has influenced national policies in both Arctic and non-Arctic countries. All of these efforts have strengthened the broader constellation of Arctic governance. She stated how Canada's governance has not changed much since the creation of the Arctic Council, in that Canada is still committed to international law and cooperation and strives to shine a light on Arctic institutions, while also promoting the importance of the human dimension.

The United States' Senior Arctic Official Louis J Crishock stated that the overlap between the various panelists highlights the scope of cooperation in the region. A value of the Arctic Council from his perspective is strong international cooperation and he believes that this has helped to keep the Arctic region peaceful while increasing environmental protection, promoting sustainable development, encouraging scientific research, and supporting indigenous peoples. The cooperation, as facilitated through the Arctic Council, allows states to collectively address and overcome the environmental, social, economic and political challenges of the region. In the past 25 years, there has been visible growth and development within the Arctic Council, and he reiterated the critical importance of the recently agreed Arctic Council Strategic Plan. He provided examples from the Icelandic Chairmanship of how the Arctic Council is extremely flexible in its desire and ability to overcome new challenges (e.g. a ban on marine litter, work on gender equality). He mirrored the optimistic sentiment of the Russian Chairmanship following the meeting in Salekhard.

Following the initial speeches, moderator Romain Chuffart asked the panelists to reflect on current and future issues in Arctic governance from their own perspective. Danish Ambassador Thomas Winkler stated a few examples of the challenges to Arctic governance: inclusion of the indigenous peoples and the rest of the world in the work of the Arctic Council, communication with the rest of the world to highlight the responsible management of the Arctic, finding a way to discuss Arctic security and military issues (but this should not be an issue of the Arctic Council).

Rebecca Lynge answered the same question from a Greenlandic perspective. As Greenland is the centre of the Arctic, it is important for Greenland to be involved in and to have an influence in the future of the Arctic. Some of the future challenges involving securing sustainable development and

increasing Greenland's role in the overall governance of the Arctic. Here, Greenland's own growing independence as a voice in the international arena needs to be strengthened, especially within the Arctic Council in order to address future challenges specific to Greenland.

Faroe Islands Senior Arctic Official Margretha Jacobsen stressed the importance of international cooperation in the Arctic region. She welcomed the increased interest and recognition of the position of the Faroe Islands as partners in the region. In particular, interest from the EU regarding the blue bioeconomy and from the Icelandic government. There is a need to explore possibilities for further cooperation such as the ability for the Faroe Islands to have their own independent voice. Since the Faroe Islands depends on the Arctic Ocean, it seeks greater influence over oceanic matters and this reiterates the point that people of the Arctic themselves must continue to be at the forefront of the policy discussions about the Arctic.

Canada's Senior Arctic Official Heidi Kutz added that the disproportionate effects of climate change is one of the leading challenges for Arctic governance. In particular, climate change does not just affect land, but also biodiversity and culture. This challenge will grow as technology makes the Arctic more accessible and gives rise to increased interest in shipping, tourism, fisheries, and natural resource development. At the same time, there is a need to protect the Arctic's fragile ecosystems. To do this, the inclusion of the Arctic indigenous peoples is paramount due to their knowledge, culture, and language.

United States' Senior Arctic Official Louis J Crishock highlighted the importance of active dialogue in the Arctic Council with the Permanent Participants due to their expertise and knowledge. One of the core tasks is ensuring economic development is done in a sustainable and transparent way that directly benefits indigenous communities. He agreed with Arctic Ambassador Thomas Winkler that military issues should stay out of the Arctic Council but believes that a holistic dialogue on these issues is needed in some form. He also agreed that climate change will bring unforeseen challenges and potential risks in the Arctic and therefore, the Council's Strategic Plan is vital to ensuring that the Arctic states have the capacity to adapt to future challenges.

The moderator of the panel discussion then asked the Arctic Ambassador Thomas Winkler to reflect on the Ilulissat Declaration from 2008 and how it changed Arctic governance. The Ambassador said that the Declaration is evidence that the Arctic is governed by international law and cooperation, despite that not being so obvious at the beginning. He claimed that the most important message of the Declaration was that there *are* rules governing the Arctic and these rules are being complied with by Arctic states. In this way, the Arctic cannot be compared with the Antarctic.

A question from the audience was about the region's so-called "Arctic Exceptionalism." The Danish Ambassador Thomas Winkler answered that the Arctic has always been influenced by geopolitical developments in the rest of the world. However, what is exceptional in the Arctic is that all eight Arctic states still cooperate, and will continue to cooperate. The United States' Senior Arctic Official

Louis J Crishock agreed that exceptionally strong cooperation is a characteristic of Arctic governance thus far. He added that he wouldn't call the Arctic a conflict area; however, it is an area of strategic competition. More importantly, it is home to Permanent Participants and their inclusion is vital to the future of Arctic governance.

Another question reflected the call for autonomy by different Arctic populations. Faroe Islands' Senior Arctic Official Margretha Jacobsen stated that participants of Arctic governance need to acknowledge the differences in the capacity and level of autonomy between different Arctic nations. Here, it is important to recognize the right of all relevant stakeholders to be part of the dialogue on how they organize the Arctic region. Here, those who live outside of the Arctic region must appreciate the contribution and influence of those who live in the Arctic region. Ms. Rebecca Lynge agreed and pointed out that it may be obvious, yet still important, to know that people live in the Arctic. As many people still don't have this knowledge, she thinks there is a gap in communication.

This was followed by a question: how do the panelists see the Munich Security Conference being a potential forum for discussing Arctic security issues in the future? According to United States' Senior Arctic Official Louis J Crishock, it is good for the Arctic states and other interested parties to have places where conversations can take place and this assembly is uniquely placed to have broad based discussions.

Another question for the Danish Arctic Ambassador Thomas Winkler was what made the Reykjavik Ministerial Meeting so successful such that the long-term strategy was decided and what role did the Icelandic Chairmanship play in this development. He answered that the Icelandic Chairmanship played a very important role in the success of the Ministerial Meeting, and especially in the preparations for the agreement. They also conducted the negotiations on the declaration and strategy in the right way which contributed to its success. However, a very important factor was that the participants of negotiations had the will to succeed. The United States' Senior Arctic Official Louis J Crishock agreed and added that when there are goals and a desire to meet those goals, the results can be more than positive.

The last question from the audience was how the panelists see addressing the climate change paradox as part of showing Arctic global climate leadership. Ms. Rebecca Lynge looked at it from the Greenlandic perspective and stated that climate change is having a drastic impact on Greenland. The Government of Greenland wishes to show global leadership even though the emissions in Greenland are insignificant in comparison to the rest of the world. They promoted their domestic green transition at the COP26 conference and hope to inspire other nations to follow up on the Paris Agreement.

Panel 3: Governance in the Arctic (part 3)

Moderator:

- **Marie-Anne Coninx** (Former EU Ambassador at Large for the Arctic, European Union)

Panelists:

- **Michael Mann** (EU Special Envoy for Arctic Matters)
- **Åsa Ågren Wikström** (Vice President, Regional Development Board, County of Västerbotten)
- **Mads Qvist Frederiksen** (Director, Arctic Economic Council)
- **Embla Eir Oddsdóttir** (Director, Icelandic Arctic Cooperation Network)
- **Francesco Bertoldi** (Head of Nordic and Arctic Unit, Scottish Government)
- **Dalee Sambo Dorough** (Chair of the Inuit Circumpolar Council)

In the third panel discussion, moderator Marie-Anne Coninx wanted to shift the focus of Arctic governance away from just the Arctic Council to cover it from the perspective of the EU, the business sector, and gender. In these remarks she also mentioned the German Arctic office, which has been managing the biggest Arctic expedition - the MOSAiC Expedition. She described Arctic governance as "very innovative" by international standards. The main development over the past 40 years in this regard has been the decentralization of authority and the increasing role of regional governance, and in particular the empowerment of indigenous people. Ms. Coninx also mentioned that there are many other institutions that are ready to meet the needs of Arctic governance such as the UN and the EU.

She aimed the first question at EU Special Envoy Michael Mann, asking if he thinks that the current model of Arctic governance allows an institution such as the EU to have greater influence in the Arctic. He answered that even though the EU is not an Observer in the Arctic Council, it has been granted the same rights to participate in dialogue. As such, while the EU is only observing the work of the Arctic Council, they did have a special session with the Chair for Observers. He also noted that the Icelandic Chairmanship pushed strongly for Observers to have a deeper role within the Arctic Council. Through the Council the EU also must collaborate with Russia, which is not always easy, but they have been doing a lot of useful work on environmental issues together. They also try to bring discussions about the Arctic into their bilateral discussions with non-Arctic states because countries around the world are concerned about the future of the Arctic, mainly because climate change has broad global impact.

The next question regarding the role of the regions in the Arctic was addressed to the Vice President of the Västerbotten Regional Development Board Åsa Ågren Wikström, who represents the regions of the NSPA network (a network of 13 northernmost regions of Finland, Norway and Sweden). She pointed out that even though the Arctic regions of the Nordic countries are geographically large, the population density is low. Despite this, the region is quite urban within an

Arctic context: they have growing cities, well-known universities, and high-tech industries that are leading the green transition. Nonetheless, the region still has several structural challenges to overcome such as vast distances and the region's topography, and given these challenges, the commitment to sustainable development solutions makes the region unique.

In these matters, she highlighted the close and constructive cooperation with the European Commission and the European External Service on the Arctic over the years. She said that the EU is an important actor on Arctic issues and EU Arctic policies are very welcomed, in addition to the wider recognition of the NSPA network. From her point of view, successful regional development requires more "place-based" policies, more cross-sectoral coordination, and enhanced multilevel governance to enable sustainable and durable growth. She especially emphasized how important it is to recognize the role of local and regional actors, and therefore, the EU has great potential to be a facilitator by investing in the European Arctic and using its soft power to improve conditions for growth in the Arctic. She continued that at the regional level of governance there is a great know-how of the conditions necessary for businesses to thrive. Here, experience in strategic innovation leadership and regional development must be utilized in future collaboration with the EU and other actors.

Moderator Marie-Anne Coninx then asked Director of the Arctic Economic Council, Mads Qvist Frederiksen, how he sees Arctic governance from a business perspective. He pointed out that the Arctic Economic Council was created by the Arctic Council, but with a very different setup. Firstly, members from countries outside the Arctic such as Germany, France, and South Korea, have the same say as some of the other members. Secondly, they also have 30% representation from indigenous groups and indigenous representatives on their board. His key points were that their aim is to benefit people from the Arctic, while at the same time needing to include people from outside of the Arctic and indigenous groups, too.

Governance for businesses is different compared to state-level governance and there are also differences in business governance between different countries. However, one thing that is common for many exporting companies is that they need a mutual framework to govern rules of trade. Here, the EU has a very important role for companies as they create legislation and policy concerning import and export rates as well as industry standards for product categories. This means that any Arctic business looking to export into the EU market must conform to said standards and this gives the EU a large role to play over Arctic governance of businesses. One of the examples he stated was Greenland and how they recently made the decision to create their own accountancy legislation, yet still copied Denmark's, because said legislation is designed to comply with EU regulations. Moreover, since Greenland is not part of the EU, it has been able to export food to Russia and avoid the sanctions on EU food exports to Russia. This shows how governance has a major role within Arctic trade. He also mentioned that foreign funding to Greenland's education sector has required that 10% go towards the green economy. This highlights the power of shaping governance in the Arctic.

Mr. Frederiksen brought up the power of language and signaling. He gave the example of how the EU insists that oil and gas stay in the ground when discussing Arctic business, but does not insist when conducting talks with the United States or China. This signals that the EU would rather have oil and gas from far away parts of the world than from the Arctic. He believes that this is wrong, as it scares away investors. He concluded that governance of business in the Arctic should focus on the Arctic as a region of potential and solutions, rather than obstacles, and that the EU has a role in promoting Arctic business.

The question regarding Arctic governance from gender perspectives was addressed to IACN Director Embla Eir Oddsdóttir, as she has been leading figure in driving gender equality in the Arctic. She started by noting how the topic of gender is moving up on the agenda in the region and this has been evident through the work on the Pan-Arctic Report on Gender Equality in the Arctic published in May 2021 as a part of the Arctic Council Sustainable Development Working Group project on gender that has been ongoing since 2013. It was an Icelandic Chairmanship project during the country's Chairmanship of the Arctic Council in 2019-2021, with leads and co-leads including Iceland, Sweden, Finland, Canada, the United States, the Saami Council and the Aleut International Association. The report itself provides almost 70 policy relevant highlights which are relevant for multiple audiences including Arctic States, the Arctic Council, businesses, researchers and the public. Broadly speaking, the most prominent findings were the need for mainstreaming and gender-based analysis, better gender and sex disaggregated data, inclusive terminology and intersectionality. The report recommended that the Arctic Council systematically engages with mainstream gender-based analysis across its work and also encourages and facilitates the development of guidelines for consistent and comparable data in the Arctic. The report was welcomed and included in the May 2021 Reykjavik Declaration as well as the topic of gender being included in the first Arctic Council Strategic Plan. There is still considerable work ahead in reducing inequalities, not just in the terms of gender, but also in promoting a broader understanding of systemic and persistent inequality such as that experienced by indigenous groups. She stated that Arctic governance does not prioritize gender equality and the goal of gender equality is not fulfilled within the region. It is important to actively bring gender-based discussions into policy and implement proposals to address systemic inequalities on multiple levels. Doing this is also an important step in moving towards sustainable policy making in the region.

Mr. Francesco Bertoldi, as a representative from the Scottish Government, talked about Arctic governance from the point of view of a non-Arctic nation. He first tried to explain why Scotland is investing in Arctic collaboration: Scotland is the most northern non-Arctic nation and the core of their modern day Arctic collaboration is that they believe in similar challenges to those mentioned by Åsa Ågren Wikström in her comments on the NSPA network. They also have many places with very low population density, and while the scale is different to the population density of other parts of the Arctic, some of the challenges are the same.

As First Minister of Scotland Nicola Sturgeon stated at the Arctic Circle Assembly 2021, Scotland's commitment to work with the Arctic is not a diplomatic nicety, but a practical policy necessity. As

they have similar challenges, they want to exchange knowledge, expertise, and best practices. For this reason, the country published their Arctic Connections Arctic policy framework in 2019 in order to facilitate collaboration with other Arctic states about common challenges such as Arctic depopulation, connectivity, decarbonization of transport, and energy. Scotland is working towards implementing the commitments of its Arctic policy framework and understands that it needs to learn more from Arctic nations.

In the next round of questions, moderator Marie-Anne Coninx touched upon what was previously said: that Observers are welcomed to engage in the working groups of the Arctic Council with their expertise and financing. As the EU is doing both, she asked EU Special Envoy Michael Mann if this form of engagement actually equates to “being inclusive” within the Arctic Council. He responded that the EU’s Arctic policy outlines clearly that the Arctic States have the first say as well as the responsibility for what happens on their territory. Besides that, the observers in general accept that their role is to “observe” within the Council. However, the starting point is that the EU is in the Arctic (three member states with territories in the Arctic) and therefore they have a role to play that they can do directly through the Member States. For example, they want to increase their scientific expertise within the Arctic Council. Overall, it is not disappointing that they are not included more, and they can still play major roles in other ways, through major allies such as the U.S. and Canada, or through the UN. He also mentioned that he would like to utilize their conversations with Arctic States to lead energy transition into the future and ensure that oil and gas remains in the ground.

Based on what Vice President Åsa Ågren Wikström had said, the moderator asked what the next steps are according to her, and what role her region can play. She emphasized that they would like to create attractive places where, in terms of gender equality, women and girls would see their future and want to build their careers. She also agreed that it is important to continue to address sustainable development and inclusive processes that include all relevant stakeholders. The NSPA network is prepared to continue to be a constructive and engaged partner that can deliver regional perspectives on how to develop the Arctic in a sustainable way. They hope that the EU will continue to listen to and invest in the European Arctic as a gateway to the larger Arctic and so contribute to global sustainable development. She mentioned the key role of the Nordic battery belt that they are building for future needs of green transition.

Talking about investing, the next question was addressed to Director Mads Qvist Frederiksen. The moderator asked how the EU could do more in stimulating investment from the business perspective. He answered that EU Member States still play a role in the European Investment Bank which is investing in green technologies and mining projects, such as those in Greenland. He referred to Dr. Mike Sfraga who emphasized two important duties of the Arctic Research Commission that overlap with EU policies: Arctic infrastructure and Arctic national resources. Talking about Arctic communication he highlighted an important point “prioritizing people living in the Arctic”. Regarding this, he stressed that the EU could do more to facilitate an energy transition that benefits the people living the Arctic and see the Arctic as a place of solutions. As such, he

suggested that the EU restructure its policy to reflect the prioritization of the people living in the Arctic.

The moderator commented on this point saying that the EU is a geopolitical power and as such, geopolitics must be taken into account when constructing new policies. The objective of the EU is to contribute to peace, security and prosperity in the Arctic and keep it an area of low tension. Overall, she thinks that the policies are quite balanced.

After that, director Embla Eir Oddsdóttir elaborated on why diversity is so important in decision and policymaking processes. She compared it to biodiversity, which is important for many reasons: it provides food, helps to fight diseases, helps the economy, etc. The same argument could be applied to cultural diversity and the discussion of gender equality. She provided a few examples: it provides human resources that can boost creativity, productivity and innovation; it can foster decreased discrimination; it can provide a balance to polarizing discourses; provide perspectives drawn from experiential realities; it is an important condition for effective democracy and good governance and contributes to improved living conditions; and an increased diversity of viewpoints have been proven to lead to better decisions-making.

A supplementary question from the moderator to Mr. Francesco Bertoldi was about Scottish action in fields such as education and human connections. He answered that Scotland has a long tradition of Arctic research in traditional fields such as glaciology and marine science. Scotland is home to Europe's largest glaciology research group and the Scottish Government also co-supported the cryosphere pavilion at COP26, encouraging a discussion of climate-related changes in the Arctic between Scottish and international experts. It is important for the Scottish Government to address climate issues relating to sea level and temperature changes, as this directly impacts Scottish communities. There is also increasing Scottish-Arctic research collaboration in relation to the space industry, the principles of climate justice, community level energy solutions and also the promotion and protection of indigenous languages. When they published their Arctic policy framework in 2019, they had two Scottish members of the University of the Arctic, now they have seven members, which is as many as in Sweden. This exemplifies the appetite for greater Scottish-Arctic collaboration. As well as high-quality research and collaboration with the Arctic, Scotland can offer a structure or expertise in terms of delivering high quality education in rural and remote areas.

Chair of the Inuit Circumpolar Council Dr. Dalee Sambo Dorrough joined the discussion and referred to Mr. Francesco Bertoldi and the topic of human connection. The Inuit Circumpolar Council also observed a greater human connection and responsiveness to indigenous peoples. It is not insignificant that the Inuit, rather than disappearing, are growing in numbers (currently 180,000 across the Arctic). She thinks that human connection and a greater responsiveness to the Inuit across the Arctic is a big change. Even though the priorities and objectives of the Inuit Circumpolar Council remain the same, everything around them is changing as nations and institutions across the globe are moving to establish their own Arctic policies and agendas.

One of the crucial objectives of the Inuit Circumpolar Council is the fact that they should play a direct role, not just because of their rights and responsibilities to future generations, but also because the Arctic is their homeland, and this is the environment that they have ingeniously adapted to. Because of that, they have much to contribute in terms of the knowledge about the unique conditions of the region accumulated over generations.

Some of the challenges faced by the Inuit Circumpolar Council at the time of its inception remain today, such as the Cold War-esque defense situation or the chronic infrastructure deficit in the region. Here, she felt that COP26 did not go far enough to refresh nations' commitments to real concrete actions to curb and end global warming, which disproportionately affects Inuit communities. Talking about the Arctic Council, she noted how the Inuit Circumpolar Council was one of the first Permanent Participants, yet they still face certain challenges about how to participate in the work of the Arctic Council effectively and meaningfully. Another challenge is retaining an influence over the future of the Arctic given the growing geostrategic interests of non-Arctic nations in the region.

She also expressed the growing global desire to alter the international legal order and the international norms. For example, nations interpret UNCLOS in a way that ignores the need to analyze issues from an interdependent not nationalistic point of view. She said that one of the pillars of the international legal order is recognition and respect for human rights, and therefore, the rights of indigenous peoples in relation to a variety of international treaties needs to be taken into account when moving forward.

Another challenge is the balance between economic development and sustainable development. For the communities in the Arctic, there are some basic needs that must be met to improve their quality of life: better access to housing, infrastructure, drinking water, sanitation services, and connectivity. Here, indigenous groups need to retain influence in the decision-making and governance processes of the Arctic.

At the end of this panel discussion there was a question from the audience about the EU Global Gateway and its potential applicability as a set of investment opportunities for the Arctic. EU Special Envoy Michael Mann said that there is already a commitment in the EU Arctic policy toward physical as well as digital connectivity in the Arctic. The EU Global Gateway is a more global approach to connectivity that will hopefully be applied to the Arctic.

AEC Director Mads Qvist Frederiksen responded to the part of the question about investments. He said that there are many opportunities across the whole Arctic and the important factor is developing and attracting the right skills and competencies to facilitate job creation in the region.

Tuesday 07 December 2021

Panel 1: Arctic Youth, Demographics, and Capacity-Building: A View to the Future

Moderator:

- **Sveinung Eikeland** (Vice Rector, Sociologist, UiT the Arctic University of Norway)

Panelists:

- **Mika Riipi** (County Governor, Lapland, Finland)
- **Alyssa Carpenter** (Northern Fellow, the Gordon Foundation)
- **Charlotte Nyheim** (Youth Coordinator Bodø 2024 – European Capital of Culture)
- **Qivioq Løvstrøm** (Assistant Professor, Department of Culture and Social History, University of Greenland; Chair, Human Rights Council of Greenland)
- **Birita Matras Petersen** (Communication and Marketing Officer, Faroese National Union of Students, University of the Faroe Islands)

After Managing Director of the International Polar Foundation Nicolas Van Hoecke briefly introduced the second day of the symposium, the moderator of the first panel discussion, UiT Vice Rector Professor Sveinung Eikeland, followed up on what was said on the first day and emphasized that the panel discussions on the second day would explore issues from a different perspective. He asked the panelists, who hail from different regions of the Arctic, to elaborate on the topic of Arctic Youth, Demographics, and Capacity-Building, and talk about their personal experiences.

County Governor of Lapland Mika Riipi mentioned that their office is responsible for the regional development of Lapland, Finland. To achieve this, they generate a regional development program every four years which sets out agreed principles that focus their efforts. It was about three or four years ago when they raised up demographics as the biggest challenge in the future of Lapland's development. Lapland's population increased for the last time in 1993 and has been decreasing ever since, bar last year when conditions and mindsets changed in part due to COVID-19. However, even this recent uptick is not enough, and they are concerned about the future. It is vital that the region continues to invest in the public sector and health services, and develops industries such as tourism and forestry. Overall, such development for demographics is a key issue, he said.

The moderator then asked why young people are migrating out of Lapland (90% of people emigrating are youth). Mr. Riipi answered that they are doing a lot of research to understand why so as to tackle this issue. For example, they are trying to increase the number of places to study in the region. He said that they already have a high-level university and great educational opportunities. However, they cannot persuade people to stay who want to move to bigger cities. This is a question of attitude that practical solutions cannot tackle. Mr. Riipi, as a former youth counsellor, thinks it is an obligation to let the youth leave and learn. But at the same time the region should make it easy

for them to come back by investing in the brand image of Lapland, investing in public sector services, cultural and leisure facilities, transport infrastructure, and jobs.

Mr. Riipi also expressed his opinion regarding indigenous peoples moving out of remote areas where they have rights to the land to urban areas where they have no rights to the land. He said that nowadays the biggest Saami community in Finland is in Helsinki. This is the same type of mega-trend of youth moving out of Lapland, but there are some differences. There are many things that make it difficult for Saami people to see their future in their home region. They might be concerned that there is no space for their traditional livelihoods because of the mining projects, for instance. This is sad, because as Mr. Riipi claimed, the Saami homeland should be mainly a place for Saami people and their traditional livelihoods. One of the threats of emigration is the possibility that Saami language and culture becomes diluted in big cities. The solution, he said, is to try and create opportunities that facilitate traditional livelihoods and avoid big mining projects that threaten indigenous land.

Alyssa Carpenter, Northern Fellow from Yukon Territory in Canada, answered focused on why living in the Arctic is challenging for young people. She said that in the Canadian Arctic, young people are encouraged to leave the territories to pursue higher education due to the limited variety of educational options. Many families in the region were previously impacted by colonization and the residential school system, so there are also painful memories associated with the region. Other challenges for young people include violence within their communities, limited support, fast-growing demographics, and a lack of quality housing which, in combination with the higher cost of living in the North, is driving young people away. The options for people without qualifications are very limited and as such, the communities need to be very creative on how they support the development and growth of young people who want to become educated. This is an issue that needs to be explored a lot more.

Professor Eikeland concluded that while the demographics are a problem in Lapland, in the Canadian Arctic the issue is living conditions and welfare. She agreed with this statement and added the issue of food security. He followed this with a question on why the birth rate is so high in the Canadian Arctic. She said that it might be due to a lack of sexual health education and a lack of protection options, but also it may be about community values. For example, it is common that families are very young, and communities are familiar with having children at a young age.

Youth Coordinator from Bodø, Charlotte Nyheim, expressed her opinion on the needs of the Arctic youth from her region. As a youth coordinator, her purpose is to include young people and make them feel a part of her project in Northern Norway. The goal is to make young people feel truly connected to their home. They will also be working on providing the right tools for young people and attracting them back to Northern Norway, as many of them move out for education and never come back again.

Professor Eikeland commented that Northern Norway is a big area, however, just three cities are growing. He asked Ms. Nyheim about her opinion on this centralization of the population. She mentioned the latest project that involved youth in which a band recorded a new music video in Bodø. Young people got an opportunity to help with production assisting, sound and light management, filmmaking, photography, etc., which helped them learn many useful skills. This is what youth projects stand for: capacity-building, skills development, and sustainability. Young people can use this to make great connections across Northern Norway. The project is also trying to engage young people from smaller rural areas so that they can bring this experience and their newly learned skills back to their home communities. Ms. Nyheim thinks that they cannot change the trend of centralization in the largest cities, but they can focus on smaller places and include all people equally.

This was followed by another question for Ms. Nyheim on why some of the young people from Northern Norway are not satisfied to be a part of small communities. She answered that, as far as she is concerned, young people in small communities do not have enough options on how to use their free time. To develop some specific skills, they need to move to bigger cities. She thinks they should figure out what they are missing there and what needs to be developed.

Professor Eikeland added that the population level in Northern Norway has been very dependent on immigration and asked why young people are moving away from North Norway. Ms. Nyheim stated as one of the potential reasons is that young people over the age of 20 only get digital education in Northern Norway, so they move to other areas to be able to go to universities in-person and meet people.

Assistant Professor Qivioq Løvstrøm talked about demographics in Greenland. She began with an overview of the demographics in the region and stated that two-thirds of the population are men and one-third are women. Women get higher grades during their whole education, and they are also more likely to choose higher education, while men usually enter the work force earlier. One of the reasons is that the fishing industry is very important for Greenland and good fishermen can earn good money relatively early in their careers. Yet despite having higher grades and higher educational achievement, the unemployment rates among women are higher than among men. Having investigated workplace division, it is visible that the more dominant and important jobs are taken by men, while educated women still work in service industries. Ms. Løvstrøm said that it's vital to get rid of this patriarchal legacy that was ingrained during colonization. Besides that, Greenland has a marginally higher fertility rate than in Iceland and Denmark, but in comparison with the past it is much lower because of urbanization; women living in the bigger cities are less likely to get pregnant than women in rural areas (50% higher rate in rural areas). At the same time there is a new trend where single women are enrolling in higher education while also taking care of a child. Overall, because of the lack of opportunities, infrastructure and quality housing many educated people decide to move to Denmark or even to Canada rather than remain in Greenland. Moreover, boys are not feeling empowered, and this is reflected in the fact that Greenland, and in particular

boys and indigenous peoples, have some of the highest suicide rates in the world. Ms. Løvstrøm concluded that there are many social problems in Greenland, and it is necessary to acknowledge them.

Professor Eikeland followed up and repeated that up to 90% of the population in Greenland are indigenous peoples, and wondered if there was any difference between them and the rest of the population. Ms. Løvstrøm said that relations between them reflect history. Historically, they would send people from Denmark to Greenland to work and help to make the framework for how Greenland should be governed. However, these (white) Danes are still in power, and still occupy higher positions in government and earn more money. They also have a hard time integrating into Greenlandic society, because people are a bit closed off and do not want to invest time in friendships with someone who may soon leave. She thinks they should retain these people who come to help, but at the same time provide opportunities to people from the local Greenlandic population who need a job.

Birita Matras Petersen, student leader at the University of the Faroe Islands, described the demographic situation of the Faroe Islands. Faroese society is small and has a history of emigration, especially to Denmark for educational and work opportunities. However, their emigration is often considered temporary as a way of gaining knowledge and experience and bringing it back to the Faroe Islands. Ten years ago, there was a discussion about the declining population of the Faroe Islands. So strategies were formulated, and campaigns were launched across the private and public sector. Since then, the situation has improved, with many young people returning to the Faroe Islands. Now the country has 11% population growth, which is the highest of any country in Europe. They have invested in education and opportunities, focusing on increasing the quality of options available and ensuring that both higher education and vocational education are free. Moreover, they invested in infrastructure which facilitates greater and quicker mobility. However, being such a small country, they are always in competition with the outside world and to ensure that people are keen to return home or stay. She added that it is vital to listen to young people's preferences. It is important to provide more opportunities in terms of education, a healthy and inspiring study environment, improved housing, and low-cost accommodation.

Regarding the high birth rate, Professor Eikeland asked if it's true that women who return to the Faroe Islands also return to a more traditional way of life. Ms. Petersen agreed that the Faroese people are family-based and as such, have a high fertility rate (the highest in the Arctic region and Europe as well). However, she also said that the traditional way of living does not prevent women from working on their careers because they have a good sense of security and strong family relations to help, as well a relatively high male participation rate in parenting.

Professor Eikeland also asked if there is a reason now for the Faroe Islands to worry about migrants not returning from Denmark. Ms. Petersen answered that there is nothing to worry about in terms of migration back to the Faroe Islands. However, people do have difficulties entering the housing

market, and so the focus in the future should be on investing in more housing, encouraging higher quality education, and increasing labor market possibilities.

There was also a question from the audience regarding employment in the Arctic regions: how is the situation in the public compared to the private sector? Mr. Riipi answered that in Lapland it is quite equal. There is a huge lack of labor force both in the private and public sector, but many foreigners are employed in the private sector. Ms. Løvstrøm also said that there is not a problem with youth unemployment in Greenland, but the difference between the public and private sector is huge. People are more likely find their first job in the public sector, work there for a long time, and then realize that they don't like it. The public sector generally struggles to attract young people due to housing issues. There was a time when the government offered housing to those who work in the public sector, but they no longer do this. Housing is a big problem that affects the employment trends in Greenland.

Another question from the audience was how do panelists view the growing interest of non-Arctic youth in the affairs of the Arctic region and how do they see future relations between those living in the Arctic and those who aren't. Ms. Løvstrøm said that people are very interested in Greenland and its stock has risen culturally in terms of outside interest in nature and indigenous peoples. Ms. Nyheim claimed that many people still don't understand all the possibilities that are in Northern Norway. As such, they should work towards changing the image of the region and creating more possibilities so that people will be willing to move to the Arctic. Ms. Carpenter sees more possibilities in her region for non-Arctic people as they are more educated. She believes that it's important to build relationships between indigenous and non-indigenous peoples in the future to ensure no-one is left behind.

Panel 2: Arctic Resilience

Moderator:

- **Mike Sfraga** (Chair, U.S. Arctic Research Commission; Director, Wilson Center Polar Institute)

Panelists:

- **Jennifer Spence** (Executive Secretary, Arctic Council Sustainable Development Working Group)
- **Áslat Holmberg** (Vice President, Saami Council)
- **Anna-Sofie Skjervedal** (Head of Secretariat, International Arctic Hub)
- **Julie Simone Hébert** (Director of Programmes and Territorial Cooperation, Société du Plan Nord)
- **Niklas Eklund** (Director, Arctic Centre, Umeå University)

Moderator Dr. Mike Sfraga opened the discussion on Arctic resilience and highlighted that the session will focus on the socio-economic impacts of climate change on Arctic communities and address issues such as food and environmental security, health, infrastructure, education, connectivity, response capacity, and cross-border cooperation in areas such as soft or civil security, including search and rescue.

Arctic Council Sustainable Development Working Group's Executive Secretary Dr. Jennifer Spence said that the Arctic Council started to work specifically on Arctic resilience during the Swedish Chairmanship in 2011, and they continued by introducing the Arctic Resilience Action Framework in 2017. They recognized that Arctic resilience is an issue that touches the work of all the Working Groups of the Council and decided that they needed to include them all in the process. They have done several Arctic resilience forum sessions that have created a space for discussion and collaboration.

They have been focusing especially on three things: Firstly, having an inclusive approach (to have diverse perspectives and to look at different issues), being specific to the Arctic context (what are the specific conditions and characteristics of the Arctic, what are the unique opportunities and challenges) and finally, how strongly interconnected different issues are in the region. The result of this dialogue was two key messages: Move from ideas to actions (create specific activities that would demonstrate the relevance of the concept for Arctic communities and peoples), and exemplify this commitment by focusing on the impacts of permafrost thaw. At the end they identified three specific activities: a community-led tabletop exercise, building a tool for communities to monitor indicators of resilience, and ensuring a continuing discussion on the future of Arctic resilience.

Vice President of the Saami Council Áslat Holmberg referred to extreme weather changes in his region and its impacts on fishing. His village is dependent on salmon fishing and this key resource is declining due to climate change and the resultant extreme fluctuation in water temperature year-on-year. In these remarks he defined resilience as all the actions that they can take to strengthen their livelihoods, community, and culture, so they are better prepared to face the changes that they are experiencing. He noted a few projects that they are involved in through the Arctic Council. For example, the Arctic Wetlands Ecosystem project under the the Conservation of Arctic Flora and Fauna (CAFF) working group of the Arctic Council aims to focus on the human activities that impact Arctic wetlands and ecosystems and support communities' capacity to engage with wetland restoration and stewardship. Here, the focus is the simultaneous strengthening of social and ecosystem resilience. Another project is one conducted under the Arctic Monitoring and Assessment project called Climate Impacts on Terrestrial Ecosystems. This project monitors the impacts of climate change on reindeer herding and the grazing area. Finally, he mentioned a project called "Salmon Peoples of the Arctic" which aims to design an assessment on freshwater rivers systems based on indigenous knowledge. One of its goals is to outline future data needs that could contribute to resilience and adaptation.

The moderator then asked a question concerning the relationship between land rights in the Arctic regions and Saami resilience. Mr. Holmberg stated that the vastness of the Arctic region is seen as a buffer to climate change as the negative impact on one region could be offset by greater productivity in another. However, this calls into question the issue of land rights. Throughout the Saami territory there are competing types of land use. For example, there is tension between wind farms and reindeer herders across Saami territory because the use of the land for wind farms reduces the flexibility and insurance for reindeer herders to use the land as grazing areas.

Anna-Sofie Skjervedal talked about Arctic resilience and the importance of knowledge-sharing with a specific focus on Greenland. Arctic Greenland is where scientific knowledge about melting ice sheets was developed, and as such, it is here that work towards climate change solutions is being done. This is based on the understanding that the Arctic is not changing but disappearing. She thinks we can overcome challenges such as permafrost degradation, energy, food and water shortages, and damaged infrastructure with knowledge and answers from science. However, much scientific knowledge is never absorbed into society or the respective communities and this is problematic in terms of Arctic resilience. That is also one of the reasons why the governments of Greenland and Denmark have decided to finance the International Arctic Hub situated in Nuuk to focus on building bridges between science and community.

So far, discussions between them often show that knowledge transfer is one way and both sides agree that greater and deeper knowledge can help us to navigate within and adapt to this rapidly changing environment. However, first we must get better in applying knowledge and data results from science within society and find solutions to the questions posed by local communities in the Arctic. In the Arctic Hub, they support researchers' engagement with local communities as part of their effort to enhance knowledge sharing. In summary, she emphasized that resilience can be cultivated, and knowledge sharing is an integral component of this. Here, Greenland is not just the victim of climate change but is also instrumental in finding solutions.

Ms. Skjervedal also answered the moderator's question on how they follow up the knowledge sharing within the Arctic Hub. She said they have a chance to talk a lot with Arctic research stakeholders and their impression is that researchers are willing to share their knowledge, they are just uncertain on how to do so. The problem could be logistics, travel, and lack of time, but it is vital to promote and build bridges between researchers and communities across the Arctic region.

Director of Programmes and Territorial Cooperation of Société du Plan Nord, Julie Simone Hébert, gave a presentation about the "Down to Earth" initiative of Québec, which illustrates that resilience opens the horizon of possibilities in the region. The mission of the Société du Plan Nord is to contribute to the integrated and coherent development of Québec's northern territory in keeping with the government's orientations, and in collaboration with regional and local representatives and the private sector. They want to establish conditions to enable residents to fully inhabit the northern territory of Québec (the northern territory accounts for 72% of Québec). Other goals include

cooperation with local and Aboriginal communities, promoting a leverage effect that pools partners' efforts and increasing synergy between the three dimensions of sustainable development. According to climate change projections, by 2080, the growing seasons of Northern Québec will increase, as will the frost-free period, allowing increased forage yields and new agricultural potential.

The Société du Plan Nord also aims to promote the development and implementation of a sustainable Nordic bio-food model by focusing on the territory's potential. Among other programs that can support bio-food development, the organization has initiated a community greenhouse development program to increase the supply of fresh local products and support the local economy.

After that the moderator asked two questions: Where did the expertise from outside of the community come from – did it come from the region of Québec or from the other areas? Where does the energy come from – is it solar, diesel or a combination? Ms. Hébert answered that each project has common ground, but each community wanted to give it its own twist, so therefore the projects are different. There are some greenhouses that use solar energy, and some others use a combination of solar and diesel energy. There are also some areas using hydropower and one project using biomass energy.

Within the government of Québec, they have a Ministry of Agriculture that includes people with a large expertise. They brought these people to work with the Northern communities to match their needs. The Société du Plan Nord also works a lot with researchers in both the private and public sectors. Overall, they are trying to develop expertise locally, because they want the greenhouses to be managed by local communities.

Director of the Arctic Centre at Umeå University, Professor Niklas Eklund, shifted the perspective of resilience towards a security focus. He made three observations: imagery and the meaning of imagery on attitudes when it comes to the Arctic, transboundary processes in order to create opportunities, and political linkages (the way the Arctic is connected with the rest of the world in political terms). He followed up the question that was noted earlier, "Why would young people move to the North?" He thinks this is a problem of imagination. There is an image of the Arctic as a remote area which in reality is more synonymous with what is actually the Polar Regions. He would like to return to a perspective of the Arctic that is inclusive of the people, processes, cultures, and science on the ground.

Regarding transboundary processes, he hopes climate change will not become something like the COVID-19 experience where national identities become dominant over a regional Arctic identity. He hopes that the green industrialization taking place in Northern Sweden right now will hopefully connect with activities in Northern Norway and Finland so they will together develop opportunities and become better places to live. Regarding political linkages he noted that we should always look at the issues from a global perspective and we should try to better understand differences in specific Arctic regions. For example, the circumpolar Arctic region has roughly 4 million inhabitants

and half of those live in Russia – therefore, issues of Arctic unity and security are impacted by developments within each Arctic state. It is therefore vital to analyze Arctic issues within the context of pluralism and resist attempts to govern the Arctic from a hegemonic standpoint.

Dr. Sfraga followed up on the topic of communication and the presentation of the North and asked if Mr. Eklund agrees that there should be better control over collective communication. Mr. Eklund agreed and commented that it is about how we construct our democratic dialogues within the region. For example, it's important to discard attempts to divide the population between the North and South of Sweden to ensure that development is equitable and sustainable.

Then a question from the audience for Professor Eklund asked whether the concept of Arctic exceptionalism (the idea that politics in the Arctic aren't affected by things happening in the rest of the world) is a reality or a necessity. He responded that he does not think that exceptionalism is a good idea from his point of view. It is good to remind ourselves that the European North (a heavily populated and industrialized part of Europe) is a part of the European Union. To this end, Arctic exceptionalism is problematic because it ignores a holistic analysis of the region, and it ignores the Arctic's relationship with the rest of the world.

Another question from the audience for Ms. Hébert was whether the agricultural idea she talked about could be turned into a franchise as there are many other areas in Alaska, Northern Canada, and Greenland that might benefit from such fresh produce. She answered that the first objective is to raise interest and confidence among local communities in the North of Québec. They first want to work with people who have this capacity building and after that to be able to improve food security, but from the local perspective. A future goal is to develop more technical expertise and provide larger greenhouses. This was followed up by a question if they would consider sharing this technology with somebody from the Yukon district. She said that all the studies that they financed through this program are available to be shared with other countries and interested parties and they also still need expertise from outside (for example, from Europe).

Following up the issue of Arctic security noted by Professor Eklund, a question for Mr. Holmberg asked what the role of indigenous peoples could be in terms of utilizing their traditional knowledge in the changing paradigm of Arctic security. He started with a note that Saami people are a cross-border indigenous people, and their territory includes NATO members, the Russian Federation, and to the territory of the EU. This reality challenges the traditional view of security as a nation-state issue. Indigenous peoples' approach (specifically, the Saami people) has historically been peaceful. They were even offered to not be part of the military in Denmark and Sweden.

Coming to the end of the panel discussion, the moderator asked Dr. Spence if the concept of greenhouses that would add to the food supplies and security came up in the discussions within the Arctic Council Sustainable Development Working Group. Ms. Spence claimed that a lot of work that they are doing is recognizing that such solutions need to be context-specific to different

communities across the Arctic. Even with the tabletop exercise that they plan to do with different communities, they know that not every solution will be transferable. The challenge is how to transfer knowledge across the region to make it practically implementable in different areas of the Arctic.

Talking about connectivity, the moderator asked Ms. Skjervedal what they learned as a result of COVID-19 in Greenland. She answered that in Greenland they realized how fragile they are, but also how much they can do when they collaborate. As there is very limited health sector capacity in Greenland, they were dependent on healthcare workers coming from outside. They are also aware that they can do much more regarding communications as they are extremely vulnerable to connectivity problems, especially in a post-pandemic world.

Panel 3: The Arctic as a More Sustainable Place to do Business

Moderator:

- **Mads Qvist Frederiksen** (Director, Arctic Economic Council)

Panelists:

- **Naaja H. Nathanielsen** (Greenland Minister of Housing, Infrastructure, Minerals, Justice and Gender Equality)
- **Pär Weihed** (Professor; Pro-Vice Chancellor, Luleå University of Technology)
- **Monica Paulsen** (Cluster Manager, Arctic Cluster Team)
- **Jocelyn Douhéret** (Director, Business Development Office, Société du Plan Nord)
- **Niels Winther** (Senior Advisor and Deputy Director, House of Industry in the Faroe Islands)

The Director of the Arctic Economic Council, Mads Qvist Frederiksen, served as the moderator for the last panel of the symposium. In his introduction, he expressed his belief that the Arctic has solutions to global mega-trends such as urbanization, changing demographics, growing populations, climate change, digitalization, and connectivity. For example, the region has fish supplies to feed the world, energy to power industries, and the raw materials needed for the green transition. He asked the panelists to introduce their expertise in the first round, give concrete examples of solutions in the second round, and answer questions in the third round.

Minister of Housing, Infrastructure, Minerals, Justice, and Gender Equality Naaja H. Nathanielsen talked from the Greenlandic Government point of view. Their government has been taking sustainability very seriously and has decided to take concrete actions such as putting a stop to future drilling of oil and gas. They are now developing a new strategy for hydropower and Ms. Nathanielsen has been working on the new carbon capture strategy. As for the sustainability agenda, she said that the government takes into account that they cannot make everyone happy. However, in instances where someone will be affected by an action, they are willing to engage in

discussions with them. Because of the conditions in Greenland and issues that they face, it can be more expensive to do business there, but the government is trying to cultivate a business environment that attracts foreign investors.

Professor and Pro-Vice Chancellor from Luleå University of Technology, Pär Weihed, talked about business development in Northern Sweden as their university is in close collaboration with industry (hydropower, forestry, mining, etc.). He claimed that today there is around €100 billion invested in the green transition in Northern Sweden. The moderator commented on that point providing the example of LKAB (a mining and minerals company), which is making the biggest private investment in the history of Sweden to finance the green transition.

Cluster Manager Monica Paulsen explained that the Arctic Cluster Team (a public-private company) accelerates innovation and supports industry in Northern Norway. Northern Norway produces and exports a lot of seafood for European and American markets, and also processes minerals and metals for the European markets. Because they have lots of wind, Northern Norway has the perfect conditions to produce renewable energy. As such, power supplies in Norway are based on renewable energy and most power-intensive industries are based on hydroelectric power. However, they know that these industries are still responsible for approximately 20% of CO₂ emissions in Norway, so there is a lot to do to find solutions to become climate neutral. To accelerate innovation within these sectors, they collaborate in clusters. They have approximately 100 companies and research institutes that they work with to reduce or reuse CO₂ emissions in a number of ways, including: carbon capture technology, renewable energy investment, and sustainable energy infrastructure.

Jocelyn Douhéret, Director of the Business Development Office at Société du Plan Nord in Québec, talked about the organization's mission to develop and contribute to the development of Québec's Northern territory in a sustainable way. To this aim, they work in close collaboration with representatives of the province, First Nations peoples, and the private sector. They coordinate the action of the Québec Government, which means they work with government bodies and departments. Presently they are implementing the 2020-2023 Northern Action Plan, - a \$1.4 billion plan. This plan is linked to the three pillars of sustainability: economic, environmental, and social. For example, they can coordinate the improvement of infrastructure that advances both the economy and local communities (e.g. a project laying fibre optic cables in the Hudson Bay area to increase digital connectivity to an Inuit community). They also work with local communities to finance their social initiatives. Regarding the environment, their main goal is to protect 50% of the area that they cover by 2025, including not only the preservation of the biodiversity of the region, but also the prevention of industrial land uses. They have already protected 25% of the land area through a variety of mechanisms. Additionally, the organization tries to maximize the economic spin-off generated by the development of natural resources in the territory. This means they will work to make sure that local businesses retain the advantages of natural resource exploitation that provide critical minerals to the rest of the world.

Senior Advisor and Deputy Director of the House of Industry in the Faroe Islands, Niels Winther, focused on the blue economy. He noted that all the Arctic regions are, at least in part, ocean nations. This provides them with access to different resources: fisheries, agriculture, ocean transport, ocean energy, etc. Therefore, there are also sustainable business opportunities. In the Faroe Islands, they have high quality fisheries, which creates subsequent economic activity to support the fisheries. Mr. Winther mentioned five areas that are important to ensure sustainable development: collaboration (between private companies, between private and public sector, and between the Faroe Islands and other nations), education (to increase the quality of expertise), research (to understand the ecosystems they are operating in), a legal framework that supports sustainable development, and market access.

In the second round the moderator wanted panelists to provide examples of solutions to climate change or opportunities for sustainable business ventures. Ms. Nathanielsen stated that an important step towards progress is to mainstream sustainability in all areas and that is what they are doing in Greenland with education, infrastructure, and connectivity. One of the areas in which they have been promoting sustainability for a while is the mineral sector, which the Greenlandic Government took over the responsibility for from Denmark in 2010. They always have had quite high environmental and social standards and have been working closely with stakeholders and project owners to engage with local communities and find solutions locally. The government is now trying to focus on the critical minerals for the green transition. They have a huge potential and are already collaborating with the EU and the USA, and just joined the European Raw Materials Alliance. She believes that the critical minerals industry will grow in the following decades and to ensure sustainability, Greenland requires companies to conduct Environmental Impact Assessments, Social Impact Assessments, and an Impact Benefit Agreement with the local municipality and Government.

The Greenlandic government also just launched their new mineral strategy last year which was created in dialogue with different stakeholders where they listened to their obstacles. They are trying to push projects in the mining sector to use renewable energy as far as they can (hydropower, solar, wave). She also mentioned a recently agreed decision to build new hydropower plants in the north of Greenland which will support the business community in that area. She noted how companies in the mining sector are used to rules and regulations, but their main concern is stability and predictability. This allows Greenland to set a high bar in terms of environmental and social standards. At the end of her speech, Ms. Nathanielsen mentioned a carbon capture and storage project that the Government of Greenland is pioneering, as there are no major actors in the private sector willing to do so yet. They will conduct the first drillings and release the data. If it turns out to be a viable sector, hopefully business will be attracted to conduct their own operations.

Mr. Weihed talked about opportunities in Northern Sweden. As he mentioned before, they have invested €100 billion in the green transition. As indicators show, they will need 20% population

growth (100,000 people) in the next 20 years to realize this investment. This is a huge challenge in terms of skilled labor. He explained that the majority of development in the area relates to fossil-free sustainable energy. However, he also mentioned that the LKAB mining and minerals company will shift from iron ore pellets directly to carbon dioxide-free sponge iron and that's a huge technical development. Moreover, they will support fossil-free steel production and invest in batteries to add to the electrification of society. A lot of projects will be grounded in hydrogen-based energy. Energy will be the biggest challenge going forward, as there is already a question whether there will be energy produced in the North and distributed to the South. The existing energy portfolio consists of hydropower and wind, although investment in wind needs to increase tenfold to match future needs. There are also a lot of issues related to wind farms such as competition for land (and how to do this in a sustainable way), not to mention how to ensure the benefits of the investment are shared among all those who live in the Arctic. There will always be opportunities as well as challenges due to population growth in the region, he pointed out.

Ms. Paulsen stated that it is vital to scale up Arctic industry to reduce the carbon footprint of imports. She provided the example of the battery industry in Northern Norway, which is similar to that in Northern Sweden. The Arctic Cluster is building five giga-factories for producing battery cells in her region. Development of such battery cell capacity production will position them as one of Europe's largest battery cell suppliers and an important part of the global value chain for energy storage. Since the infrastructure is already there supporting other industries, building these factories is very efficient and effective. Their greatest challenge will be to get people to move to the Arctic to work in these new green industries.

Ms. Paulsen also emphasized the example of the hydrogen value chain. There are more than 700 initiatives for hydrogen across Europe. Producing green hydrogen should help to reduce the carbon footprint of logistics, which represents 20% for a lot of industries. Regarding the metal industry, the region has a metal recycling company called Celsa, which produces steel. If it runs on hydrogen it can become more sustainable. Combining it with carbon capture from other process industries, they can also make ammonia and methanol, which are important contributions to new energy systems. The moderator added that there is a Norwegian company that has just established a business unit on sustainable flying, based on electric batteries for short flights.

Mr. Douhéret continued that they have similar conditions as those in Greenland, Northern Norway and Northern Sweden. They produce minerals and energy, and forestry is also a huge sector. Around \$3 billion from the public and private sector are invested in the territory each year. They are trying to ensure that local companies retain the benefits of such investment. As for private investment, the most important factors are environment, society, and governance (ESG) with local procurement being part of it. At Société du Plan Nord they decided to work on that in 2015 and provide tools to big companies to reach their goals in terms of ESG. Specifically, they have established a local supplier directory in 2015, where they keep updated information about 5,000 different employers and companies within the territory. They are also in contact with different industries, so they know what their needs are in the short, medium, and long term. To conclude,

their goal is to communicate those needs to local companies and to communicate who the local suppliers are to big companies. He stated that every year they host networking meetings between big companies and local suppliers. They also offer audits of pre-qualifications to local companies, helping them reach their goals by allowing them to understand the conditions under which they will supply larger companies. They are also developing a new program where big mining companies can express which of the local companies they would like to engage with, and that company then receives support. At the same time, they match expertise and companies from the south of Québec with projects in the North, because in the North there is not enough expertise to meet certain needs. In summary, they strengthen local capacity and support local companies to get contracts, while also providing information and training about how to apply to public tenders to local companies.

Mr. Winther started with an example of aquaculture in the Faroe Islands. Farmed salmon now represents half of the country's goods exports, which was not predicted 15-20 years ago when there was an industry crisis. However, they developed a stringent legal framework in collaboration between industry and government with a focus on sustainability. This brought good economic results and sustainable development to this sector. There was also collaboration between the research community and the business sector, which made sure that salmon fish farming is sustainable. Because of this development and large investments in land-based facilities, they are able to shorten the amount of time salmon is in the sea and thus increase production without having considerably more fish in the sea. In recent years, there have been several different strategies to lower carbon emissions from the industry such as the development of bio-gas facilities, which utilize excess raw materials from salmon farming to produce green energy.

They have also developed green aquaculture supply boats to decrease the emissions from salmon farms. However, for that they need more electricity production from renewable resources. Mr. Winther introduced a project from Minesto company that aims to produce tidal energy with the help of turbines. This development increases the stability of energy production, as it is possible to accurately predict tidal patterns. Other developments are to go out to the open sea to farm; however, the technology that is needed there is a huge challenge.

As a last example, Mr. Winther stated the seaweed farming industry in the Faroe Islands also represents a great opportunity to lower carbon emissions as it a rainforest in the sea. The moderator added that there is a huge potential to feed people with more seafood in the future (currently, only 7% of global protein intake comes from seafood). He also mentioned that Iceland is also very advanced in bio-innovation; in Norway, they only use 56% of cod, whereas in Iceland they are able to use 80%, as they use the skin in the pharmaceutical industry (cod skin is actually more valuable than cod fillets).

After the second round, moderator Mr. Frederiksen asked Ms. Nathanielsen in what sector reforms are next needed to make the Greenland economy more sustainable. She said that the most important factor in developing a sustainable business community is government support in creating

legislation. In Greenland they are planning tax reform, as well as reform on housing and fisheries (reform on fisheries should be done in 2022). However, they cannot change issues such as a small work force and an educational level that will take many years to be increased, and as such, it remains important to remain pragmatic and encourage immigration to supplement the work force.

The Greenlandic government is planning to host a conference on green fuels for land, sea, and air transport to see if they can work with that as well. She stressed that it is not possible to solve all problems at once, and sustainability requires there to be an imbalance somewhere.

A question from the audience asked “Considering that many banks are reluctant to invest in the Arctic, how would you convince them to take part in the projects?” Panelists were also asked to include Asian countries in their discussion, in light of the Chinese “Arctic Silk Road”. Ms. Nathanielsen expressed her belief that banks will come into the mining sector when larger companies invest in Greenland. Mr. Weiherd added that it is not primarily banks that are investing in Sweden, it's private capital that goes into investments. He believes that once investment happens and industrialization is realized, banks will absolutely follow. Mr. Douhéret claimed that in Québec they have one institution called “Invest Québec”, a government agency with a specific \$1 billion fund which is managed by “Resources Québec”. This fund can co-invest in projects (mainly in the mining sector) to reduce risk for investors. After that, moderator Mads Frederiksen followed up with a question for Mr. Winther about whether he thinks the companies in the Faroe Islands see themselves as Arctic companies. Mr. Winther answered that they are definitely not trying to brand themselves as non-Arctic. Instead, he stressed that companies are focusing on the pristine environment of the region. If the companies in the Faroe Islands have a project or business case that is good enough, they will get investment, whether it comes from banks or from private sources. Local banks are instrumental in providing initial seed capital for investment in the Faroe Islands. The European Investment Bank also guarantees investments.

The moderator Frederiksen concluded the panel discussion and thanked all the panelists. The Managing Director of the International Polar Foundation Nicolas Van Hoecke ended the 2022 Arctic Futures Symposium and thanked the International Polar Foundation team for the organization of the symposium.

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