Greenland and Iceland in the New Arctic

Recommendations of the Greenland Committee Appointed by the Minister for Foreign Affairs and International Development Co-operation
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Preface

In a letter dated 9 April 2019, the Minister for Foreign Affairs appointed a three-member Greenland Committee to submit recommendations on how to improve co-operation between Greenland and Iceland. The Committee was also tasked with analysing current bilateral relations between the two countries. Össur Skarphéðinsson was appointed Chairman, and other members appointed by the Minister were Unnur Brá Konráðsdóttir and Óttarr Guðlaugsson. Two Ministry employees worked with the Committee: Hildur H. Sigurðardóttir during the first part of the working period and Geir Oddsson during the latter half. Lara Valgerður Kristjánsdóttir and Pétur Hreinsson from the Ministry also worked with the Greenland Committee in the final stages of the report.

There has been a great increase in bilateral relations between Iceland and Greenland, both political and economic, in recent years. This is reflected in the Icelandic Government’s decision to establish a diplomatic mission in Nuuk in 2013, and the decision of the Greenland authorities to establish a diplomatic mission in Reykjavík in late 2018. There is a growing economic connection between the two countries.

The countries already have great mutual interests, including in the fields of fisheries, air services, air traffic control, tourism and matters pertaining to the Arctic region. Enhanced co-operation in health care, education and support services for mining could become important areas of co-operation in the future. At the international level, co-operation between the countries is already growing, particularly Nordic and West Nordic co-operation and within the Arctic Council.

The Committee conducted research by visiting Greenland. Many meetings were held, both with locals and in Iceland. Information was also collected in various other ways.

The Greenland Committee’s report provides a detailed analysis of the current state of bilateral relations between the two countries and includes 99 recommendations for increased co-operation in various areas. They pertain equally to Icelandic authorities, the private sector, non-governmental organisations and the university community. Most recommendations are included in a special section on “extensive opportunities for co-operation”.

The report opens with an argument for why it is now more important than ever to increase communications between the countries, not least due to the region’s position in the new Arctic geopolitical significance.
It includes a discussion on the land and society, Greenlandic government structure and politics, and infrastructure development, including the considerable development of air and sea transport. The fishing industry, travel industry and mining operations are discussed in special chapters, which also include proposals for co-operation. Due to the proximity and extent of communications, the Committee decided to discuss East Greenland, and the issues particular to the area, specifically.

The report and recommendations are the work of the Committee alone. They are intended as a template for future co-operation between the countries and to provide consultation for the Minister. The Committee has prioritised 10 recommendations for policy development, and furthermore proposes that Greenland and Iceland enter into a framework agreement on future areas of co-operation.

Össur Skarphéðinsson, Chairman of the Foreign Minister’s Greenland Committee

Ölafur Ragnar Grímsson meets with the Greenland Committee: Unnur Brá Konráðsdóttir, Össur Skarphéðinsson and Geir Oddsson. Committee member Óttarr Guðlaugsson was absent. Photo: Ásgeir Ásgeirsson.
Main Recommendations

The Greenland Committee's report contains a total of 99 specific recommendations for measures to increase co-operation between Greenland and Iceland in various areas. A comprehensive summary of these recommendations can be found at the end of the report.

At the outset, however, proposals are made for a framework agreement between Iceland and Greenland and for a parliamentary resolution on a Greenland policy, as well as 10 special recommendations for policy development.

I. Framework Agreement and Parliamentary Resolution

1. The Minister for Foreign Affairs will work on establishing a framework agreement on co-operation between Greenland and Iceland, detailing the objectives in the defined areas of co-operation. Iceland will focus on the issues and recommendations discussed in the Greenland Committee's report.

2. The Minister for Foreign Affairs will submit a parliamentary resolution describing Iceland's intent and objectives for increased co-operation between the two countries. The memorandum will include a definition of desirable areas of co-operation and a discussion of means to achieve them.

II. Ten Recommendations

1. Bilateral trade agreement
The Minister for Foreign Affairs will work on establishing a bilateral trade agreement between Greenland and Iceland with the aim of increasing trade between the countries and lowering the price of daily necessities for Greenlandic consumers. The bilateral trade agreement, along with the weekly sailings between Nuuk and Reykjavik that commenced this year, is expected to facilitate the entry of Icelandic low-cost supermarket chains into the Greenland market.

2. After School Centre in Tasiilaq
The Government, in consultation with Save the Children in Iceland and the municipality of Sermersooq, will give Tasiilaq in East Greenland a financial grant to purchase premises for an after school centre and pay an employee's wages for three years. This will be an act of friendship on behalf of Icelanders toward the East Greenland community, which is burdened with social problems, such as widespread sexual abuse of children and the highest suicide rate among young people in the world.
3. Support for vulnerable people
The Icelandic Red Cross will receive support to embark on a fourfold project to support vulnerable people and improve the capabilities of local volunteers. The emphasis will be on mental health and trauma counselling, partly in view of the high suicide rate, training and empowering young volunteers to carry out preventive work among their peers, breaking the isolation of the elderly, and on the organisation of emergency response in the event of disasters and major accidents. Special emphasis will be placed on East Greenland, with the goal of reducing the suicide rate and all forms of violence against children (see 9.4). These projects will be carried out in collaboration with the Greenlandic Red Cross.

4. Development of distance learning
The Minister for Foreign Affairs and the Minister of Education, Science and Culture will conclude an agreement to ensure the funding for a three-year pilot project to implement distance learning at the University of Nuuk, Ilisimatusarfik, in collaboration with the University of Akureyri. Icelandic authorities will offer Icelandic expertise on the development of distance learning for the vocational and upper secondary levels, provided by the University of Akureyri. The countries will submit joint applications to Nordic and European funds for funding to implement distance learning in Greenland in order to raise the educational level in Greenland, which is currently the lowest in Europe.

5. New comprehensive fisheries agreement
A new comprehensive fisheries agreement will be established, extending to all straddling fish stocks, including deepwater redfish. Co-operation, including joint cod research off the coast of East Greenland, will be greatly increased. Temporary staff exchanges between institutions will be enabled; young Greenlandic scientists will be supported to work on PhD projects at the Marine and Freshwater Research Institute in Reykjavik and co-operation between companies in the fisheries sector will be established, including on the formation of an ocean cluster and fisheries studies. Regular bilateral consultations between institutions through mutual working visits will be formalised.

6. Search and rescue
The Minister for Foreign Affairs and the Minister of Justice will offer to share Icelandic search and rescue experience in order to establish a volunteer organisation in Greenland based on the experience and principles of ICE-SAR.

7. Small power plants in East Greenland
The Minister for Foreign Affairs and the Minister of Industry, Energy and Tourism will cooperate with the Greenland authorities to establish small power plants
in East Greenland with the aim of replacing oil as an energy source for domestic heating and electricity production. It is proposed that East Greenland be included in the Icelandic National Energy Authority's plan of micro hydro power plants. Concurrently, funding will be provided for individual projects on the basis of sustainable operational criteria (see 9.7.2 and see also oil burning in the Arctic in 8.10). The East Greenland model should become an example of energy transition for all Greenland villages where hydroelectric power is available.

8. **International think tank**  
The Minister for Foreign Affairs, in consultation with Greenland authorities, will propose to the Arctic Circle that an international think tank be established on “Greenland in the Arctic”, e.g. in collaboration with the Wilson Center in Washington DC and the Arctic Initiative at Harvard University. The aim is to increase discussions on Greenland in the international academic community while strengthening the international relations between Greenland and Iceland.

9. **Health care agreement**  
The Minister for Foreign Affairs and the Minister of Health will promote increased co-operation between Greenland and Iceland in the field of health care. The areas in which the Icelandic health system can serve Greenland will be mapped, with an emphasis on coronary angioplasty, brain angioplasty, specialised training for nursing personnel and elective procedures, such as joint replacement surgery and fertility treatment. Co-operation will also be established between the Icelandic Radiation Safety Authority and the Greenland authorities, on the implementation of standards and monitoring of radiation protection and radiation sources. A Greenlandic nurse and/or licensed practical nurse should be hired at Landspítali and Akureyri Hospital to facilitate the reception of emergency patients from the east coast of Greenland. The co-operation agreement between the countries in the field of health care will subsequently be updated with reference to the above-mentioned projects.

10. **Arctic Centre**  
The government will appoint a working group to prepare the opening of an Arctic Centre in Reykjavík, the future home of the Arctic Circle. There will be facilities for visiting foreign scientists, scholars and PhD students and an Arctic museum. Efforts will also be made to strengthen ties with Greenland. The support of the many foreign institutions, associations and funds associated with the Arctic Circle will be sought to strengthen the financial basis of the project. The goal is to sustain, for the long term, the Icelandic forum that has proven the most successful in drawing attention to the Arctic and Greenland in a constantly evolving environment of rapid changes.
1. Greenland and Iceland in the New Arctic

The Arctic has seen catastrophic changes due to climate change. Arctic warming is at twice the global rate. Within two decades, the Arctic Ocean will be open for shipping and new shipping routes will cut by half the sea route between Asia and Europe. The Arctic will open up to the exploitation of various non-living resources. Fish stocks will grow and move further north and tourism will increase. The big powers are striving to maximize their position to take advantage of the ensuing new opportunities. The melting also alters the traditional lines of defence of the superpowers, pushing military troops and bases further north.

In only a single decade the Arctic has been transformed from an isolated peripheral region into one of the focal points of a new 21st century geopolitics. At the same time Greenland and Iceland are acquiring a new, strong position towards the outside world - not least the big powers. However, new risks emerge with new opportunities. Hence, rapid changes in the Arctic call for increased co-operation between the two neighbours. A united stance will enable them to better protect Arctic interests, develop new opportunities and strengthen their political position in the tempestuous waters of global politics.

Four major factors shape the development in the Arctic:

- Climate change
- Security interests of superpowers
- New shipping routes
- Resource utilization

These factors explain the increasing tension between the superpowers in the Arctic. This chapter analyzes how they intertwine to act on the position of both Greenland and Iceland and explains the foreground of the political changes presently happening in the Arctic and how the changes may affect the status of the two countries.

1.1. Global Effects of Melting

Climate change was recently described in one of the world’s most respected scientific journals as “an existential threat to civilisation”.2 It is important to keep in mind that the consequences are not limited to the Arctic, but have far-reaching effects around the world. The melting of the vast Greenland ice sheet and the ice cover in the Arctic Ocean, in conjunction with global warming, is raising sea levels and contributing to new weather extremes. They manifest themselves in various areas of the world, with more frequent and severe hurricanes, extreme rain, heat waves, prolonged droughts and forest fires, as well as increased risk of flooding in populated areas far from the Arctic.

These changes are drastically reflected in the Greenland ice sheet. It is melting faster than ever before and has been declining seven times faster in this decade than in the 1990s. The annual rate of loss increased from 33 billion tonnes of ice to 239 billion from 1992 to 2018. From 1992, a total of 3,800 billion tonnes have been lost from the Greenland ice sheet due to melting and increased glacier flow.3 Sea levels rise accordingly.

THE GREENLAND ICE SHEET

The Greenland glacier covers 1,710,000 km². Apart from the main ice sheet, isolated glaciers and small ice caps cover an area that is almost equal the size of Iceland. The average thickness exceeds 2 km. At the highest point it reaches 3,290 m above sea level. It contains enough water to raise global sea levels by 7.2 m. Formed 18 million years ago the main glacier sits in a deep depression that at some points is lower than the sea level. High surrounding mountain ranges contain the main glacier within the depression. Only the Antarctic ice sheet is larger than the one covering Greenland. A scientific expedition, in which Icelanders took part, drilled through the ice sheet and recovered a 3 km core containing invaluable information on climate development.

2 Timothy M. Lenton, et al. 2019. Climate tipping points — too risky to bet against. The growing threat of abrupt and irreversible climate changes must compel political and economic action on emissions. https://www.nature.com/articles/d41586-019-03595-0
Scientists predict that sea levels will have risen by 67 cm by the end of the century. As a result of the increase, 400 million people are at serious risk of flooding. Scientists believe that there is an increasing risk of tipping points being reached, where one catastrophic climate event follows another in a never-ending vicious circle. If one fifth of the Greenland ice sheet melts, the global sea level will rise by almost two metres, with catastrophic effects on living conditions all over the world.

Approximately 80% of those most severely affected live far from the Arctic, most on the plains of Asia. This is why distant countries such as China, Japan, South Korea and the Pacific nations strive to collaborate with the Arctic nations on researching and understanding the effects of warming on the Greenland ice sheet. By researching the melting of the glaciers and ice sheet of the Arctic Ocean, these distant nations are in fact mapping out their own future.

**Mandate for Independence**

“According to the mandate we have received from the nation, we must work for independence. There should be no doubt that everything we do is part of preparing for this. More than 70% of the population wants to move toward independence, and the Act on Greenland Self-Government stipulates how this is to be done. This is the mandate that we have received and have held for a long time.”


Kim Kielsen,
Prime Minister of Greenland (2014 – )
Photo: Government of Greenland/Tusagassivik
1.2 New Shipping Routes

The unavoidable melting will result in the Arctic Ocean becoming ice-free at the end of most summers sometime between 2030 and 2040. Reinforced ships will subsequently be able to sail year-round in either no ice or in one year-old ice.

There will eventually be three passable shipping routes across the Arctic Ocean:

1. The Northeast Passage
From the Bering Strait the Northern Passage stretches 5,500 km past Siberia and onwards to Europe. It is already an important shipping route for Russia and a prerequisite for the increased utilisation of oil and gas in the Russian Arctic. China has invested heavily in the Northeast Passage and negotiated with Russia to use the route as part of new maritime Polar Silk Roads between Asia and Europe. Icelanders have discussed a connection to the Northeast Passage by way of a large shipping port in North-East Iceland, with a focus on Finnafjörður, south of Langesnes.

In Scandinavia plans are afoot on developing major infrastructures related to the Northeast Passage. Kirkenes in northern Norway strives to become a transshipment port. If funding is provided from the Chinese Belt and Road Initiative, the idea is to establish railway connections with Rovaniemi in Finland and from there to Helsinki, with a 100 km tunnel to the Estonian capital of Tallinn and onwards to mainland Europe.

2. The Northwest Passage
This is a difficult route extending from the Bering Strait along the North-American coastline through the Canadian archipelago to the Baffin Bay, facing Greenland, and onwards to Europe. The Northwest Passage is particularly difficult to traverse due to thick blocks of ice stacked up by strong currents along the coastlines of the archipelago. It is expected to become the latest of the three passages to be open for transport. Another drawback is the long-standing territorial dispute between the United States and Canada.

3. The Central Sea Route
The Central Sea Route lies close to the centre of the Arctic Ocean. It has the advantage for seafarers to be mostly outside national jurisdictions. In such areas, coastal states lack legal powers to impede traffic. Surprisingly, research have demonstrated that the ice cover is thinning at the fastest rate in the middle of the Arctic Ocean. The Central Sea Route is therefore anticipated to become the first

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5 IMO’s International Code for Ships Operating in Polar Waters (Polar Code) is mandatory under both the International Convention for the Safety of Life at Sea (SOLAS) and the International Convention for the Prevention of Pollution from Ships (MARPOL). The Polar Code covers the full range of design, construction, equipment, operational, training, search and rescue and environmental protection matters relevant to ships operating in the inhospitable waters surrounding the two poles. The Polar Code entered into force on 1 January 2017. http://www.imo.org/en/MediaCentre/HotTopics/polar/Pages/default.aspx
route free of ice. A transshipment port in Iceland would be a feasible option to serve the Central Sea Route.

In Iceland, vivid interest is related to a possible port in Finnafjörður in the North East. It is strategically situated with respect to both the Central Sea Route and the Northeast Passage. However, a transshipment port in Kirkenes, Norway, offers a bit shorter route between Asia and Europe and would reduce the competitiveness of Finnafjörður with regard to the Northeast Passage.

Interestingly, China’s Arctic policy suggests that in the long term China intends to use more than one maritime route across the Arctic Ocean. The policy text refers to new routes in the plural. It should also be kept in mind that despite their collaborative efforts on the Northeast Passage, China–Russia relations have historically been tense. Their geopolitical interests are not always in alignment, for example, in Central Asia. It is likely that China will think twice before deciding to focus her maritime transport between Asia and Europe solely on the Northeast Passage. If warming in the 21st century will develop as predicted, it may well happen that the 21st century will bear witness to maritime transport between China and Europe along both the Northeast Passage and the Central Sea Route.

DIVISION OF THE ARCTIC

“To put the Arctic in context, the area is as large as Africa. I often find it convenient to divide the Arctic into three parts: The vast eastern area stretches from the Bering Strait across seven time-zones in Russia, ending in three small areas in the north of Norway, Sweden and Finland. The western area covers Alaska and the Canadian Arctic. The central area, which includes Iceland and Greenland, extends from the North Pole south across the Arctic Ocean covering the vast territories of Greenland and Iceland, with the Faroe Islands on the periphery. It is this area that globally is fast becoming a focal point due to the security interests of the superpowers as well as its proximity to the new Trans-Arctic shipping routes, not to mention the importance of Greenland. The central area is also where climate change is most obvious to the world.”

(Ólafur Ragnar Grímsson, in a meeting with the Greenland Committee)

6 https://eng.yidaiky.gov.cn/zchj/qwfb/46076.htm
1.3. Resources

Scientists estimate that the Arctic contains 13% of the world’s oil reserves and 25%–30% of the global gas reserves. The freezing cold and thick layers of ice have restricted exploitation as well as prospecting and extraction of metals and minerals. Several nations consider it possible to extract valuable resources from the seabed, including minerals, with melting of the ice cover. Russia, the US, also Greenland, have major plans to increase mining of various Arctic resources. With warming, extraction of valuable resources will increase, on land and off shore, including from below the seabed. Greenland’s scenarios on economic independence have been closely linked with utilization of non-living resources.

The exploitation of living marine resources is also destined to increase. The Intergovernmental Panel on Climate Change (IPCC) asserts that in the 21. century North Atlantic fish stocks will continue to move northwards. IPCC considers it “highly likely” that a “considerable increase” of biomass and fishing will be experienced on the peripheries of the Arctic Ocean. For example, the capelin, a fish species of economic importance, is predicted to start spawning off the coast of Novaja Zemlja. Big non-arctic powers have expressed an interest in fishing the common areas of the Arctic Ocean when accessible. Member states of the Arctic Council have responded by agreeing on large sanctuary areas with indefinite ban on fishing.

Arctic tourism will greatly expand with more cruisers already delighting tourists with Arctic tours in summer to Iceland, Greenland, Jan Mayen, Svalbard, the Canadian archipelago and Alaska. Visits of cruisers to Greenland increased by 90% in the period 2015–18. Prior to the Covid-19 pandemic

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the annual number of passengers in the Arctic Ocean was fast approaching 100,000.10 A well-known international company, Lindblad Expeditions, announced that it’s first cruise between northern Norway and Alaska along the Northwest Passage would take place in the summer of 2020. The pandemic intervened. Russia intends to invest heavily in Arctic tourism infrastructure and to multiply the number of Arctic tourists by 2035.11 In anticipation of a melting future the cruise industry had more than half of the 50 cruisers being built in 2018 designed to navigate through ice.

It can be assumed that Arctic cruises will require air transport to destinations far inside the Arctic and the ensuing construction of airports and hotels, search and rescue facilities as well as port facilities will provide new platforms for traditional Arctic tourism. It will demand well trained guides and staff to serve high-income tourists in search of adventures and experiences.

**REAL-TIME LINK**

“From Bangladesh and Myanmar in India’s immediate east to Japan and South Korea in the Far East, invariably the entire coast is vulnerable to what happens in the Arctic. From rising seas to cyclones, the North Pole unites the South and the East.”

(https://www.thehindubusinessline.com/opinion/why-indias-foray-into-the-arctic-matters/article29517604.ece)

**Professor D. Suba Chandran is India’s leading expert on the Arctic.**

Photo: D. Suba Chandran

### 1.4. Power Play in the Arctic

For 30 years, the Arctic has been characterised by what has been referred to at times as “Arctic peace”. Military tension has been low. Disputes between superpowers in other arenas, such as the Ukraine conflict, have hitherto not disrupted Arctic co-operation to a significant degree. However, some states see a new security threat in the melting of the ice sheet. In times of conflict an ocean free of ice will enable access of hostile fleets to the shores. In order to defend against this new military possibility, troops and new military bases

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are moved further north. Meanwhile, the rising superpower of China has increased its ties and influence in the Arctic arena and neighbouring regions in various ways. In 2017, Chinese warships participated for the first time in exercises with the Russian navy in the Baltic Sea, and states, such as Sweden in her new Arctic Strategy, 2020, look askance at a military co-operation of Russia and China. The geopolitical status of the Arctic has already undergone a change in the early 21st century. A new tension between superpowers is emerging. As the Cold War between Russia and the United States defined the second half of the 20th century a growing tension between the United States and China has already cast a long shadow into the 21st century.

A turning point was the speech given by the United States Secretary of State, Mike Pompeo, in May 2019, in Rovaniemi. He defined the Arctic as a new area of geopolitical conflict. The Secretary of State was harshly critical of Russia's military build-up in the Arctic. The greatest attention was, however, drawn by his explicit criticism of increased Chinese activity in the region. He described as absurd China’s definition of herself as a “near-Arctic” state. He observed that Chinese research in the Arctic Ocean might possibly be used to facilitate access by submarines and warned the Arctic could become a conflict area, not unlike the South China Sea. His strong views were reiterated by Vice President Mike Pence in his visit to Iceland a few months later. Pompeo’s speech marked the start of a new geopolitical era in the Arctic.

The radical change in the region’s status was further manifested later in 2019 when the Danish Defence Intelligence Service (FE) issued a new risk assessment for Denmark. The report assigned greater risk to geopolitical power play in the Arctic than to terrorism and cyber risks. A particular concern was expressed about China’s interest in Greenland. Elsewhere, the head of the FE linked the change in risk assessment to the growing US interest in Greenland and the "power play" taking place in the Arctic between them and other superpowers. The new Arctic Strategy of Sweden, 2020, also reflected a departure from previous security assessment of the Arctic.

14 De arktiske stater samarbejder fortsat om regionale spørgsmål. Trods et ønske blandt landene om at holde regionen fri for sikkerheds- og forsvarsstoffer er der et stigende militært fokus på Arktis. Der former sig et stormagtsspill mellem Rusland, USA og Kina, som øger spændingsniveauet i regionen. See Forsvarets Efterretningsdieneste. „Efterretningsmæssig Risikovurdering 2019” https://fe-ddis.dk/Produkter/Risikovurderinger/Documents/Efterretningsmæssig%20Risikovurdering%202019.pdf
1.5 Withdrawal from the Arctic

The United States effectively withdrew from the Arctic at the end of the Cold War with the collapse of the Soviet Union. In Iceland the United States decided unilaterally to close its military base in Keflavík in 2006, despite strong opposition from Icelandic authorities. The trans-Atlantic relationship significantly cooled. In the years 2008–2019 almost no high-ranking ministers from the USA visited Iceland and requests for talks on free trade met with little enthusiasm. The new indifference toward the Arctic was apparent in the scant interest for the Arctic Council. In its infancy it was largely ignored by the US, and no US Secretary of State attended its annual meetings until Secretary of State Hillary Clinton participated in the meeting in Nuuk, 2011, along with Secretary of the Interior, Ken Salazar.

Greenlanders experienced the same lack of interest. They had a remarkable relationship with the United States during World War II, that indirectly influenced the independence struggle decades later. When Self Rule was obtained in 2009, the Greenlanders hoped for, and expected, economic co-operation, not least in mining. It was a great disappointment when nothing came of this. In a recent article by Ane Lone Bagger, published at the end of her term as Minister of Foreign Affairs, she noted that after 2004, Greenlanders expected increased economic co-operation with the United States but that this did not materialize.15 Former Prime Minister Kupiik Kleist

had earlier remarked that Greenland was no longer of any importance to the United States. Instead, the United States reduced their presence in Greenland, airfields were closed and operations at the Thule Air Base were reduced. Greenlandic mood turned sour, when the United States terminated long-standing service contracts to the Thule Air Base, of great value to the Greenlandic economy, and contracted to US companies at a higher price.

While the United States interest toward the Arctic steadily declined, Arctic interest by Russia increased by leaps and bounds. From the year 2000, Russia fortified the Northern Fleet and invested heavily, with Chinese support, in the Northeast Passage, which not only was of commercial value, but of obvious military importance. Six military bases, either new or developed from relics of the Cold War, were built on Wrangel Island, the New Siberian Islands, and Franz Josef Land off the coast of Siberia. The main purpose of the military bases is to protect the vast coastline that will open up with the melting in the Arctic Ocean. From the northernmost base, Nagurskoye on Franz Josef Land, military aircraft could attack the Thule Air Base. Constructions also support very large supply and transport aircraft and equipment to operate aircraft that can carry long-range nuclear weapons. Nagurskoye will be the world's northernmost base for fighter jets, located 1,000 km from the North Pole. Russia was very fast to establish the base. Construction began in 2017 and is expected to be completed in 2020.

The development of new military bases, especially on Franz Josef Land, radically alters the security interests of the United States. The military base in Nagurskoye has major implications with regard to the Thule Air Base, which is a key link in the US defence chain. A worst-case scenario for the United States is a conflict in which aircraft from Nagurskoye incapacitate Thule Air Base simultaneously and other aircraft carrying long-range nuclear weapons take off westwards. In order to respond to the new scenario, the

United States need to increase their preparedness at Thule, preferably to have presence in other areas in Greenland and also to have secure access to Iceland in times of volatility. Congress also has mandated US authorities to establish a new naval Arctic base.

In addition to Greenland's renewed strategic importance with regard to US defence, the growing trade conflict between the Trump Presidency and China also put focus on Greenland as a major source of rare earth metals. Greenland has a quarter of the global supply of these elements. It didn’t fully dawn until this century how important some of the rare earth metals are for emerging industries, including high-tech armaments, such as missiles and nuclear bombs, even the latest types of fighter jets and submarines. The United States and the EU accordingly define rare earth metals as “critical” raw materials and China as “strategic” materials. The Chinese have an absolute advantage when it comes to the production of rare earth metals (see Section 7). On the contrary, the United States produce next to none. They have been completely dependent on imports, mostly from China, which in 2018 provided 78% of the quantity required by American industries. The significance of this was dramatically displayed when China limited export temporarily in the 2010s. In this new perspective Greenland has suddenly acquired an increasingly important position as a future provider of rare earth metals. In developing the new Arctic policy, the United States are, for the first time, taking note of this unique position of Greenland.

1.6 China and the Arctic

As the United States withdrew from the Arctic, China’s interest in the region grew. China became an observer state in the Arctic Council in 2013. It published a detailed policy on the Arctic in 2018 and has for many years taken an active part in research into climate change related to the Arctic. China has defined herself as a “near-Arctic” state. In the Arctic, the Chinese have by far the most economic relations with Russia. They have invested heavily in the Northeast Passage, energy resources and systems to transport gas from Siberia to China. From the Yamal region on the Kara Sea, liquefied natural gas is transported by huge vessels and in late 2019, Presidents Xi and Putin inaugurated a new 8,000 kilometer-long gas pipeline system that stretches from Yakutia by the Arctic Ocean, across the Amur River and to Shanghai.

China has also developed economic co-operation with the Nordic countries, including Norway, where a free trade agreement is in the final stages. As previously noted, there is great interest in North Norway in establishing a transshipment port for the Northeast Passage in Kirkenes, and related transport infrastructure. The increased emphasis on the Nordic countries is reflected by the Chinese Government formally entrusting the province of Hubei with the task of conducting trade with the Nordic countries on behalf of China. Numerous delegations from Hubei have regularly visited the Nordic countries, including Iceland. In the last decade the three West Nordic nations, i.e. Iceland, Greenland and the Faroe Islands, have significantly increased their economic co-operation with China.

Iceland signed important agreements with China in the 2010s, including a free trade agreement, the first such agreement between China and a European state. Following the banking crisis, the countries entered into a currency swap agreement which played a major role in breaking Iceland’s isolation in the Icesave dispute and is renewed regularly. In North Iceland, the Polar Research Institute of China (PRIC) operates a small centre for the exploration of the aurora borealis phenomena in collaboration with the Icelandic Centre for Research (Rannís). Icelandic authorities were introduced to the Chinese interest in new shipping routes across the Arctic Ocean in the previous decade, with an emphasis on developing the Central Sea Route. China has closely followed


26 Bill Chappell. 2019. „Russia Begins Sending Natural Gas To China As Putin And Xi Open New Pipeline.” https://www.npr.org/2019/12/02/784171826/russia-begins-sending-natural-gas-to-china-through-new-pipeline
plans for a large shipping port in Northeast Iceland, and representatives of COSCO, China’s largest shipping company, have visited Iceland in connection with that. China invested in costly oil exploration in the Dreki area northeast of Iceland, which was later put on hold. Iceland became a founding member of the Asian Infrastructure Investment Bank, which facilitates participation in the enormous Belt and Road Initiative. China’s interest in the Central Sea Route and its potential connection with Iceland was emphasised in 2012, when the icebreaking research vessel Xue Long visited Iceland with the intention of sailing across the North Pole to China.

Meanwhile, Greenland has also developed closer ties to China. Exports to China are thirteen times the amount moved to the United States.\(^\text{27}\) China is now Greenland’s second most important export market after the EU. When Greenlanders were unsuccessful in raising finance for mining operations in the West, including in the United States, they turned their attention to Asia, both South Korea and China. In the Greenlandic Government’s annual reports on foreign affairs, China has been referred to as a preferred partner country since 2015. In the 2016 report, the opening of a diplomatic mission in Beijing was considered, with the explicit intention of linking Greenland’s priorities with the Chinese Arctic policy.\(^\text{28}\) One year later, Prime Minister Kim Kielsen, along with three other ministers, visited China and introduced the possibility of co-operation in mining operations and infrastructure, including building three international airports. By then, the Greenlanders had been unsuccessful in finding finance in Denmark for building the airports. Following the Prime Minister’s visit, major Chinese corporations expressed interest in financing and building them. This was vehemently opposed by the United States authorities, who raised the matter with the Danish Government. Eventually, the Danish Government raised funds for two airports, in Nuuk and Ilulissat, and the Chinese withdrew.

The airport issue became highly controversial and Kim Kielsen’s government lost its majority in parliament and struggled to survive as a minority government until a new party (Demokratit) joined it in May 2020. Today, the position of China has changed drastically since the implementation of Self Rule in

2009: Chinese companies have major shareholdings in four large mining areas in Greenland; two Chinese oil companies have expressed interest in licenses for onshore oil drilling to be tendered in 2022;\(^\text{29}\) the Chinese are discussing to open a research station for climate studies in Greenland\(^\text{30}\) and a Chinese university wants to install an earth station for satellite communication in Nuuk.\(^\text{31}\) The Greenland government has recently announced a diplomatic mission to be established in Beijing in 2021. At the same time the Greenlanders have stressed their intent to remain a part of Western defence co-operation in an independent future. Famous for their skills to manoeuvre the traditional kayak they seem equally skilled to navigate the diplomatic high-seas.

The third West Nordic country, the Faroe Islands, a part of the Danish Kingdom, has also increased ties to China. It is presently preparing the introduction of 5G communication technology in collaboration with the Chinese company, Huawei. The Faroese have worked on a free trade agreement with China for seafood products and took a major step by opening a diplomatic mission in Beijing in 2019. Shortly after Secretary of State Pompeo's speech in Rovaniemi, US Ambassador to the Kingdom of Denmark, Carla Sands warned the

\(^{29}\) Mingming Shi and Marc Lanteigne. 2019. „China’s Central Role in Denmark’s Arctic Security Policies Copenhagen’s Arctic planning has to take China into account.” https://thediplomat.com/2019/12/chinas-central-role-in-denmarks-arctic-security-policies/


\(^{31}\) Andreas Lindqvist. 2017. „Nyt kinesisk satellitprojekt køres under radaren.” https://sermitsiaq.ag/node/201440
Faroese, in an open letter, of co-operation with China on 5G. Their independent streak was previously on display when the EU countries, led by Denmark, imposed trade sanctions against Russia due to the Ukraine conflict. The Faroese took little notice of Copenhagen and went on to open a directorate for trade in Moscow. Today, Russia is the largest export market of the Faroe Islands, currently purchasing 30% of Faroese exports.

1.7 New Policy Development – the US Awakens

When the Trump Administration took office, it was confronted with an Arctic reality that had changed dramatically in a short period: Russia was busily building half a dozen new military bases on the Siberian coast and China was displaying herself as a “near-Arctic” state. Many European countries had partnered with China in the Belt and Road Initiative, including heavyweights from the midst of Nato, such as Italy and the important financial centre of Luxembourg. Major infrastructure relating to expected Chinese financing was being planned in the Nordic countries. Five Nordic prime ministers announced officially that they had agreed to “continue” discussions on increased co-operation with China. In the West Nordic region, a vital link in the United States defence chain, all three West Nordic countries were tying bonds of economic co-operation with the rising superpower in Asia, that was increasingly suspect in the eyes of the United States.

Many factors, therefore, called for a re-evaluation of the US Arctic policy, not least security interests, new shipping routes and exploitation of resources. A bipartisan consensus gradually emerged in US politics on the importance of limiting the Chinese influence. Donald Trump explicitly stated early in his presidency that he considered China’s growing power a new threat. The United States now define China as their main competitor for global influence and resist it with increasing determination.

Although the Trump administration never presented a fully polished Arctic pol-

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33 https://www.norden.org/is/news/aukid-samstarf-nordurlandanna-og-ka
icy, there have been numerous displays of a completely new attitude, heralded by the historic speech by Secretary of State Pompeo in Rovaniemi. With regard to Greenland and Iceland a new understanding of their geostrategic importance has been expressed on many occasions.

### 1.8 Unexpected Emphasis on Iceland

By 2019, the renewed US interest in Iceland was on prominent display. In the first week of the year in Washington, the countries' foreign ministers signed an agreement on increased defence co-operation between Iceland and the United States. It was explicitly justified with reference to changed conditions in the Arctic. US Secretaries had barely visited Iceland since the closure of the Keflavík military base in 2006, with the exception of Secretary of State Condoleezza Rice, who came on a visit in 2008, decided two years before in connection to the major shift in the defence relations. However, there was a dramatic turnaround in 2019, when three heavyweights in the Trump administration and five senators visited Iceland in a short period.

Barely five weeks after the January meeting with Guðlaugur Þór Þórðarson in Washington, Pompeo returned the visit and had important discussions in Reykjavík with his colleague, including trade issues. At the meeting, Foreign Minister Þórðarson emphasised the importance of free trade between the states. US Vice President, Mike Pence, visited Iceland later that year and discussed the Arctic, defence matters, and trade issues between the two states. During his visit, He was candid about his views on China in statements to the media. The Vice President thanked Iceland, erroneously, for refusing to take part in the Belt and Road Initiative, with Prime Minister Katrín Jakobsdóttir correcting him immediately. A new emphasis on defence between the states was reflected by the fact that during the meeting with the Icelandic Prime Minister, defence issues were also discussed, including projects to improve facilities for the submarine search aircraft fleet at Keflavík Airport.

At a meeting between the Vice President and the Icelandic Minister of Foreign Affairs, a historic new approach to trade between the states was presented. Previous Icelandic governments had been unable to initiate free trade.

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discussions with the United States, but at the meeting Pence surprised by declaring the willingness of US authorities to discuss a free trade agreement with Iceland. Back in the United States the Vice President confirmed this in a closed meeting where two senators took up the issue, and further disclosed that a working group was exploring the matter. Background information provided by officials to the media linked the free trade discussions with the altered security conditions in the Arctic and Iceland’s potential involvement with the Belt and Road Initiative. The different approach to Iceland showed that Washington understood that Iceland was holding new cards.

In his speech in Rovaniemi, Secretary of State Pompeo had surprised many by announcing that Secretary of Energy Rick Perry would deliver a keynote address at the Arctic Circle in Reykjavík six months later. This was further confirmation of the United States’ renewed interest in the Arctic. Iceland was emerging from the fog of long-standing US disinterest in the region and gaining a new significance with the United States’ reevaluation of the importance of the Arctic in 21st century geopolitics.

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38 Alayna Treene. 2019. „Trump eyes free trade agreement with Iceland.“ https://www.axios.com/%20trump-iceland-free-trade-deal-russia-china-a1a0dfb5-b936-480d-a8ce-0163250570\4.html
1.9 Greenland and the United States

The renewed interest in Greenland was reflected in President Trump’s dramatic statement in August 2019 where he expressed interest of the United States in purchasing Greenland. Although the statement was unexpected, it was later confirmed that it was the result of White House discussions on the increased military importance of Greenland. The President’s statement put Greenland on the front pages of the world’s media and drew unparalleled attention to the country’s unique position. President Trump intended to visit Denmark that same summer, and a notable item on his agenda was a bilateral meeting with Kim Kielsen, Prime Minister of Greenland. Up to that point, US authorities had mostly communicated with Greenland through the Kingdom of Denmark. Unfortunately, the President subsequently cancelled the visit and explained in a tweet that the Prime Minister of Denmark “had no interest in discussing the purchase of Greenland ...”.

In the summer of 2019, John Bolton, the President’s National Security Advisor, issued a historic statement on Twitter following a meeting at the White House with Carla Sands, the US Ambassador to Denmark, who had been travelling to Greenland for talks with politicians, business leaders and officials. Ambassador Sands’ stopovers included a visit to a large mining area for rare earth metals in South Greenland. In his tweet, Bolton stated his meeting with Sands had revolved around stronger economic ties with Greenland, and, notably, he expressed the willingness of the United States to invest in airports and mining research. Bolton’s tweet can also be related to a more low-key unilateral declaration of intent signed by Under Secretary of Defense for Policy John Rood at Thule Air Base one year before, which stated that the United States intended to “pursue vigorously” investments in airport infrastructure in Greenland that may have dual military and civil purposes in order to enhance US military response and surveillance capabilities. The declaration was not widely reported but it was celebrated by Greenlanders.

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40 See: https://twitter.com/AmbJohnBolton/status/1169591060064088078?ref_src=twsrc%5Etfw


42 Kenneth Elkjær, Thomas Munk Veirum. 2018. „USA vil undersøge investeringer i grønlandske lufthavne.” https://knr.gl/da/nyheder/usa-vil-unders%C3%B8ge-investeringer-i-gr%C3%B8nlandske-lufthavne

43 The statement was issued in the midst of a government crisis in Greenland, a week after Kim Kielsen’s government lost its parliamentary majority when Denmark, at the initiative of the United States, pushed China out of the airfield project
Six weeks after Bolton’s declaration, Thomas Ulrich Brechbuhl, a close advisor of Secretary of State Pompeo and a member of President Trump’s inner circle, led a delegation of US officials to Nuuk to discuss increased trade, investment and co-operation in the field of education with Greenlandic cabinet members.44

In the spring of 2020, the United States allocated USD 12.1 million to projects in Greenland, including education projects. At the same time, it was indicated that this was the beginning of a further co-operation. In the US media this was interpreted as a part of a struggle for influence in Greenland between the superpowers.45

The US Government thus used the year 2019 to underline a major change in attitude towards the Arctic region, especially Greenland and Iceland. The government also took the unprecedented step of initiating direct communications with the Greenland Government by opening a diplomatic mission in Nuuk in early summer 2020.46 This indicated a clear understanding of the fact that Greenland was on the path to independence. Although President Trump expressed his interest in Greenland in an unusual manner in the summer of 2019, he is nevertheless the first President of the United States to understand the new geopolitical importance of the Arctic. This will be part of his legacy, whatever else may be said when history passes its judgement.

1.10 Co-operation and External Connections

All indications point to the Arctic becoming a venue for geopolitical competition between the superpowers in this century, as evidenced by Secretary of State Pompeo’s outspoken proclamations in Rovaniemi. In the face of a changed situation, the United States has reassessed the importance of Greenland and Iceland in the Western security chain and now regard them as important links, as was the case during the Cold War. Meanwhile, both countries have developed an economic relationship with China and have an opportunity to take part in major infrastructure projects via the Belt and Road.

Greenland and Iceland in the New Arctic

Initiative if they so choose. This new situation strengthens the position of the two neighbouring countries, while also making it more difficult to maneuver between the superpowers.

Increased activities, industrial and commercial, seem to be unavoidable in the Arctic region, due to the melting ice. They will create new dangers to fragile ecosystems and living resources. The nations most dependent on the welfare of the Arctic are also the ones for which it is most important to guard the ecosystem of the ocean and fight for sustainable utilisation. They have certain obligations toward both the region’s residents and nature. In view of the opening of the Arctic and political developments already in play, it is logical that Greenland and Iceland increase their co-operation in a systematic manner. They need to stand closer together in the global community. This will strengthen their political position, bring them economic benefits, and make it easier for them to protect together the interests of the Arctic.

One way to secure the position at home is to strengthen available ties with other nations and regions outside the West Nordic region that have demonstrated interest in the developing Arctic. Populous areas with strong links to the Arctic have, in recent years, sought to increase co-operation with the West Nordic nations. These include, for example, Quebec and Nunavut in Canada, the US states of Alaska and Maine, and Scotland. They all have a very
strong position in their home countries and have formed ties through the West Nordic Council and the Arctic Circle.

Quebec has formulated a special policy, Plan Nord, for the northern part of the province, which it presented at a special conference in Quebec, held in 2016 in collaboration with the Arctic Circle and opened by President Ólafur Ragnar Grímsson. Nunavut is a vast autonomous Inuit territory in Northwest Canada, that wants both more ties with Greenland and stronger relations, via Greenland, with the West Nordic region. There is much interest in Alaska about co-operation with Iceland. One of Alaska’s major investment funds, Pt Capital, is now the majority owner of both an Icelandic telecommunications company and a hotel chain. In recent years, Maine has defined itself as an American trading portal for the Arctic and is connected to the Icelandic Eimskip’s Arctic navigation network and the Royal Arctic Line in Greenland. The government of Scotland, which belongs to the neighbouring area of the Arctic region, has expressed its interest in co-operation with the West Nordic Region at the Arctic Circle, and recently set out a detailed policy outlining Scotland’s goal of becoming mainland Europe’s gateway to the Arctic. Scottish Prime Minister Nicola Sturgeon has, like many Scottish leaders, attended the Arctic Circle Assemblies more than once. For various reasons, North Norway would be at home in such an extended family in the future. Even in Ireland, there is now talk of taking part in Arctic co-operation through neighbouring countries in the West Nordic region.

In light of this, it is time for Iceland, in consultation with the other West Nordic countries, to activate the capabilities and interest of these countries in a joint venue. It is ideal to prepare for the formal establishment of such a network in connection with the next Arctic Circle in Reykjavík (see 8.18).

### 1.11. Mutual Benefits

The importance of both Greenland and Iceland has increased in the new geopolitics of the Arctic. Greenland’s unique position is a complex one. In the Arctic, the country is of great importance due to its enormous size, its geographical location, unique and unspoiled nature, valuable minerals and energy sources. Greenland’s position is de facto unique in that it is the only indigenous Arctic nation that has gained actual sovereignty and managed to preserve and strengthen its native language. The fact that the Greenlandic nation aims for independence increases the country’s importance. For these and various other reasons, co-operation with Greenland is desirable for many nations.
Iceland’s strength is due to its position on the new Arctic shipping routes, its highly developed infrastructure and, not least, its proximity to Greenland. Iceland is already an important gateway between Greenland and the outside world. A third of Greenland’s air transport is via Iceland, and in 2020 the countries became interlinked in a new maritime transport network in the Arctic. Iceland is close enough to provide services, particularly for East and North Greenland, and is important for projects in those areas in the future. The proximity is therefore a strength for both countries in the eyes of the outside world.

Greenland and Iceland have great mutual interests in ensuring that Arctic resources are utilised in a sustainable manner and that the global community takes strong measures to combat climate change. The countries also share major interests in key areas such as transport, tourism, fisheries and energy. Geographically, the countries are a stone’s throw away from each other and there is mutual understanding, friendship and respect between them. Close co-operation is therefore likely to have a synergistic effect in many areas and bring both economic and political benefits as well as strengthen the position of both countries vis-à-vis the outside world.

One of the conclusions of this report is that although the relationship between Greenland and Iceland is characterised by mutual good will, communications between the nations are not sustained in a systematic manner. An Icelandic Prime Minister, for example, has not visited Greenland since 1998. There are key Icelandic state institutions in areas of common interest that have little or no connections with their counterparts in Greenland. There are historical explanations for this, but addressing and improving this state of affairs is long overdue. The countries need to work systematically on improving their co-operation, most importantly in areas where future disputes may arise, e.g. fishing or air traffic. At the crossroads that seem ahead in the Arctic, it seems rational and logical for Iceland and Greenland to make strong bilateral ties a priority in their foreign policies, both for the short and the long term. To that end they should map out in a systematic manner how they want to see future co-operation develop.

This report, prepared on the initiative of the Minister for Foreign Affairs, presents numerous ideas for closer co-operation between Greenland and Iceland. The objective is to increase practical co-operation and solidarity in the fields of the economy, politics, administration, science, research and innovation, culture and sports, as well as increased grassroots communications via NGOs. The ideas take note of both the weaknesses and the strengths of the coun-
tries and emphasise the clear synergistic effects of increased co-operation. The objective is for the countries to strengthen each other and work together on the welfare of the Arctic. With well developed co-operation, Greenland and Iceland can take on a position and importance beyond their size and become leaders in important, well-defined areas that greatly matter, such as the sustainable use of resources and environmental protection.

Greenland is on a determined path towards independence. The Althing has, on behalf of Iceland, declared its full support for the steps Greenlanders have taken on this journey. It is not a question of if but of how and when independence will be achieved. Iceland has both interests and obligations in this development. Greenlandic independence will undoubtedly be advantageous for Iceland, and there will be increasing mutual benefits with closer co-operation between the states. The obligations arise from the fact that Icelanders have valuable experience of how a small nation in the Arctic builds a state on the basis of her own language, culture and resources, and with her own people. A nation on the road to independence needs support and powerful allies. Greenlanders can benefit from the experience of Icelanders. Stronger ties will form a channel to share these experiences until full independence is achieved.

Queen Margrethe II hands Josef Motzfeldt, Chairman of the Greenlandic Parliament, Inatsisartut, the Act on Self-Government in 2009
Photo: Keld Navntoft / Ritzau Scanpix

47 Parliamentary resolution no. 42/145 on increased co-operation between Iceland and Greenland. https://www.althingi.is/altext/145/s/1483.html
Greenland and Iceland in the New Arctic

2. Land and Society

Greenland used to be the forgotten land between America and Europe, but now it is in the global spotlight and at the centre of discussions about the Arctic region. The country is still a crucible of change, and a country of strong contrasts. In the North and East, centuries-old traditions of the hunting community prevail while a way of living consistent with a Western welfare society has been established in the towns and villages. The future, with its new opportunities, is at the door but the colonial past provides a bitter contrast. Today, the country shows clear signs of a society with a progressive mindset. The government pursues a clear policy on economic independence, with an emphasis on education, human resources and the use of natural resources as a foundation for ultimate independence. Despite various difficulties, the younger generation is optimistic and the nation has strong expectations for a brighter future. In many respects, Greenland is on a positive path.

2.1 Population and Predicted Decline

The population of Greenland was 55,992 in 2019 and had more than doubled since the middle of the last century when there were 24,000 inhabitants (see Table). However, a foreseeable reduction in population is a matter of grave concern. Forecasts indicate that in around 2040, the number of inhabitants will have decreased to 52,000-53,000 and will fall below 50,000 a decade later if present conditions prevail. The long-term plans of the government revolve in large part around reversing this negative trend.

Population by residence in urban or rural areas 1979–2019.

<table>
<thead>
<tr>
<th>Year</th>
<th>Urban area</th>
<th>Rural area</th>
<th>Total</th>
<th>Urban area</th>
<th>Rural area</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>48,723</td>
<td>7,269</td>
<td>55,992</td>
<td>43,280</td>
<td>6,972</td>
<td>50,252</td>
</tr>
<tr>
<td>2009</td>
<td>47,085</td>
<td>9,108</td>
<td>56,193</td>
<td>41,689</td>
<td>8,473</td>
<td>50,162</td>
</tr>
<tr>
<td>1999</td>
<td>45,519</td>
<td>10,565</td>
<td>56,084</td>
<td>39,654</td>
<td>9,787</td>
<td>49,441</td>
</tr>
<tr>
<td>1989</td>
<td>43,932</td>
<td>11,238</td>
<td>55,170</td>
<td>36,003</td>
<td>9,762</td>
<td>45,765</td>
</tr>
<tr>
<td>1979</td>
<td>37,205</td>
<td>12,132</td>
<td>49,337</td>
<td>30,717</td>
<td>10,204</td>
<td>40,921</td>
</tr>
</tbody>
</table>
The main reason is the attraction of Denmark. Every year, 370 more people move to Denmark than move from Denmark to Greenland. This is equivalent to the entire population of Ilulissat, the country’s third largest town, emigrating to Denmark in one decade. Between 10,000 and 11,000 Greenlandic Inuit live in Denmark (a precise number is difficult to determine). The pull of Denmark is due to more employment opportunities, better healthcare and schools, and family connections and housing. The government expects to be able to simultaneously combat the exodus and lure Greenlanders in Denmark back home with new industries and more numerous and diverse employment opportunities. In recent years, unemployment has been declining rapidly in the towns and there have been frequent reports of labour shortages. Covid-19 will undoubtedly slow down the positive economic development for the time being, but will not change the opportunities that lie ahead.

Approximately 89% of Greenland residents are Inuit and 7.7% are Danish. The number of Danes has decreased proportionally since 1975, when 14% of the registered population was from Denmark. Danes come to Greenland in search of good income and work experience that will help them in the Danish labour market, but also to experience adventures and out of curiosity about this remote and exotic part of the Danish Kingdom. Few stay there for long and fewer still learn Greenlandic. Most Danes work in administration, teaching and health care. As Greenland is part of the Danish state, the 4,000 plus Danes are not considered foreigners. Greenland is a homogenous society and very few foreigners are registered in the country. Only 1.74% of the registered population came from outside the Danish state in 2018, most from the Philippines, Thailand, Iceland and China. Most are employed in fish processing and the construction industry.

Another reason for the declining population is the declining birth rate over the last three decades, after a high fertility rate in previous decades. Since 2012, however, the birth rate in Greenland has increased by 10%.48 The abortion rate, which is usually consistent with social conditions, is approximately 50 per 1,000 women. This is four times higher than in Denmark, where the equivalent number is 12.4 abortions per 1,000 women. The number in Iceland was 14.6 per 1,000 women in 2018.49

48 In 2017, per 1,000 inhabitants, there were 15.2 births in Greenland, 11.9 in Iceland and 10.6 in Denmark https://data.worldbank.org/indicator/SP.DYN.CBRT.IN?locations=GL
2.2. Towns and Villages

Greenland is the most sparsely populated country in the world. There is an average of 0.025 inhabitants per square kilometre. Iceland has 3 per square kilometre. Sweden and Finland, the most sparsely populated countries in the EU, have 22 inhabitants per square kilometre. Even if only land outside the Greenland ice sheet is taken into account, population density in Greenland is still more than ten times lower than in Mongolia and Siberia, the second most sparsely populated areas.

The west coast has by far the densest population. There is no ice year-round around Disco Bay, due to the slight warmth of the Gulf Stream, which flows from Iceland with the Irminger branch, keeping the southern part of the west coast open all year. 92% of the nation lives on the ice-free coastal area. The capital Nuuk is there, as are the main towns of Greenland and the main components of the fishing industry. In South Greenland, the Irminger Current passes by Cape Farewell (Uummannaarsuaq, Kap Farvel), and living conditions there are often advantageous. The deep fjords become so green, due to the warm summers, that Erik the Red, who was outlawed from Iceland for killing Eyjolf the Foul and Hrafn the Dueller, named the country Greenland. He believed the name to be likely to attract new settlers. South Greenland is still a

Birth rate

Birth rate per 1,000 people, Greenland, Denmark and Iceland, 1960-2018.
Source: https://data.worldbank.org/indicator/SP.DYN.CBRT.IN?contextual=default&locations=GL-DK-IS
hub of agriculture, based on the breeding of sheep imported from Iceland in 1915 and mixed with a few Faroese ewes and seven Scottish rams.

The east coast is barely inhabitable, not least due to the great ice drift brought by the fast-moving East Greenland Current all the way from Siberia and the central Arctic Ocean. It brings with it icebergs that break off from the icefalls that drop into the ocean in many places. The ice hinders the development of fisheries in the Tasiilaq area, despite the excellent fishing grounds off the coast. In some locations, it accumulates in thick piles and causes long port closures in East Greenland. Settlements never developed on the east coast except for an isolated community in the Tasiilaq area and one village in Scoresby Sound. Only 7% of Greenlanders live east of the ice sheet. Very few people live in the northernmost part of Greenland, or just around 1%, and only in Qaanaq and Thule.

The communities are divided into towns and villages. The definition of these is sometimes unclear. At the administrative level, the line is drawn at 500 inhabitants. A total of 70 towns and villages were registered in 2013, 13 with over a thousand inhabitants, 29 with between 100 and 500 and 28 with under 100 inhabitants. Approximately 90% live in towns, and 60% thereof inhabit the five largest towns of Nuuk, Sisimiut, Ilulissat, Aasiaat and Qaqortoq. The villages are located on skerries or narrow strips of land between the coast and high and usually steep mountains.

The push to modernise, or rather urbanise, Greenland began in 1950, with the aim of concentrating the labour force in promising fishery hubs in order to create an economic basis for the Greenland community. This was a Danish government decision taken in Copenhagen shortly after the Second World War, but it certainly enjoyed the support of Greenlandic leaders, who wanted to open Greenland up and bring it into the modern world. Some of them later opposed this decision when they felt that the plan was implemented too harshly. In some places, there was strong opposition from the population to plans to reduce the number of villages, especially those that were considered unsustainable in the long term and were therefore to be closed.

One of these was Kangeq, a settlement of 50–60 people only 20 km from Nuuk. In 1974, the village was literally turned off: the electricity was cut off, the priest sent away, and the only shop was closed. The residents were placed in tene-

51 See: https://www.google.com/search?q=NPR+media+wiki&oq=NPR+media+wiki&aqs=NPR+media+wiki&aqo=-chrome_69/5 79717j0&sourceid=chrome&ie=UTF-8
Greenland and Iceland in the New Arctic

A photograph of Kangeq residents ca. 1920. In 1974, the village was closed and the people moved to Nuuk. Image: Greenland National Museum & Archives

ment buildings in Nuuk. Anda Poulsen, who turned 14 that year, said in a 2016 interview with NPR that within a decade, ten former Kangeq residents had committed suicide. Anda founded the first hotline in Greenland for people with suicidal thoughts.51

The villages have been in steady decline for a long time. In 1950, half of Greenlanders lived in villages, then a third in 1977 but only 13% did in 2015. Some have very few inhabitants. In 2018, there were 13 villages with less than 50 inhabitants. At the beginning of this year, 2020, the fewest inhabitants were the 18 registered in Kangerluk on Disco Island. This excludes the two island villages of Illorsuit and Nuugaatsiaq, which were flooded in 2017 and not rebuilt. However, a few people still insist on registering their domicile there. The most northerly village in the world, Siorapaluk in the Qaanaaq area, numbers 42 souls.

Of the towns, Nuuk is by far the most populous. In the middle of the 20th century, more than a thousand people lived there, but the population was 17,984 at the beginning of 2019. Populations forecasts indicate that Nuuk will have a population of 30,000 by 2030. Sisimiut, Illulissat, Aasiaat and Qaqortoq have 3,000 to 5,500 inhabitants. Tasiilaq, the only town on the east coast, is the seventh largest town in Greenland, with 2,063 inhabitants.
The towns are reminiscent of European small towns and the capital of Nuuk has the air of a tiny cosmopolitan city. It has domestic and foreign restaurants, fine hotels, Seamen’s Hostel, Queen Ingrid’s Hospital which is Greenland’s main hospital, a university, a theatre, galleries, outdoor markets, a lively marina, an administrative centre and, coming soon, an international airport. Economic activities there are more diverse than elsewhere in Greenland. Education, employment and the bustling city life attracts people from rural areas. Nuuk is constantly growing. Construction is ongoing in all parts of the capital, new neighbourhoods are being planned and the crane index is rising. This is not enough, however. Just like Reykjavik, Nuuk has a homeless population.

2.3 Vast Municipalities

Greenland is divided into five municipalities, the largest of which is Sermersooq, which stretches from the west coast far south of Nuuk over the Greenland ice sheet to the east coast and north to Scoresby Sound. Kujalleq is south of Sermersooq, and farther north are Qeqqata, Qeqertalik and, furthest north, Avannaata.\(^{52}\)

Nuuk is the seat of the local government in Sermersooq. The settlements on the east coast are therefore governed from west of the Greenland ice sheet, although Tasiilaq is 820 km away and Ittoqqortoormiit in Scoresby Sound is 1440 km away. Sermersooq is more than five times larger than Iceland, i.e. 531,900 km\(^2\). Avannaata is almost as big, at 522,700 km\(^2\).

The eastern and northern part of the country is home to the largest national park in the world, Kalaallit Nunaanni nuna eqqissimatitaq, which covers close to half the country, or 972,000 km\(^2\). No one has permanent residence there except members of the Sirius Dog Sled Patrol, a Danish naval unit headquartered at Daneborg. Its members travel constantly on dog sleds, sometimes for four months at a time, usually in pairs, and maintain the sovereignty of the Danish Crown in the uninhabited wilderness. As part of an agreement with the Danish state, the US military controls the area around the Thule Air Base in the northwestern part of the country, close to Greenland’s northernmost settlement, Qaanaaq. At the height of its activities, 10,000 soldiers were stationed there. The air base has been controversial due to the enforced relocation of inhabitants to Qaanaaq in the early 1950s and, later, because of the crash landing of a B-52 bomber just west of the base. The

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52) In 2018, the municipality of Qaquitsup was divided into two and became the municipalities of Avannaata and Qeqertalik.
aircraft was carrying four nuclear bombs, and part of one could not be found. Due to pollution, including plutonium pollution, fishing was prohibited in the area.

Closest to Iceland, at a distance of about 290 km, is the Blosseville Coast, in East Greenland. Rising from the highlands is Greenland’s highest mountain, Mt. Gunnbjörn, 3,694 m high, named after the settler Gunnbjörn Úlfsson, who lived in the 10th century. He was carried off course west of Iceland, believed he saw skerries in the distance and named them Gunnbjörn’s Skerries. This is referred to in the Book of Settlements, the Saga of Erik the Red and the Saga of Ólafur Tryggvason. The “skerry” later turned out to be on land, in the mountainous area that is probably the “Hvítserkur” used by Icelanders as reference point when travelling between the countries in the times of Erik the Red and his wife Þjóðhildur. In the north, it is only 26 km from Greenland to Ellesmere Island, which is part of the Inuit autonomous region in Nunavut. Artifacts have been found, including remains of a type of home-spun cloth that was unique to the Nordic settlement in Greenland, that suggest that the settlers travelled north to Ellesmere Island or traded with indigenous people from there.53

The Inuit came to Greenland in the 12th century, while the Icelandic colonies were still flourishing. They are a different nation from those that inhabited Greenland for millennia but disappeared without a trace from the pages of Greenlandic history. One individual left a lock of black hair in ice found in Saqqaq in West Greenland. The lock of hair turned out to belong to a brown-eyed man with uniquely shaped teeth who lived in Greenland 4,000 years ago.

2.4 Four languages

The Inuit came to Greenland in the 12th century, while the Icelandic colonies were still flourishing. They are a different nation from those that inhabited Greenland for millennia but disappeared without a trace from the pages of Greenlandic history. One individual left a lock of black hair in ice found in Saqqaq in West Greenland. The lock of hair turned out to belong to a brown-eyed man with uniquely shaped teeth who lived in Greenland 4,000 years ago.

53 Peter Schledermann. „Notes on Norse Finds from the East Coast of Ellesmere Island,“ N.W.T. Arctic. vol. 33, no. 3 (September 1980).
and was related to the Koryaks and Chukchi of Siberia but unrelated to the Inuit. The Saqqaq people lived the longest in Greenland before the Inuit.

The Inuit and Icelanders first met by Disco Bay, which the Icelanders called Norðurseta and where they went to obtain whale and walrus bone and walrus skin by hunting and trading with the Inuit. Far north of the Arctic Circle, 73 degrees north, on the island of Kingittorsuaq, young Icelanders inscribed a stone one late winter’s day centuries ago: “Erlingur Sighvatsson, Bjarni Þórðarson and Indriði Oddsson on Saturday before Rogation Day raised this mound.” Rogation Day was on April 25th. About 20 km south is the town of Upernarvik, which is now home to just over 1,000 inhabitants.

Genetic research confirms that the Inuit mostly came in one wave, moved down the west coast and arrived in South Greenland while the Icelandic settlement was still there. Remains have been found of the nations coexisting in practically the same spot. From there, the Inuit headed north along the east coast to Ammassalik Island to the area where Tasiilaq is now. Those who ended up there lived in poverty, and for a time only one small settlement survived. Much later, in the 19th and into the 20th century, another scattered wave of Inuit came to North Greenland from Canada: the “Arctic Eskimos”, as the Danish-Inuit explorer Knud Rasmussen referred to them. The term “Eskimo” later came to be used in a derogatory manner and in 1977, the Inuit Circumpolar Council (ICC) agreed to replace it with the term “Inuit”.

Three Greenlandic languages are spoken in the country, all from the Eskimo–Aleut language family. The vast majority speaks West Greenlandic, Kalaallisut, which became the official national language when Greenland was granted self-government in 2009. It is considered a polysynthetic language, i.e. language where suffixes and prefixes can be easily added to a root or stem so that one word can even accommodate an entire sentence. Another variant, Tunumiisut, is spoken in East Greenland. East Greenlandic children who come to school for the first time do not understand spoken West Greenlandic and find it difficult to read. Both are closely related to Canadian Inuit languages. A very small group of Inuit in the Thule area of North Greenland, the descendants of those whom Knud Rasmussen met in his day, speak a variant of Inuktitut which originates in neighbouring areas in Canada.

The fourth language in Greenland is Danish, which is not only the mother tongue of about 6,000 Danes in Greenland, but also 6,000 Inuit who do not speak Greenlandic. They have grown up speaking Danish as their mother tongue and have never learned Greenlandic. Most are from families where one parent is Danish. However, some Greenlandic parents decided to raise Danish-speaking children in the belief that speaking perfect Danish was the key to a brighter future. An emphasis on Danish education in elementary schools in the previous
century, particularly in the 1950s and 1960s, resulted in some Greenlandic children, primarily those placed in “Danish” classes, never learning Greenlandic. The large group of people who grew up with Danish as their de facto mother tongue partly explains the strong position of Danish in Greenlandic society (see 4.8).

In the Inatsisartut, the Parliament of Greenland, instant translations between Danish and Greenlandic are provided. All documents are translated. There have been Members of Parliament and Ministers who do not speak Greenlandic. In the legal system, care is taken to ensure that everyone has the opportunity to use the language they are most comfortable with. In the governmental system and business world, Danish used to be the primary language, but the position of Greenlandic is growing increasingly strong. Tuition in Greenlandic schools is still in Danish after primary school (see Section 4.8). Due to a shortage of teachers, many teachers are brought over from Denmark. However, up to university level, tuition is translated to Greenlandic as necessary.

The Danish Prime Minister’s website on the Act on Self-Government states that the law does not extend to education in Danish, but that it is assumed that the Greenlandic Government “must ensure education in Danish and other relevant languages in order for Greenland’s youth to pursue further education in Denmark and other countries”. The policy declaration of the Kim Kielsen government, which was formed after the 2018 elections, emphasises that English will be introduced as the first foreign language taught in Greenlandic schools – before Danish.

The strong position of Danish is a thorn in the side of many Greenlanders, and the pioneers of the independence movement understood the importance of the native tongue for the nation’s self-image and struggle for sovereignty. One of the achievements of the Greenlanders is to be the only Inuit nation to have been able to preserve and strengthen the status of their native language.

55 See: http://www.stm.dk/_p_13090.html
Number of unemployed in Greenland, annual average for the years 2010–2019.
Source: Grønlands Statistik.

Number of unemployed as percentage of the labour market in towns and villages, annual average of the years 2010–2018.
Source: Grønlands Statistik.
2.5 Income Distribution – Employment

The average unemployment rate was 5.2% in 2018 and is declining (Figure page 47). There has recently been a shortage of labour in the big towns. There is generally much more unemployment in the villages than in the towns (Figure page 47). The worst situation is on the east coast. In September 2019, for example, unemployment was six times higher in the Tasiilaq area than in Nuuk.

In 2015, 16.2% lived below the poverty line\textsuperscript{56}, but poverty is steadily declining. Like unemployment, poverty is most frequent in East Greenland. As in other European welfare societies, there is a considerable income gap between different groups. The Gini coefficient is higher than in the Nordic countries (Figure page 48), or 35.4 in 2018\textsuperscript{57} and rising. In comparison, the Gini coefficient in Iceland was 24.1 in 2016\textsuperscript{58} and remains stable. Average income after taxes is twice as high in Greenlandic towns than in the villages, or DKK 258,111 versus DKK 126,505. Figure page 49 shows the distribution of income after tax in Greenlandic municipalities in 2017, before the municipal change.

It is interesting to examine the gender pay gap. The 2018 nation-wide statistics for average wages after taxes show an average of DKK 190,766 for men and DKK 151,889 for women. Women’s wages are thus about 79% of men’s wages.

The Gini coefficient in 2017

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{gini_coefficient.png}
\caption{The Gini coefficient shows income equality where 0 is perfect equality and 100 is perfect income inequality. Source: Eurostat og Grønlands Statistik. 2019. Grønland i tal 2019.}
\end{figure}

\textsuperscript{56} See: https://www.cia.gov/library/publications/the-world-factbook/geos/print_gl.html
Using the database of Statistics Greenland (Grønlands Statistik), average income before taxes in the years 2017 and 2018 in two different areas, the capital of Nuuk and Tasiilaq in East Greenland, was compared. Income was examined on the basis of original nationality (Danes are the vast majority of people born outside Greenland), and also compared between, on the one hand, indigenous people in the towns and indigenous people in neighbouring villages.

The conclusion was very clear. In the towns, Tasiilaq and Nuuk, residents born outside Greenland had more than double the average income of other Greenlanders.

The average income of villagers in both areas was much lower than that of the town residents, with the difference amounting to one third and one fourth. It should be noted that in the villages, hunting, especially of seals, is still a very important part of a livelihood and way of life that isn’t only based on wages. The EU ban on the importation of seal products in 2009 had a highly negative effect on Greenlandic hunters. Due to the ban, the company Great Greenland, the main buyer of sealskins in Greenland, has hundreds of thousands of unsold sealskins. The EU seal regime was amended in 2015 so that skins from seal hunted by indigenous people, primarily Inuit, could be imported into the EU. Despite this, there has been little increase in market demand.

The average income of the villagers near Nuuk was 40% higher than that of the villagers in the Tasiilaq area. Income difference between town residents in the areas was about 60% in 2018.\(^\text{59}\)

2.6 Conflicts and Adjustment

The modernisation measures launched by the government in the mid-20th century brought about social ills that left a deep mark. People were concentrated in the towns to form a labour force that was to be the basis of a modernised fishing society. Danish was introduced in elementary schools at a time when “only a very small proportion of Greenlanders spoke Danish”. The rapid change in lifestyle created a generation fraught with unemployment, alcoholism and an increase in violent crime. Only five years after modernisation began, reports began to arrive in Denmark from Danish officials in Greenland about growing alcoholism and violent crime, to such
an extent that the Danish state set up a committee to investigate the social consequences of modernisation.\(^{61}\) The consequences became markedly more severe with the generations that grew up while the conflicts between the new and old ways were at their harshest. There was an enormous increase in sexual violence against children and suicides increased dramatically (see Figure).

![Suicide rate in Greenland](https://www.tandfonline.com/doi/full/10.3402/ijch.v74.26053%40zich20.2015.74.issue-S1)

The consequences were first felt in Nuuk and the large towns. Elsewhere, modernisation began later so the social consequences emerged later. Towards the end of the century, there were signs of societal adjustment as alcohol abuse declined, crime rates against children in large towns were reduced, and the suicide rate seemed to reach a stable level, albeit one much higher than in other countries. Sexual offences against children are addressed specifically in Section 9 on East Greenland.

There are very clear signs of social recovery, indicating the growing inner strength of the community. There are positive developments in all areas when looking at the country as a whole. However, sparsely populated and isolated settlements stand out, especially in East Greenland. Sexual offences against children are much more frequent there than the national average ever was, and suicides, especially among young people, are still at an all-time high.

1. Greatly Reduced Alcohol Consumption

General alcohol sales were permitted in Greenland in 1955 and five years later, alcohol consumption, measured in pure alcohol, was 6 litres for every Greenlander 15 years and older. Consumption increased rapidly, reaching 22 litres between 1982 and 1987. The scourge of alcohol had a profound effect on society, not least the children who grew up with the consequences of their parents’ heavy alcohol consumption. Since then, alcohol consumption has been steadily declining, and in the last 20 years it has fallen by more than half (see Figure). As an indication of this, alcohol consumption per capita was by far the highest in Greenland in the Nordic countries in 2000, but had fallen below the average consumption in Denmark in 2015 (see Figure). Today, Greenlanders consume, on average, 2 litres of alcohol less than Danes, and less than Finns, Icelanders and Swedes. Binge drinking is still a problem, as it is in other parts of the Nordic region.

Alcohol consumption in Greenland and Iceland

![Graph showing alcohol consumption in Greenland and Iceland](image)

Consumption of alcohol in Greenland and Iceland. Alcohol consumption in Greenland has dropped dramatically in recent decades.

Alcohol consumption in the Nordic countries

![Bar chart showing alcohol consumption in the Nordic countries](image)

Comparison of alcohol consumption in the Nordic countries. In 2015 alcohol consumption in Greenland was less than in Denmark. Now only Norwegians consume less alcohol per capita than Greenlanders in the Nordics.
2. Lower Crime Rate

Serious violent crimes such as murder dropped by half during the present decade. In fact, the number of all types of crimes has decreased rapidly everywhere in Greenland. Between 2006 and 2018, the decrease was 41% nationally, slightly less in Nuuk, and 40% in East Greenland. Sexual violence against children, which is a great social ill, decreased more slowly during the period, or by a third.

Sexual violence against children topped among the generation born in the 1970s, about 40% of which fell victim to various such crimes. There was a subsequent reduction in violence and for the generations born after 1995, the percentage seems to be steady at 20%. East Greenland and villages in North Greenland are an exception. There, the percentage of victims became double that of the national average, 69%, and there has not been any significant decrease after 1970. In the period 2006–2013, more such offences were reported to the police in Tasiilaq in East Greenland than in Nuuk, despite Nuuk having six times the population. The same applies to rapes. Such crimes decreased almost everywhere in the country, except on the east coast. Almost as many rapes were reported in Tasiilaq as in Nuuk in 2018, or 24 as opposed to 29 in Nuuk.

3. Increased Life Expectancy

In the middle of the 20th century, life expectancy of Greenlandic children at birth was shockingly low, or 32 years for boys and 37 for girls. Housing was generally very poor and cramped, so infectious diseases were rampant. Fatalities due to diseases such as tuberculosis, were very high. Modernisation was accompanied by major reforms in housing and health care. New hospitals were also built in most of the big towns. As a result, life expectancy increased significantly.

In 1960, life expectancy at birth was 55.2 years for girls and 50.5 years for boys. Greenlanders born in 1978 could expect to reach the age of sixty (Figure page 54). It is now likely that a newborn girl will reach the age of 75.8 years and a boy will be 70.2 years old. However, this is a much lower life expectancy than in Europe, where the corresponding figures are 84 and 78 years (Figure page 54). This is partly due to the high rate of unnatural deaths, e.g. suicide.

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63 Befolkningsundersøgelsen i Grønland 2018 – levlevikår, livsstil og helbred
64 Source: Grønlands Statistik. http://bank.stat.gl/
65 Source: https://data.worldbank.org/indicator/SP.DYN.CBRT.IN?locations=GL
66 Source: https://www.indexmundi.com/greenland/demographics_profile.html
4. High Suicide Rate

Suicides in Greenland can be compared to a chronic epidemic. Each year, twice as many people commit suicide as die in accidents. At the beginning of the last century, however, it was rare for Greenlanders to commit suicide. For the first thirty years of the century, 1900–1930, only one suicide was recorded on average. The number of suicides did not rise much until 1960, at which time there were still occasional years with no reported suicides. There was a major shift when modernisation hit society the hardest. There was a wave of about 5 suicides per year between 1960 and 1964, which increased tenfold over the next 30 years, to
over 50 suicides per year in the late 1980s. At the time, there were 117 suicides per 100,000 inhabitants. By the turn of the century, the wave had begun to subside. Figures for the years 2008–2017 indicate, however, that the rate has stabilised at 75 suicides per 100,000 inhabitants. This is five times the world average, and more than double the rate in Guyana, which is at the top of the World Health Organisation’s list.

In Greenland, suicide is most common among young people, especially men, contrary to other nations, where the rate increases with age. Suicide is by far the most common cause of death for young Greenlanders between the age of 15 and 29. The proportion of young men between the ages of 20 and 24 who commit suicide is three times higher than the average suicide rate for the nation as a whole, or 267.4 per 100,000 inhabitants.

In this century, suicides are being committed by younger and younger people, particularly girls, and there are examples of 10-year old children committing suicide. Contrary to popular belief, suicides are not usually committed during the darkest winter months but when the sun is out, particularly in early summer. The rate is higher with higher latitude and is also higher in small settlements than in the towns. It is by far the highest in the remote settlements of the east coast and northern part of Greenland.

Historically, the suicide wave in Greenland has followed a pattern similar to the other societal ills that seem to be unavoidably linked to the rapid changes to the Greenlandic way of life in recent years. It rose just over a decade after modernisation began in 1950, peaked among the generations born in the following decades, and began to subside before the turn of the century. Alcohol abuse was also at its height during this period, which contributed to the violence and sexual abuse. Studies show that for those who grow up in such circumstances, the risk of suicide is 3–4 times higher than with other groups.

In an article by P. Bjørregaard (2018), who has studied suicides in Greenland far more thoroughly than anyone else, reference is made to unpublished sources where it is claimed that 60% of adult Greenlanders have lost a friend or relative to suicide, a third of 15–17 year old youngsters have lost a relative and a fifth have lost a close friend or loved one.

70 See Eduardo Chachamovich et al. 2015. Suicide Among Inuit: Results From a Large, Epidemiologically Representative Follow-Back Study in Nunavut. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4501584/
3. Government Structure and Politics

The Home Rule Act in 1979 and the Act on Self-Government in 2009 radically changed Greenland’s constitutional status, as Greenland gained de facto sovereignty. The former law enabled Greenlanders to establish their own parliament, the Inatsisartut, and their own government, the Naalakkersuisut. Following Home Rule, a university, Ilmatusarfik, was established in 1987 in Nuuk. With the Act on Self-Government, Greenlanders received long-awaited acknowledgement of their status as a distinct nation according to international law. West Greenlandic, Kalaallisut, became the official national language. At the same time, the Greenlandic nation was granted the invaluable right to declare full independence when it wants to.

3.1 Government Structure and Administration

Most of the executive and legislative power over Greenlandic affairs is now in Greenlandic hands. Greenlanders therefore manage the majority of their own affairs. A list of the policy areas overtaken by the Greenlanders on account of the 1979 Act, and subsequently the 2009 Act, can be found in a footnote source. Greenlanders can now determine when they take over new policy areas, but in some instances, consultation with Denmark is required. As soon as a new policy area is overtaken, its financial responsibility transfers to Greenland.

The most important policy area still handled by Denmark is foreign policy and security. Border control, immigration and work permits for foreigners are controlled by Denmark. The Danes are also responsible for issues such as shore patrol, surveillance of ships within Greenlandic territorial waters, search and rescue, defence, the currency as well as law enforcement, including prison affairs. The court of last resort, the Supreme Court, is in Copenhagen.

The basis of Greenland’s constitutional structures is the same as Iceland’s. It is founded on parliamentary democracy with a threefold division of power. Greenlanders elect 31 members to the Inatsisartut, every four years on average. Greenland also has two representatives in the Danish parliament. The Inatsisartut convenes in spring and autumn. It operates in a format similar to the Nordic parliaments. Members of Parliament hold the executive branch accountable through inquiries, requests for reports and discussions on individual issues, and propose a vote of no confidence if they believe it necessary. The latest such proposal was submitted (and rejected), in autumn 2019.

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72 See the overview of policy areas overtaken by Home Rule in 1979 and self government in 2009: https://www.stm.dk/multimedia/GR_oversigt_sagsomr_der_300120_EN.pdf
In general, governments are supported by a majority in Parliament although minority governments have also been experienced. One such was led by Kim Kielsen for 18 months in the term beginning in 2018. Icelandic-style coalition governments are most common. A majority government of one party (Siumut) was in power for one period.

On behalf of the parliament, the government, Naalakkersuisut, exercises executive power in the matters controlled by Greenland. Ministers usually number 8–9, but it varies with governments. For example, 7 started in 2020 but increased to 10 at the end of May, when the Demokratiit party joined Kim Kielsen’s minority government. The government is divided into ministries and a politically appointed Minister directs each one. Ministries have numbered 11 since the change in government in May 2020. The clear division between the executive and legislative powers is underlined by the tradition of Ministers, other than the Prime Minister, vacating their seat in Parliament when they join the cabinet. A break in this tradition occurred, however, when two Demokratiit MP’s became Ministers in late May 2020.73

The state is run on a budget that the government submits annually and has to be approved by Parliament. During the short-lived de facto self-government of Greenland during the occupation of Denmark in World War II, government operations were sustainable, not least due to the good income from cryolite mining in Ivittuut. With the post-war modernization measures, however, Greenland’s economy developed differently than Denmark expected, and the government costs gradually increased. In 2003, Denmark’s annual contribution to the Greenlandic state (d. blokstilskud), equalled 30% of GDP. At the start of self-government in 2009, the “bloktilskud” was linked to the Danish index. It amounted to a quarter of GDP at the time. It decreases proportionally with increased GDP and is presently less than 20% (Figure page 58). Today the “bloktilskud” stands at around DKK 3.7 billion, or close to half of the government expenditure. In addition, the Greenlandic government receives reimbursement for costs incurred in policy areas for which Denmark is still responsible in Greenland. Many Danes are displeased with Danish tax money being used to fund the government of Greenland and there is limited understanding of the great benefits that Denmark enjoys from Greenland being part of the Realm (see frame). Payments from the European Union for fishing rights (see Section 5) are also an important source of income for the government.

Denmark annually contributes a fixed, index-linked amount ("bloktiškud") to the Greenlandic state, which - as must be stressed - the Greenlanders took over from Denmark in an unsustainable form. These annual payments have to be considered in view of Denmark's colonial past in Greenland. The amount corresponds to approximately 0.17% of Denmark's GDP. It will, under present conditions, be paid while Greenland remains part of the Danish Kingdom. Some Danish taxpayers are not too happy with this arrangement and speak of it as a kind of almsgiving.

However, the benefits that Denmark enjoys due to Greenland are much bigger than generally acknowledged. Because of Greenland's location and vast size in the Arctic, Denmark has attained much greater international importance than it would otherwise possess. The Arctic is quickly becoming one of the central points in the geopolitics of the 21st century and simultaneously Denmark's international position grows stronger due to the growing importance of Greenland. Denmark also handles Greenland's defence and security issues and as such has concluded important agreements with the United States on facilities in Greenland. The Thule Air Base, for example, is a fundamental component of US defence. This has put Denmark in a key position towards NATO – and, particularly, the United States. The benefits may be difficult to quantify, but without a doubt this is a decisive factor with respect to Denmark's global position and importance.

Without Greenland, Denmark would be a small country without much influence in the global arena. However, because of Greenland Denmark has influence that exceed her size by far and is a major power in the Arctic. That is not a bad deal for 0.17% of GDP.
A majority view seems to be that a prerequisite of Greenland’s full independence is economic independence from Denmark. Recent governments have made plans to work towards that goal. They are based on the development of tourism in the next decade, including with three new, large airports, the utilisation of subsoil assets (see Section 7) and increased value creation in fishing and fish processing. In a highly interesting master’s thesis at the University of Iceland in 2019, Ástríður Jónsdóttir concluded that government plans were progressing successfully.\(^{74}\)

### 3.2 Foreign Policy and Security Issues

The most important policy area that Denmark still handles on behalf of Greenland is foreign policy and security issues. Greenlanders have made increasingly explicit demands to partake in all decisions that concern their interests. The delimitation of competences is not altogether clear. The Danes take care to consult with the Greenlanders as possible, but have not yielded formal representation in the Arctic Council to them. They also handle important communications with the United States regarding the Thule Air Base. Both has caused friction between the nations. Since the passing of the Act on Self-Government, Greenlanders have been increasingly successful in projecting their distinct image towards the global community.

Since 2005, Greenlanders have the right to enter into – "on behalf of the Kingdom"\(^{75}\) – international conventions, provided that they only concern Greenland and matters within the competence of Greenlandic self-government. Greenland may also, with the formal permission of Denmark, apply for membership of international organizations as long as it is "in compliance with the constitutional status of Greenland". This means it cannot be an independent member of an association of nation states. Greenlanders may also open diplomatic missions in countries that are important for their commercial interests. Their foreign affairs service is small but effective and seems well suited to protect Greenlandic interests in the country’s complicated relationship with Denmark in the field of foreign affairs. Interestingly, it differs from other Greenlandic administrative departments in that it is almost exclusively made up of Greenlanders. Ane Lone Bagger, former Minister of

\(^{74}\) Ástríður Jónsdóttir 2019: Sovereignty in Development: Progress in Greenland’s independence struggle. https://skemman.is/browse?type=author&value=%C3%A1str%C3%ADr%C3%B3nsd%C3%B3ttir+1979-

\(^{75}\) Taken from the website of the Danish Prime Ministry: https://www.stm.dk/_p_13090.html
Greenland’s first diplomatic mission was opened in Brussels in 1992 and the second in Washington DC in 2014, also serving as Greenland’s diplomatic mission to Canada. The third was opened in Reykjavík in 2018 after Iceland had established the first foreign mission in Nuuk in 2013. Due to the constitutional relationship between Denmark and Greenland it was not possible for Iceland to give the diplomatic mission in Greenland an embassy status. A clear political statement was made, however, by simultaneously elevating the first Icelandic Consul General to the rank of ambassador. It was a title not previously held by the diplomat in question. The strong political link between Greenland and Iceland as reflected in mutual diplomatic missions underlines the will of both for close co-operation and solidarity in future. The special relationship is also underlined by the fact that Iceland until recently was the only nation with a diplomatic mission in Greenland.

The United States reevaluation of Greenland’s importance became apparent when the Americans opened a consulate in Nuuk in June 2020. China is expected do the same in the coming years with an eye on her interests in the Arctic and growing trade with Greenland. The Greenlanders themselves have now declared their intention to open a diplomatic mission in Beijing, possibly in 2021. It was interesting to observe that questions from the audience to a panel of Greenland’s four top diplomats at the Arctic Circle Assembly 2019 mostly concerned this issue. Russia is also elevating her diplomatic presence in Greenland and has been permitted to appoint an Honorary Consul in Nuuk.

Greenland was the first nation to leave the European Union but nevertheless has formed a good relationship with the Union, which is Greenland’s most important export market. Greenland has also signed an agreement with the European Union on fishing quotas in Greenlandic waters for a fee, including an exemption from import duty in the internal market. Unlike the Faroe Islands, Greenland maintains formal links with the European Union through its membership of OCTA, the Association of the Overseas Countries and Territories Association.  

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Greenland places great importance on Nordic co-operation. Greenland is a member of the Nordic Council and has been very active in the West Nordic Council from the beginning. Greenland cooperates with indigenous organisations and related nations in Canada, such as the Inuit autonomous region in Nunavut. Greenlanders have been very visible in Arctic affairs for many years, not least through robust participation in Arctic Circle fora. The Greenlandic Government's Foreign Affairs Reports clearly state that Greenland authorities consider the Arctic Circle to be the most important open forum to present Greenlandic views and policies to the global community. Greenlanders have obvious ambition to play a larger role within the Arctic Council and the Danish monopoly on representing the Danish Kingdom in the Council has caused a growing friction with Denmark.
The current Minister of Finance and former Minister for Foreign Affairs, Vittus Qujaukitsoq, famously expressed his opinion that Denmark's role in the Arctic Council is anachronistic in light of the authority that has devolved to Greenland. Both he and former Prime Minister Aleqa Hammond have also implied that it would better serve Greenlandic interests if the Greenlanders themselves were to negotiate with the United States on military matters, such as the Thule Air Base. Greenland is Denmark’s ticket to a permanent seat on the Arctic Council, and representing Greenland’s defence and foreign policy matters yields Denmark a very strong position towards the United States and NATO. This is de facto acknowledged by reports by Danish defence experts on the “Greenland Card.” Simply put, Denmark’s international position is much stronger because of Greenland than it would otherwise be.

Greenland needs foreign investments to exploit its great subsoil assets (Section 7) and has expectations that their utilization will speed up economic independence from Denmark. Therefore, the notion of Greenland being open to investments by all is a consistent theme in the foreign policy. Accordingly, Greenlanders have not been shy to seek Asian investments, including from China, not least in mining. In the Greenlandic Government's reports, China is considered desirable for co-operation in this field. Many Greenlandic Ministers have visited China to present investment opportunities, including Prime Minister Kim Kielsen. Greenland’s interest in Asia is not least due to the fact that hopes for investments from the West following self-government, including the United States, have not materialized.

Greenlanders have been successful in establishing themselves in Asia and are well on the way of establishing good markets there for Greenlandic seafood. Both China and Japan are now among Greenland’s strongest export countries, buying 13 and 8 times more fish products each year than the United States (DKK 100 million). By comparison, negotiations with the United Kingdom following Brexit revolve around fish exports in the range of DKK 6–700 million. Chinese mining companies now have rights in four locations in Greenland and South Korean companies in one location. A Malaysian business tycoon is currently preparing to build the first boutique hotel in Nuuk.

80 Vittus Qujaukitsoq, Foreign Minister in 2016 (now Minister of Finance): “As more authority gets devolved to Greenland it becomes harder to argue for the relevance of Denmark's participation in the [Arctic Council].” https://www.arctictoday.com/greenland-leaders-remarks-stir-up-controversy-abroad-and-at-home/

following his purchase of Iceland’s largest hotel chain. In the near future, Greenlandic interests will also call for possible free trade with China, as Nordic competitors in the field of seafood either already enjoy (Iceland), or are negotiating (Norway). Greenlanders’ deft diplomatic maneuvers are reflected in the fact that while increasing their economic co-operation with China, they have taken care to re-iterate the importance of Western co-operation and expressed a desire to continue as member of Nato post-independence (they presently are through the Danish Kingdom).

Both Denmark and the USA are concerned about the Chinese interest in Greenland. When Denmark advertised for sale an abandoned military base in Kangilinnquit (Grønnedal), the Danish Prime Minister, Lars Løkke, swiftly rescinded the offer when it turned out that the only interested buyer was the Chinese company General Nice. 82 The “Chinese card” was skilfully played when Greenlanders hit a Danish wall when trying to raise finance on reasonable terms for three new international airports. They went on to draft agreements with Chinese companies on financing and construction of the airports, which led, once the USA had intervened, to the opening of Danish coffers. The airports are now under constructions.

Although Denmark is constitutionally mandated to represent Greenland in foreign affairs, Greenlanders have been successful in their conscientious effort to extend and consolidate Greenlandic influence in that field. This may be explained by three factors: First, they have established direct contact with all states where they have special interests, as evidenced by the Greenlandic Ministers’ visits to China; second, they have exerted their legal rights to open diplomatic missions in states of special interest as in Washington and Brussels and soon in Beijing; third, the relationship between the states within the Kingdom of Denmark has developed in such a way that as of now no Danish government can conclude an agreement with another state concerning Greenlandic interests without the consent of Greenland. In practice, Greenland has assumed power to veto the way in which Denmark exercises her formal rights with regard to Greenland in foreign affairs.

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3.3 Contemporary Politics

The Greenlandic party system is young and emerged from the conflict over independence and later Greenland’s membership of the European Union. The three oldest parties in the current party system, Siumut, Atassut and Inuit Ataqatigiit (IA), were all formed in the run-up to the 1979 Home Rule elections. Together these parties reflect the traditional spectrum of European politics.

Siumut has, with one exception, always been in government, and held the prime ministry. In the 2009 election, which revolved around self-government, the IA became the largest party and led the first government after the passing of the Act on Self-Government. Since then, IA has been the second largest party. Both Siumut and IA want separation from Denmark according to their policy platforms.

Atassut was founded as a liberal right-wing party. It was initially opposed to Home Rule but later supported it and wants strong self-government without separation from Denmark. The party is in favour of privatization in some areas, supports NATO and is friendly towards the European Union. Early on, Atassut was the second biggest party, and was the winner of the 1983 elections, with more than 46% of the vote. Its popularity has waned since then, and the party had a following of 6% in the last elections.

Demokratit was founded in 2005 by Per Berthelsen (later an MP for Siumut), one of the founders of the rock band Sumé, which was prominent in the independence struggle in the 1980s. Demokratit is a liberal party that focuses on education and housing and draws most of its support from the towns. Its success has been at the expense of the other liberal party, Atassut. Demokratit took a seat in the government for the third time in May 2020 when the party formally joined the minority government of Kim Kielsen after providing support since October 2018.

Greenlandic politics are tumultuous and sometimes vicious, due to the personal proximity in the small Greenlandic community. There is frequent turnover of ministers. Since Kim Kielsen’s new government took office in April 2018 and until the end of 2019, nine ministers had resigned for various reasons, more than the seven who had a seat in the government at the end of the year. The splintering of parties is frequent and can often be traced to personal reasons rather than ideological ones. Demokratit, which was founded by a politician who left Siumut (only to return there later), was itself splintered before the last election, 2018. The 2018 elections illustrated the sometimes

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83 Rasmus Leander Nielsen, Assistant Professor at the University in Nuuk, Ilisimatusarfik, in a lecture at the Arctic Circle, 2019.

3.4 From Colony to Modern Times

From the 13th century, Greenland, together with Iceland and the Faroe Islands, was a tributary of the Kingdom of Norway. When Norway submitted to the Danish crown in 1536, the three countries came with it. The Danes were forced to cede Norway to Sweden after the Napoleonic Wars with the Treaty of Kiel in 1814, but they were allowed to keep Greenland, the Faroe Islands and Iceland. In Greenland, the Inuit were dominant from the end of the Icelandic settlement in the late 15th century until the beginning of Danish colonization.

Hans Egede, a Norwegian priest who was educated in Copenhagen, was fascinated by the Icelandic Sagas accounts of the settlement of Vikings in Green-
Moses Olsen (1938–2008), Jonathan Motzfeldt (1938–2010) and Lars-Emil Johansen (1946–) were the leaders of the independence generation that emerged around 1970. They fought hard for Home Rule and the preservation of the Greenlandic language. They feared that the modernization pursued by Denmark and likeminded Greenlanders would destroy Greenland's traditional culture and that Danish might eventually eliminate the Greenlandic language. Under their leadership, the ruling party Siumut was formed. For a while, Moses and Lars-Emil were Greenland's representatives in the Danish Parliament. Moses, elected in 1971, was instrumental in securing the Premiership of Jens Otto Krag who began the process that finally resulted in Home Rule. All three became Ministers in the Greenland government, and Jonathan and Lars-Emil served as Prime Minister for 17 and 7 years, respectively. Greenlanders often fondly refer to the trio as “pingajoqqat”, a Greenlandic word for “a mother bear with two cubs”. In this metaphor, Jonathan is the mother bear.

Moses and Jonathan were the same age, close friends, and served in government together for twelve years. Jonathan, who was also a priest, married Moses and his first wife. Both had close ties to Iceland. Jonathan became the husband of Kristjana Guðmundsdóttir Motzfeldt from Skötufjörður in Iceland. All three wrote poetry and Moses became a well-known poet. When Moses was 25 years old, in the early 1960s, he moved to Iceland to study Icelandic and Icelandic literature at the University of Iceland. He translated Icelandic poems to Greenlandic, including “Storm” by Hannes Hafstein, the first Icelandic Minister for Iceland in the Danish Cabinet (1904-1909). In an interview with the Icelandic socialdemocratic paper, Alþýðublaðið, Moses stated he intended to learn from the Icelandic experience how to get rid of Danish rule. At the end of the interview, the reporter wondered prophetically whether Moses would be “the one to free his nation from the yoke of the Danish overlords”. Moses was fascinated by the history of the Icelandic independence struggle. He sought inspiration from his stay in Iceland when, several years later, he became a leader of the young Greenlanders in Copenhagen who would launch the struggle that led to Greenland’s Home Rule and, later, self-government. Thus a remarkable link exists between Iceland and the Greenlandic people's struggle for independence.
land. He went there with the King's permission in 1721 to look for the remaining Nordic community and enlighten it with the gospel of Lutheranism, as the Nordic colony had belonged to the Catholic faith. Hans Egede established a settlement and trade with the permission of the Crown and in 1775, Greenland was formally declared a colony of the King of Denmark. A year later, the Royal Greenland Trading Department gained a monopoly on trade with Greenland, which remained in place until 1950. Until then, Greenland was a closed country and Denmark's interests were protected by the Danish navy if other nations attempted to trade with the locals.

Greenland supplied Denmark with important goods, fur, fish and, not least, seal and whale oil. Danish homes and towns were lit up with oil from Greenland and Iceland until cheaper mineral oils appeared on the market around 1880. The Danes engaged in profitable mining for some time, especially cryolite mining in Ivittuut. During World War II, the mine supplied the United States with raw materials for aluminum used to produce light fighter planes. Cod fishing on dinghies and export of salted cod began in the 1910s.

Exchanges with whalers from various nations and Danish colonisation had many unforeseen consequences. For millennia, the Inuit had been isolated in the Arctic and never come into contact with the white man's diseases. Hans Egede brought with him measles, which decimated the population. Tuberculosis spread like wildfire in the cramped settlements of the indigenous population. By the end of the colonial era, tuberculosis was the cause of 32% of fatalities\(^86\) and the rate of tuberculosis in Greenland is still one of the highest in Europe.

The Danes gradually built up an administration system in the country and in 1859, established councils of hunters (d. Forstanderskaber) which over time developed into democratically elected municipal councils in the 20th century. Greenland was nevertheless a colony where the Danes ruled, just like they did in Iceland in centuries past. However, Denmark's full control over Greenland was not formally recognized in international law until 1931, when Norway's claim to the north of the country was rejected by the International Court of Justice in The Hague. Norwegians had hunted on land and traded furs with the Inuit and had a vision of an arch of influence in the Arctic, extending from North Norway to northern Greenland, Svalbard and Jan Mayen. Iceland supported Denmark in the The Hague, although some Icelandic politicians, inspired by Romantic nationalism, made a claim to Greenland on the basis of ancient colonial connections. The Danish position in the dispute was strengthened when they sold the West Indies to the United States in 1917, which in

\(^{86}\) P. 114 in: Axel Kjær Sørensen. 2006. „Denmark-Greenland in the Twentieth Century.” https://books.google.is/books?id=UlFMfMtR9AC&pg=PA74&lpg=PA74&dq=Augo+Lynge+Greenland&source=bl&ots=Epjx9mtnkD&sig=ACfU3U0E7rPREGiGpjH7ciec1dERTbebQ&hl=en&sa=X&ved=2ahUKEwiXqaOX6pLnAhWBlewKHSNGASKQ6AEwD3oECAgQAwv=onepage&q=Augo%20&f=false
turn agreed to support Danish demands. At the same juncture US abandoned their own claims to North Greenland raised first by the explorer Robert Peary during his expeditions.

The German occupation of Denmark in 1940 marked a turning point in Greenland history. The United Kingdom and Canada had plans to occupy Greenland but were turned away by the United States, which saw their own opportunities in Greenland. At the same time, the remarkable Danish ambassador to Washington, Henrik von Kaufmann, declared that during the occupation of Denmark, he would not, as negotiorum gestor, obey orders from Copenhagen. The United States secured Greenland’s defences, established a diplomatic mission in Nuuk, built airfields and installed military bases, including in Thule. They subsequently negotiated with the Danes about military bases in Greenland. Thule became an important link in the defense system of the United States and NATO, and has in the last five years gained renewed importance, as described in Section 1.

Nazi Germany’s occupation of Denmark therefore made Greenland a de facto independent and autonomous country during the war years. The Greenlanders were successful in governing the country. The operations of the state were self-sustainable, thanks to the revenue from cryolite mining, and the successors of the earlier “Forstanderskaber” ran the settlements successfully. For the first time, Greenlanders viewed the world not through a Danish lens and obtained a new perspective on the world and their status within it. During this short-lived period of independence, Greenlanders gained valuable experience of self-government. It gave the nation confidence in its ability to manage its own affairs.

From this short but important period of self-government runs a clear thread to the struggle for independence, which began decades later. The collaboration with the United States during the war was a positive experience for the Greenlandic society and explains the complex but positive attitude towards the US in our days. This attitude, for example, is reflected by the Danes being blamed, rather than the Americans, when troubles have arisen relating to the Thule Air Base.

The war also opened the eyes of the United States to the importance of Greenland in a military and security sense. After the war, in 1946, the United States expressed interest to own Greenland, just like President Trump in 2019, and offered to buy it at the price of USD 100 million in gold. The Danes were not interested, and the Greenlanders did not want to become a part of the United States. Greenland attitude towards the relationship with Denmark at the time was vividly displayed by public celebrations when Denmark was freed from German occupation.

Towards the end of the war, a wave of freedom swept through the world and
one of the primary goals was to free the oppressed colonies of the old super-powers. The most prominent advocates of this were the United States, the world’s most powerful superpower. They had fought their own war of independence against European colonial masters and had played the largest part in freeing Denmark from their Nazi occupiers. The United Nations adopted an unequivocal declaration on decolonization. All the old colonial powers were forced to cut the colonial ties and between 1945 and 1975, almost all colonies gained independence.

The UN listed Greenland as a Danish colony but Denmark took a different route. The Danes decided to incorporate Greenland as a whole in the constitutional reform of 1953, and Greenland was simply made a Danish county. Constitutionally, Greenlanders were awarded an equal status to Danes, although this did not prevent the ratification of a law, 11 years later, stipulating the various privileges of Danes working in Greenland. Whilst all Danes had the opportunity to pass judgement on the new constitution in a national referendum the Greenlandic people, however, were never asked if they wanted to become a Danish province. The Greenland Provincial Council, presided over by a Danish Governor, was given three days to offer its opinion. An international authority on constitutional law, Guðmundur Alfreðsson, who was Greenland’s representative in the committee that wrote the parliamentary bill for the 2009 Act on Self-Government, has researched this historic decision. He concluded that the incorporation of Greenland into the Danish state had limited its opportunities in the long term.

Greenland’s rapid modernization started in the post-war years, often at a furious speed (d. “rasende tempo”). A special Greenland Commission (Grønlandskommissionen), was established in Denmark. Five of the sixteen members were Greenlandic. In addition to subcommittees, a total of 105 people were involved in planning Greenland’s rapid entry into modern Europe. Only ten were Greenlandic. The process of modernization initiated improvements that were long overdue. Ambitious reforms were initiated in education and strides taken in health care, which resulted in a dramatic increase in life expectancy. Trade monopoly was lifted and the country was opened up for Danish citizens and Danish capital. As a result the proportion of Danes went from 5% in the middle of the century to 15% in 1975. It is currently just below 8%. The Danish language was adopted in schools with the intention of making Greenland a bilingual country. In 1961-1980, ten thousand Greenlandic children were sent for a yearlong stay in Denmark to learn the language, and many others were sent for shorter summer stays.

87 See: https://denstoredanske.lex.dk/f%C3%B8destedskriterium
There was an overwhelming emphasis by the authorities on the Danish language. This was described in a rare interview with a Greenlandic student in Icelandic language and literature in 1963 in the Icelandic student magazine who stated that Greenlandic pupils had to learn Danish “until they’re gasping for breath and speak it in their sleep…”. The student was Moses Olsen, who ten years later would be one of the leaders of the independence struggle in Greenland.

The Danish officials in charge of shaping Greenland’s future believed that the Greenlandic language was a barrier to progress, and suggested officially that efforts should be made to discontinue its use in the future. Mogens Boserup, later a professor at the University of Copenhagen and consultant on the economic restructuring of Greenland in the 1960s, was one of those who made this arguments in articles in the Danish and Greenlandic media. At a famous meeting in Sisimiut in 1970, he argued his case before representatives of Greenlandic youth. Present at the meeting was a young Greenlander who later became Greenland’s second Prime Minister: Lars-Emil Johansen. In his autobiography, he described the meeting with Boserup as a dramatic turning point in his life. Lars-Emil became one of the fiercest advocates for the protection of the Greenlandic language and its adoption as official language.

The authorities pushed hard for Greenland’s urbanisation (see 2.6). Although the model was Danish, the modernization measures enjoyed strong support by influential Greenlanders. Paradoxically, the man who warned most sternly against the rapid changes was Knud Oldendow, an old, one-legged and boozy bird enthusiast who was director of the Greenland Administration in Copenhagen. Not surprisingly, he was set aside. The dramatic social effects of modernization were felt immediately as described earlier (Section 2).

A turning point in Greenland history arrived in the 1970s, when the Danish public decided in a referendum to join the European Union. A majority of Greenlanders had elected against membership, primarily because of fishing interests. So did the Faroese. However, having Home Rule the Faroese enjoyed the freedom to choose whilst Greenland, without Home Rule in own affairs, had no such choice. The EU issue immediately led to increased demands in Greenland for Home Rule based on the argument that it was a prerequisite for a referendum on EU membership. Soon an informal alliance, fuelled by young Greenlandic politicians and radical students in Copenhagen, demanded Home Rule. The political movements created in the EU dispute later became the basis of the current party system in Greenland.

91 See: https://timarit.is/page/4344072#page/n13/mode/2up
The question of Home Rule was finally submitted to the Greenlandic people in 1979. In the midst of winter 63% of the population turned out to vote, and an overwhelming majority, 70.1%, voted for Home Rule. An early task of the new Home Rule Government of Greenland was a referendum on the European Union. A clear majority, 53%, wished to be outside the EU. In the aftermath, no long-running disputes continued after the issue was concluded in a referendum. Today, Greenlanders generally consider their relationship with the European Union to be good and the valuable agreement between the two has been renewed regularly without any difficulties.

The independence movement grew stronger as a result of the successful Home Rule. In 2008, Greenlanders managed to secure a referendum on self-government. An overwhelming majority of 75% supported self-government. A year later, on the longest day in the Arctic at summer solstice on June 21, Greenlanders celebrated a historic milestone when long awaited self-government became a reality. For a great many it was a dream come true. The Act included the right of Greenlanders to declare full independence from Denmark whenever they so choose. Interestingly for Iceland, the President of the Republic was the only foreign Head of State invited to the celebrations.

3.5  Icelanders in Greenland

Next to the Danes the Icelanders have been the most populous group in Greenland. This has changed with influx of foreign labour and presently Icelanders have been pushed to third place (127 in 2019) by Filipinos (215) and Thailander (156).

Icelandic citizens do not need a special permit to work in Greenland, as the country is part of the common Nordic labour market through Denmark. In 1980, fewer than 20 Icelanders were registered in Greenland. At the turn of the century Icelanders numbered 100 and reached 204 in the financial crisis of 2008. In recent years, an average of 120 Icelanders have worked in various occupations in Greenland, mostly in construction. The number fluctuates in line with the activities of Icelandic construction companies (see Section 8.11). One of them, Ístak, is currently building a school in Nuuk, which will be Greenland’s biggest building.

In the fisheries sector, the number of Icelanders has increased as Icelandic companies, especially Brim hf, have extended their activities in Greenland. Several Icelanders are occupied in government positions and in administration. Icelanders have for example served as permanent secretaries and been visible in aviation industries. An Icelander was recently recruited to oversee construction of three new airports, the largest construction project in Greenlandic history.
4. Infrastructure Development

The people of Greenland inherited weak infrastructure when they gained Self Rule from the Danish Government. A very small population, vast distances, permafrost and freezing cold invite vastly greater challenges with regard to infrastructure and basic services than encountered by countries outside the polar circle. Construction, that may seem simple elsewhere, quickly becomes costly, arduous and at times technically next to impossible in the harsh conditions in Greenland.

The ice free parts of the country that are habitable expand to more than four times the size of Iceland. Over this vast expanse only 56 thousand people are spread in 73 small towns and villages. In isolated rural areas, where the frost will plummet to minus 50–60°C and permafrost makes digging very difficult it demands Herculean efforts to provide basic infrastructure such as clean water, garbage disposal, sewerage and drainage, healthcare, energy to every home, access to phone and Internet services, not to mention education. The cost pr. capita is enormous. This was the inheritance of Naalakkersuisut, the government of Greenland, when autonomy was attained.

4.1 Water Collection, Sewerage, Waste Disposal

In most places soil at surface is extremely shallow, often absent, making it very difficult to put infrastructure into the ground. In places, such as Sisimiut, Maniitsoq and several others, terrain is rocky. Installing sewers can pose a considerable problem. Pipes may need to be heated with electrical cables. In the larger towns, nonetheless, there is a strong focus on pursuing the United Nations goals for health and sustainability. At great cost municipalities, such as the aforementioned, have taken large steps to construct infrastructure such as sewers.

Water sourcing is another difficult task in Greenland. Drinking water is usually collected from lakes. In some villages, expensive water treatment facilities are needed to ensure that drinking water fulfills health requirements. In places like Qaanaaq, North Greenland, where there is a shortage of running water, the inhabitants have come up with ingenious, albeit expensive, ways of sourcing drinking water. The terrain sometimes demands solutions that do not correspond fully to requirements of optimal safety measures.

Two specialists from the Danish Technical University (DTU), Kåre Hendriksen and Birgitte Hoffman, have been researching infrastructure development in

Greenland for years. In 2018, they published an informative overview where a detailed summary of water piping and sewerage in Greenland can be found.\footnote{Kåre Hendriksen and Birgitte Hoffmann. 2017. „Greenlandic water and sanitation—a context oriented analysis of system challenges towards local sustainable development.” https://link.springer.com/article/10.1007/s11356-017-9862-z}

In all towns and villages the government is responsible for procuring drinking water and installing drainage systems, as well as providing sanitation services for the indoor latrines used where sewers are non-existent. The service varies according to size and conditions at each settlement. It becomes more rudimentary the further north one goes. In Nuuk, nearly every building has both running water and water toilets that connect to the sewerage system.

In the six largest towns, the majority of the buildings are connected to the water supply network, and most are connected to the sewerage system. A water supply network can also be found in most of the smaller towns and, in some places, a sewerage system. Larger buildings, such as apartment buildings, all receive water through the water supply network. However, most towns, excepting Nuuk, will have homes that are not connected to the water supply network. In those cases, drinking water is delivered to indoor water tanks by a water supply

**ICE MELTING IN QAANAAQ**

Qaanaaq, in the bitter cold of northern Greenland, a short distance from the Thule Air Base, is home to 640 people. The ground is permanently frozen and water is hard to come by. For four months in summer and autumn the inhabitants can fetch water from a nearby stream before it freezes. At summer’s end, they fill municipal water tanks that supply the villagers with water for another four months. To gather water for the rest of the year, the locals set on a dangerous journey in their vehicles onto the ice sheet and gather chunks of ice from large icebergs. The ice is melted in a special ice melter which is used over the waterless months. However, due to climate change the ice sheet is rapidly thinning, and the journeys onto the ice are becoming perilous. To limit travel and danger, large chunks of ice are transported to shore and used as a water supply. However, garbage and waste from the village is strewn across the shoreline, including human waste from the bag toilets that inevitably have to be used in Qaanaaq like all villages in Greenland. At the same time, Qaanaaq is experiencing a small boom thanks to the Greenland halibut - a water intensive industry. The danger of contamination for both the villagers and the fish product is obvious.

*The village of Qaanaaq.*
*Image: Kedardome / Shutterstock.com*
Toilets with running water are generally the norm in places such as Nuuk, Sisimiut, Maniitsoq and similar townships with a combination of a solid water supply network and a sewerage system. In every town, aside from Nuuk, there are buildings, however, where water toilets can’t be installed. Such modern conveniences get scarcer as the towns get smaller and the further north one goes. Whole towns, such as Upernavik in North-Greenland (approx. 1000 inhabitants) are without water closets. Instead indoor latrines are used, often termed “bag toilets” after the plastic bags used to collect the waste (e. honey-buckets). Indoor latrines of this type are used in every village in Greenland, as neither water supply networks nor sewerage systems are widely available. The bags are picked up by truck or a tractor from the municipality, and often disposed of into the ocean. In some places channels are dug into the shoreline to facilitate disposal. Elsewhere, they are left lying on the shore. Official regulation prescribes a minimum distance between disposal sites and the nearest buildings but due to the terrain, it often is problematic to comply. In recent years, vacuum trucks have become a more common method of disposal.

Approximately 30–40 thousand tonnes of waste is created annually in Greenland. In the harsh conditions of permafrost, ice cover on the ground and lack of soil it is extremely costly and technically challenging to dispose of the waste in accordance with the strict environmental requirements normally adopted in Europe. The latrine bags of Qaanaaq and Siorapaluk, the northernmost settlements, are a perfect example of that. Progress may at times appear slow but gradually Greenland is aligning with European regulations. The government has formulated a policy on the sorting and recycling of waste, which in remote settlements can be difficult to implement. A lack of soil prevents the use of landfills in most places. Some villages have accumulated old rubbish dumps, well-preserved by the frost, dating back to the time of the Danish administration. The government plans to clean up old dumping grounds and dispose of the waste in accordance with modern regulations. An official plan to transport old rubbish dumps from the northern and eastern part of Greenland all the way to the large towns on the west coast is being executed. At point of destination the waste is to be sorted, and that which can’t be recycled is to be incinerated in special plants. The energy from the incineration process is where possible used for heating purposes. Hazardous waste poses a special problem as it can’t be disposed of through incineration.
and to be collected and exported at a great cost. A text message from a “pillar of society” in one of the larger villages on the coast is a reflection on the general state of waste treatment in the villages: “Garbage collected, not much separated, then burned once in a while.”

The leftovers of garbage and waste from US military stations closed during the Danish administration have caused controversy and debates in the Greenlandic parliament. In one particular case, 30,000 Greenlanders signed a petition demanding that the government undertakes a clean-up operation. This is a theme well known to Iceland, where the Icelandic government had the responsibility, just as the Danish administration had in Greenland, to clean up waste, sometimes hazardous, at the departure of the US military.

International environmental standards are being gradually implemented. Greenland has ambitious long-term plans for sustainable development. In a country as harsh as Greenland it costs, however, a lot of effort and money.

**4.2 Healthcare Services**

The health care system is well organised in Greenland despite the difficult conditions. It is divided into 16 healthcare districts. Each has a healthcare clinic with a staff of doctors and healthcare professionals. The sparse population, vast distances and the isolation of many communities create enormous challenges. Ingenious ways are employed to offer the best possible service. All the villages, except for the smallest ones, offer access to “pipaluk”, a remote health counseling. With an increased emphasis on high-speed Internet infrastructure in the coming years, Greenlanders intend to place an even greater emphasis on telemedicine. Tele-Post, the telecommunications company, has ambitiously announced a plan to integrate the Internet and health services headlined as “doctor in every house.”

Páll Matthíasson, the director of the National University Hospital of Iceland, has in a professional capacity visited Greenland three times in the past years. He expressed the view that the healthcare system in Greenland is generally well organized and especially praised the hospital in Nuuk.

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96 See: https://nyhedertv2.dk/udland/2019-08-22-amerikanerne-har-efterladt-en-giftig-arv-i-groenland-se-billederne-her?fbclid=IwAR3d3zp7dVtgEDmfCEWZwpj_Fgxb3oexBQHRJaNo0_VyoX57hRfFx6_0

The hospital in Nuuk, with 156 beds and named after Queen Ingrid, serves as the state hospital. Smaller hospitals are in four other larger towns (Ilulissat, Aasiaat, Sisimiut and Qaqortoq). In emergencies, long distances frequently cause problems. Airplanes and helicopters are therefore an essential part of Greenland’s healthcare system. The hospital in Nuuk has access to an aircraft and in addition to that, the state has a contract with Air Greenland for emergency medical operations. The state has an agreement with Iceland on emergency services to the east coast. The hospital in Akureyri, North Iceland, serves the northernmost settlement on the east coast, Ittoqqortoormiit in Scoresby Sound, and Landspítalinn in Reykjavík handles emergency healthcare cases from the Tasiilaq area, and occasionally Nuuk. The patients are mostly newborn children that require immediate treatment, as well as heart patients in distress. Each year, Landspítalinn receives a few emergency cases from the west coast as well.

Patients requiring special care, not available in the Queen Ingrid Hospital in Nuuk, are treated at the Rigshospitalet, a state hospital in Copenhagen. Close to 900 patients are flown in to Copenhagen for medical care each year. However, it is much quicker to fly patients to Iceland and considerable opportunities for extended co-operation exist between the two countries with regard to healthcare.

### 4.3 Transportation in Adverse Conditions

Two state enterprises serve as Greenland’s lifelines in transportation within the country and between Greenland and Denmark.

Air Greenland, owned by the state, is Greenland’s lifeline in the air and manages all domestic flights and the majority of helicopter transport. In addition to transporting people, the helicopters serve as a lifeline for the remote communities when ports are closed by sea-ice, sometimes up to 9 months. When the ice prevents transportation by sea, the helicopters are used for all essential transport of people, goods, and mail. Air transport service is costly despite being subsidized and people travel by boat as much as they can. Air Greenland also handles international flights with daily flights to Copenhagen from Kangerlussuaq, sometimes twice a day over the summer season. Air Iceland Connect, a daughter company of Icelandair, also serves as an important gateway to Greenland, bringing a third of all air passengers to the country. The company has operated scheduled flights throughout the year to Nuuk and Kulusuk and, during the tourist season, to Narsarsuaq and Ilulissat. Norlandair, located in Akureyri in northern Iceland, operates scheduled flights to Nerleri.

98 See the discussion on tourism in Section 6.
Inaat (Constable Point) in Scoresby Sound throughout the year. Both airlines also transport mail and fresh produce to the east coast.

Royal Arctic Line (RAL), a state-owned enterprise, is Greenland’s lifeline on the ocean. It has the sole licence for freight transport between Greenland and Aalborg, that historically has handled most of Greenland’s imports and exports. Aalborg’s outsize role in trade with Greenland is a relic from times of Danish monopoly, making transportation of goods unnecessarily expensive and inconvenient (see below, and Section 8.13). The Icelandic Eimskip shipping company also has served an important role by operating a regular route between Reykjavik and Nuuk. RAL’s subsidiary, the Arctic Ummiaq Line, operates a historically famous ferry, Sarfaq Ittuk, which transports passengers and goods between Ilulissat on the west coast to Narsaq on the southeastern tip. As 92% of the population live on the coast covered by the Sarfaq Ittuk it is a vital line of transport, even if it takes three days to travel between the terminals. A smaller private enterprise, Disco Line, handles passenger transport between the towns and villages by Disco Bay.

Two major reforms are underway that are likely to revolutionize transport in Greenland, especially in relation to tourism and freight transport:

Firstly, Kim Kielsen’s government has signed agreements to build three new airports to provide a rapid boost to tourism. Two of the airports, in Ilulissat and Nuuk, will be large enough to accommodate 300 passenger aircrafts. The third, in South Greenland’s largest town, Qaqortoq, will play a vital role in the domestic flights to and from South Greenland, in addition to serving as a destination for flights from Iceland. The airports are planned to be operational in 2023. In Qaqortoq a movement pushes for the new airport to be extended to a size that can support international flights to Europe and the US so as to ele-

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**COMPLEX DOMESTIC TRAVEL**

In a vast country, where the miniscule size of the population prevents direct flights, travel between places can become very cumbersome and complicated. A resident of Ittoqqortoormiit who has business in Nuuk often has to fly first to Akureyri in Iceland, then to Reykjavik and finally to Nuuk. People in Qaanaaq in the north who are going to Qaqortoq in the south fly to Upernavik, from there to Kangerlussuaq, on to Narsarsuaq and then take a helicopter to Nanortalik and another to Qaqortoq. Domestic flights are quite costly for ordinary Greenlanders.
vate South Greenland tourism (see Chapter 6). In addition, in his New Year’s statement, 2020, Prime Minister Kielsen announced that eight smaller airports will be constructed in as many small towns.99

Secondly, a major change is in process regarding inbound and outbound shipping in Greenland following a historic agreement between RAL and the Icelandic Eimskip on co-operation and sharing of three new China built vessels. The agreement makes use of Reykjavik as a new gate to the US and links Greenland to the international fish transport system. The agreement will soon become fully operative. It will remove the last remains of the Danish monopoly on trade with Greenland through in Aalborg (see Section 8.13).100 Related to the agreement, RAL has started a weekly route between Tasiilaq and Reykjavik during the ice-free periods. The RAL agreement marks a watershed in trade relations between Greenland and Iceland.

4.4 Telecommunication – Network Connectivity

Within Greenland, telecommunication infrastructure is a mixture of submarine fiber-optic cables that run between the largest towns, digital radio signals transmitted via amplifiers on radio masts at 70–100 km intervals along the west coast, and satellites that serve the most remote settlements. Like in Iceland, it is difficult to run telecommunication as infrastructure is prone to be impeded by harsh winter and autumn weather that break masts and affect communication networks. Tele-Post, which is responsible for postal and telecommunications services, seems to be a dynamic company well connected with the latest technology. It has done a stellar job of bringing digital communication to the people of Greenland, particularly in light of the sparse population and the enormous distances that have to be negotiated. The company is on track to reach the ambitious goal of enabling residents, from Nanortalik in the south to Upernavik in the north, to enjoy the same high-speed Internet as the residents of the capital Nuuk and the large townships, where 92% of the population live.

100 Source: https://knr.gl/da/nyheder/amerikansk-stat-vil-v%C3%A6re-gr%C3%B8nlands-nye-ind-k%C3%B8bscenter?fbclid=IwAR2iKaMYLdvEgk6HyNH3CPDor-xFFbVLDjZCKusnYP- dzS2sGxCM23Wag
The company has invested DKK 700 million over the last three years, 2017 to 2020, to improve infrastructure. The larger towns enjoy good connectivity and incoming guests do not experience any difficulties in accessing the Internet. In an interview with Tele-Post officials, it was stated that villages as small as 70 inhabitants now enjoy broadband and mobile phone services. Alongside better connections for smaller settlements, Internet use in those areas has grown enormously.101 In the most remote settlements, where 8% of Greenlanders live, the service is now via satellite and can be slow and intermittent. In particular, villages in the northwest, on the east coast and sheep farmers in rural southern Greenland are underserved as regards quality internet connections. Tele-Post has a three-pronged plan to improve infrastructure over the next three years in these areas that presently rely on more costly and less reliable satellite service connections.

The Greenland Connect is an optic fibre submarine connector that provides internet connection between Greenland and the outside world. One branch is installed between Nuuk and Newfoundland, Canada and another between Qaqortoq to Landeyjarsandur on the south coast of Iceland. A submarine connector is between Qaqortoq and Nuuk. The Canadian government announced in 2019 the construction of a new fiber-optic cable from the Inuit Autonomous Region in Nunavut to Nuuk. In 2017, Tele-Post significantly improved the carrying capacity of the system by adding new terminals in collaboration with the Chinese company Huawei. This provides added support to Icelandic data centres that already market their services to major corporations in North-America.102

Competition is permitted in Greenland for the sale of online services that service providers buy wholesale from Tele-Post. In most of the larger towns, 2-3 such companies are competing for the telecommunications market. However, Greenland has yet to see a sharp decline in the price of roaming charges in recent years as it is not part of the European Economic Area. The price of phone calls and mobile data outside of Greenland is therefore still steep compared to Iceland. It is expensive to communicate from Greenland abroad in comparison with communication costs in Iceland and the Nordic countries. Using the Internet to communicate with remote locations in Greenland also poses technical difficulties.

101 Lecture from the 2020 Greenland Economic Council Conference. Det Digitale Grønland. Kalaallit Nunaat Digitaliusoq. https://naalakkersuisut.gl/-/media/Nanoq/Files/Attached%20Files/Finans/DK/Oekonomisk%20raad/Seminar%202020/DK0702%20Det%20Digitale%20Gr%C3%B8nland%20%C3%A9konomisk%20R%C3%A5d%20Januar%202020.pdf

A revolution in Greenland’s networking capabilities is looming if international investors’ plans for high-speed networks through a system of 650 low altitude telecommunications satellites come into fruition.\textsuperscript{103} The first satellites have already been launched. Tele-Post has ensured that Greenland will be one of the first areas served by the new system. Experiments that were done with the first satellites show that the signal delay is less than 60 milliseconds and the system therefore fulfills the requirements for a high-speed Internet network. The furthest reaches of Greenland’s settlements, ocean vessels and aircraft over Greenland will then have access to high-speed Internet.

The new system of low-orbiting satellites will open up whole new possibilities, such as in the field of distance learning. Interestingly, despite good Internet connections in areas where the vast majority lives, the Internet is not to any extent used for distance learning. This is a field where Icelanders have a wealth of experience and invites opportunities of co-operation that will help bolster the level of education, a top priority for the government of Greenland (see 4.8 and 8.6).

### 4.5 Energy Production and Power Stations

Greenland runs five hydroelectric power plants that produce a total of 80 MW for six towns.\textsuperscript{104} The largest one is a 35 MW freshwater power plant, set deep in a mountain by the Buksefjord bay, and produces electricity for Nuuk. All the other ones harness the power of glacial lakes, 22.5 MW in Illulissat, 15 MW in Sisimiut, a 7.2 MW power plant in southern Greenland supplies Narsaq and Qaqortoq, and Tasiilaq produces 1.2 MW. The power plants are owned and managed by Nukissiorfiit, a state-owned energy and water utility. The power plant for Nuuk is at full capacity and expansion is needed due to the constant migration to the capital. Nuuk is predicted to expand from 17,000 to 30,000 inhabitants by the end of the 2020s.

With the exception of the Buksefjorden plant, Icelanders have built all the power plants in Greenland. Landsvirkjun Power (LVP), a subsidiary of Landsvirkjun, has been involved in the operation and supervision of some. There are several farmer-owned power plants in South Greenland, all built by a family business in Árteigur in Kinn in Iceland, known for its pioneering work on micro


\textsuperscript{104} See the discussion regarding hydroelectric power plants in Greenland. https://www.businessin-greenland.gl/en/Erhverv/Vandkraft/Eksisterende-vandkraftvaerker
hydro power plants. The potential for hydroelectric power on the west coast has been explored for 40 years by Greenlanders, Danes and Icelanders. Landsvirkjun and its subsidiary company have explored several options for power plants on both sides of the Greenland landmass, suitable of serving mining and other future industries. A conservative estimate indicates that at least 650 MW of energy can be harnessed in the area between Sisimiut and Nuuk. One consequence of global warming is the increase of harnessable hydro power. GEUS, the Geological Survey of Denmark and Greenland, measured a 54% increase in ice melt from the Greenland Glacier during the periods of 1980–91 and 2003–14. Later research have demonstrated an even greater increase.

The government’s official policy is to eliminate use of fossil fuels as a source of heating and production of electricity and to supply 90% of the energy requirements of towns and villages with renewable energy sources by 2030. The present production already provides 70%. Promising opportunities for more generation of hydroelectric power have already been researched to some extent near several other towns. Five of those (Aasiaat, Qasigiannguit, Maniitsoq, Paamiut and Nanortalik) have a population that comprises 13–14% of the total population. In 2019, parliament requested the government to start pre-planning the construction and financing of two of them, in Aasiaat and Qasigiannguit, and also the necessary increase of hydropower for Nuuk. If executed and completed, 90% of the energy needs of the Greenland population will be met by renewable energy.

As regards future electrification of villages, micro hydro power plants remain the best option wherever hydropower is accessible. This is included in the future vision of the administration and in the mandate to the government in 2019 on a green energy initiative the parliament included examination of such plants in six locations. Two are on the east coast, Kulusuk and Ittoqqortoormiit, which is of interest to Iceland (see 9.7.2). In the future, research is needed to decide where micro hydro power plants are a viable option. For villages on islands, archipelagos, peninsulas or Arctic deserts devoid of hydropower different renewable energy solutions must be explored.

The Arctic Council has a major project under development on such solutions for isolated Arctic communities which is managed by the National Energy Authority of Iceland. It explores integrated energy solution based on solar, wind and large batteries, with oil as a standby energy source. Greenland has taken the first steps to test alternative energy sources with experimental windmills erected in a few locations. So far, they have not fared well in Green-

land’s sometimes extreme weather conditions. Nukissiorfiit is presently running a wind power testing station with the Sisimiut Technical College, to explore which types of wind turbines could be best suited for Greenland. With respect to Greenland’s future goal of providing villages on the coast with alternative energy, an important step would be to link up with the Arctic Council project on integrated solutions for renewable energy. This is further discussed in Chapter 9.7.2.

For small nations with big hydropower potential foreign investments in energy-intensive industries have been an attractive option to speed up infrastructure. All governments in Greenland have understandably nurtured ambitious plans for such projects. As in Iceland, data centres requiring large power plants have emerged as a desired future industry. Alcoa’s plans for aluminum production in Mannitsoq have stalled and in the present global market situation aluminium smelters do not appear to be a realistic option in the foreseeable future. At a meeting of the Greenland Economic Council in early 2020 it was announced that Jess Svane, Greenland’s Minister of Industry and Energy, was in talks with a “very large international company” with interest in various Greenlandic energy solutions. Production of synthetic fuels was particularly mentioned. Large-scale production of hydrogen is a part of the discussion and presently there is serious talk of making Greenland a centre for carbon dioxide disposal when technology allows. Icelandic governments are very familiar with such ideas from “large international” players that talk the talk without putting their money where their mouth is. But, just like Iceland, Greenland will eventually be able to attract foreign investments to harness her ample resources. It will take a lot of patience and planning. In this respect a lot of experience can be contributed by Iceland.

4.6 Consumer Goods in Rural Areas

In isolated, tiny communities the market forces are too weak to sustain a distribution of daily necessities through traditional retail. In face of market failure the State has to intervene to ensure steady supply of consumer goods. This vital role is served by a subsidized state-owned rural network of 64 all-purpose general stores. They are run by a retail chain, Piluersuioq, owned by KNI, Greenland’s largest company. KNI, in proud possession of the State of Greenland, was formed in 1986 when Greenland inherited the Royal Greenland Trade, which on behalf of the Crown managed the Danish monopoly on trade.

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106 Lecture from the 2020 Greenland Economic Council Conference. Jørn Skov Nielsen. „Vedvarende energi som eksempel på succesfuld importsubstitution og som eksportpotentielle – hvad skal der til i praksis?“ https://naalakkersuisut.gl/-/media/Nanoq/Files/Attached%20Files/Finans/DK/Oekonomisk%20raad/Seminar%202020/DK%202%20Energi%20pr%C3%A6sentation%20til%20JSN%20DK.pdf
from 1776 to 1950. The KNI website states that one of the key roles of Pilersu-
isq is to maintain steady access to daily necessities for rural communities, where trade cannot be supported under normal market conditions. Apart from consumer goods, the chain distributes oil for snowmobiles, boats and central heating, serves as the local State post office and operates the local branch of the State’s bank. Conveniently, it also sells tickets for the State’s helicopter service. These multi-function stores are a foundation of daily life in rural Greenland and a vital part of the infrastructure.

4.7 Road Network

One of the idiosyncrasies of Greenland’s infrastructure is that outside of the towns, roads do not exist. The only paved road is a 4.5 km stretch of road between an old naval port in Kangilinnquit (Grönnedal) and an old mining town, Ivittuut, close to Cape Desolation. A 10 km long country road lies from a harbour to a goldmine in Nalunaq. A 150 km gravel road has for years been planned between Greenland’s second largest town, Sisimiut, and the international airport in Kangerlussuaq.

New developments loom, however, on the horizon for Greenland’s public transport – through the participation of an Icelandic company. At the start of 2020, an Icelandic company signed the first ever agreement on regular land-based transport routes in Greenland. The transport route is planned between Kangerlussuaq and Sisimiut on specially equipped off-road vehicles that are rooted in lessons learned from Icelandic climate conditions. They do not require significant road construction. Three vehicles, prepared by the company Jöklar ehf., are set to be delivered in 2021.

In future, South Greenland has realistic opportunities for road construction between key locations and the international airport in Narsarsuaq and future airport in Qaortoq. A Danish expert conveyed to the Greenland Committee that the possibility of a road system in South Greenland had been analysed by Danish experts, including from the Danish Technical University (DTU). At a meeting in the Kujalleq municipality in southern Greenland, the tourism authorities stated that once the construction of the new airport in Qaqortoq was complete, road construction would take first place on Greenland’s tourism

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107 See: https://www.kni.gl/da/kni/knis-historie/
108 Morgunblaðið 2020. Agreement on the first national land transit system in Greenland. https://www.mbl.is/vidskipti/frettir/2020/01/13/samid_um_fyrstu_landsamgongur_a_graenlandi/?fbclid=IwAR1r5svDH_ZsoAZKw7lwZ9P3xL3QjRx5deQWLmpS4Lnu2kaeecMYYFu75
Greenland and Iceland in the New Arctic

Greenland invested 25.3% of public expenditure on education in 2017. Comparable figures were 16.8% in Iceland in 2016 and 13.8% in Denmark in 2014. The OECD state average was 12.9% in 2016.


Part of the colonial heritage is reflected in the level of education in Greenland. It still ranks as the lowest of the Nordic countries. One of the victories of the independence struggle is that, since gaining self-government, Greenland has seen a significant increase in the number of graduates from all levels of the school system. Financial allocations into education have drastically increased and presently are proportionally higher in Greenland than elsewhere in Europe. Historically, primary education has been the weakest link in Greenland’s school system. Shortcomings at this level and the quality of teacher training have been harshly criticized in Danish evaluations. A special emphasis has therefore been on strengthening the primary school system.

4.8 Education and Learning

Number of those completing their studies in Greenland by school level, comparison between 2005, 2010 and 2016. Source: Grønlands Statistik.

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Whilst a growing number of teenagers complete the primary school, far too few seek further education. A majority (54%) of the population aged 15 - 64 only finish the primary levels. In the Nordic countries the same ratio is half as low. Around 30% have finished a vocational training and further education and 16% completed a university education.\textsuperscript{112,113} A gender gap is reflected by 1 in 5 women seeking further education but only 1 in every 8 men.

Mandatory schooling begins at age 6 and lasts for 10 years. In some villages, only parts of the primary school are offered in the village, hence, young children have to move away from their parental homes to complete the mandatory primary education. A large number of children, and all of the village kids, also have to move far away from home to pursue secondary education. For many pupils this proves very difficult. Parents and teachers relayed to the Greenland Committee that this is a big reason for kids not continuing to secondary school or dropping out and returning back to their village or home town. Some, especially the people of East Greenland, feel that the “European” world in the larger towns on the west coast does not welcome them as equals.\textsuperscript{114} They stand out and sometimes are mobbed. In addition, for many, especially from the East, the importance of the Danish language in secondary education is a serious hindrance as in the remote villages Danish is not the language in every day life (see below and Sections 2.4 and 9.3). These are

\begin{center}
\includegraphics[width=\textwidth]{chart.png}
\end{center}

\textbf{The number of young people neither studying nor employed.}

\begin{itemize}
\item[113] Comparable figures in Iceland for the fiscal year of 2018 are 22% on primary education, 34% vocational and secondary education and 44% university education.
\end{itemize}
among the primary reasons for the high drop-out rate of students in Greenland, especially those from the remote settlements. It is notable that in 2017, around 60% of Greenland’s young people, aged 16–18, were neither studying nor working (Image 24)\textsuperscript{115}

Secondary schools exist in the four largest towns, Nuuk, Sisimiut, Aasiaat and Qaqortoq. Six locations offer vocational studies of varying duration. Nuuk has an academy of art and students can enroll in theatrical studies at the State Theatre in Nuuk. A well established business school is in Qaqortoq, South Greenland, where tourism studies are also offered, including a 6-month course for Arctic guides. The same municipality also offers agricultural studies in a combined teaching and research center in Upernaviarsuk. A polytechnic is in Nuuk and Sisimiut. The latter offers, for example, technical education in mining skills. A college in Nuuk educates teachers, with Greenlandic as the teaching language. It was founded in 1845 by missionaries. Students in Greenland receive educational grants and education is free of charge.

The University of Nuuk, Ilimatusarfik, was established following the Home Rule and opened formally in 1987. It presently has approximately 800 students. By comparison, in 2018, 600 Greenlandic students were enrolled at university level in Denmark\textsuperscript{116} The vast majority of subjects at Ilimatusarfik are taught in Danish, and a few in Greenlandic and English. The university is based on a classic Danish model, like the University of Iceland originally, and offers a bachelor’s degree in 11 subjects and a master’s degree in 4. As befits a mature university Ilimatusarfik also graduates students with the degree of PhD. Doctoral dissertations, some cited elsewhere in this report, are fully comparable to Icelandic ones. Ilimatusarfik therefore has important experience in how to establish PhD programs within a small university. This is valuable for some of the smaller Icelandic universities intent on starting PhD programs (see 8.6).

Fewer Greenlanders continue onto masters or PhD programs after completing their bachelor studies, as compared to the other Nordic countries. In conversations in Ilimatusarfik it emerged that university students in Nuuk are on average older than in the Nordic countries, and a high proportion have families and maintenance obligations. At the same time there is a great demand for

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{116} Kevin McGwin. 2018. For Greenlandic students in Denmark, making it easier to make the grade. https://www.arctictoday.com/greenlandic-students-denmark-making-easier-make-grade/#text-t-There%20are%20600%20Greenlandic%20students
\end{itemize}
\end{footnotesize}
educated people in the labour market and students can get a job as soon as they leave university. Fewer will therefore pursue further education, instead opting to support their families. Among graduate students, unemployment is rare and educated people can expect higher incomes.

The role and influence of Danish, as a teaching language, merits a closer look. From the 1950s, in connection with modernization (see 2.2, 2.4 and 3.4), the policy was to make Greenland bilingual and children were taught to speak Danish from the earliest stages of primary school. Only a “very small proportion” of Greenlanders spoke Danish at the time. For a while, Greenlandic parents could choose to send their children to “Danish” classes, where all subjects were taught in Danish from the start of the child’s schooling. Many parents, and pillars of society, genuinely believed that the future of Greenlandic children was best served by securing a strong command of Danish. Children who had no Danish skills when they entered primary school often had to learn subjects in Danish, and very often the teachers were Danish with no knowledge at all of Greenlandic. In 1964, more than half of the teachers came from Denmark and by the 1990s, a third of the teachers at the primary school level were Danish.

For many pupils it was a traumatic experience to enter school where they did neither understand the teacher nor the schoolbooks. Kuupik Kleist, the fourth Prime Minister of Greenland (2009–13), described this in his autobiography as a “culture shock”. He barely spoke a word of Danish at the time. This system understandably did not yield good results and is one of the main reasons for the traditional weakness of the primary education in Greenland. This, however, was a taboo subject and not spoken of, neither in Denmark nor Greenland, for decades. A teacher from Denmark, with a Greenlandic family and a teaching experience of 25 years in Greenland, broke into tears at a meeting with a member of the Greenland Committee when she described this. According to her it was a lasting negative experience for many kids to enter school and be met with an environment where they did neither understand the teacher nor


118 See: https://www.youtube.com/watch?list=PL1LYwiqN4A--5tpABUKMPHQMdBsrlmXP&p=contin-uie=1237&v=YT86ThZnKb4&&feature=emb_logo&fbclid=IwAR3Zv9V2I3phz-7Kn93D8cJ3MB2yGyz-4PC-MElad0XQvsq4EpYpPzGqEHeimid:

119 Source: http://denstoredanske.dk/Erhverv,_karriere_og_ledelse/P%C3%A6dagogik_og_uddannelse/Uddannelse_i_andre_lande/Greek%3BBlandl_(Uddannelse)

the books. In her view this was one of the main reasons for the weakness of the primary education system, low levels of education in the adult population and is still a contributing factor to the high drop-out rate. She described it as a liberation when this became a part of open discussion 10-15 years ago.

Today, the Greenlandic language is to be taught in primary school and Danish as a second language. A lack of Greenlandic teachers still persists and teachers have to be brought in from Denmark. Many of the primary schools therefore have to operate with interpreters between Danish and Greenlandic. At secondary and tertiary level Danish is effectively the language of education. A report, Det grønlandske språk i dag, (e. The Greenlandic language today), found at he Government’s website, states that the prerequisite for entering a secondary school in Greenland is to command Danish or to have passed a Danish primary school examination. However, many children have limited command of Danish when they leave primary school, and interpreting services have to be provided on ad hoc basis in secondary schools. At university, classes are primarily conducted in Danish.

Proficiency in the Danish language and historical and social ties to Denmark entail that the vast majority of young Greenlanders who wish to study abroad head to Denmark. Denmark has the additional benefit that a third of all Greenlandic Inuits live there and greet newcomers with Greenlandic hospitality and a warm embrace. The Danish “bridge” has therefore provided a certain level of security for young people moving to study abroad for the first time. By the same token, however, the Danish “bridge” makes young Greenlanders less likely to seek knowledge and international connections by studying in other countries. In general, this narrows the Greenlandic horizon. This is realized by the government who seeks to reduce the importance of the Danish language by placing an increased value on international languages.

In East Greenland, language is an even more problematic issue. Apart from not understanding Danish the inuit children on the east coast do not understand the West Greenlandic language when they enter the school system. Most of their teacher are either Danish or come from West Greenland (see Chapter 9.3)

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Finally, in conversations with school representatives in Nuuk it emerged that distant learning barely exists in Greenland. In Iceland, people have gained a great deal of experience with regard to distance learning at both the upper secondary and university level. This has contributed in a significant manner to increase the level of education in Iceland. The introduction of distance learning as an option in the Greenlandic system would be an ideal venue for co-operation between the two countries.

4.9 Media, Culture and Arts

The state TV and radio broadcast in Greenlandic and Danish and a few local stations are run by entrepreneurs. Two newspapers are published on a weekly basis, Sermitsiaq and Atuagagdliutit (AG). Most media outlets also post daily news online.

Art and culture are vibrant. Inuit traditions are often intertwined with progressive contemporary art. Nuuk has an academy of arts and a national theater which is tied to drama studies. Women are very active in the creative fields. Recently, a young woman, Niviaq Korneliussen, broke onto the international stage with her debut novel. In recent years, other young Greenlandic authors have attracted attention and been nominated for the Nordic Council's Literature Prize. The Prize has yet to be awarded to a Greenlander. Pivinnguaq Mørch is another young interesting author who is shaking up the literary scene in Greenland. Last year (2019) his book of short stories and poems, Arpaatit qaortut (“The White Running Shoes”), was nominated for the prize.

Provocative visual artists have attracted attention for their strong political statements, often related to the independence struggle of the Greenlandic people. Female artists, such as Julia Haardenberg and Nanna Anike Nikolajsen, not to mention the performance artist Jessie Kleemann, belong to this group. Each of them builds on Greenland’s strong tradition of visual arts, which dates back to the first painter, Aron of Kangeq (1822–1869) and his incomparable drawings and watercolour pieces that have remained a well-kept secret from the world for far too long. Aron is one of the unsung and undiscovered treasures of Nordic art history.

123 Niviaq Korneliussen's book, HOMO Sapienne, published in 2014, was nominated for, among other things, the Nordic Council Literature Prize 2015 and the Politiken Literature Prize that same year.
Female classical musicians have also made their mark. A classical piece by one of them, Arnannquaq Gerstøm was premiered by the Iceland Symphony Orchestra at an event in the Harpa concert hall commemorating the 100th anniversary of the Icelandic Home Rule. Arnannquaq, in addition to being a remarkable composer, is also one of the leaders of Greenlandic business life and sits on the Greenlandic-Icelandic Chamber of Commerce. All types of music are presently flourishing in Greenland, in the field of pop music as well as classical music. The youth music scene is characterized by a myriad of bands and Greenland’s punk legends, Nanok, have cast the sounds of Greenland far and wide. Pétur Ásgeirsson, Ambassador and first Consul General of Iceland in Greenland, established an exchange program for music groups between Iceland and Greenland. Bands from Greenland have since to much acclaim performed on numerous occasions in the Iceland Airwaves music festival.

The unique musical art form, the drum dance, which East Greenlanders saved from extinction, is booming. The Icelandic chess society The Rook has invited some of Greenland’s most famous drum dancers to perform in Iceland. The world took note when the celebrated musician Björk Guðmundsdóttir brought with her a choir of Inuit girls from Greenland on one of her world tours. A high percentage of children and teenagers are involved in various forms of music. It is notable that Steen Lynge, who became Foreign Minister in May
2020, belonged to a teen band in his youth that broke through in Greenland, and later was part of a well-known, local rock band, apart from pioneering a celebrated record label in Nuuk.

Film-making in Greenland is also being lead by women. One of those women, Nina Paninnguaq Skydsbjerg Jacobsen, recently became the first Greenlander to win an award at an international film festival.124 Around 50 people are active in the field of film-making in Greenland125, which is a sign of how film-making has flourished in the country in recent years. Iceland’s consul general, Pétur Ásgeirsson, staged regular Icelandic film festivals in Nuuk. The result of that work is the bond which ties cinematic trailblazers in Greenland to their colleagues in Iceland. The Icelandic Parliament strengthened that bond deservedly, while approving the 2019 budget, when they extended the reimbursement for film and TV production costs to films shot in Greenland in collaboration with local filmmakers. As Greenland is outside the European Economic Area, a special parliamentary approval was needed to help this come to fruition. This marked a historic step towards the countries’ co-operation in the field of arts and culture, which has already launched international film projects in which Iceland and Greenland take centre stage.

### 4.10 Sports

Greenlanders are advancing in another arena of social infrastructure – sports. Their largest project underway is the construction of a multi-purpose national stadium in Nuuk, designed by a world-famous architect. Sports, especially the types that can be practiced indoors, have flourished in recent years, thanks to sports halls that have sprung up in several communities. Greenland boasts of successful national teams in table tennis, badminton, indoor football (futsal), handball and taekwondo. Asian martial arts are popular, although none supersedes taekwondo, which has been practiced in Greenland for 40 years. The current Minister of Finance, Vittus Qujaukitsoq, founded the world’s northernmost taekwondo club in Qaanaaq. Greenland is making a name for herself in the Inuit Games, which are held annually and draw in indigenous peoples from all over the Arctic region.

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124 See: [https://sermitsiaq.ag/groenlandsk-filproducer-vinder-pris-i-norge](https://sermitsiaq.ag/groenlandsk-filproducer-vinder-pris-i-norge)

Handball has developed rapidly thanks to the sports halls and same can be said about futsal, that with handball and soccer rank as Greenlands’ most popular sports. Professional handball players have played with major teams in Iceland and elsewhere in Europe. Greenland has even reached the finals of the North American handball tournament, cracked the list of the 20 best handball nations in the world and the 2019 North American tournament was held in Greenland. A fine women’s national team is also emerging in the sport.

It is estimated that 10% of the nation, especially the younger generations, regularly take part in football training. Like Icelanders back in the old days, Greenlanders struggle with a lack of covered pitches and the prolonged winters. In recent years, the government has been looking to set up synthetic turf pitches in most parts of the country, although it is technically very difficult to install them due to difficult terrain (drainage is a problem). Artificial grass has been installed in Nuuk, Paamiut, Qaqortoq, Tasiilaq, Nanortalik and Ittoqqortoormiit. The Greenland tournament is held annually and the country’s football season is the shortest in the world, at barely one month. B-67 from Nuuk is the Real Madrid of Greenland and has won the Greenland Championship 13 times. Greenland has produced several professional football players and a young female footballer was recently invited to take part in the U-16 women’s national team in Denmark. Greenland has not been admitted into UEFA, which requires nations to be independent but is presently working toward a FIFA membership. The national teams participate in the Island Games with significant success. Some of the Greenlandic footballers have gone professional.
and a few have chosen to play with the Danish national team. Jesper Grønkjær, born in Nuuk, became the player of the year in 2006 in Denmark. He has served as a regular in the Danish national team and played with renowned teams in Germany, the Netherlands and England, where he played for 4 years for Chelsea.

Greenlanders used to stage the Greenland Cup, which was a knock-out football contest for the men's teams of the three West Nordic nations. The first tournament was held in Sauðárkrókur, Iceland, in 1980 and Greenland's first international match was against the Faroe Islands. At the same tournament, the national teams of Iceland and Greenland went head to head for first time in a game that ended with a 3-0 victory for Iceland. Three years later, Iceland barely managed to beat Greenland 1-0. The Greenland Cup came to a close a few years later. Greenland, like the other West Nordic nations, has made great strides, and many feel it is high time to revive the West Nordic football tournament with the participation of national teams of both genders. Jakob Isbosethsen, Greenland’s Consul General in Iceland, has played as a goalkeeper in the national football team.

Chess is popular among children and teenagers in wake of the chess invasion spearheaded by the Icelandic chess club The Rook. The Icelandic club also initiated the establishment of the Greenland Chess Association. The largest municipality, Sermersooq, introduced chess as a subject in primary schools at the initiative of Justus Hansen, a member of parliament from Tasiilaq and an honorary member of The Rook.
5. **First-Class Fishing Industry**

Modern Greenland is far more dependent on the fishing industry than Iceland. In 2017 seafood accounted for 90% of Greenland's exports compared to 38% of Iceland's exports. Fishing and processing generate a quarter of the national income and more than 16% of the workforce is in the fishing industry. The ocean is therefore the backbone of Greenland's economy.

Over the last decade, the fishing industry has experienced an economic boom. The UN Intergovernmental Panel on Climate Change considers that there is a high probability of a significant increase in the catch of commercial species on the periphery of the Arctic Ocean as we move further into the 21st century and species continue to migrate northwards (see 1.3). There is every indication that the fishing industry in Greenland will continue to grow by leaps and bounds in the 21st century.

Greenlanders have taken advantage of the boom years and have made many significant and sensible investments. Their offshore fishing fleet underwent a complete renewal when six new high-tech vessels replaced older vessels. Their best fish processing plants are world-class, particularly the shrimp processing plants. Science based catch advice is a cornerstone and the country has developed a good capacity for fisheries research. A new marine research vessel will be ready by the start of 2021. In 2018, a new and transparent system for fishing quota fees was introduced, partly based on Icelandic expert advice. Through the transfer of harvest rights, a valuable rationalisation has been achieved in the industry, particularly with regard to shrimp fishing.

The most important market for Greenlandic seafood is within the European Union. East Asia is also a significant market area. China is thus the second largest export destination and buys seafood annually for DKK 1,300 million and Japan for DKK 800 million. By comparison, in the aftermath of Brexit, there is talk of a trade agreement with the United Kingdom, which would amount to DKK 6–700 million. Exports to the United States only number around DKK 100 million.

Greenland can reasonably be expected to gain a stronger foothold in the US fish market in the coming years: First, the new RAL and Eimskip shipping network will make it far easier to transport fish almost directly to the United States via Portland, Maine (transshipped in Reykjavik); Second, the Greenlandic fisheries giant, Royal Greenland, has set up a sales office in Boston; Third, the United States has now opened a consulate in Nuuk with the aim of furthering economic co-operation with Greenland.

It is also conceivable that in the next few years, Greenland may explore making an agreement with China on suspending customs duties on seafood.
products. Its competitors in the seafood markets; Iceland, Norway and the Faroe Islands; either have a free trade agreement with the People's Republic of China or are set to conclude such an agreement, or have clear plans for establishing a free trade agreement with China for seafood products. A similar agreement would strengthen Greenland's competitive position in the Chinese market considerably. Although it took the Norwegians a long time to reach the final stretch, the Icelandic experience indicates that it would not take too long to finalise such an agreement. Talks about this have begun within the Greenlandic administration\textsuperscript{126} and a consulate in Beijing would help clear the path. The Chinese have shown interest in economic co-operation with the West Nordic region.

When Greenland left the European Union in 1984 following a referendum (see 3.3), it signed an agreement with the EU regarding the leasing of fishing rights. It is also a prerequisite for the access and full exemption from duty on Greenlandic seafood exports to the EU’s internal markets. The agreement is renewed for 6 years at a time and was valued at €218 million for Greenlanders for the period of 2014–20. Greenland’s bargaining position for the next period has been bolstered thanks to significant increases in the price of fish, and the increase in Greenland’s fishing capacity following the renewal of the country’s fishing fleet. The original agreement was made when Greenland did not own the vessels to fully utilise its fish stocks.

The main risk for the industry is manifested in the large increase in fishing permits for the coastal fishing of cod and halibut, along with the readiness of local politicians to allocate fishing rights contrary to best advice in the name of regional policy. The Greenland halibut, which was Greenland’s golden goose for the longest time, shows signs of fatigue after excessive fishing. The cod fisheries are also well above the fishing limits established by marine scientists, but most stocks seem to be growing and the development of sea temperatures could boost the stocks and lead to smooth sailing for Greenland’s fishing industry. Fierce political clashes over quota regulations are frequent and governments save themselves at the eleventh hour by increasing quota allocations.\textsuperscript{127}


The primary opportunities for the industry lie in increased utilization and value creation by strengthening the blue bioeconomy. Greenland has already achieved good results through the improved utilisation of unprocessed materials. Polar Seafood has, in a short amount of time, increased the raw material utilisation of halibut from 50% to 90% and Royal Greenland produces meal for human consumption from shrimp shells at its factory in Ilulissat\textsuperscript{128}. There are great opportunities for increases in innovation, job creation and value for Greenland’s fishing industry. This can be seen if one looks at the number of jobs in Greenland’s bioeconomy as a whole, i.e. fisheries, agriculture and forestry as well as related industries. The Nordic Council of Ministers estimates that up to 35% of jobs in Greenland belong to the bioeconomy, while the average in the Nordic countries is around 17\%.\textsuperscript{129}

One of the defining characteristics of the Greenlandic fishing industry is that the culture of the old hunting society lives on in a different shape. The strong tradition for small fishing vessels and fishing cooperatives remains the lifeblood of the numerous small villages that dot the coastline. This type of fishing was developed when fishing began in earnest in the last decades of the 19th century, when Greenlanders began to build dinghies for fishing. Today, the fleet of small fishing vessels is the cultural cornerstone of those coastal villages and they drive considerable revenue in Greenland’s economy (see 5.2). Greenlanders have therefore succeeded particularly well in modernising their hunting industry, without having discarded the characteristics that make their traditional fishing community so unique.

5.1 Greenland’s Economic Upswing

The main commercial marine species are shrimp, Greenland halibut and cod. Shrimp is the most important, representing 41% of the value of exported seafood in 2018, with halibut at 27% and cod at 9\%.\textsuperscript{130} Pelagic species came in strong in the last decade, particularly mackerel and, to a lesser extent, blue whiting and herring. Lumpfish is a considerable supplement and, annually,
several thousand tonnes of redfish, deep-sea redfish, haddock, golden salmon, Arctic cod, snow crab, saithe and smelt are caught.

The center of the fishing industry is on the west coast, mainly from Nuuk and north to Disco Bay. South Greenland has been coming into its own after Brim hf. gained a foothold there, but in East Greenland, the small population, poverty and the ice drift from the Arctic Ocean hinder the growth of their fishing industry. Good fishing grounds can be found off the east coast, and vessels from other parts of Greenland come there to fish for Greenland halibut, cod, redfish and mackerel.

The economic upswing of the last decade was reflected in the high prices and large catches of all types of commercial stocks. Cod rejoined the fishing stocks with gusto, moving from near collapse to catches of over 40 thousand tonnes. In the last century, fishing in the area collapsed due to simultaneous disastrous environmental changes in the ocean and the relentless plunder of their fishing grounds by international fleets, in which Icelanders took an active part. There are two cod stocks in West Greenland and in recent years a new stock has started spawning off the coast of East Greenland at Kleine Bank.

The economic upswing expanded thanks to the migration of mackerel into Greenlandic jurisdiction and good catches of blue whiting and herring. In 2018, 62 thousand tonnes of mackerel, 24 thousand tonnes of herring were caught off the east coast and in the Banana Hole (i. Sildarsmugan) northeast of Iceland, and a similar amount of blue whiting off the Faroe Islands. Historically, 2018 was by far the best fishing year for pelagic species in Greenland and catches reached 100 thousand tonnes.

5.2 The Importance of Dinghy Fishing

The Greenlandic fleet reflects a remarkable dichotomy in their fisheries. The number of seafaring vessels is close to two thousand. The fleet consists of 6 new freezer trawlers, 26 vessels over 30 metres in length and 255 under 30 metres. In addition there are approximately 1,700 dinghies less than six metres fishing inshore many open and with an outboard motor. A noteworthy fact is that 1,100 dog sleds and snowmobiles have special sled licences for fishing. They are used for fishing through ice mainly on a line that is usually pulled by hand.

132 I. jullur, d. joller.
Quotas are issued “within the skerries” and “outside the skerries” and the line is drawn at 3 nautical miles. A modernised offshore fleet fishes in the outer zone but the dinghies and smaller vessels fish inshore. The coastal fishing is the backbone of communities in the primary fishing areas on the west coast, Disco Bay, Upernavik and Uummannaq. It is subsidised in various ways, such as paying far lower fishing quota fees for shrimp and Greenland halibut compared to the offshore fleet, and no fees for cod and other species. On the other hand, small boats are required to land 100% of the fish they catch locally, which aims to create employment on shore. Coastal fishing in 2018 caught more than half of the cod and shrimp landed and twice as much Greenland halibut as the offshore fleet. Small vessels and coastal fishing are therefore a far more important part of the Greenlandic economy than in Iceland.

The fisheries management system works well for the most important commercial species, shrimp, but not as well for the Greenland halibut. There, we see a combination of factors such as free fishing in demarcated areas and outside quota-set areas, and the near automatic granting of fishing permits for dinghies. The number of dinghy permits grew by 74% in the period of 2013-2018 and permits for small vessels with installed motors grew by 18%. Only one stock, which spawns at a depth of 1500 m in Davis Strait, supports all Greenland halibut fishing on the west coast. Unsustainable fishing of the Greenland halibut stock is reflected in the fact that the average fish length has decreased in the above-mentioned areas, with the greatest and most rapid decline seen in Disco Bay over the past years. There is every indication that Greenlanders are pushing the limit dangerously with regard to Greenland halibut and the fishing in Disco Bay and Baffin Bay are borderline sustainable.
The shortcomings of the system should be remedied by a review of the fisheries management system, which is set to be completed in 2020. The group working on new proposals includes the Icelandic Hilmar Ögmundsson, an economist and advisor to the Greenlandic Ministry of Finance. He led efforts to design a new system of fishing quota fees, which was introduced at the beginning of 2018. Gunnar H. Haraldsson, a former economic adviser to the Icelandic government and former director of the University of Iceland’s Institute of Economics, was also involved in the process. A good overview of how fishing fees have developed for Greenland and the Greenlandic fishing industry can be found in articles and interviews with the Icelandic Hilmar Ögmundsson.140

137 See: http://www.natur.gl/fileadmin/user_files/Dokumenter/Raadgivning/Fisk/Sammendrag__DK__.af_fiskeri%26Asgivning_for_2020__ICES_og_NAFO__.finales_HS.pdf?fclid=IwAR0O2jIIsxe3Kc6TTC9u8lyL2Q0rWQ0k10MP-9ipCaj0upyoofMP141
139 Sermentsiaq. 2019. Kvoteforhøjelse kan blive dyrt for fiskerne. https://sermitsiaq.ag/node/216987?fclid=IwAR3_oARNinwlyJnSQQKQoALjgqYELw8c8lIswi2OQp9PKIEFDFbo0uKk
5.3 A New and Transparent System of Fishing Fees

A new arrangement for fishing fees was implemented at the start of 2018. The Greenlandic government based its approach on the new system being transparent and homogeneous and taking into account the level of resource rent. It was intended to ensure that the fishing companies had the leeway to return profits and ensure funding for new investments. The resource rent was defined as the EBITDA (excluding paid fishing fees) less the required rate of return on investments and calculated depreciation. It was based on a 10% return on investment (value of the vessel) and a 6% depreciation.

The result was a fishing fee structure that, based on the type of fishing vessel, is either a fixed percentage of the landed catch value or a variable percentage of the export value for each vessel. The ratio is determined by the average price of each type without any discount. The ratio is variable by stock and whether the catch is caught offshore or inshore. All species are subject to the fee, nine in all. Processing plants pay the fishing companies for the catch but withhold the fishing fee and pay directly to the state.

The new system created ISK 7.3 billion in returns for the Greenlandic state in 2018, which was a 55% increase from the previous year. It should be noted that the system was implemented without significant conflict and the fishing industry continues to flourish.

The Greenlandic system would seem to be less complicated and more transparent than the Icelandic system. For Icelanders, it would be worthwhile to compare the two systems and see if the Greenlandic system is better suited to Icelandic reality than Iceland’s current system.
5.4 The Giants of Greenland

Two companies, Royal Greenland and Polar Seafood, loom over Greenland’s fishing industry. They are on a par with the largest fishing companies in Iceland and it can be constituted that they are at the forefront on the world stage. Both own new offshore vessels with first-class fishing and fish processing technology and operate high-tech shrimp processing plants.

Royal Greenland is the largest producer of coldwater shrimp in the world. It is Greenland’s largest company, with 1,487 people working within Greenland\(^{141}\) and close to thousand abroad. It runs 33 out of 50 processing and reception facilities. Some are very small, as few as 1-2 workers in small villages that receive and freeze catches frequently caught on sleds through ice. Such micro facilities sustain villages and are an example of how the large state-owned companies play a social role in the villages. Some of the processing plants are large and technologically advanced where work is done in shifts around the clock. Royal Greenland is 100% state-owned.

Polar Seafood is by far the largest private company in the country with a staff of 1,401 people in 2020 of which more than 300 are foreign staff abroad.

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5.5 Iceland Rides the Wave

The Icelandic company Brim hf purchased all the processing on land and a third of the fishing operation of Arctic Prime Fisheries (APF) which is the largest fishing company in South Greenland. Foreign companies are not permitted to own a larger stake in a fishing company in Greenland. APF employs about 150 people and received landings from almost 170 small vessels in 2018.

In Narsaq, it operates a 10-person processing facility, which is also the only processing plant in town. The company recently bought a fish-freezing plant in Qaqortoq in partnership with Faroese investors, which is estimated to employ 30 people. However, the most extensive activity is in Nanortalik, where 60 people process high-quality salted fish for sale in Spain. When Brim entered the scene, the last processing in Nanortalik had closed and unemployment rate was high. During a visit to South Greenland, it was apparent that the locals, both the general public and the leaders of the Kujalleq municipality, regard the Icelanders as having saved the fishing industry in the region.

APF also operates the only fish processing plant in Kuummiut on the east coast, where 92 boats from Tasiilaq and five villages in the area landed in 2019. The company encouraged and supported small boat owners to start fishing by offering favorable loans for the purchase of equipment, especially winches. This being the poorest area of Greenland, the company's fish processing is of vital importance, even if it hardly constitutes a rich vein of income for the owners.

The main difficulties in operation is the dearth of a stable and trained workforce. The company has therefore instituted a training program, where younger employees are sent to take courses at the Icelandic College of Fisheries in Grindavik and receive further training at fish processing plants in Iceland. Three young Greenlanders who trained there now run the company's processing plant in Nanortalik in South Greenland. AFP has also supported young Greenlanders to study for captaincy.

The company paid DKK 89 million in salaries in 2019, close to DKK 43 million went into paying duties and public fees, including DKK 12.5 million in fishing quota fees. The company broke new ground by becoming the first company in Greenland's fishing industry to introduce a fixed monthly salary for employees instead of hourly wages.
Two other Icelandic companies have invested in the fishing industry in Greenland. Sildarvinnslan in Neskaupstaður owns a third of the company Polar Pelagic, which operates the pelagic trawler Polar Amaroq. Ísfélag Vestmannaeyja also owns a third of the pelagic company Pelagic Greenland, which operates two vessels, with Royal Greenland owning the remaining share.

Greenlanders lacked pelagic vessels when the mackerel began to enter Greenlandic jurisdiction in significant numbers back in 2013. This was resolved by foreign chartered vessels and during the period of 2012–19, a total of 18 vessels were chartered from Iceland.

5.6 Recommendations:

1. New comprehensive agreement on fisheries
No comprehensive agreement on fisheries currently exists between Iceland and Greenland. However, various agreements on specific aspects have been made.

Bilateral agreements on redfish and Greenland halibut both expired in 2019. Greenlanders have not wanted to renew agreements unamended. The countries have a tripartite capelin agreement with Norway. It was recently renewed and, given that capelin is now found to a much greater extent than before off the coast of East Greenland, Greenland's share was increased from 11 to 15%.

There is a bilateral agreement on the access Greenlandic vessels are given in Iceland for the landing of herring and mackerel. The agreement limits the landings of charter vessels from Greenlandic fishing companies, which are an important factor in Greenland’s utilisation of pelagic stocks. An old treaty from 1998, which draws its name from Ilulissat, is a loose framework for co-operation between the two countries. A joint committee has also been meeting annually since 2013 to discuss the division of straddling fish stocks. Judging by the committee’s minutes, other issues are not on its agenda. It is the only formal coordination between the nations on fisheries.

There is no agreement on deepwater redfish, which, however, accounts for one-fifth of redfish catches. Deepwater redfish is overfished, and the stocks are dwindling. It is important that it be defined as a straddling stock and protected against overfishing through an agreement on management of the fisheries. Historical data shows, without a doubt, that cod has migrated between the countries Exclusive Economic Zones. However, there is a lack of new research to assess the current extent and nature of that migration. For
five years, Greenland has been requesting an agreement on cod with little response from Iceland.

In addition to the above stocks, there is an underutilised bounty of mesopelagic stocks, the so-called “mid-ocean blanket” in enormous quantities that covers a large area of the ocean between the two countries. There is little doubt that these stocks will be exploited in the future. Additionally, Icelanders will sooner or later have to confront the rapid climate change that the United Nations’ Intergovernmental Panel on Climate Change (IPCC) believes will shift the stocks further north as the century progresses. Mackerel is an illuminating example of how stocks have migrated due to climate change. Capelin is another stock that has already altered its spawning migration patterns and has moved to East Greenland to a significant degree. The IPCC predicts that, due to global warming, the capelin will start spawning in the Arctic Ocean as the century progresses. The Icelandic government needs to be forward-looking and begin preparations in a timely fashion for the possible migration of other commercial stocks due to global warming.

In light of the above, it is therefore high-time to prepare a single comprehensive agreement on fisheries that encompasses all species and every facet of the co-operation between Greenland and Iceland on fishing and formalises regular communication between ministries and agencies (cf. proposals in Section 8.1 on co-operation between line ministries).

**Recommendation no. 1:**

- A comprehensive fisheries agreement should be negotiated between Iceland and Greenland covering straddling stocks, including deep-sea redfish, other agreements that are listed above, co-operation between ministers, ministries and fishery institutions and agencies. The agreement should also cover actions proposed in Recommendations below.

2. **Co-operation between research institutions**

The Icelandic Marine and Freshwater Research Institute (MFRI) manned a capelin expedition in 2018 and 2019, on Greenland’s behalf. The Institute has also served in an advisory capacity regarding the processing of acoustical data and the age analysis of otoliths. Both countries are participating in international research on the identification of substocks of Greenland halibut.

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142 The mesopelagic zone of the ocean lies between the epipelagic and the bathypelagic zones at a depth between 200 to 1000 meters below the ocean surface. Large numbers and mass of so-called mesopelagic species live in this pelagic zone.
No other current research collaboration can be found between MFRI and its sister institute in Nuuk, Pinngortitaleriffik.

Apart from annual meetings, which exclusively focus on the renewal of agreements for straddling stocks, there is no formal working relationship between MFRI and Pinngortitaleriffik. There is no systematic channel for a bilateral co-operation. Directors and key experts have not made reciprocal working visits between institutions. The Directorate of Fisheries, on the other hand, has an agreement with its sister agency in Greenland from the fall of 2019, regarding the dissemination of information on vessels and fishing and on the training of staff.

Both institutions have shown a willingness to establish co-operation and therefore there is a need to establish a regular channel, as argued in Section 8.1. On behalf of Pinngortitaleriffik, this willingness was made clear at a meeting in Nuuk, but also at a meeting with Vivian Motzfeldt, the leader of Inatsisartut, the Greenlandic Parliament, who placed a special emphasis on closer co-operation with the MRFI. Greenlanders have stated that, in their experience, it can be difficult to seek data from the sister institution in Iceland. Pinngortitaleriffik considers it expedient to see equal sharing of data in some fields, and that both countries stand to benefit from a richer and more structured bilateral co-operation.

**In a meeting with Pinngortitaleriffik the following views were expressed:**

- It would be expedient to share information on cod, including data from the last century, as Greenlandic data is not as extensive and their timeline far shorter.

- Due to analyses of the origin of cod in Greenland waters and the proportion of Icelandic cod, it would be expedient to be given access to historical biopsies, otoliths and scales, on the basis of which new genetic technology can be used to determine the extent to which Icelandic cod migrates between the countries.

- There was real interest in strengthening research ties and co-operation on a practical basis with Iceland on cod by East Greenland, in addition to other commercial species.

- It would be better to resolve disagreements on the basis of facts that emerge through the collaboration of scientists than through politicians, such as on the migration of cod from Iceland to East Greenland.
**Recommendation no. 2**

- Consultation meetings on fisheries and research, at minimum once a year, should be formalised between the directors and main experts of Pinngortitaleriffik and the Icelandic Marine and Freshwater Research Institute (Hafrannsóknastofnun). Ministers should also ensure that reciprocal working visits of specialists in various fields of fisheries be established between the institutes.

- A channel should be created to share on a regular basis new, relevant data from fisheries and marine research. Furthermore, historical data on catches off Greenland should be made available for joint research projects, cf. the proposal on joint research on cod stocks.

- Temporary exchange of experts, from research and administration, should be enabled to strengthen the relationship and communication of information and new knowledge between Pinngortitaleriffik and Hafrannsóknastofnun.

- Icelanders should invite a promising Greenlandic scientist to complete a doctoral project in Iceland, to be carried out under the guidance of relevant experts.  

3. Joint cod research

For five years, Greenlanders have been pursuing a special agreement on cod fishing between the countries, arguing that Icelandic cod is migrating to Greenland to grow before returning to Iceland for spawning and is then counted as part of Icelandic catches when caught. This is well known with regard to juvenile drift from Iceland, but Greenlanders also believe that adult cod which has finished spawning moves to growing areas by East Greenland. These arguments are familiar to Icelanders as they have used those same arguments themselves with regard to the mackerel dispute. A stock that settles annually within the jurisdiction and lives off resources within that jurisdiction creates for that country the rights of a coastal state and becomes the subject of agreements on fishing.

Cod in Greenland waters is biologically complex and composed of at least four genetically differentiated stocks. Two are of West Greenlandic origin, one is of

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143 There are well-known precedents for strengthening ties between countries in marine science by inviting a student to study for a doctorate at a reputable research institute. At the conclusion of the Cod Wars, the British government offered a competitive grant for Icelanders who wished to study for a doctorate in marine sciences.
The catch quota and catch limit in Greenland is not issued per vessel but to fishing companies and associated areas. Catch quotas for vessels over 6 metres is transferable. Deep-sea fishing of species other than shrimp, is allocated annually as a fixed catch limit. For the coastal fishing of cod, crab, lumpfish and of halibut from dinghies, the fishing has to be licensed and is subject to a maximum catch limit. There is a per-species cap on company quota permits. For the deep-sea fishing of shrimp, the maximum is one third, for coastal shrimp fishing it is 15% and 5% for the coastal fishing of halibut with boats over 6 meters.

East Greenlandic origin and spawns on Kleine Bank, and finally we have a cod of Icelandic origin. One of the two West Greenlandic stocks is an in-shore stock, which is most likely divided into smaller, genetically differentiated stocks.

There is no dispute in the scientific community that historically cod eggs and larvae have drifted to Greenland, especially when large cohorts are found near Iceland. Juvenile cod will often migrate south of Cape Farewell (d Kap Farvel, g. Nunap Isua) and north along the west coast. In Greenland, they appeared in the last century as adult cod in catch, not just during major fishing years, but in most cohorts. Tagging from the last century unequivocally show that the cod that migrated to Iceland as adults came, not only from East Greenland, but also from fishing grounds on the west coast, albeit to a lesser extent. 144


JUVENILE DRIFT AND CHAMPAGNE

"In some years, sea mass flows from spawning grounds on the south-west coast of Iceland over to Greenland. From experiments on drifting made with bottles, one of the bottles was put to sea in February 1929 and recovered 133 days later in Southwest Greenland (Tåning, 1931 a). These experiments were done in style: Usually, people would use lemonade or ginger ale bottles, but Tåning used champagne bottles!"

Historically, Icelandic cod seems to have periodically contributed a great deal to cod fishing in Greenland. From the very beginning of large-scale fishing on the west coast, after the middle of the last century, Icelandic cod accounted for almost 30% of the catch. By the end of that period, just before the catch dropped abruptly, cod of Icelandic origin made up the bulk of the catch, or 92% of the 400,000 tonnes of annual catch. By that point, the West Greenlandic stocks had plummeted due to overfishing and worsening environmental conditions in the ocean. Therefore, historically, the feeding grounds in Greenland have been important for the Icelandic cod stocks when the cohorts were large. The migration of adult Icelandic cod from the feeding grounds in Greenland, which Icelandic fisheries scientists called the “Greenland migrations”, regularly ended up supporting upswings in cod fishing in Iceland.

The current cod fishery in East Greenland did not begin until 2008, when a five thousand tonne quota was allocated on a trial basis, but it has developed into an important part of the Greenlandic fishing industry. Fishermen from the Westfjords and Snæfellsnes in Iceland have sometimes traced good catches during the spring months off the coast of East Greenland to a feeding migration of fish from Icelandic waters at the end of spawning, e.g. in 2003, 2007 and 2010. The same views were expressed by Greenlandic fishermen.
and shipowners to the representatives of the Greenland Committee. Tagging during the last century did not show, however, that adult cod tagged in Icelandic waters migrated to Greenland on a large scale.\textsuperscript{146}

Pinngortitaleriffik’s recent catch advice for 2020, states that the agency believes that juvenile cod from Iceland is still using areas by East Greenland to grow.\textsuperscript{148} Image on page 108 shows the distribution of trawls made by Icelandic vessels at the midline and on Dohrnbank, which indicates good fishing in those areas. At a meeting of the straddling stock committee for the countries in 2019, it was clear that both Icelandic and Greenlandic experts agree that cod in Iceland and East Greenland has a strong connection through juvenile drift, feeding and spawning migrations.\textsuperscript{149} Greenland’s request for a special cod fishing agreement is based on this.

For Icelanders, it is well worth considering such an agreement, especially in light of the fact that as the Arctic warms up, which we saw happen in 1930–1965, cod from Icelandic waters seem to utilise the warming seas by Green-

\textbf{“THE FISHERMAN’S KNOWLEDGE”}

“… there is a lot of movement of the fish stocks between jurisdictions… much more than people have wanted to admit until now. With warming of the oceans and changes to ocean currents, it’s to be expected that the variety of stocks and the transfer of fishing grounds in Iceland to other areas, such as over by East Greenland, will only increase in the coming years… as cod is increasingly moving to East Greenland … This is in accordance with what people have called the fisherman’s science …”


\textsuperscript{146} Schopka, S.A. 1993. The Greenland cod (Gadus morhua) at Iceland 1941–1990 and their impact on assessments.

\textsuperscript{147} Hafrannsóknastofnun (the Icelandic Marine and Freshwater Research Institute). 2019. Distribution of fishing in Icelandic waters in 2018. https://veidar.hafogvatn.is/

\textsuperscript{148} Source: http://www.naturgl/fileadmin/user_files/Dokumenter/Raadgivning/Fisk/Sammendrag__DK__af_fisker%C3%A5dgivning_for_2020___ICES Og_NAFO___finale_HS.pdf?fbclid=IwAR0Zijf5sxeaZKcI6TcOBul6yLQ3o4rWWgkI0MP-9jipCaj0upyoFMP14i

\textsuperscript{149} Agreed records of the Annual Meeting of the Joint Icelandic Fisheries Commission, Reykjavik 8–9 April 2019.
Iceland to grow, both off the west and east coast. Every prediction about warming has been realised so far and predictions for the 21st century indicate that such a warm period will be permanent and cod will thrive in areas further north than before. As global warming intensifies in the Arctic, it may be important for the Icelandic fishing industry to have an agreement on fishing that takes into account, among other things, the origin of cod caught off the coast of Greenland.

Of the cod stocks the one off East Greenland is the least researched and in 2018, for example, no such research was undertaken. That same year, ICES experts recommended to increase research and placed a special emphasis on the tagging of cod by Iceland. Joint research into the origin and migration of cod within Greenland’s feeding areas, especially on the east side, would serve to dispel misunderstandings and prevent potential tensions between Greenland and Iceland over cod.

**Recommendation no. 3:**

- Iceland and Greenland should organise joint research on cod stocks off East Greenland to assess migration, origin, and proportion of different stocks, including by tagging in Icelandic waters.

- Iceland should initiate a joint project on cod stocks in Greenlandic waters, based on MFRI’s historical samples from the last century and new research on tagging and genetics.

- The result of the above should be the basis for further co-operation, including in connection with fishing.

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151 The International Council for the Exploration of the Sea was founded in 1902 and remains the oldest international marine science collaboration in the world. Iceland became a full member in 1938 but had been part of the council from its foundation as a Danish dependency.
4. Business co-operation
Since 2012, Icelandic businesses have increasingly been seeking out co-operation with Greenland’s fishing industry. Icelanders own a one third share in two companies that are mainly fishing for mackerel. Greenlanders have also met the shortage of vessels for pelagic fishing by leasing Icelandic vessels and have thus been able to utilise a significant portion of their fishing rights for such species. Brims’ hf. sister company, Arctic Prime Fisheries, is the backbone of the fishing industry in the southern part of Greenland and it also operates the only fish processing plant in East Greenland. Hundreds of Greenlanders therefore derive their income in part or in full, from the work of Icelanders in Greenland’s fishing industry.

During visits to Greenland, while preparing this report, it became clear that the locals view Icelandic participation positively and encouraged increased investment and participation of Icelanders in the industry. During meetings with leaders in the Icelandic fishing industry, it was stated that the newly-passed law facilitating the transfer of vessels between jurisdictions could clear the way for co-operation, but it was also noted that there is a need to examine the taxation of fishermen that work in Greenland for most of the year and in Iceland for the remainder of the year.

Recommendation no. 4:
• The Minister for Foreign Affairs should appoint a task force, including representatives of Fisheries Iceland, to examine ways to increase co-operation between Greenlandic and Icelandic businesses in the fisheries related sectors. This task force would also propose how authorities might facilitate the participation of Icelandic fishermen and companies in the development of Greenland’s fishing industry.
5. Training in fishing technology

In conversations with the leaders of the fishing industry in Nuuk and South Greenland, it was stated that the Greenlandic fishing industry lacks staff with basic training for the complex mechanical equipment at sea and on land, on handling of fish and quality management, on the making and mending of fishing nets and with line fishing technology. Arctic Prime Fisheries, Brims' sister company, has sent young staff on an eight-week training course at the Icelandic College of Fisheries (Fishtækniskólinn) in Grindavík. Representatives of the company said that it had been a great success and considered it important for the fishing industry in Greenland to have the opportunity to send regularly new and promising employees for training of this kind.

The principal of the Icelandic College of Fisheries, Ólafur Jón Arnbjörnsson, said that three Greenlandic groups had attended training at the school and that the companies paid for the enrolment in those courses. He did not foresee any problems with designing courses that were tailored to the needs of Greenlanders. The main thing would be to establish a strong relationship with the respective companies. The first half of those courses could be staged in Greenland and the second half in Grindavík. After that, students would go on to take internships at leading Icelandic companies. The College of Fisheries has already signed a contract with leading companies in every field of fish processing. Students would also have the option of studying for two years at the College of Fisheries, with advanced courses in specialized subjects, including Marel Technology, but Marel technicians are in demand for high-tech fish processing. Greenland's system for study grants has some flexibility for including such studies.

The College of Fisheries is part of a co-operation network of fisheries training programs across the Nordic countries. Within that network, there has been a great deal of interest in establishing a Nordic center of excellence in fisheries technology that could meet the combined needs of the countries in this sector. This could cut costs by centralising the core studies in one location, but distributing other studies, which would be tailored for specific areas. Ólafur Jón said that it would be ideal to locate the portion of the studies that related to coastal fishing in Greenland, where such fishing was a vital part of the local fishing industry. There is a growing need for similar technical training in key areas of the fishing industry in Greenland, the Faroe Islands, Iceland and northern Norway. A centre of excellence of this kind is well-suited to the core objectives of Nord Atlantens Udviklings Strategi (The Northern-Atlantic Development Strategy), NAUST, which is implemented by NORA, the cooperative framework between Greenland, Iceland, the Faroe Islands and the coastal regions of Norway under the auspices of the Nordic Council of Ministers.
Recommendation no. 5

- The Minister of Foreign Affairs should, in consultation with Greenlanders, entrust the Icelandic College of Fisheries in Grindavík with the task of organising courses aimed at increasing the skills of employees in the sector in accordance with the needs of high-tech fishing and fish processing, longline fishing and traditional coastal fishing with an emphasis on quality management. It will assume that the companies will fund the training of their employees.

- The Foreign Ministers of the two countries should request framework proposals for a Nordic centre of excellence in the field of fisheries technology from the cooperative network of fisheries training programs in the West Nordic region. Subsequently, they should pursue consensus among NORA's partner countries on planning for such a center.

6. Greenlandic ocean cluster

The Greenlandic government has expressed ambitious goals about igniting a start-up scene in a similar way as we’ve seen in Iceland over the last 15 years. Substantial sums are available in the form of competitive subsidies and various other grants and the Greenlandic start-up environment has changed considerably for the better. However, very few start-ups are created. In conversations, it emerged that Greenlanders consider it more advisable to seek enthusiasm and experience from a small community with a strong background in ocean start-up ventures, than to a far larger nation such as Denmark.

The result of the work done at the Icelandic Ocean Cluster and its synchronisation with the Icelandic fishing industry and government with regard to high technology and start-up initiatives, was broached multiple times in meetings with the Greenland Committee in Nuuk. Municipalities, Greenlandic consultants and managers in the tourism and fishing sectors made it clear that they were requesting that the Icelandic government would facilitate the dissemination of Icelandic start-up experience to Greenlanders. The entrepreneurs behind the Icelandic Ocean Cluster were specially named in that regard.

Recommendation no. 6

- The Minister for Foreign Affairs should in co-operation with the entrepreneurs and leaders of the Icelandic Ocean Cluster and Fisheries Iceland seek proposals on how Icelanders may best disseminate positive experiences on the cultivation of start-ups within the fisheries sector. On the basis of these proposals, the Minister of Foreign Affairs should explore the possibility of co-operation between the Ocean Cluster and Greenlandic parties, such as the Greenland Growth Fund (Grönlands Vækstfond), on how to disseminate Iceland's experience, with the aim of strengthening value-adding start-up businesses within Greenland's fisheries sector.

7. Processing of pelagic catches

There is no land-based processing of pelagic catches in Greenland and catch not processed at sea is sold for processing in Iceland or the Faroe Islands. The Greenlandic government is interested in exploring the possibility of establishing land-based pelagic processing. The Tasiilaq area is best situated with regard to fishing areas where pelagic species are caught in Greenlandic waters. There is a lack of employment opportunities in the area and there might be an opportunity to use temporary fiscal incentive to promote land based processing.

Recommendation no. 7

- The Icelandic government should offer to share experiences and expertise to assess the potential for land-based processing of pelagic catches in Greenland. It should be explored whether temporary fiscal incentives, such as harvest rights, and financial subsidies for facilities and development can be used to attract core investors with experience in the industry from the pool of local talent and Icelanders.
6. Tourism Prepares for Take-Off

6.1 Introduction

A watershed is expected in tourism in Greenland once the global travel industry has recovered from the Covid-19 pandemic. This is mainly due to the three new international airports soon to be constructed in Nuuk, Illulisat and Qaqortoq. When completed in 2023, Greenland will be able to receive international jets flying in tourists directly from Europe and North America. The country has abundance of natural wonders to support a vibrant tourism industry. In the wake of the pandemic, it can also be anticipated that sparsely populated countries with wilderness solitude and success in tackling Covid-19 will be preferred destinations. This will be important in terms of the relative increase in tourism in countries such as Greenland, where tourists are still very few. It therefore is not unlikely that Greenlanders will reach the set goal that by 2030, the country will be visited annually by 100,000 air borne passengers.

The stagnant growth in tourism by air is mostly due to poor flight connections. This will radically change with the new international airports. When operative, Greenland’s most popular destinations will be ready to receive major airlines flying in tourists with large international jets. At the same time, the country is rapidly moving into the global spotlight. This is mainly due to the central role Greenland has assumed in the growing global awareness of climate change. Also, the now famous statement of US President Trump in August 2019 literally catapulted the country onto the front pages of the media all around the world. In the coming years Greenland has every potential to become one of the hubs for sustainable tourism in the Arctic.

Airbus jet from Air Greenland on the Kangerlussuaq runway.
Image: Victor Morazov / Shutterstock.com
The government has boldly taken four major steps to prepare the tourism industry for take-off and join the leading sectors of the economy. The first step was the brave and historic decision to build three new international airports to be completed in 2023. The second was a take-over of all shares owned by the State of Denmark and SAS in Air Greenland. The Greenlandic state now owns Air Greenland 100% and has a full control over the most important air transport route into the country. The third step was a controversial decision to significantly reduce docking fees for cruisers. It paid off and resulted in a very steep increase in the number of cruising passengers. The fourth step was a strategic decision to brand and market Greenland as a destination for adventure tourism\(^{153, 154}\). The fifth step, not yet decided, but unavoidable if Greenland is to succeed in securing significant increase in tourist volume by air, is an increased flexibility in aviation so as to attract more foreign airlines and increase flight frequency. At the same time it will be necessary to reduce landing fees and passenger taxes.

\(^{153}\) It is difficult to establish a concise definition of “adventure tourism”, but according to ATTA (Adventure Travel Trade Association) travel of this kind involves nature activities, often outside the comfort zone, requiring some physical exertion, and preferably off the beaten path. An important part is getting to know and forming a connection with the culture of the area.

Recently, 800 people\textsuperscript{155} were employed in tourism in Greenland. In 2019, a total of 133,622 visitors arrived.\textsuperscript{156} The number of air passengers was somewhat stagnant until 2019 when a steep increase was experienced and the number of airborne tourists rose by one-third, totalling 85,705. Interestingly, prior to 2019 airborne tourists were similar to Iceland almost 50 years ago when 59,418 foreign tourists arrived in 1971, thereof only 1,301 by ships.\textsuperscript{157}

Significant reduction of docking fees yielded 90\% increase in cruise visits in 2015-18. The number of shipbourne tourists rose accordingly and was 46,333 in 2019. Greenland's tourism season is very short, from the end of June to September, with a sharp peek from middle of July to August.

The Danish make up the most valuable tourist segment and a third of them arrive by air. However, the Danish share of paid overnight stays is outsized as they were responsible for 55\% of the 133,711 overnight stays. Other nationalities were Germans, Americans and the French. Their combined numbers were,
Greenland and Iceland in the New Arctic

However, smaller than that of the Danes. Icelanders only purchased 2.5% of the overnight stays in the same year.

<table>
<thead>
<tr>
<th>Country</th>
<th>Quantity</th>
<th>Proportion</th>
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</thead>
<tbody>
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<tr>
<td>Germany</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>133,711</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Number of overnight stays by nationality in 2019. Source: Grønlands Statistik

Nonetheless, Iceland has great importance for Greenlandic tourism. Nearly third of all air passengers to Greenland fly through Iceland, or 18,488 in 2018. Iceland is accordingly an important gateway for tourists to Greenland. From Iceland, the majority of passengers travel from Reykjavík or 12,361 in 2018. Departures from Keflavik the same year were 5,328 and 795 from Akureyri. From Reykjavík, the vast majority, 5,143, went on day trips to Kulusuk on the east coast.

A VISION FOR THE FUTURE OF GREENLAND’S TOURISM INDUSTRY 2020-2023

We promote economic growth, create jobs and ensure the sustainable development of society by making Greenland an internationally renowned and sought-after destination for experience-based and adventure tourism with an emphasis on quality, safety and sustainability. The goals of the policy are fourfold:

1. Increase demand for experience-based and adventure tourism
2. Tourism all year round for all of Greenland
3. Communicating knowledge and increasing skills
4. Creating a positive operational environment for the sector
Three airlines operate scheduled flights between the two countries. Air Iceland Connect (AIC), which merged with the parent company, Icelandair, at the beginning of 2020, has departed from Reykjavík to four locations in Greenland, and Air Greenland competes with Icelandair on three routes from Keflavík (Nuuk, Ilulissat, Narsarsuaq). Norlandair runs scheduled flights from Akureyri to Scoresby Sound far north of the Arctic Circle and is a real lifeline for the 358 villagers in Ittoqqortoormiit.

### Flights to and from Greenland 2018

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<th>Arrivals</th>
<th>Departures</th>
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<td>Kulusuk</td>
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<td>36,242</td>
</tr>
</tbody>
</table>

*Flights to and from Greenland 2018. Akureyri, Keflavík and Reykjavík as destinations. Source: Isavia.*
Two international airports are in Greenland, both built during the Second World War. In addition to the one in Narsarsuaq, another airport is at the foot of the glacier in Central Greenland, in Kangerlussuaq. It is Greenland's main international airport and serves as a hub for travels to Copenhagen but also to other domestic destinations.

Interestingly, AlC/Icelandair has maintained scheduled flights to more locations in Greenland than in Iceland. This highlights how important the Greenland flights are for the Icelandic domestic flight market. In addition, Icelandair transports the lions share of tourists using Iceland as a stepping stone on visits to Greenland. In fact, Greenland is a pillar for the Icelandic aviation industry, albeit rarely acknowledged.

### 6.3 Key Institutions

Three key entities in Greenland, all owned by the state, will shape tourism in the near future. An understanding of them is important for analysis of how tourism in Greenland is likely to develop and where opportunities exist to increase co-operation between the tourism industries in the countries.

**Visit Greenland** is responsible for promotion and marketing in Greenland and has defined the main target group as tourists in search of experience and adventure. **Air Greenland** transports 2/3 of tourists who come by air and takes care of their travel domestically, either by planes or helicopters, in some cases boats. A new state company, **Kallaalit Airports**, will be responsible for the operation of the new airports and terminals and also their marketing to attract new foreign airlines to Greenland.

In addition, **Campus Kujalleq**, a deep rooted trade school in Qaqortoq, will also play an important role in Greenland’s tourism. It is the only school to offer studies in tourism, including Arctic tourism. The government will soon have to boost up education in tourism. In 2030 the country is going to need at least twice as many trained Arctic guides as today if plans succeed. In Campus Kujalleq Greenland has a splendid seed for the future.

1. **Visit Greenland**

Visit Greenland is a government entity, a kind of a mix of the Icelandic Tourist Board and Promote Iceland. It has a staff of 8 and also maintains an office of 4 in Copenhagen due to the importance of the Danish market. Visit Greenland is responsible for shaping and developing the image of Greenland and for maintaining statistics for the sector. It issues the state's tourism policy. However, product development and innovation is delegated to tourism
representatives and business bureaus of the five municipalities. An Icelandic veteran of aviation to Greenland, Árni Gunnarsson, sits on its board. CEO Julia Pars stated that Visit Greenland’s tourism policy should be sustainable and responsible, guided by the United Nations’ global goals. Practical advice and models for implementation of such policy has been accrued from visits to Iceland, both from municipalities and businesses.

Like Iceland, Visit Greenland mostly promotes Greenland through social networking sites rather than expensive advertising and campaigns. Websites unique to Greenland such as film.gl and greenlandmusic.com garner a great deal of spontaneous attention. Success is reflected by Visit Greenland now being among the most visited travel sites online. As a result, Greenland is gradually emerging on the travel media hot-lists of highly recommended destinations.

Visit Greenland’s official goals are to increase Greenland’s visibility, extend the tourism season currently limited to a narrow peak in high summer, maintaining the country’s share of the valuable Danish tourism market, increase visits of cruisers and also to attract an increasing share of the tourist volume to Iceland to add Greenland as a destination. In the new Tourism Policy for 2020–2023 adventure tourism is defined as a target sector for the future. The reasoning is threefold: Such travelers are of most value to the economy, are well suited to the small size of the nation and are interested in the traditional culture. By 2025 Visit Greenland aims to have established Greenland as a world-renowned adventure travel destination and have established tourism as one of the leading sectors of Greenland’s economy. The effects of the pandemic on the global scene may, however, delay the latter.

Visit Greenland also cooperates with Greenland Venture, a facilitator for start-ups, to create a fertile environment for entrepreneurship and start-ups in tourism. An interesting idea being explored involves concessions to businesses in certain fields within demarcated areas. By this entrepreneurs and small operators are allowed space to build and consolidate their business whilst protected from fierce competition for the very few tourists arriving in Greenland as yet. Examples of such designated fields are helicopter skiing, lodging, angling, and musk ox and reindeer hunting. Visit Greenland’s projections for annual growth in tourism is a modest 5%.

See: http://tourismstat.gl/It. See also the 2018 annual report from Visit Greenland.


Interestingly, CEO Pars does not consider an actual competition exists between Iceland and Greenland, despite both being categorized as Arctic travel destinations. Also, she argued that in future increased competition is likely to have a positive cumulative effect for both countries. Apart from a single annual meeting in connection with NATA’s trade fair nothing much exists in the way of organized, structured consultation between Visit Greenland and Icelandic tourism authorities.

2. Air Greenland

The company is the backbone of Greenland’s transportation services, domestically and abroad. The company flies to Copenhagen and Keflavík. Direct flights to Boston and Canada were attempted, such as to the Nunavut Inuit autonomous territory but were not successful. International flights have mostly been based on a 22-year-old 300 passenger Airbus 330-22, soon to be replaced. The company operates 15-20 helicopters and 9 airplanes for domestic flights, along with a few ferries. It has close to 700 staff and is among the very largest employers in Greenland. Air Greenland also owns a stake in two Icelandic airlines, 25% in Norlandair in Akureyri and a 30% stake in Norðurflug.

CEO Maliina Abelsen stated the company considers it important to own the entire value chain in the service of tourists, and therefore Air Greenland operates hotels and the country’s largest travel agency, Greenland Travel, with a branch in Denmark. Through a subsidiary, the company also rents out a variety of outdoor equipment to tourists. There is some controversy about a state airline taking part in competition, including against the company’s customers, outside its core business of aviation. Air Greenland counteracts by arguing that it is a part of the company’s social responsibility to participate in strengthening the travel industry in this way. The company also serves mining companies with helicopters. For the development of the tourism industry in Greenland, and Air Greenland’s wellbeing in future, it might be preferable if the company focused its energies on aviation and yielded space to smaller service enterprises to grow on its wings.

The company’s passenger base can be roughly divided into three categories: One-third derives is from Denmark, one third is from Greenland, and the rest from other countries. Chinese and American tourists have shown increasing interest in Greenland as a destination. When the new airport in Nuuk is operative the company intends to revisit direct flights from the capital to the United States. High season is from June to August. Winter operations are not profitable, but as a state airline the company has obligations and can not shut down routes in winter. The slow growth in aviation mainly derives from
the Copenhagen route. CEO Abelsen expressed it as disappointing that the company’s recent route between Greenland and Iceland had yet to yield the desired results.

She concurred with Visit Greenland that Iceland and Greenland were not in direct competition for passengers. Iceland was a different destination from Greenland, and one that is far better known. Greenland anyway didn’t desire the mass tourism CEO Abelsen seemed to connect to Iceland. Apart from the most popular places connections to smaller destinations were few and it therefore was difficult to relieve congestion by sending people elsewhere. CEO Abelsen said unequivocally that the aim was to market Greenland as a destination for adventure travel. That way, Greenland could attract exacting tourists from higher income brackets who used the infrastructure and paid a good price for quality.

The management of Air Greenland did not hide the view that significant profits are not to be made from passengers on cruise ships. Instead, emphasis should be on directing passengers to the country by air. The company anticipates tougher competition in wake of the new international airports, but does not fear competition from low-cost airlines. Interestingly, Air Greenland does not consider mass tourism to be a promising option for Greenland and she does not expect the government to pave the way for low-cost airlines into the market, for example, through landing fee concessions. In this respect, Visit Greenland and Air Greenland are of the same view. As both are strong state players this is likely to influence government policy towards low-cost airlines. The company has returned a reasonable profit, in excess of DKK 50 million in 2018.\textsuperscript{161} Fares by Air Greenland are considered high by the traveling public.

\section{The Airport Revolution – Kalaallit Airports}

A special entity, Kalaallit Airports, was established by law to oversee the construction, operation and marketing of the three new airports. At a cost of DKK 3.7 billion they will by a considerable margin be the costliest project in Greenland’s history. In Nuuk and Ilulissat, the runways will be 2200 metres long, making it possible to service direct jet flights from destinations in Europe and North America. All will be one-stop security airports. Passengers can travel within Europe without having to go through additional security checks and border control. The project is set to completely transform Greenland’s air travel connections with the outside world. With correct marketing

\textsuperscript{161} Air Greenland Annual Report 2018. https://www.airgreenland.com/media/1536715/ag_eng_a- rsberetn2018.pdf?fbclid=IwAR3j9Me3HUgIWI6tB75BALByfMuC5W_7f7U3a8FEdgKj7y10plLy3QAx8vx8
Greenland’s airports have been developed with funding from Denmark and the government of Greenland. The new airports have been designed to reduce travel times and costs. They will also facilitate the expansion of tourism in the region.

The new airports will reduce the cost of fares and save on travel time. International jets, for example, will cut flight time from Reykjavík to Nuuk by 40 minutes. More time will be saved by not having to wait at the international airport in Kangerlussuaq for flights to domestic destinations, sometimes for hours. Direct flights will also reduce total traveling costs significantly as arriving tourists do not have to fork out for expensive domestic tickets for travel from Kangerlussuaq or Narsarsuaq, to final domestic destination. In addition, the new airport system should enable reduction in landing fees and passenger taxes by an average of at least 30%, with corresponding changes in air fares. Travelling to Greenland will therefore be more affordable and convenient in future, and this is expected to be a significant boost to tourism.

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162 Kristján Már Unnarsson. 2019. An Icelandic engineer is overseeing the construction of the airports in Greenland. https://www.visir.is/g/201910919707/islenskur-verkfraedingur-styrir-gerd-flugvallanna-a-graenlandi

163 Refer to the request from the Danish Ministry of Finance for additional funding for Kalaallit Airports International A/S from 13 March 2019. https://www.ft.dk/RIPdf/samling/20181/aktstykke/aktstktt101/20181_aktstk_afgort101.pdf?fbclid=IwAR3k2mGGDkksVw3vGfbghEgwY66YWBwiD78q-crk-%20seGz85Zefm2ly69NmdHE
The Icelandic experience demonstrates in no uncertain terms that the Greenlandic nature, however unique, will not sell itself. Correct marketing of the new international airports is an absolute prerequisite for the success of the overall business plan. At a meeting with Kalaallit Airport, 2019, it was revealed that a marketing strategy was not yet fully formed. It was noted this would be done in collaboration with Air Greenland. A marketing specialist had been hired to work out a plan to promote the new airports to international airlines. Aviaaja Knudsen-Karlshøj advanced the view that travel restrictions to Greenland would remain in place and that special concessions, enough to attract low-cost airlines to Greenland, would not be granted. The same view had previously been expressed by the CEO of Air Greenland.

In this respect, a certain dualism was detected in conversations with administrative leaders of tourism in Greenland. Whilst they desire to see a robust growth there was a detectable anxiety towards low-cost airlines. What vaguely was defined as mass tourism with clear reference to Iceland seems not to be desireable in their view. In fact, on the tourism spectrum it was clearly considered to be on the opposite end to the adventure tourism desired by Greenland. This, however, is not the general experience of the Icelandic industry that considers adventure tourism to be mainstream, and low cost airlines to be important providers of tourists in that category. Importantly, the Icelandic experience is also that a certain minimum of tourist volume is necessary to develop a sufficiently diverse range of experiences/offers to attract tourists from the adventure category. A frank exchange of views and experience between the two sectors might be advisable.

4. Arctic Tourism – Campus Kujalleq
The number of adventure tourists to Greenland will double by 2030 if present plans will be successful. If Greenland is to live up to expectations as an adventure travel destination, it has to redouble its efforts to produce well trained Arctic guiding staff. Very special skills are needed to guide tourists through wild nature, often dangerous, on sea, land and glaciers. Currently, the educational system is not equipped to manage a large increase in tourism. For example, practical work experience (internships) for Arctic guide students is missing entirely. As a consequence, the travel agencies in the country import most of their Arctic Guides during the main season. In fact, it is striking how few of the employees are Greenlandic. The country is therefore missing out in terms of revenue and interesting jobs for young Greenlanders.

Only a single school includes tourism studies as part of the syllabus. Campus Kujalleq is a thriving school in trade and commerce in Qaqortoq that offers a six-month "Arctic Adventure Guide" course that according to its website is "based on the Icelandic model". The Arctic courses are tough and only about
50 Arctic Guides had graduated in mid-year 2019. The study program appears well suited to Greenlandic needs and is also designed to inspire entrepreneurial vigour in the students. The course is a totally Greenlandic initiative, pioneered and driven by visionary leaders. A touching description of the difficult start of the course can be read in a recent masters thesis that, inter alia, contains interviews with school administrators and teachers.164

The school has tailored the studies to the challenges and dangers of Greenland’s nature. Great emphasis is placed on “reading” conditions in nature, navigation techniques, the English language, and natural studies such as knowing the local flora and fauna. One of the courses is “Animal footprints in Nature” (d. Dyrespor i naturen) and generally referred to by students with a whiff of cynicism as “the shit course”. In an internationally recognized course (“Wilderness First Responder”) the emphasis is on training students on how to respond in emergency scenarios in the wild. A third of the studies take place in camp tents in the North Greenland wilderness. Boat rides are nearly always a part of the Greenland tours and baggage often is transported by boat between domestic travel destinations. One-fifth of the study is accordingly for a licence to navigate a small vessel with 12 people within the skerry limit (3 nautical miles). When graduated, the Arctic Guide has an official license to lead groups of 12 people through the wilderness of Greenland, including mountains and glaciers.

At a meeting in Qaqortoq with Ria Oldenburgh, director of teaching, she stated the biggest downside with the program is that the school does not have fixed agreements with any travel companies to take students on as interns. Students therefore have to acquire working experience on their own. Many have to resort to taking jobs on the coast liners of Hurtigruten, a shipping company, that is a far cry from the strenuous guide experience in the wild. Madame Oldenburgh highlighted that scant training in guiding glacier tours was accessible in Greenland. She stated, that highest on her wish list was to enter into agreements with Icelandic companies offering internships for students of the Arctic Guide course.
6.4 Opportunities in Tourism

Representatives of Icelandic Mountain Guides, Einar Torfi Finnsson and Leifur Örn Svavarsson, met with the Greenland Committee, to define the main opportunities and shortcomings in Greenland in the field of adventure and experience tourism. Their company is one of the largest companies in that particular field in Iceland and has been operating in Greenland since 1996. It pioneered glacier walking tours in Iceland. The main conclusions were as follows:

Greenland is a desirable location for adventure and experience tours. It is therefore logical for Greenlanders to emphasize that particular market segment that also is the fastest growing segment within tourism. Increasingly, the tourists in this category are in a high-income bracket, purchase a great deal of services and generate the most added value. They want to experience as much as possible and are willing to pay for quality, whether it is in restaurants, hotels or guided tours. This category of service requires skill and knowledge and demands a high price. However, it is not particularly demanding in terms of man power which is well suited to the size of the population.

The Majestic Mountains of Greenland

“Nowhere else where I have been, have I seen mountains this magnificent and awe-inspiring, neither in the Rocky Mountains of America nor in the Alps. And to be honest, the Icelandic mountains in all their majesty and beauty are humbled by the peaks in Greenland, most of which are over 1500 metres high and many of the highest peaks tower 2000 metres in height.”

Steindór Steindórsson of Hlaðir, botanist and headmaster of the Akureyri Junior College.

Tourists in this category are more interested than others in engaging with the culture of the areas they visit. They buy museum tickets, seek out cultural events and are interested in learning about the culture of Inuits. They show nature, the locals and their culture respect.

Guiding and leading groups through the often harsh and dangerous nature of Greenland demands great skills and training. Greenland is still lacking in many components of experience-based tourism and it is imperative to bol-
ster the sector by improving skills. This applies, for example, to glacier walks, ice and glacier climbing and certain types of skiing. This could, according to Icelandic Mountain Guides, easily be remedied by a systematic plan to train young Greenlanders in Iceland. Until then, it will be unavoidable for operators to import trained mountain and glacier guides, as almost every business in that sector currently does.

A small but growing group of dedicated adventure tourists seek out challenging tours where the limits of endurance are tested. Examples are tours offered by Icelandic Mountain Guides crossing the great Greenland Glacier or skiing along the longest trail in the world, all the way from Scoresby Sound to Tasilaq in East Greenland, in all a 1,200 km journey on skis. Aggressive marketing for this type of extreme adventure tourism could boost the economy in the northern territories, which currently do not enjoy extensive tourism.

Similarly, the growing popularity of expensive adventure tours to Antarctica could also be used to attract adventure tourists interested in similar trips to Greenland. Access to Greenland is easier and it would be possible to offer similar trips at very competitive rates. In addition, the general infrastructure of Greenland is of higher quality, the mountains and glaciers are no less impressive; even offering unscaled mountains as an attraction. Greenland also
has the advantage over Antarctica to offer a unique culture to explore, whereas no original culture is found in the uninhabited wilderness of Antarctica.

Greenland’s tourism industry is still lacking some simple, low-cost infrastructure that would be of much convenience to Arctic tourists, and do only require a simple set of skills. This includes georeferenced hiking routes, designated trails, especially the difficult parts, and the creation of paths in some parts of Greenland. Other Icelandic operators, active in tourism in South Greenland, mentioned the same, with reference to popular trails in the vicinity of the ancient ruins from the Icelandic settlement in the 10th century.

The Icelandic Mountain Guides were adamant that the tourism industry in both Greenland and Iceland would strongly benefit from co-marketing the countries as destinations for Arctic experience tours. In accord with several other operators in both countries Icelandic Mountain Guides emphasised the importance of cultivating and attending the ATWS Travel World Summit, an annual “must” event in the adventure space. They criticized that Icelandic authorities have never attended the World summit (see later), in contrast to Greenlandic colleagues who regard it as a key event in the adventure and experience sector.

Icelandic Mountain Guides argued that several popular Arctic products successful in Iceland could be introduced to the benefit of the Greenlandic sector. They specially pointed out three categories.

1. **Glacier walks**
   Short walks on the glacier terminus are among the best selling tours in Iceland (and New Zealand). Glacier walks require great skills and highly trained guides who are currently not available in Greenland, as Ria Oldenburg, course director at Campus Kujalleq, previously described. Before the pandemic, 300 thousand travelers would purchase such tours in Iceland. Glacier walks might be offered all over Greenland, according to Icelandic Mountain Guides. They expect that such tours would be a big draw for tourists in Greenland and referenced the experience from Iceland and New Zealand.

2. **Ice & Mountain Climbing**
   The extreme adventurers in the category of adventure and experience tourists are increasingly turning to climbing mountains in icy terrain, both glaciers and mountains. Tours of that type need highly trained Arctic guides with high level of endurance and experience. It is their opinion that the local guides are still lacking the skill set needed to lead such trips. Such training should be sought out in Iceland.
3. Helicopter Skiing

Affluent tourists are flocking into this niche of Arctic experience offered in Iceland. In Fljót, Siglufjörður and by Dalvík, tourists are transported by helicopter to mountains and ski down. This service is quite expensive but in high-demand. Birgir Ömar Haraldsson, CEO of Norðurlflug, which specializes in “heli-skiing”, also has experience from Greenland and states it is an ideal country for such sports. Greenlandic climate creates an ideal type of snow for heli-skiing. Guiding and leading such trips, however, also requires a great deal of experience and training.

6.5 Possible Areas for Co-operation

In Greenland, everyone from the tourism sector, be it on the government, local or business level, expressed a keen interest in fostering a stronger co-operation with Iceland. The attitude among the Icelanders was similar, although more subdued.

Interestingly, the Tourism Policy of Greenland for 2016–19 includes a special section on Iceland. Iceland is defined as a tourist hub for those heading to Greenland, ideal for co-operation on “combination tours” and the Policy argues that Iceland’s importance for tourism in Greenland is such that the local
sector must acquire necessary understanding and insight into the Icelandic market. The Policy maintains that it is urgent for Greenland to achieve good co-operation with the Icelandic sector on matters such as promotion, market research, innovation, solutions to common problems and in general transfer of knowledge — such as on tourism satellite accounting.

Leaders from both sectors are of the view that Greenland and Iceland would reap mutual benefits from joint marketing as destinations for Arctic adventure travel. Businesses operating in both countries considered it important to forge a stronger connection to the ATWS Travel World Summit. This is by far the largest and most important gathering in the adventure sector, where new destinations and innovative products are presented to travel agencies and major travel media outlets. Icelandic authorities were criticized for not attending the ATWS Travel World Summit. Every year the event is held in a different country and operators in both Greenland and Iceland are of the view that their respective countries should strive to attract the trade fair, and that it would be of great advantage to Arctic tourism if it were to be held, separately, in each of the countries.

Greenlandic companies are eager for networking opportunities with regard to Icelandic operators, and are keen to have regular workshops with Icelandic companies and tourism authorities. The areas mentioned specifically were tourist safety, combinations tours, innovation, entrepreneurship, preservation of fragile sites and structuring and development of tourist destinations. Leaders in the administration, such as CEO of Visit Greenland, believe that Greenlandic companies could seek enthusiasm, experience and expertise to Iceland, not least with regard to new products, new offers and to develop new destinations. In her view the administration would reap a variety of benefits through regular consultation, not least as the Icelandic experience could be used to avoid or solve problems possibly encountered with increasing volume of tourists to Greenland. The Nuuk Chamber of Commerce specifically requested that “match-making” visits between companies be re-introduced in order to promote business opportunities through co-operation.

In Iceland, the Icelandic Tourist Board believed that successful innovations, such as learning centers and destination agencies165, could be useful in the development of tourism in Greenland. The learning centre serve as a kind of educational portal for businesses and are tailored to the needs of small businesses, which Greenlanders expect to proliferate with the increase in tourism.

165 See the Tourism Learning Center at https://haefni.is/
GIRL CLIMBERS FROM EAST GREENLAND

In Kulusuk, Icelandic Mountain Guides have for years fostered a remarkable community project that includes a free climbing course for local teenagers. The project lasts for 20 days each summer, 1.5 - 2 hours every day. Free packed lunches are provided and the day’s climb is concluded with a football match, initially in Kulusuk Square. Each day the youngsters collect one large bag of trash.

The project has been supported by quality equipment contributed by foreign companies, such as safety lines and top of the line shoes for the children, and other equipment needed to construct three to four climbing areas. Trained mountain guides have instructed on a voluntary basis, with Icelandic Mountain Guides providing them with housing in Kulusuk. Friends and relatives with ties to the company have come to Greenland to participate in the work, preparing food and packed lunches. The project attracted wide attention, and has been praised in foreign newspapers by journalists who visited specifically to write about the confident climbing kids.

The girls seemed to be more active than the boys and became the core of the project. Some of them have “aged” with the annual courses and now have matured into talented adult climbers. The programme has helped to empower and develop local talent. Mountain climbing is not without risks but the girls have conquered their fears, collected achievements and are growing into strong women who are aware of their abilities. They develop interest in their environment, its protection and are filled with pride in Kulusuk and the history of their people. They are also becoming avid rock climbers, and this has, among other things, created employment opportunities for them in the tourism economy of the future.
of the local population. This approach enables different parts of the country to develop tourism on their own terms and is therefore well suited to the geography of Greenland, where significant distances are between demarcated tourist areas.

Tourists seeking experiences that include outdoor activities in the harsh nature, e.g. on mountains and glaciers, also want to get to know Greenlandic culture and therefore prefer Greenlandic guides.\textsuperscript{166} However, the newly graduated guides in Greenland lack experience with ice and mountain climbing, helicopter skiing, not to mention glacier tours. The only school that offers an Arctic program for guides lacks the kind of vocational training that is needed to provide Arctic guides with the practical experience that is demanded by the operators. It would be very important if possible to provide such training with Icelandic operators that in the process would acquire valuable contacts in Greenland.

Minimum infrastructure is still lacking in some places, such as footpaths navigating sensitive areas or fortified patches on some difficult parts of marked or georeferenced hiking trails. An example are some of the popular trails in the vicinity of the Icelandic ruins in South Greenland, which custodians fear will be damaged as the tourist numbers continue to rise. In the 1980s and 90s the skills for this type of low-cost infrastructure effectively did not exist in Iceland and was brought into the country through foreign volunteers who constructed footpaths in the National Parks at Pingvellir and Skaftafell and

\textsuperscript{166} Masters essay on the website of Visit Greenland.
Greenland and Iceland in the New Arctic

Icelanders settled in South Greenland in the 10th century led by Erik the Red and his wife, Þjóðhildur Jörundsdóttir. The settlement area and nearly seven hundred registered archaeological sites can now be found on the UNESCO list of world heritage sites. Thousands visit the three most significant sites annually: The large stone church in Hvalseyjarfjörður from the 14th century, where walls still stand 6 metres high; the bishop’s residence in Garðar and Brattahlíð, where Erik the Red took land and Þjóðhildur, his wife, built the first chapel in Greenland. Their son Leif the Lucky, would become the first European to set foot in the New World. These three areas are the most visited sites in South Greenland and already show signs of wear and tear due to tourism.

Alibak Hard, UNESCO’s site warden, has presented suggestions for conservation measures. They entail installing a circular path around the ruins with demarcated incoming trails, and simple information plaques. The core of the idea is to get Guðjón Kristinsson, a famous master carpenter and path builder from Drangar in Árneshreppur in Iceland, to teach a course at Hvalseyjarkirkja on path making for volunteer organizations, from Iceland and Greenland. Locals would subsequently teach Guðjón’s methods through courses in their home communities and recruit new volunteers. The goal would be to protect the three aforementioned sites and later to protect similar sites in the homesteads of the volunteers.

Resources to ensure the safety of travelers is a cornerstone of tourism. To some extent these resources are lacking in Greenland (see Section 8.10). It is important for the development of tourism in Greenland to create localized skills in that field. Section 8.10 argues for an efficient low-cost method to build such resources within Greenland based on the proven example of the ICE-SARS, the voluntary search and rescue association active all over Iceland.
Prior to the Covid-19 pandemic international hotel chains had shown growing interest in investing in hotels in Greenland. One of them, the Berjaya chain, which owns and operates the Icelandair hotels, has already applied for a lot to build a boutique hotel in Nuuk, the first of its kind in Greenland. In relation to the growing interest in the Arctic by affluent tourist from Asia investors from the continent have discussed a futuristic “once-in-a-lifetime” experience spa-hotel by the hot springs in Scoresby Sound (see Section 9).

The Greenland Committee was introduce to an interesting idea on using the extensive network of The Arctic Circle to attract international investors to Greenland. The Arctic Circle is currently preparing a “Mission Council” for Greenland in addition to the existing councils. A good example of the influence wielded by the network is the Pt Capital fund which manages investments in the Arctic region. The former president of Pt Capital sits on the Arctic Circle’s advisory board. In the last few years Pt Capital has invested in Icelandic businesses like the telecommunications company Nova and the KEA hotel chain. Another international investment fund linked to the Arctic Circle is Guggenheim Partners, which has established a registry of promising investment opportunities in the Arctic, including Greenland, under the title “The Arctic Investment Inventory”. The Inventory is the first step in establishing an investment fund focusing on the Arctic. The chief investment officer of Guggenheim Partners announced at the last assembly of the Arctic Circle that the registry would in future be published on the Wilson Center’s website in Washington. The Wilson Center manages the „Greenland Dialogue” that is the main discussion forum on Greenland I North America. The Arctic Circle is headed by the former President of Iceland, Mr. Ólafur Ragnar Grímsson, and through the network of the Arctic Circle it will be possible to connect with international investors regarding investment in promising projects, including Greenland.

Asian interest in Arctic tourism has been growing. In China´s policy on the Belt and Road Initiative a special section (no.3.3) is devoted to Arctic Tourism and it is emphasized that China not only will encourage but also support Chinese businesses to collaborate with local entities to develop tourism in the respective regions. Currently, more than thousand Chinese tourists visit Greenland each year and officials within the administration in Greenland consider “significant possibilities” in developing a relationship with the Chinese travel sector. Prior to the pandemic direct flights to Iceland from China were being prepared from the Hubei region, which is specially mandated to
maintain trade links with the Nordic countries. When global tourism recovers from the pandemic, direct flights between China and Iceland most probably will become a reality. This would be of importance to tourism in Greenland due to the strong flight connection with Iceland. It is a well known fact that when visiting Europe, Chinese tourists invariably visit more than one country. Aviation between Iceland and China can therefore be developed to include Greenland. In fact, it would be of benefit to both if Iceland and Greenland adopt a joint approach to branding and marketing the countries to the traveling Chinese public as preferred Arctic destinations.

6.6 Recommendations

1. Joint Marketing

- The tourism leadership, in collaboration with Visit Greenland, should form a common policy on the countries’ marketing and branding strategy as Arctic travel destinations, aimed at the target group of experience and adventure travelers. Among other things, they should emphasise the small size of the population and Iceland’s and Greenland’s well-executed response to the Covid pandemic.

2. Collaboration of Tourism Administrations

- The Ministers of Tourism of Greenland and Iceland shall agree on an annual bilateral consultation meeting. In connection with this, other tourism authorities will review the status and development of the industry, as well as new measures. Careful consultation is particularly important while tourism is working through the consequences of Covid-19.
3. Regular Workshops on Hot Topics

- The Icelandic Tourist Board and Promote Iceland should hold meetings every few years, and as often as necessary, regarding policy making for the tourism industry of both countries in collaboration with Visit Greenland and the business bureaus of the municipalities of Greenland. Furthermore, workshops should be held with the participation of companies regarding defined topics, such as the tourism industry's responses to the Covid pandemic, cluster collaborations, mixed tours, product development, incentivising of entrepreneurial initiatives, and innovation. Special emphasis should be placed on introducing successful innovations from the last decade of Icelandic tourism (e.g. glacier walks, ice caves).

4. Dissemination of Solutions and Innovations

- The Icelandic Tourist Board should invite the Greenlandic administration to join a workshop in Greenland on projects that the Icelandic administration has undertaken, such as tourist safety, protection of vulnerable areas, development of new tourist destinations, load distribution, contingency plans, and problems that may arise with increased volume of tourists.

- Special emphasis should be placed on introducing Icelandic innovations such as destination agencies and the tourism learning center.

5. Icelandic Internship for Greenlandic Arctic Guides

- The Icelandic government should initiate an agreement between Campus Kujalleq and Icelandic businesses so that young Greenlanders who graduate as Arctic Adventure Guides should have the option of pursuing internships in Iceland in the future.

- In collaboration with Campus Kujalleq and Visit Greenland, a onetime course should be held in Iceland for working guides in Greenland on glacier hiking, ice and mountain climbing.
6. Tourism Satellite Accounts
   - The Foreign Minister with pertinent authorities should establish a collaboration between the University in Bifröst and Visit Greenland on tourism satellite accounts.

7. Skills for Low-Cost Infrastructure
   - Iceland should help establish a co-operation between the Icelandic Forest Service and Greenland's tourism authorities on the dissemination of skill sets applicable to simple infrastructure development in tourist areas, such as construction of walls, footpaths and trails. Iceland should also open its strong network of international voluntary organisations in this field to Greenland.

8. Conservation of Icelandic Heritage Sites
   - In memory of the settlement of Erik the Red and Þjóðhildur Jörundsdóttir in South Greenland, Icelanders, in collaboration with the custodians of the UNESCO World Heritage Site, should cooperate on establishing procedures for the protection of fragile archeological remains from the settlement, that are endangered by the increase in tourism.

   - The Icelandic Government should finance a course in South Greenland where an Icelandic expert, Guðjón Kristinsson from Drangar, instructs interested volunteers from Iceland and Greenland on how to construct paths in protected areas. The aim is to protect the three most valuable historic sites that are currently most at risk: Hvalseyjarkirkja, the bishop's residence in Garðar, and Brattahlíð.

   - Iceland and Greenland should take the initiative to establish a co-operation with other nations that have ties to the settlement, regarding the financing of a program aimed at strengthening and utilising the local capacity of volunteers to protect other significant Icelandic antiquities in South Greenland.
9. ATWS Travel World Summit

- The ministers of tourism from both countries should work to bring the ATWS Travel World Summit to both Greenland and Iceland in the coming years. The fair is the most important gathering for the experience-based tourism sector and a perfect occasion to present the countries as ideal destinations in the aftermath of the Covid-19 pandemic.

10. Arctic Infrastructure Investment Fund

- The Arctic Circle should be brought in to employ its extensive network in establishing an International Arctic Investment Fund based on the Arctic Investment Inventory established by Guggenheim Partners at the Wilson Center in Washington. The role of the fund would be, among other things, to stimulate business opportunities related to Greenland, such as the construction of hotels in relation to the expected increase in tourists.
7. Mining in Greenland

Greenland is in a key position due to the unusually large deposits of usable metals, oil, gas and precious stones in the ground. A major supply of rare earth metals have put Greenland in a new and unique position. Several overlapping factors indicate that the 21st century will be prosperous for the Greenlandic mining industry. Since the financial crisis of 2008, the global inventory of minerals is being depleted, few new mines have been commissioned and a growing shortage of valuable metals is noticeable in the markets. An upswing is therefore anticipated in global mining in the coming decade, including in Greenland.

Experts, including in Greenland, have, however, expressed concerns that the very next years may see a decreased demand for metals due to the economic consequences of the Covid-19 pandemic. This, no doubt, will lead to a corresponding delay in Greenland. However, the value of companies in certain sectors of the rare metal industry, as in gold mining, has risen since the pandemic began. The latter half of this decade has seen an explosion in exploration permits in Southern Greenland. Recently, an area of more than 6 thousand square kilometres was allotted to various companies that hope to find precious metals outside previously known mineral-rich areas. At the start of 2020 exploration permits have been granted for the whole of South Greenland. There was scant evidence that the first wave of Covid-19 had influenced the interest in new permits in Greenland.

The Government’s mineral policy 2014–18 points out that mining projects will demand huge volume of services. Domestic providers, in comparison, are miniscule and may lack capacity to cover the needs of big projects, restricting possible revenue streams into the Greenland economy. They submit, therefore, that co-operation with foreign suppliers and service providers is conducive to elevate levels of domestic skills in mining and to ensure revenue into the local economy. This policy, in effect, creates a platform for future co-operation of Greenlandic and Icelandic companies in the service sector in relation to mining. Iceland is in close proximity to Greenland and co-operation between industries in the two countries has already been successful in various fields. Icelandic companies in several sectors have extensive experience within Greenland and are well liked. A well defined strategy of further co-operation would strengthen the capacity of Greenlandic companies to grow and take full advantage of the future rise in mining activities. This would no doubt benefit industries in both countries.

7.1 Metals and Precious Stones

Greenland has a wealth of valuable metals and minerals such as gold, silver, iron, lead, zinc, copper, nickel, uranium, platinum, molybdenum, zircon, strontium, tantalum, vanadium, barite, thorium, tungsten, and several others. In addition, Greenland is in a unique position as it possesses a fourth of the world's known supply of rare earth metals. Several of the 17 elements in that category are valuable to the arms industry and increasingly important to various high-technology industries. Global scarcity of these metals is a major factor in why the superpowers exhibit growing interest in gaining a foothold in Greenland. A variety of precious stones is also found in Greenland, such as rubies and pink sapphire and to a lesser degree emeralds and spinel. A wealth of small diamonds was discovered a few years ago in two locations. Less expensive but much in demand are Greenlandic tourmaline, amazonite, peridot, topaz and lapis lazuli.

Oil and gas reserves are thought to rest in strata on the seabed east, north and west of Greenland and on land in the north of Greenland, both on the east and west coasts. Following the passing of the Act on Self-Government in 2009, when the control of natural resources passed into the hands of Greenlanders, the government had high hopes that oil production would generate substantial income that would pave the way for economic independence from Denmark. This has yet to materialize. Experimental drilling off the coast of West Greenland has proven futile and around 20 issued permits have been returned or allowed to expire. Last year, the government of Greenland introduced a new approach which is directed at attracting smaller investors171 for hydrocarbon exploration. Permits for five areas, two of them in East Greenland, will be auctioned over the next two years.172 However, following the Covid-19 pandemic and the steep drop in oil prices, the prospect of oil exploration in Greenland is not expected to garner much interest in the coming years.

172 Kristján Már Unnarsson. 2020. “Kielsen presented the Texas oil barons with Greenland’s tender” https://www.visir.is/g/20200218905
7.2 Rare Earth Metals (REMs)

Rare earth metals (REMs) have attracted increasing attention as the trade dispute between China and the US has progressed. Contrary to the name, the metals are not rare at all. They are, however, seldom found in mineable quantities. In Greenland, they have so far been discovered in 9 locations, in some cases in large quantities. As noted before, a fourth of the world’s known supply can be found within Greenland’s jurisdiction.

**PRECIOUS STONES FOR ALL**

Greenlanders, who have been picking red and pink stones in Aappaluttoq from time immemorial, were outraged when an international company was given exclusive rights to mine rubies and sapphires in the area. The government of Greenland responded to the demands of the people by instituting new laws allowing ordinary citizens, with a registered address in the respective municipality, to be allotted one square kilometre of land to search for and collect valuable minerals. Each person is allowed a maximum of five simultaneous permits. They are not transferable even if valuable minerals are discovered. In 2019, 66 such permits were issued.

In addition, all residents are permitted to search and collect minerals on common land in their municipality. Vittus Qujaukitsoq, Minister of Finance, searches and collects gems in his spare time. In Nuuk, you can buy elegant jewelry made from rare rubies that locals have collected.

The special qualities of the REMs (strength, durability, magnetism, heat resistance) have resulted in new disruptive technologies, expressed in mobile devices, lasers, converters, industrial robots, hard drives. They are also of great importance to the arms industry and, for example, used in nuclear reactors, guided missiles and night-vision goggles. REMs are also vital in the production of batteries, electric cars, wind turbines and considered crucial for future global energy transition. Their newly acquired significance is reflected by China defining the REMs as “strategic” metals and the European Union and the United States have listed them as “critical” raw materials.

China has a dominant position with regard to processing technology of REMs and has conducted more research in that field than any other nation. In case of some of the metals China is in possession of the only known production
method. Roughly 1/3 of the known global reserves is within China that also generates 80% of the annual global production. Dysprosium is a case in point. It is one of the most important REMs and in 2018 China provided 98% of the global supply.\textsuperscript{173} Meanwhile, the United States produces next to nothing and has to rely on China that in 2018 supplied 78% of the volume required by the US industry.\textsuperscript{174} It is feared in the US that if tensions in the increasingly aggressive trade dispute with China do not recede she may deploy her dominance in REMs.\textsuperscript{175} Greenland’s wealth in REMs therefore adds to the country’s importance in the eyes of the United States. This was, for example, expressed in 2019, when the US government signed a letter of intent with Greenland on surveys for REMs in the mineral-rich southern parts and simultaneously an agreement with the government of Australia to facilitate co-operation between US and Australian investors for REMs processing in Greenland.\textsuperscript{176}

Since the advent of Greenlandic self-government, Greenlanders have been aggressively seeking investors to develop their mining industry. In the face of western indifference, they tried their luck in Asia, and China in particular. As previously described, Prime Minister Kielsen traveled to China, accompanied by three other ministers, and presented the Chinese government and investors with opportunities for mining in Greenland. Shenghe, a Chinese company, is now the largest shareholder in a mining company that will extract 15 different REMs, as well as uranium, in the Kvanefjeld mine in southern Greenland. The mine is assumed to be the second-largest mine for REMs in the world.

The geopolitical importance attached to the REMs has made Greenland more attractive in the eyes of the big industrial nations than ever before. It doesn’t hurt Greenland’s position that new shipping routes across the Arctic Ocean will shorten transport routes to Asia by half.


7.3 Competitive Physical Advantages

For many reasons Greenland constitutes an attractive option for the international mining sector. Density of minerals in most cases is high in the upper strata, deposits are frequently large and the total quantity high. Unlike in Canada, Russia and Alaska, most potential mining areas in Greenland are close to the shore, making it easy to access supplies and equipment and to move material out. Another advantage is that raw materials are usually very close to the surface and therefore easy to mine. These physical benefits reduce the risk of investors and counteract that many of the fields with large potential are in remote areas, even for Greenland.

Surprisingly, an unexpected asset for mining in Greenland is the infrastructure for communication that is considered to be more dependable as compared to other mining areas in the Arctic. Increasingly, automated equipment that requires online technology will be introduced in mining, hence the importance of solid communication network. In addition, mining is energy-intensive and as the international mining sector is making moves towards renewable energy, the availability of hydropower potential adds to the lure of Greenland from the perspective of mining. The government of Greenland instructs on using renewable energy in mining wherever possible.

Most mineable materials are in large quantities. The concentration of gold deposits found in many parts of Greenland rivals the famous Yukon gold veins in Alaska, the Abitibi Gold Belt in Canada and the Witsbasin in South Africa. This is the case, for example, with the Nalunaq mine in South Greenland, which will open next year under Icelandic management. In Dundas in the northern part of Greenland, the world’s largest deposit of titanium weaves its way through easily-mined sand dunes that extend far into the shallow waters. Scoresby Sound in East Greenland has a mountain of molybdenum. One of the world’s largest iron mines is only 150 kilometres out from Nuuk. In South Greenland, two mountains of REMs are situated on either side of a fjord, where a glacier has pushed its way through a giant volcanic plug. Considerable uranium reserves accompany the REMs. The controversial metal is also found in large quantities in other parts of Greenland, for example at Disco Bay. In fact, Greenland is projected to be among the 5-10 largest producers of uranium in the world. The ruby mine in Aappaluttoq, not far from Nuuk, is described by its founder to contain one of the largest ruby deposits in the world. The anorthosite mine in Kangerlussuaq is presumed to be the largest in the world. Palladium and platinum are found in great deposits in south-
ern and northern Greenland and in the northernmost part of the country the Ironbark zink mine in Citrone-fjorden will be the the largest of its kind.

Global warming will influence mining in Greenland in several ways. Receding glaciers may open up new areas for mining exploration and production, previously inaccessible. In 1990, an old mine (Black Angel) for lead and zinc was closed off at the edge of a glacier on the west coast. Since then, the glacier has retreated approximately 250 meters and 2 million tons of new raw material can be accessed. In the northern reaches of Greenland, it will be possible to process mined materials for longer periods annually, and the “transport window” for raw materials and supplies will expand due to reduced ice. Likewise, new shipping routes across the Arctic Ocean will significantly shorten the time it takes to ship raw minerals to distant markets in Asia. In that sense, global climate change has piqued the global mining industry’s interest in Greenland.177

The Danish-Norwegian missionary Hans Egede reported the presence of minerals shortly after his arrival in 1721. In 1854 the famous cryolite mine in Ivittuut, South Greenland, was started. In World War II the mine played a vital role supplying the Americans, and later Canada, with cryolite, indispensable in production of aluminium used for light fighter planes. Cryolite was exported into the late 1980s. A copper mine was operated with intervals from 1852 in Innatsiag, South Greenland (Josvas mine) to exhaustion in 1914. In Quillissat in North Greenland a coal mine was in production from 1924 to 1972. In Maarmoriliik in Uummannaq on the west coast high quality marble on par with the famous Italian Carrara marble from Tuscany was produced between 1933-1973. The mine was later converted to the Black Angel mine (lead,zinc, see 7.3) As a result Greenland has a considerable mining tradition and the Greenlanders were praised as efficient miners.

7.4  Greenland - Focal Point of Attention

When Greenland gained self-government in 2009 exploration for raw materials was in full swing. At the time, several large international mining companies were preparing to start operations. At a stroke, the situation changed completely when the financial crisis swept the world. Mining companies everywhere scaled back activities. New mines were halted, capital drained out of the sector and exploration was put on hold. Global demand for metals was met by drawing on existing inventory.

The situation has re-balanced in recent years. Reserves of mineral stocks have rapidly diminished in the last decade. A shortage of various metals is foreseeable and price hikes have begun. In contrast to other commodities, such as refined oil, global stocks of important metals will decline. Shortages always encourage investment in the mining industry. Therefore, despite the challenges of Covid-19, there is consensus that the market shortages and low global interest rates will in the imminent future attract capital into the mining sector. In 2017, applications for exploration permits were already increasing and by the end of 2019 close to 60 permits were active. The Ministry of Natural Resources hopes to increase the number of permits to 200 in the next decade. The system, however, is designed to support 500.178

The Greenland Committee had conversations in the fall 2019 with four leaders in different lines of the mining sector (government official, contractor, mining manager, a consultant). A consensus existed that in the preceding years signs of growing interest in Greenland mining had emerged from the international sector. Eldur Ólafsson, managing director of the Nalunaq gold mine, coined a phrase by predicting that within decades Greenland would become the “focal point of the mining world”.

7.5 Sound Governance and Stability

Many of the positive attractions of Greenland in the eyes of international mining companies are related to sound governance and stability. They were defined as follows:

- **Strict environmental legislation.** Greenland has stringent environmental regulations that are based on the Nordic model. This, somewhat surprisingly, is desirable in the eyes of large international companies. Almost all of them are listed on a stock exchange. Environmental negligence in the mining sector has often caused harsh criticism from the public and NGO’s and consequently led to investor distrust and stock depreciation. Responsible mining companies thus feel that the strict legislation of Greenland protects not only the environment but also their investors.

- **Clarity on legislation.** Based on experience Greenlandic law have been clarified on issues important to the industry. In some countries with good mining potential unclear legislation often leads to costly disputes.

- **Absence of corruption.** "We can handle the cold and isolation but not corruption," an experienced mining manager stated. In this category Greenland scores very high.

- **State-owned land.** The whole of Greenland is controlled by the state. Companies, therefore, only have to negotiate with a single party regarding the use of land, which also issues the licence for exploitation of minerals. This is a huge benefit as it shortens the time from project idea to production by 1-2 years.

- **Political stability.** In some parts of the world, with volatile or unstable politics, companies that exhibit profitable production are increasingly faced with local demands for higher taxation, or even nationalization. In unstable countries, conflicts, even wars, may halt production, or force close-downs. Mining companies prefer to invest in countries with sound and secure governance. In this respect, Greenland is a safe country. For this reason, mining companies in more turbulent parts of the world view it as an option to move operations to Greenland in future.
7.6 Plans for Large-Scale Mining

Four mines have been issued with exploitation license. Two are already operational, one producing rubies and pink sapphires and the other anorthosite. The other two plan to start operation in the imminent future (gold, zinc). Several larger mines are in various stages of preparation. Every year, new mining potential is discovered.

Ruby production began recently at the Aappaluttoq mine, approx. 200 km from Nuuk, and presently employs 30 staff. Aappaluttoq is “red” in Greenlandic. From times ancient the Inuit knew it as “the area of red stones”. The first line of Greenlandic ruby jewelry emerged in 2018 and sold out. The price of rubies has quadrupled in past years. If everything goes according to plan, the size of their workforce is set to double. Anorthosite is produced in the White Mountain mine about 80 km from Kangerlussuaq, also with staff of close to 30.

The Nalunaq gold mine near Nanortalik in southern Greenland also has been issued with an exploitation licence and is planned to be operational next year, 2021. The mine is owned by AEX Gold, listed on the Toronto Stock Exchange. It is licenced to explore the “gold belt” in southern Greenland. Apart from being managed by an Icelander, the mine happens to be located on the site of the Icelandic settlement founded by Erik the Red, and his wife, Þjóðhildur, in the 10th Century. They were parents of Leif Eiríksson “the lucky”, who was the first European to set foot in America.

The concentration of gold is very high in Nanulaq, 18.6 grams/ton, and it is estimated to contain 1.2 million ounces. Around 70-90 people will be employed there on a regular basis. Ironbark, the fourth mine with a license, is

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situated in the far north, in Citronefjord, at 83rd parallel north. It will be the fifth largest zinc mine in the world, also producing lead, and in future, the semiconductor germanium. Staff of at least 500 people will be needed to operate the mine. Located far from the nearest settlement and totally isolated, due to the sea ice it will only be possible to supply the mine, and ship out the production, during two months in late summer. All infrastructure needs to be installed from scratch. The owners of the mine have been in talks with Icelandic contractors regarding the project.

In addition to the four mines described above, 7–10 other mines, most of them large, are at different stages of preparation. The two projects, that have proceeded furthest in the licensing process, are in South Greenland, the Tanbreeze mine in Kringlerne and the mine in Kvanefjeldet. In the former, “light” REMs will be produced and the latter will yield “heavy” REMs along with uranium. In the vicinity of Nuuk, the huge iron mine in Isua remains on hold. It is wholly owned by a Chinese company and set to eventually become the largest iron mine in the world. Titanium will be processed from the sand dunes of Dundas in North Greenland. In the Disco-Nussuaq region on the west coast, there are plans for large-scale mining of nickel, copper and platinum. In the Kangerluarsuk area plans are afoot to mine zinc, lead and silver. Apart from the rich Nalunaq gold mine, smaller gold mines are also being planned. A large molybdenum mine has been mapped out in Scoresby Sound on the east coast. The prospective mining company had discussions with an Icelandic engineering concern on a subsea cable from the west coast of Iceland to provide energy for the molybden mine. Huge copper reserves on the Wegener peninsula to the north of Scoresby Sound have been researched since 2011. Interestingly, the Covid-19 pandemic has not deterred interest in mining in Greenland. In April 2020, the Blue Jay company, which also owns the rights to titanium mining in Dundas, announced plans for major prospecting in large areas in South Greenland, mainly for for zinc, lead and silver, but also other metals, such as uranium and gold.

Officials in Nuuk expect 3–5 mines will be launched in the coming decade. Unofficially, expectations are that up to 10 world class mines will be operational within 30 years. Leading representatives of the mining sector, however, believe that based on the deposits already discovered, five new mines will be launched in the next ten years and 12–15 in the next 2–3 decades.

7.7 Labour Force - Service Businesses - Binational Co-operation

Most future mines will be located far from human settlements. Some will be far north, such as the Ironbark in Citronefjorden, where ice prevents maritime transport 10 months every year. The mines will require a port, some big enough to accommodate vessels up to 100 meters; build roads, runways, helipads and power plants; construct staff housing, offices, warehouses, canteens, recreational facilities, health care centers, and laundry services; as well as a range of other services. A large isolated mine may be defined as an independent settlement, that has to be self-sufficient for the needs of up to a thousand people. In some cases, the number of temporary construction workers will be much higher.

The labour needs of the mining sector will consequently be enormous compared to the labour market in Greenland. Most of the mines will be “medium-sized”, with 300 to 700 staff when operational. In six mines listed in the government’s resource policy from 2014, it is estimated that a total of 1,500 people will be employed at the mines. A large number of workers and technicians will also be temporarily required to construct the mines, and prepare quarrying. For example, 3,300 workers will be needed to launch the iron mine in Isua, 1,000 in Kvanefjeld, 3–400 for the Ironbark mine and 130 in Kringlerne. The construction of each mine can take 2-4 years. It is not unlikely that several mines will be under construction at the same time during the first phase of Greenland’s new mining age.

The government policy is to maximize the processing of raw materials within Greenland. In some cases, this will require the addition of 4–600 people to the workforce related to each mine. The new mining industry will therefore require a large workforce. Although the intention is to recruit domestically to the greatest degree possible, it is clear that the mining industry will be largely dependent on foreign labour. The Greenlandic government has clearly stated in their resource policy from 2014, that the specialised labour force that can’t be sourced within Greenland, may be recruited from abroad. If progress will be according to existing plans, up to 5,000 workers will be needed in new...
mines in a foreseeable future. By comparison, the total populations is less than 57,000 and only about 26,000 are active in the labour market. A shortage of labour is already emerging due to extensive infrastructure projects and a favorable exchange rate for the fishing industry.

In large mines, the need for various services within that area is met by outsourcing to subcontractors. This includes the operation of kitchens that have to produce food around the clock for shifts of hundreds of people. This also requires services like washing, cleaning, security, all kinds of maintenance, snow removal within the area, waste and garbage disposal, water sourcing, energy production, supply transport, trade, and recreation. Helicopter services, which are an integral part of the preparation and operation of mining areas, are usually always outsourced. Helicopters are important during the prospecting phase and during construction, frequently requiring 4-6 helicopters. Once the mine is operational, the helicopters are generally considered part of the infrastructure. Chemical analyzes which rely on complex equipment are an integral part of mining operations, both during preparatory research and at later stages, while the quantity and quality of production is being monitored. Such services are often provided by subcontractors and Icelandic companies in this field have often supplied services for mining research in Greenland.

With regard to the operation of the mine, a market is emerging for a variety of general and specialized supporting services. Most Greenlandic companies are too small to provide those basic services. The resource policy, on the other hand, explicitly states that co-operation with Greenlandic companies would strengthen the position of foreign companies in relation to tenders. The intention is to promote the development of skills domestically. Icelandic companies, on the other hand, know the lay of the land in Greenland and can use this to their advantage by seeking out opportunities for co-operation with the local small businesses regarding a range of supporting services for the emerging mining industry.
7.8 Potential Areas for Co-operation

Detailed conversations with leaders in business, administration and politics made it vividly clear that Greenlandic opinion favours co-operation with Iceland, mining services included. Points mentioned referenced the geographic proximity of the countries, Icelanders' familiarity with conditions in Greenland, a positive experience of extensive Icelandic participation in Greenland's construction sector, and various services related to mining exploration are already being sourced from Iceland. The emphasis on Icelandic healthcare and health services was notable.

In general, Icelanders appear to be well liked in Greenland. This partly stems from the feeling of having shared a common past in the sense that both nations endured a difficult history under the same colonial power, Denmark. Today, Icelanders are exempt from having to apply for a work permit in Greenland as the country belongs to the common Nordic labour market through Denmark. This is important, as work permit applications are still processed in Denmark and take at least 6 months, a significant constraint on foreign investment in the country.

Several areas with partnership potential exist in the mining sector:

**East-Greenland.** From the mining perspective the east coast is as yet the least researched part of Greenland. Prospecting is in early stages. However, mountains of valuable metals, such as molybdenum, are mapped in Scoresby Sound. Research, not widely shared, indicate significant deposits of copper at the Wegener peninsula. The Greenland Committee was also informed in confidence on research in other areas of East Greenland, indicating future mining potential hitherto unmapped.

Iceland is already the main gateway to East Greenland. It offers by far the easiest and shortest way to procure supplies by sea and air and to connect to international flights. The nearest hospitals and medical services, vital for the mining industry, are in Iceland and already serving settlements on the east coast. Supporting services to research and preparation for mines in East and Northeast Greenland, such as aerial surveillance and mapping, provision of supplies, transport of technical personnel etc. has mostly been provided from Iceland. With respect to future mining in East Greenland a multitude of opportunities for co-operation exist, both in respect to research and, at a later stage, development of mines and mineral extraction.
Iceland is also particularly well located to manage transshipment and storage of raw materials. The Greenland government understandably aims to keep processing of material within Greenland. Processing, however, is very energy-intensive and isolated mines will be in need of vast amount of renewable energy for refining of raw materials. Lack of renewable energy and labour may in the early stages of the mining industry be bottlenecks. This invokes the possibility of Greenland and Iceland joining forces in this field, if, on one hand, material will be exported unprocessed.

Construction - civil engineering. Big-scale mining in Greenland will demand great skills in complex construction and technical engineering suited to harsh Arctic conditions. Icelandic companies, both engineering firms and major contractors, are competitive on the international stage and have extensive experience with the design and construction of large structures in Greenland.

Passenger flights – transport of staff. The constructing and mining companies will fly all employees to their home countries during monthly off periods. Operation of large isolated mines will therefore be in need of extensive passenger service from international airlines. Due to the proximity and strong international air connections of Iceland the flight connection to the mining industry will largely be via Iceland. In this service sector, Iceland will be an important pillar for the development of the Greenlandic mining industry.

Science and research flights. The Icelandic company Norland Air has for a long time managed most research and scientific flights in Greenland (and around the Arctic region of Canada). The company operates a ski plane that can land on glaciers and the staff has a lot of experience with Arctic environments. Officials in Greenland’s Ministry of Natural Resources expect that over the next few years, research activity in connection with the mapping of potential mining areas will more than triple. Most of the area that has yet to be researched can be found in North and East Greenland. Therefore, Icelanders may expect increased demand for such services.

Helicopters. For helicopter companies, a considerable amount of work will be available while companies are mapping deposits of mineable minerals and other resources. An average mine will require up to six helicopters when the preparation is at its peak, and hundreds of people will need to travel to and from the mining area during the first stage of the construction period, which
in some cases may last several years. In the later stages of construction and after mining has begun, a runway will usually have been built and aircraft used to transport staff on scheduled trips to nearby locations. Only a single helicopter, at most two, will then be required, for safety reasons. Icelandic helicopter companies, such as Reykjavik Helicopters and Norðurflug, have been collaborating with mining companies in Greenland.

Temporary staff agencies. The preparation phase for the mines and possible final processing of raw materials, will require a considerable number of foreign workers. For years, Icelanders have gone outside the country to source a large segment of the skilled and unskilled workforce needed for local projects, and Icelandic temporary staffing agencies have extensive experience in navigating the complex licensing processes. This type of service was one of the projects mentioned during talks with the Greenland Committee on grounds for potential co-operation. It was also emphasised that such companies would be jointly owned and located and registered in Greenland.

Health care services. In mining, safety is of the utmost concern and there are strict requirements in place for first-class medical and health services and access to hospitals during emergencies. At many mining locations, the service has to be capable of serving a community of 500-1,000 people, which may be several hours of flight time from the nearest hospital. The proximity to Iceland and the Icelandic health service's extensive experience with remote settlements in East Greenland, make Iceland an attractive option for medical services and healthcare. The only technologically advanced hospital available in emergencies that may arise in Greenlandic mines is located in Iceland. In that field, Iceland can provide valuable support for Greenland's mining sector.

Specialised technical work. The mining preparation phase demands a specialized labour force, for example in relation to mapping, geological processing, chemical analysis and other forms of data processing, as well as analytical work in connection with production and quality control after operations commence. Multiple small companies will carry out services in these areas, even in the case of smaller mines. Iceland's proximity and experience with difficult conditions, create an opportunity for Icelandic experts and companies to gain a foothold in this field in collaboration with domestic companies.

General support services. Mining companies outsource all services, such as in the field of electrical contractors and machine shops, suppliers of replacement parts, as well as services for work components like cooking, recreation, cleaning, laundry, etc. This presents an opportunity for co-operation with Greenlandic businesses.
Financial services. One person contacted had extensive experience in the international mining industry and said there was a significant need for a range of financial services for employees and smaller service companies that are created around mining companies. They can be up to three dozen. This, they claimed, offered opportunities for Icelandic financial institutions, although a strong marketing initiative would be needed to promote such services.

Measuring radiation. Disputes over uranium mining in southern Greenland led to a ban on the mining of radioactive materials, which was lifted by the Greenlandic parliament by a one vote majority in 2013. Subsequently, Greenland adopted provisions to comply with international agreements regarding the production and sale of radioactive materials, but the implementation of appropriate standards for the control of radiation sources is still pending (minerals, various industrial products, radioactive drugs and medical equipment, airport screening devices). Meanwhile, for example, it is not possible to start preparing mines with “heavy” REMs that are known to frequently contain traces of uranium. An example of this is the mine in Kvanefjeldet, in southern Greenland, where 260 thousand tons of uranium are present alongside “heavy” REMs. Without implemented standards, a mining permit cannot be issued for those mines. Icelanders have recent experience in that category. In conversations with the administration in Nuuk, it was stated that Greenlanders consider co-operation with Iceland the best solution for the implementation and installation of the required equipment. Radiation measurements are related to various other areas, including health surveillance, and a proposal for co-operation in this area can be found in Section 7.8.

Rare earth metals. The complete processing of rare earth metals requires energy, which should, ideally, be renewable according to Greenland’s resource policy; as well as educated workforce; and a robust research environment. Although the aim is to maximise domestic processing to the utmost degree, it is likely that energy-intensive processing of rare metals will take place mainly outside of Greenland during the first period of their emerging mining sector. Co-operation with Greenlandic mining companies on the complete processing of raw materials in Iceland would therefore be tenable and could be used as...
an opportunity to educate and train young Greenlanders in the field. Such a co-operation could be of great benefit to both nations.

It is important for the Icelandic government to provide detailed information to the Greenlandic administration and international mining companies that are considering operations in Greenland on what kind of services Iceland could offer. It is also recommended, that the Minister of Foreign Affairs invite the representatives of those who are preparing to begin mining in Greenland to a meeting in Iceland to explore possible incentives and services with regard to warehousing, transshipment and processing in Iceland.

### 7.9 Recommendations

1. The Foreign Minister is recommended to include provisions in the General Framework Agreement (see Main Recommendations 1.1.) that encourage co-operation between Greenlandic and Icelandic service providers and also on possible co-operation or joint ventures in Iceland regarding raw materials, such as Rare Earth Metals, that may be difficult to refine domestically.

2. The government should device a policy on temporary incentives to encourage mining companies in Greenland to seek co-operation in Iceland on services such as supply storage, transshipment and storage of raw materials from mines in East and North Greenland. The policy should also support further processing of raw materials in cases when such service is sought/needed outside Greenland.
3. The Foreign Ministry’s Directorate for External Trade and Economic Affairs should, in consultation with Iceland’s Chamber of Commerce and the Confederation of Icelandic Enterprise, perform an assessment of the type of support services mining companies in Greenland will need and the capabilities of the Icelandic industry to meet those needs.

4. Subsequently, the Ministry for Foreign Affairs and Iceland’s Chamber of Commerce should establish a web portal (one-stop-shop) where mining companies can obtain all the necessary information, links and system guidance on all aspects related to types of service that can be provided from Iceland (suppliers, temporary staff agencies, contractors, air service, general service companies, financial services, customs and taxation, etc.).

5. The Consulate General in Nuuk should be tasked with monitoring the issuance of licenses for research, prospecting and mining, and to contact and/or meet with pertinent parties to provide a “resource package” to highlight the benefits of using Iceland and Icelandic industries with respect to mining activities in Greenland.

6. It is proposed the Minister of Foreign Affairs invites selected mining companies in Greenland to a meeting in Reykjavik to encourage co-operation with regard to services, construction, and possible processing of raw materials in Iceland that may need further processing outside Greenland.
8. Extensive Opportunities for Co-operation

The strongest bonds between nations are based on extensive individual relationships. First-hand experience of the culture and people is the best way to establish mutual ties of understanding and friendship between nations. The most profound and long-lasting connections are those that are formed at an early age and last entire lifetimes. They are established when young people move to other countries for education or work, and by participation in sports, civil associations and not least by extensive travelling. In most cases, commerce and involvement in the economy of other countries encourages positive views and greater understanding between nations. Same applies to co-operation in cultural and artistic activities, which often reflect the deeper core of societies. The educational systems of nations that have formed close ties have an obligation to share their backgrounds of history and culture through educational activities, such as text books, syllabus and teaching. Quality media, especially publicly owned, has a responsibility to inform on contemporary developments. In the relationship between Greenland and Iceland non-governmental organizations have played a pivotal role, through the work of Hrókurinn chess club, the Red Cross, Save the Children, the Scout movement and the Iceland Touring Association.

Government involvement can facilitate all those factors. They provide a fundamental role by encouraging cultural exchanges, strengthening cooperative efforts in the fields of research and science, promote the joint efforts of civil societies, create conditions to make travelling technically and economically feasible, and not least by removing hindrances to commerce. Governments are of vital importance with respect to possibilities for young people to study abroad. In the case of Greenland and Iceland, where there is a language barrier, incentives such as scholarships and research grants carry much weight. The Icelandic authorities furthermore have a duty to ensure that at all times there exists linguistic knowledge to translate literature between Icelandic and Greenlandic.

Authorities also have an important symbolic role. Interactions between heads of state and political leaders, such as mutual official visits, are official statements of unity and friendship. When ties of friendship are established between nations, the authorities have a duty to advance and cultivate close bilateral co-operation in all official areas. This is especially important where strong mutual interests are at stake. Consultation and co-operation will al-

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185 The television station N4 has aired documentaries about Greenland, and the Icelandic State Broadcasting Company relates news from Greenland and regularly features discussions of Greenlandic affairs on their morning programs.
ways serve to minimize the probability of misunderstandings or tension. This can, at times, be important in sensitive areas, for example, regarding common fish stocks.

One conclusion of this report is that the current co-operation between Greenland and Iceland is characterized by a lack of organisation and reflects a high degree of randomness in too many respects. Several opportunities for co-operation, not least in the public sector, are wasted due to lack of dialogue. In some areas the involvement of public authorities is important to remove barriers between the countries’ private sectors. A profound understanding of the institutions of Greenlandic society must therefore be established in Icelandic administrative circles beyond the Ministry for Foreign Affairs. At present, this is not the case. Icelandic authorities must in an organised manner strengthen the formal connections with Greenland in all the major areas of administration, between ministers, ministries and principal institutions, schools and NGOs, not forgetting the field of sports.

The three preceding sections contain a detailed analysis of possible co-operation in three important economic sectors: the fisheries sector, which is currently the mainstay of the economy of Greenland; the tourism sector, where efforts for improvement are ongoing; and mining, which is likely to become an important industry in the imminent future. The present Section contains 19 recommendations for co-operation in various other areas. All are practically feasible. If executed, all may result in stronger ties between Greenland and Iceland.

8.1 Leaders, Ministries, Institutions

Analysis of the relationship between the countries reveals that Icelandic authorities have devoted surprisingly scant efforts to cultivate formal ties with Greenland subsequent to Self Rule in 2009. Yet, Icelanders, with a recent history of a struggle for independence from Denmark, should feel certain neighbourly duties towards a nation on a similar journey towards independence. Nonetheless, no Icelandic Prime Minister has shown our closest neighbour the respect of an official visit to Greenland in more than 20 years. Surprisingly, PM Davíð Oddsson was the last one to pay such a visit. At the same time, all three Prime Ministers of Greenland in this decade have visited Iceland, some of them more than once.

Meetings between other ministers have become more frequent in recent years. Four ministers have, for example, visited Greenland in the last two
years. In addition, there are sporadic meetings between various ministers at the fringes of Nordic conferences. In light of the government’s desire to strengthen co-operation with Greenland, the number of bilateral meetings has to be increased, as must the frequency of visits from major ministers and experts. The best way to achieve this is to formalize connections and co-operation in a framework agreement between the nations, as proposed at the beginning of the report. The respective Foreign Ministers, Guðlaugur Þór Þórðarson and Ane Lone Bagger, established an important precedent by formally deciding in Nanortalik in the summer of 2019 that bilateral meetings of Foreign Ministers would in future take place every year, with the countries alternating as hosts.

Analysis of links of Icelandic government institutions with corresponding entities in Greenland revealed that Greenland is still assigned a fringe status, as judged by answers to formal queries from the Greenland Committee. In some cases, individual directors of major Icelandic institutions have never even met with colleagues from Greenland. The Health Sector is a welcome exception, maintaining links based on formal agreement with the Health Sector in Greenland. The only direct, formal co-operation between institutions is a laudable agreement between the Directorate of Fisheries and its counterpart in Greenland, from 2019.
With regard to developing links with Greenland in an organized manner the Office of the President of Iceland is a rare exception among government institutions. Ólafur Ragnar Grímsson made successful efforts to cultivate ties with Greenland during his tenure as President, and also founded the Arctic Circle, which now is the most important non-governmental venue for Greenlanders to expand their international presence. The current President, Guðni Th. Jóhannesson, also has visited Greenland in his presidential capacity and intends to offer a temporary post on his administrative staff to the Greenlandic foreign service. The same was previously offered, and accepted, by the Faroe Islands. This fine precedent should be followed by other institutions of the Republic.

As Minister for Foreign Affairs, Gunnar Bragi Sveinsson signed an agreement with Greenland, 2013, which included provisions on temporary staff exchanges similar to a previous agreement of the Ministry with the Faroe Islands and

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activated successfully. The Greenland provision has, regrettably, not been applied as yet. Temporary staff exchange programs traditionally have proven to be a successful avenue for communication, experience and innovations with friendly nations. With a view to that it is proposed to make leeway for other ministries and relevant institutions to exchange staff members and interns with pertinent Greenland authorities on a temporary basis. Particular emphasis should be on areas of mutual interest, such as fisheries and energy (see Section 5, on Fisheries).

The consultations on ministerial levels mostly have concerned the health care sector, as earlier mentioned. The Ministry of Health deserves special praise for regular bilateral consultation with corresponding authorities in Greenland. The Minister of Health and high level officials meet annually with Greenlandic colleagues. The National Hospital and the Hospital in Akureyri specially appoint personnel as contacts with health authorities in Tasiilaq and Ittoqqortoormiit in East Greenland. Co-operation within the health care sector, may, however, be increased further still, as described later.

Two conclusions may be derived from the satisfactory co-operation within the health sector: Firstly, a formalized agreement ensures continuity of co-operation. Secondly, the practical co-operation based on the agreement has verifiably improved the quality of life in East Greenland. The experience gained strongly indicates that it would facilitate co-operation between sectors, ministries and institutes if based on formal agreements, ensuring execution and continuity.

A priority should be placed on developing strong co-operation networks in sectors containing mutual national interests. Such sectors are fisheries, travel services, aviation, telecommunications, education and Arctic affairs. Areas of common interest are those most likely to benefit from regular consultation. Experience has demonstrated that consultation between experts and scientists can often resolve differences before they develop into conflicts. This is especially important in fisheries, where unsolved issues may surface in the imminent future.

As yet, the Greenlanders have less experience of state-building with ensuing development of institutional capacity than Iceland, which already has developed a successful and mature, independent state. Today, Greenland is still facing tasks that demand solutions, that may be sought in Icelandic experience.
It, however, will always be the privilege of Greenland to decide if she wants to make use of the Icelandic experience. Icelandic politicians sometimes (correctly) argue it is the moral duty of Iceland to be of service to Greenland, if requested. It should, however, never be overlooked that it is also of direct material benefit to Iceland's interests to tighten the connections with Greenland in any way possible and to assist her empowerment in all fields.

**Recommendations:**

- Yearly, bilateral ministerial meetings should be introduced, and held alternately in each country. These, and other recommendations in this Section, should be included in a provision in the General Framework agreement, (see Main Recommendations p. 12).

- A formal agreement should be made regarding bilateral consultations, meetings and work visits between the ministries responsible for the countries' joint interests in the fields of fisheries, tourism, air travel, education and Arctic issues. Other ministries should assess whether there is reason for them to engage in bilateral co-operation in their respective fields.

- Icelandic institutions that work in policy areas connected to Greenland should formalize working relationships with their sister institutions where sharing is ensured of experience, data, innovations and other important information, and foundations laid for joint, practical work, such as research.

- Ministries and institutions should be given leeway every few years to exchange staff members and interns on a temporary basis with Greenland. It is suggested that the Foreign Ministry be the first by using the provision in the existing ministerial declaration from 2013.

- The Minister for Foreign Affairs should solicit ideas from ministries and institutions regarding desirable co-operation with Greenland, and submit to the government a proposal based on those ideas.


8.2 Information, Knowledge, Image

Ideally, each of the two nation should be encouraged to learn more about the other and her way of life. No website exists in Icelandic with general information about Greenland, its history, culture, nature and economic structure.

The same applies to Iceland with respect to Greenlandic websites. The mutual material offered by the educational systems on each nation is limited. In the same vein, student exchanges between the countries are minimal and mostly restricted to short visits regarding field work. The linguistic barrier is a great hindrance. Only a handful of people speak both languages, and in effect, no translators of literature are available. In view of that it is important that Icelandic authorities offer student grants in order to create capacity to translate between Greenlandic and Icelandic. In the past the Icelandic authorities offered an annual grant for one Greenlandic students to register at the University of Iceland. On of them was Moses Olsen, who later would translate Icelandic literature into Greenlandic, and become a leading ideologue in the struggle for independence. Today, English is fast becoming the international language used by the younger generations in both countries. Gradually, the number of university courses being offered in English is increasing. In the near future, more opportunities will therefore be for exchanges of teachers and students. Regrettably, no such specific plans exist at the moment.

In the educational system in Iceland little effort is devoted to teaching about Greenlandic culture and current affairs. More awareness in both regards would help to foster closer connection between the nations. It is important, therefore, that educational authorities push for inclusion of more material on Greenland in the primary school syllabus and encourage projects between schools in the two countries. Similarly, the media should be encouraged to take more interest in Greenland, for instance, by offering travelling grants to journalists to increase programmes and news related to Greenland.

The initial period of the Icelandic Mission in Nuuk, started in 2013, was marked by energetic work on the part of Ambassador Pétur Ásgeirsson, who was appointed Consul General, and whose achievements included successful band exchanges and Icelandic film festivals. Both were very well received in Greenland. The film festivals were followed by a surge in co-operation between the countries in the field of cinema. This resulted in joint projects and with Greenland being included in the system of reimbursement for Icelandic films, despite the country not meeting the criteria of being a member of the European Economic Area. Such cultural activities have considerably...
decreased after Ambassador Ásgeirsson’s departure. It is important that the pioneering work of Ambassador Ásgeirsson be continued.

KALAK arranged the successful “Greenlandic Days” in 2013 in co-operation with the Greenland-Iceland chamber of commerce, supported by companies that had interests in Greenland, and loyal friends of Greenland. The event was not repeated due to a lack of financial support.

**Recommendations**

- The Ministry of Foreign Affairs should support the following actions:
  
  - The “Greenlandic Days” be held every other year in Iceland, and in the alternating years “Icelandic Days” in Greenland. Greenlandic artists (drum dancing, rock music, visual arts, handicraft) be invited to visit and presentation of interested tourism companies should play a part. KALAK is best suited to manage the project on Iceland’s behalf, and should be funded accordingly.

  - Educational authorities in Iceland should be encouraged to promote material on Greenland suitable for primary pupils. School authorities should also encourage closer ties between Icelandic and Greenlandic schools at the primary level, for instance, through joint projects.

  - An annual essay contest on Greenland be initiated among pupils in the last class of primary school, in co-operation with the Ministry of Education, the Greenland Fund and Icelandair. A trip to Greenland would be an ideal main prize.

  - The band exchange program be revived, and the music scene be presented in a reciprocal manner to the younger generations of the countries.

  - The Icelandic film festival in Nuuk should be consolidated as an annual event.

  - For five years, two annual grants for trips to Greenland should be offered to the media, through the Greenland Fund.
• A three year grant to a promising young Greenlander to study Icelandic should be offered every three years. In a similar manner, Icelandic students should be supported to study Greenlandic.

• Efforts should be made to promote the publishing of translated Greenlandic literature in Iceland.

• The administrations of both countries to explore ways to establish regular exchange of students and guest lecturers between Icelandic and Greenlandic universities.

• Authorities in Iceland are recommended to support KALAK in creating a website in Greenlandic and Icelandic, as well as Danish and English, where general information about both countries can be accessed, with focus on their history and cultures, along with basic information about the existing travel options between the countries.

8.3 Red Cross Support Projects

East Greenland is beset by social problems, as described in Section 9. Scant psychological crisis support is available locally for individuals, who have to deal with traumatic experiences, often during vulnerable childhood. The Icelandic Red Cross has valuable experience of building networks where local volunteers are empowered to provide support. Considering the extensive problems faced by the people of East Greenland it is imperative that the capacity of the Icelandic Red Cross will continue to be of support to those in need in East Greenland.

On the occasion of its 90th anniversary in 2014, the Icelandic Red Cross concluded to substantially increase co-operation with the Greenlandic sister organization, Kalaallit Røde Korsiat (KRK), with particular emphasis on establishing facilities for youth activities. The Icelandic Red Cross also provided financial and technical support for the first report ever written in Greenland on vulnerable demographics. This report will be used by the KRK for guid-

ance in its work over the next few years. The community of East Greenland also found it very helpful that the Icelandic Red Cross supported the foundation and development of the first branch of the Greenlandic Red Cross in Tasiilaq. The new unit has now been in operation for two years. In Nuuk the Icelandic Red Cross has also been actively participating in a university project that aims at breaking the isolation of the elderly.

With a view to the situation in East Greenland the Greenland Committee strongly recommends that the Icelandic authorities enable the Icelandic Red Cross to continue with the successful work it has begun in Greenland, not least on the east coast, in close co-operation with KRK. The Red Cross has special experience in activating volunteer networks involved in stress relief. Such task is difficult, not least in sparsely populated areas where social problems abound. The Icelandic Red Cross has demonstrated success in strengthening voluntary activities in difficult areas, and the organization’s experience in this regard can be of invaluable help to KRK, not least in East Greenland. It is of great importance to continue to support the newly established unit in Tasiilaq and promote its capacity with emphasis on recruiting, training and directing new volunteers.

**Recommendation:**

The Foreign Minister is strongly recommended to support the Icelandic Red Cross project in Greenland to be executed in close collaboration with its Greenlandic partner, KRK. In East Greenland the objective will be to lower the suicide rate and reduce all forms of violence committed against children, with a special focus on the target group between the ages of 15–30 years. In general, the project will pay particular attention to preventive measures and psychological support for vulnerable demographics. Four separate issues will be addressed:

* **Structuring and development of volunteer work:** Recruitment and training of volunteers to support and empower young people to take on the challenges they face in a socially fragile community. By taking part in the project, volunteers will obtain guidance, increase their self-confidence and receive training to be able to provide support to people their own age through play and work. The objective is to engage young people and encourage them to be a positive force in their immediate environment.
The Icelandic prevention model employed to reduce narcotics use among adolescents has attracted attention from all over the globe. It has been adopted in several cities in Europe under the name "Planet Youth" and is currently being used in the United States, South America and Africa. The model is likely to be of good use in Greenland.

The Icelandic prevention model is based on decades-long research carried out by experts at the University of Iceland and Reykjavík University, who studied the narcotics use patterns of adolescents and what methods proved best to reduce their consumption. They have involved all primary and secondary schools in Iceland. The results indicated that three methods are the most effective for reducing alcohol and narcotics use among adolescents. One, that the adolescent spends at least one hour a day with the family, irrespective of how this hour of togetherness is spent; two, participation in some kind of organized physical activity and youth work, such as sports, scouting, chess or whatever else, as long as the activity is conducted in an organised manner; and three, abstaining from alcohol use until the age of 18 years.

### 8.4 Planet Youth - The Icelandic Prevention Model

The Icelandic prevention model employed to reduce narcotics use among adolescents has attracted attention from all over the globe. It has been adopted in several cities in Europe under the name "Planet Youth" and is currently being used in the United States, South America and Africa. The model is likely to be of good use in Greenland.

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The model therefore does not take the form of issuing instructions or prohibitions, but instead encourages the adoption of positive rules of living. For many years these rules have been presented once a year on a special Prevention Day, instigated by the President of Iceland and held in co-operation with all Icelandic schools and municipalities, sports associations and youth clubs. On the day a special presentation is given in every single school, where the rules are explained. This is the core of the Icelandic prevention model which presently is being adopted on a wide scale internationally.

The model is based on predictive factors for alcohol, tobacco and narcotics consumption, supported by a valuable database that keeps expanding as the research goes on. Simultaneously, the predictive value increases, as do the possibilities for intervention in case of undesirable developments. The model is adapted to the conditions that exist in each place, but fundamentally it relies on the cooperative efforts of parents, schools, sports associations and public institutions that work to ensure the well-being of children. Its roots can be traced to research conducted into increasing use of alcohol and narcotics among Icelandic youths in the 1990s. The success has been remarkable.

In 1998, 17% of Icelandic pupils in the last year of elementary school had used cannabis, 23% smoked every day and 42% drank alcohol at least once a month. After the prevention model was adopted, the frequency of consumption dropped drastically in all categories, and now it is below 10% in all. Two comparisons with other parts of Europe reflect the positive development in Iceland: In a recent survey 80% of 16 year olds in Europe had tasted alcohol at least once, whilst only 35% of the same age class in Iceland had done so. At the turn of the century, Icelandic youths had the dubious distinction of some of the highest rates for alcohol consumption and smoking, but by 2015 their drinking and smoking was less than in any other European country according to a survey conducted in 35 European states (European School Survey Project on Alcohol and Other Drugs, 2015). The success is even greater with regard to smoking. The percentage of youths who smoke on a regular basis has dropped from 23% to 3%. The Icelandic prevention model is thus one of the quiet victories achieved by the Icelandic community, and it is most certainly worthy of exporting.

GIF, the Sports Confederation of Greenland, very actively promotes preventive efforts in its home country. During a meeting in Nuuk much interest was expressed in making a connection to Planet Youth and implementing the Icelandic prevention model. GIF is very active in social work in the community, and strives to reach children and adolescents. A large percentage of Greenlandic children have an active membership in GIF. The association particularly emphasizes the importance of parental involvement in the activities. Accord-
ing to the Icelandic prevention model it is important to have an effect on how children spend their leisure time. In order to achieve the model's objective the participation of parents and sports associations is of special importance.

The Greenlandic authorities have assigned priority status to the fight against narcotics consumption among young people. In Iceland, the City of Reykjavík has the most experience of using the Planet Youth prevention model. Co-operation between that city and the most populated municipality in Greenland, Sermersooq, would be a most appropriate avenue to share the Icelandic model. Sermersooq includes both the capital, Nuuk, the big towns on the west coast, as well as Ittoqqortoormiit and the Tasiilaq region in East Greenland where social problems related to alcohol and narcotics consumption are deeply felt. Ideally, GIF should be involved in the cooperative efforts to implement the Icelandic prevention model in Greenland.

**Recommendations:**

- The Ministry for Foreign Affairs is recommended to initiate co-operation involving the Icelandic prevention model between the community of Sermersooq, the City of Reykjavík, Reykjavík University and GIF, the Greenland sports association, for the purpose of counteracting substance abuse among young Greenlanders.

- Icelandic authorities should provide funding for ensuring that the project can be launched.

### 8.5 Sports Co-operation

Sports are important in Greenlandic towns, especially indoor sports such as futsal, team handball, badminton, martial arts and table tennis. The status of sports in Greenland is described in Section 4.10. GIF, the Sports Confederation of Greenland, has twelve thousand members, of which eight thousand are active. The majority are children and adolescents. One of GIF’s primary objectives is getting young people involved in healthy sports activities. At a meeting, GIF representatives expressed their strong desire to work as closely as possible with the Icelandic sports movement. GIF’s focus was mainly threefold:
First, GIF is very interested in closer collaboration with ÍSÍ (the Icelandic Sports Association). They want to establish professional connections between the two associations in order to share knowledge, research and experience regarding the organisation of volunteer work, the social aspects of sports, e.g. wellbeing and bullying in sports, the integration of sports in small communities, and the development of sports for people with disabilities. GIF is interested in sharing its own experience from operating in a small community as well as learning from the experience of Icelanders, not least about arrangements for the youngest age groups. GIF is very interested in having access to and participating in ÍSÍ conferences on the above-mentioned matters.

Second, GIF would like to cooperate with the Icelandic sports movement to improve training in Greenland in various fields, both through visits by experienced Icelandic coaches to Greenland and through access to all kinds of coaching education in Iceland, e.g. ÍSÍ courses and workshops in individual subjects. GIF is especially interested in leadership training. GIF also focuses on non-traditional public sports that are specifically related to Greenland and stated that there is demand within the sports movement for Icelandic expertise in the field of non-traditional public sports, e.g. skiing, glacier hiking and ice climbing. (These aspects are specifically addressed in Section 6, on tourism.)
Third, GIF is interested to further co-operation on sports competitions, both bilateral and between the West Nordic states. GIF stressed the desire for friendly games at school level with social activities included. East Greenland was specially addressed in this respect (for recommendation re. East Greenland, see Section 9). Similarly, a desire was expressed to see more opportunities for youth teams to participate with their Icelandic peers in youth football tournaments, and for Greenlandic athletes to participate in the Reykjavik International Games.

GIF representatives recalled the Greenland Cup, a football tournament held alternately for several years in the West Nordic countries in the 1980s, and is interested in reviving the tournament in some form. Greenland is currently undergoing a football revival, thanks to new artificial turf fields and indoor facilities for futsal. The success of the Icelandic national football team has been the subject of much attention and admiration in Greenland. The nation longs for international matches against its neighbour, and such events would undoubtedly be a great boost for football in Greenland. The same applies to team handball, where Greenland is on a roll but sorely needs international matches. The women's national team has specifically requested matches against the Icelandic team.

A meeting of the associations in Iceland would be a good starting point for a collaboration, where the associations could present practical ideas. Based on the results, sports authorities in both countries might take further steps for future collaboration.

**Recommendation:**

* The Foreign Minister should in co-operation with relevant authorities invite the two sports associations, GIF and ÍSÍ, to a meeting in Reykjavik with representatives of the Ministries of Foreign Affairs and Education. The purpose will be to discuss ideas on future co-operation’s in all aspects of sports, with emphasis on youth activities, training co-operation and national games.
8.6 Distance learning - An Innovative project by the Universities in Nuuk and Akureyri

Distance learning has provided thousands of Icelanders with an opportunity to pursue various types of education that they would otherwise have missed. Distance learning could similarly benefit many Greenlanders, as the country’s long distances can sometimes be very constraining when it comes to education. Already in the upper grades of primary school, long distances restrict the school attendance of young Greenlanders and contribute to the high drop-out rates between school levels. They also impede access to the schools in various vocational fields scattered along the west coast. The education level in Greenland is the lowest in all the Nordic countries.

Icelandic experience shows that distance learning is suitable for most of those who seek more education, and this applies equally to fishermen on the high seas and parents busy with work and child rearing. Greenlandic authorities spend a lot of money on education and they are very concerned with promoting higher education in order to increase prosperity and, in future, to staff the Greenlandic systems with educated Greenlanders. In Greenland, there is a strong correlation between education and income and employment level. Distance learning therefore seems to be a particularly good option for raising the level of education as well as the average income.

However, distance learning is not currently available in Greenland. Greenland has still some way to go in the field of education and judging from the Icelandic experience, distance learning could make an enormous difference. As confirmed in a meeting with Tele-Post, connectivity in the larger towns already is of sufficient quality to support distance learning. In addition, a high-speed revolution is expected in the imminent future, as described in Section 4.4. It will be based on an international system of low-altitude satellites that connect every Greenlander to a high-speed network, whether they live in the most remote settlements or are out at sea. This lays the groundwork for a revolution in education in Greenland. The speed of these developments depends on how readily knowledge on the development of distance learning can be shared with Greenlanders. In this, Iceland can play an important part. It is likely that co-operation between the two countries in developing distance learning in Greenland will be highly successful.
The University of Akureyri is the cradle of distance learning in Iceland, both at the upper secondary and university level, and has extensive experience of teaching on both levels. The Minister for Foreign Affairs has also recently signed a service agreement with the University of Akureyri to support Arctic co-operation. The University has collaborated successfully with its sister institute in Nuuk for many years. A visit to Ilisimatusarfik revealed an interest to collaborate with Icelanders on developing distance learning. Ilisimatusarfik is already an established educational institution that plays an important role in Greenlandic society and is an ideal venue to develop distance learning domestically.

The co-operation needs to extend to the transfer of the technological environment, pedagogical advice and the sharing of internet-friendly educational material in English. It is important to create leeway for the schools to exchange inspiring visiting teachers with distance learning experience in order to share practical experience in the best way possible. The project must be based on both the introduction of distance learning at the university level and later at other levels, i.e. at an upper secondary and vocational level. An ideal first step is a pilot project with subjects that experience has shown are well suited to distance learning and for which there is a need in Greenland.

A collaboration between the universities on an equal basis would not only benefit Greenlanders but would also create various opportunities for the University of Akureyri, including an opportunity to increase its unique Icelandic position in Arctic studies. In addition, Ilisimatusarfik has successfully developed high-quality doctorate studies, as is currently being prepared at the University of Akureyri. Thus, Greenlanders can share valuable experience with the University Akureyri in that field.

In the longer term, the following possibilities related to distance learning can be pointed out: The University of Akureyri has established a first-class fisheries science faculty from where leading figures in seafood processing and production have graduated. Alumni from the faculty have played a large part in the innovation that now characterises the Icelandic fishing industry. A considerable amount of teaching is conducted in English; a language increasingly familiar to younger generations of Greenlanders. In this area, the University
of Akureyri is already collaborating with North American universities. If there is Greenlandic interest, it would be possible in the future to begin teaching some fisheries science at Ilisimatusarfik in collaboration with the University of Akureyri, via distance learning and visiting lecturers. This could possibly be linked to a collaboration with a university in North America. It should be pointed out that the US Government is interested in supporting the development of fisheries-related studies at the university level in Greenland.190 With regard to the business courses already taught at Ilisimatusarfik, the focus could be on innovation to increase value, as meetings held in Nuuk revealed that there is a demand for more innovation in the Greenlandic fishing industry.

The Greenlandic government places great importance on raising the education level of Greenlanders, and one way to achieve this is to adopt distance learning. The University of Akureyri’s experience in this field could expedite the practical introduction of distance learning in Greenland and make it more efficient. It is therefore important that the countries’ governments create a financial basis for distance learning co-operation between Ilisimatusarfik and the University of Akureyri. A key factor in any potential financing from Nordic funds is the support and close co-operation of the governments.

Recommendations:

• The Foreign Minister is recommended to initiate an agreement regarding the introduction of distance learning as an option in Greenland, and on dissemination of experience from Ilisimatusarfik to the University of Akureyri on structuring and preparing studies at PhD levels.

• The agreement should enable Ilisimatusarfik and the University of Akureyri to have financial capacity to establish distance learning at university level, including the cost involved with contributing the teaching studies and technological requirements for building up a three-year demonstration project in selected fields of study.

190 See: https://www.state.gov/briefing-with-senior-state-department-official-on-the-administrations-arctic-strategy/
8.7 Health Care Co-operation

For distressed patients where response time is critical, a well organized collaboration between the National University Hospital of Iceland (Landspítalinn) and Greenland could save lives in cases of serious cardiac events or strokes. Páll Matthíasson, Director of the National Hospital of Iceland and Henrik L. Hansen, Greenland’s Director of Health, are of the opinion that it is important to explore ways to strengthen the ties between the National Hospital and Queen Ingrid’s Hospital in Nuuk. A promising first step would be to map out any excess capacity in the Icelandic healthcare system and see if it can to some extent match Greenland’s needs. Subsequent to such exploratory work, rational decisions may be made regarding further co-operation.

Rógvi Finsson Johansen, manager in the Greenland health sector, reported that when a team from Greenland visited the National Hospital in Iceland few years ago, the group was surprised by the number of surgeons as well as the complexity and versatility of the procedures performed at the National Hospital. The visit sparked a discussion in Greenland about furthering a more substantial collaboration between the National Hospital and the hospital in Nuuk. For various reasons, not least change of Ministers in Greenland, this promising idea did not materialize.

An agreement exists from 2012 regarding a healthcare collaboration between Iceland and both the Faroe Islands and Greenland. The agreement with the Faroe Islands is outlined in detail and includes certain types of procedures that are performed in Iceland. The agreement with Greenland is a broader framework agreement, mostly focusing on emergencies, especially on the east coast. It does not include special procedures, as in the case of the Faroese agreement. The ties to the Faroese healthcare sector are therefore better defined than in the case of Greenland.

• The Icelandic authorities should offer Icelandic expertise in planning distance learning on the vocational and upper secondary level, with specific advice and experience provided by the University of Akureyri.

• The countries should jointly seek the participation of Nordic funds in financing the introduction of distance learning in Greenland.
The Akureyri Hospital provides all emergency medical services to the most remote settlement in Greenland, Ittoqqortoormiit in Scoresby Sound. The Icelandic airline Norlandair, based in Akureyri, manages emergency medical service flights to the region. The National Hospital provides services to the Tasiilaq region and receives close to half of all emergency cases from the region. In some cases, emergency patients are flown in from Nuuk. The Director of the National Hospital disclosed that the hospital received approximately 30-35 patients annually. Mainly, these are newborns who need to be transported to the intensive care unit immediately as well as patients experiencing severe cardiac events. Both the National Hospital and the hospital in Akureyri have nurses who serve as contact personnel in the collaboration with East Greenland. It merits mention that a Faroese speaking nurse has been employed at the National Hospital, but no Greenlandic speakers are on the staff.

Henrik L. Hansen, Director of Health, provided an analysis of patients who in 2017 and 2018 were sent from Queen Ingrid's Hospital to the National Hospital in Copenhagen for medical treatment that is not available in Greenland. Greenlandic patients are primarily sent to Denmark for cancer cases, cardiovascular diseases and orthopedic surgery. Approx. 950 patients were sent each year and each incurred a cost of over 100 thousand Danish kroner. The total cost annually was therefore over 100 million Danish kroner. About 85% of that cost is incurred by a third of that group. Some of the patients only stay in Copenhagen for a short period of time.

Icelandic doctors and health institutions could supply many of the operations which presently are performed in Copenhagen. In the vast majority of cases, these are not categorized as emergency procedures. They could be organised well in advance. The flight route to Reykjavík is less than half the duration of the journey to Copenhagen, excluding domestic flights within Greenland to Kangerlussuaq, which serves as the point of departure to Denmark, and where patients may have to wait for hours. In the case of patients with severe medical conditions, medical staff will accompany them, and often the next of kin also travels with the patients. The Greenlandic healthcare system would therefore see a marked reduction in cost if Greenlandic patients sought medical treatment in Iceland to a greater extent, rather than to Denmark. For patients who have difficulties with long-haul flights, the benefits are obvious.

The primary obstacles to supplying these services in Iceland are of a social nature. Few of the older generation in Greenland can speak English and none of the staff members at the National Hospital or Akureyri Hospital speak Greenlandic. The language barrier, both when communicating with doctors and nurses, but not least in relation to accommodations in hotels, therefore
is a great problem to many Greenlandic patients. On the other hand, a third of the Greenlandic Inuits live in Denmark, where many patients can rely on a social net of friends or family members. The State Hospital (Rigshospitalet) and patient accommodation in Copenhagen also employ Greenlandic staff.

The communication issues are considerable not least with regard to the elderly, who generally make up the largest patient group that require medical services outside of Greenland. A similar problem arose in connection with patients arriving from the Faroe Islands and resolved by employing Faroese-speaking nurses. Hiring of Greenlandic nurses would in a similar way resolve the linguistic issues with Greenlandic patients. In Iceland, there is also interest within the administrative system to strengthen the relations to the Greenlandic medical sector by offering places to 1-2 Greenlandic students to study medicine at the University of Iceland. Currently, all such students go to Denmark, simply because there is no other place for them to study medicine.

The Director of the National Hospital believes there are many opportunities for increasing the collaboration between the countries beyond the emergency cases from the east coast of Greenland. Excess capacity exists in various areas, not only at Landspítali, but also in Akureyri and Akranes, and, in addition, various operations could be performed in clinics outside the hospitals. Increased collaboration on specific activities, e.g. cardiac catheterisation procedures that are not performed in Nuuk as well as brain catheterisation where the National Hospital has achieved great results in removing blood clots from the brain, would therefore yield mutual benefits to both countries. In Iceland, it would also be possible to perform various elective surgeries such as arthroplasty. The National Hospital also provides regular specialized training courses for advanced nursing care, e.g. perioperative and anaesthetic nursing. There is interest to offer such courses to Greenlandic nurses.

Dr. Hansen informed that the hospital in Nuuk has access to a DAC-18 aircraft with a special agreement with the government that the hospital could use to transport multiple patients to Iceland in one go. That could be used for example, to bring patients to pre-organized elective operations. This was done to much satisfaction of all concerned, when a group of patients were flown into Iceland for arthroplastic procedures around 2010. There was, according to a manager in the hospital sector, interest in pursuing this further but petered out.

The Greenland's Director of Health also pointed out that in Greenland, no fertility services were provided to those who have difficulty conceiving. He stated there was demand for such services in Greenland. Henrik L. Hansen, who previously held the position of Director of Health in the Faroe Islands, reported that the Faroese had sought such services in Iceland to much sat-
isfaction. The Icelandic healthcare system has exhibited great results in that particular field. This makes trips to Iceland for such procedures attractive to Greenlandic couples, and today people of childbearing age are of a generation where most are able to communicate in English to a greater degree.

Páll Matthísasson, the Director of the National Hospital, has visited Greenland in recent years, and considers healthcare services in Greenland to be well organized and was appreciative of the hospital in Nuuk. He considers there is a need to increase mental health services in Greenland, and that innovations in Iceland, such as the multi-factoral mental health response teams in the Reykjavik area could help to alleviate suffering and cut costs.

A co-operation in the field of radiation protection has been suggested. This relates as well to other fields and is discussed in details Sections 7 and 8.8.

**Recommendations:**

- The National Hospital and Akureyri Hospital should add a Greenlandic nurse and/or a licensed practical nurse to their staff, to make the treatment of Greenlandic patients easier.

- Health authorities are recommended to request the National Hospital with relevant authorities in Greenland to map the capacity of the Icelandic health system to Greenlandic needs. Particular attention should be given to cardiac catheterisation, brain catheterisation, elective operations, such as joint replacements, and fertility treatments.

- In particular, mental health solutions should be presented to the Greenlandic authorities, focusing on multi-factoral mental health response teams developed in the Reykjavik Capital Area.

- For medical studies, 1-2 places at the medical faculty of the University of Iceland/National Hospital should be reserved for students from Greenland.

- The Minister for Foreign Affairs is requested to update the health care agreement with Greenland to include the above recommendations.
8.8 Radiation Protection

Greenland needs to implement radiation measurement and radiation protection standards to fulfill Greenland's adoption of the International Atomic Energy Agency (IAEA) regulations for the control of radioactive materials in Greenland. This includes materials used in industry, hospitals and border control (paints, X-ray equipment, radiopharmaceuticals, airport radiography) or mined from the earth (uranium). The Greenlandic Parliament has already transposed the necessary provisions into law in a satisfactory manner. The next stage is to develop standards for monitoring and protection that correspond to Greenland's obligations. It has already been concluded by Greenlandic authorities that the wisest way would be to seek guidance from a nation with experience of small systems, such as Iceland.

Uranium mining is set to begin in the coming years. Greenland has deposits that are estimated to contain up to a quarter of the known deposits on Earth. Aleqa Hammond, the former Prime Minister of Greenland, announced in 2013, at the first Arctic Circle Assembly, that Greenland could in future become the 5-10th largest exporting country for uranium.

Strict IAEA regulations apply to the treatment of uranium, not least to its processing, to ensure the safety of people and the environment. Greenland also has a large supply of REMs that are in high demand, but most often uranium is found scattered within the “heavier” part of such metals. In South Greenland, a well-explored mine containing REMs, will due to dispersed uranium content, have difficulties in obtaining license unless a monitoring system is installed.

Greenlanders need to design a monitoring system that fulfills the requirements of the IAEA while also being well-suited to the small size of the Greenlandic community. Icelanders have the corresponding experience and know-how having implemented such systems before 2010. The Icelandic Radiation Safety Authority considers that the Icelandic standards, approved by the IAEA, are well-suited for Greenland. Talks with Greenlandic representatives showed a clear interest in co-operation with Iceland regarding the implementation of that system.
Recommendation:

- The Minister for Foreign Affairs should establish formal co-operation between the Icelandic Radiation Safety Authority and the health care authorities in Greenland to introduce standards for radiation protection and monitoring of radiation sources, based on the experience that Icelanders have accumulated.

8.9 Search and Rescue

The search and rescue association Landsbjörg (ICE-SAR) has been a pillar in Icelandic society. Thousands of trained men and women are on stand-by to assist in the case of disasters. Its also runs a dynamic search and rescue school. The association has served an important role in the education and training of children and young adults, as several youth groups operate in connection to the search and rescue squads. The sense of responsibility and self-reliance is bolstered in young people through training and taking part in important search and rescue emergencies that help fellow citizens.

Greenland does not have corresponding infrastructure. No volunteer search and rescue association like ICE-SAR exists in the country. The Danish navy is in charge of search and rescue outside 3 nautical miles, but the police in Greenland (one of twelve divisions of the Danish police) is responsible for search and rescue within the 3 nautical miles. Both would stand to benefit greatly from a team of trained locals when searching beaches and mountains for lost people. The local search and rescue squads would have knowledge of the geography of the region, which is an invaluable asset. In remote communities such as East Greenland, where rescue work can involve long distances in case of a ship lost at sea or travellers lost in the mountains, there is a dire need for the training and organization of local search and rescue efforts.

At the Arctic Circle Assembly in the autumn of 2019, the Danish government was criticized for scant investment in search and rescue facilities in Greenland. A fisherman who lived in Tasiilaq said at a meeting with the Greenland Committee that his colleagues who sail to fish in dinghies had to ply their trade with a great deal of uncertainty, for example, should the boat's engine stall or break down, or hit an iceberg. He considered it highly desirable to

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establish a co-operation with Iceland concerning the development of search and rescue based on ICE-SAR structure of volunteers.

In conversations with Rögví Finsen, who previously served as the head of civil defense in the Faroe Islands and is working on developing similar activities within the Greenlandic administration, he stated that there is an interest in establishing a Greenlandic volunteer organisation based on the Landsbjörg/ISE-SAR model. Kim Kielsen, the Prime Minister of Greenland, has during visits to Iceland studied the Icelandic civil defense system, including the organisation of search and rescue efforts. Rögví referenced the positive co-operation between the Faroe Islands and Landsbjörg and said that Iceland and the Faroe Islands worked well together in that field. Faroese search and rescue workers have attended the Landsbjörg’s training school and completed internationally certified courses in search and rescue with ICE-SARS. He considered it important to establish a similar co-operation with Greenland to improve the skill set of Greenlanders in that respect.

In Greenland, tourism is taking off and one of the foundations for that industry is the ability to ensure the safety of tourists. In Iceland, Landsbjörg is a well-oiled operation and their skills are an essential link in the safety chain for Icelandic tourism as well as the general public. A similarly organised operation is needed in Greenland if its plans on international tourism are to be realized. It is important for Greenland to develop resources in this field and the Icelandic model, based on trained volunteers at several sites, seems ideal.

Iceland already plays a role in international response efforts with regard to cruise ship emergency situations off the shore of East Greenland. Arrivals of cruisers have increased rapidly in recent years. Due to their proximity to Iceland, Icelandic search and rescue teams have the fastest response time. In such scenarios, Iceland is assigned to serve as base for rescuing and attending those who have been shipwrecked or wounded. A training exercise for major emergency operations with the participation of international rescue teams based around a hypothetical shipwreck off the east coast of Greenland, has already been executed with Icelandic search and rescue teams as core units.

Icelanders, in accord with the Greenlandic government, would within a structured framework of co-operation, present activities and organization of ICE-SARS to government entities, municipalities and NGOs in Greenland.
conference to be convened by the administration in Nuuk. Subsequently, the government would have the opportunity to send teams of interested parties to attend workshops in Iceland, participate in rescue drills and get to know the association's activities first-hand. The contribution of the Icelandic government would be to generate capacity for ICE-SAR to assist in the first steps of developing a similar organisation in Greenland and to offer leadership courses for Greenlandic representatives in Iceland. It would be advisable to focus efforts at organizing the initial core of such a volunteer association in a single location, and subsequently to disseminate capacity created there to other sites.

**Recommendations:**

- Icelandic authorities should offer Icelandic expertise and experience to establish volunteer search and rescue organisations in Greenland, based on the experience and principles of ICE-SAR, the Icelandic Association for Search and Rescue.

- The activities and organization of ICE-SAR should be introduced in a meeting in Greenland with the Civil Defence Minister of Greenland, representatives from institutions and ministries, interested municipalities and civil organisations.

- The authorities in Greenland to be invited to send representatives on a learning trip in Iceland for the purpose of observing first-hand the activities of ICE-SAR, and to make plans regarding eventual co-operation on the establishment of a similar voluntary structure in Greenland.

- Leadership training for enthusiastic pioneers from NGO’s or municipalities should be offered in Iceland.

- ICE-SAR should by Icelandic authorities be given the task of fostering a trial pilot project in a community selected by the Greenlandic authorities.
8.10 Hydroelectric Power in Greenland

Icelanders have built 4 of the 5 hydroelectric plants that supply 6 Greenlandic towns with a total of approx. 80 MW of electricity (see 4.5). An Icelandic company has also constructed all the farmer-operated power plants in South Greenland. Electricity produced through hydroelectric power currently amounts to 70% of all the state-produced energy. The government's policy is to supply 90% of the energy requirements of towns and villages with renewable energy sources by 2030.

Where hydroelectric power is not available, the state-owned energy company Nukissiorfiit generates electricity with oil. Oil is also used for heating of houses in many of the larger towns and all the villages. In the Arctic region, the benefits of forgoing the use of fossil fuels are more immediate than in most other parts of the world. The burning oil emanates airborne soot particles travelling far onto the white surface of ice and glaciers, causing the ice to absorb heat more readily and thereby accelerating glacial melt. Converting from oil to renewable electricity is therefore one of the key goals of the Greenlandic government. Very good potential for hydropower plants can be found on the west coast where the largest towns are located and where the majority of the population lives. Technical limitations do not prevent the goal of the government for 2030, provided the government can access the necessary finance. This may become a problem as other major construction projects are expected in the immediate future in Greenland. This will put great demands on the limited financial resource of the Greenland government.

The Greenlandic parliament agreed in 2019, to entrust the government with submitting a plan for the construction and financing of two new power plants for the towns of Aasiaat and Qasigiannguit by Disco Bay, as well as for increasing the production of electricity for Nuuk using hydroelectric power. It is also predicted that the population of Nuuk will double by the end of 2030. The power plant in Buksefjord, which supplies the capital with electricity, is already at full capacity and the increased need for hydroelectric power is therefore inevitable. Once work is complete, it is estimated that close to 90% of the nation’s energy requirements can by supplied by renewable energy sources. In addition, there are considerable possibilities for the construction of power plants near the towns of Maniitsoq and Paamiut on the west coast and Nanortalik in the south of Greenland. In this respect, it is recommended elsewhere in this report (Section 9) that in the villages in the rural areas the need for renewable energy will be fulfilled by co-operation between Green-
land and Iceland to construct micro hydro power plants, similar to those already built by an Icelandic company at several farm sites in South Greenland.

The following scenario in hydro power demand is likely to emerge as the century progresses:

1. The Greenlandic Parliament has approved a review of the power plant options for the capital of Nuuk and the towns of Aasiaat and Qasigiannguit by Disco Bay. Construction will inevitably need to begin in the first half of the incoming decade, if the government is to achieve its targets for 2030. By the same token, the local government is interested in constructing power plants in three other towns, Maniitsoq, Paamiut and Nanortalik. The progress of all projects will depend on the financial and technical leeway, access to capital and finding suitable partners.

2. The construction of power plants with a range of capacities will be necessary when mining takes off in Greenland (see Section 7). Several mines have already advanced in the licensing process and will be operational in the next decade. The government is committed to use renewable energy in the mining sector wherever possible. Mines needing energy are likely to proliferate until the latter half of this century. The energy demand varies greatly depending on the nature and size of the mines, from 1-2 MW up to 150 MW.

3. In addition to existing plans, data centers and data processing are likely to gain a foothold in Greenland in the first half of the century. The development of artificial intelligence and “big data” already are increasing global demand for new data centers and renewable energy. Greenland has already begun to attract the attention of the data industry and the Greenlanders expect to be able to offer energy rates

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Leaving out possible energy-intensive big projects in a more distant future it is clear, nonetheless, that soon Greenland will have to undertake construction of hydro power plants if the targets for 2030 are to be achieved. The government, however, has limited financial leeway due to construction of infrastructure that is currently planned. Difficulties in financing the three new international airports also demonstrated it can be problematic to raise capital for infrastructure through traditional routes in Denmark. However, Iceland, with involvement of Icelandic energy companies, even pension funds, could enter collaboration on constructing and running of new profit-driven power plants in Greenland. This would create valuable opportunities for Icelandic companies in the energy, design and construction sectors. At the same time it would support the government of Greenland to achieve targets on Arctic climate protection. A collaboration of this kind would not only be a valuable contribution to the future co-operation of the nations but serve to elevate both on the international stage.

4. For the more distant future energy-intensive industries producing hydrogen and methanol, expected to fuel aircraft and freighters of the future, are being seriously discussed within the administration. In this respect, large international companies have scrutinized the hydro-power options between Sisimiut and Nuuk. Conservative estimates assume the energy potential in the area to be close to 650 MW. At the same time, some Greenlanders still have expectations for traditional power-intensive industries as elevated the Icelandic economy in the 20th century, such as the Alcoa smelting plant previously considered at Mannitsoq. Projects like these will demand the construction of huge hydro power plants similar to Kárahnjúkar in East Iceland. It remains to be seen if such plans will materialize.

In this respect it is of importance that the subsidiary of Landsvirkjun, Landsvirkjun’s Power (LVP), was established for the specific purpose of undertaking profitable projects of this type outside Iceland. The parent company, Landsvirkjun, is an internationally respected company with extensive experience in the construction of power plants in Iceland and in Greenland. Similarly, LVP has an excellent history of constructing, supervising and financing of power development in several countries. The participation of Landsvirkjun and LVP in profit-driven projects in Greenland with the state-owned company Nukissiorfiit as a solid end-buyer will inspire confidence and facilitate financing on agreeable terms. It should be noted that Greenlandic law allows foreign legal entities to own companies that operate power plants in Greenland and a proposed plan in the structure of Nukissiorfiit may facilitate this type of co-operation.\textsuperscript{194} It should also be noted, with regard to long-term finance, that the Belt and Road Initiative is tailored for this type of infrastructure development. Such projects can now be initiated on a stand-alone basis without the countries involved needing to be formal members of the initiative, which helps avoid political complexities.

The participation of companies owned by the Icelandic state in the construction of hydroelectric power plants in Greenland corresponds well with Iceland’s policy on the protection of our climate and the Arctic. It would also serve as a strong symbol of solidarity of the neighbouring countries in the Arctic.

**Recommendations:**

- The government is recommended to promote co-operation with Greenlandic authorities on construction of hydropower plants, on market-based conditions, as a part of a wider co-operation to protect the Arctic climate.

- The Foreign Minister is encouraged to include a provision on bilateral collaboration in the field of renewable energy as part of a prospective General Framework Agreement between Greenland and Iceland (see Main Recommendations, p. 12).

\textsuperscript{194} Lecture from the 2020 Greenland Economic Council Conference. Jørn Skov Nielsen and Claus Andersen-Aagaard. Vedvarende energi som eksempel på succesfuld importsubstitution og som eksportpotentiale - hvad skal der til i praksis? https://naalakkersuisut.gl/~/media/Nanoq/Files/Attached%20Files/Finans/DK/Oekonomisk%20raad/Seminar%202020/DK%202%20Energi%20pr%C3%A6sentation%20til%20JSN%20DK.pdf
8.11 Construction

Icelandic companies have been deeply involved in construction in Greenland for over half a century. Icelandic engineering firms have operated branches in Greenland or collaborated with Greenlandic contractors and engineering firms in Greenland. Landsvirkjun has researched and mapped energy production potential on the west coast, in connection with mining plans and energy-intensive industries, and to a lesser extent on the east coast. Icelandic contractors have participated in construction in most of the large towns on the west coast, notably in Nuuk, and in smaller projects in several places, including in the desolate areas of North and East Greenland.

Ístak has been the most active and involved in multiple large-scale projects since 1970. The company has built four of Greenland’s five major power plants, installed high-voltage lines, built airports and a number of structures, such as the university, the new harbour in Nuuk, apartment buildings in several towns, constructed schools, including in Upernavik far north of the Arctic Circle. At the start of 2020, the company won a tender to build a large school in Nuuk, set to be Greenland’s largest building. The Icelandic company Ístak has also been involved in preparatory work for a large mine in Citronen Fjord in northern Greenland and other mines, including in Scoresby Sound. The company recently took over construction work by Daneborg in the far north, home to Sirius, the Danish army’s dog sledding unit. Several other Icelandic companies, of all sizes, have been involved in construction and engineering projects in Greenland. The farmer-run power plants in South Greenland are, for example, constructed by Icelandic entrepreneurs from Árteigur in Kinn.

Icelandic companies have several advantages over companies outside of Greenland. They have a solid reputation in Greenland. They are known for seeking co-operation with local contractors and for enabling Greenlanders to enter into apprenticeship programmes. Icelanders are considered particularly good at so-called “greenfield” projects, i.e. projects construed from scratch. Icelandic companies also have a reputation for being very self-reliant in difficult circumstances. The mining industry is attracted to such qualities. In a special section on mining, the advantages of Iceland as a partner in Greenland’s mining industry are described in detail. Good air connections to Iceland are also considered an advantage of doing business with Icelandic companies.
As described the near future will see the start of a number of construction projects in Greenland in sectors where Icelanders have a great deal of experience. Work is commencing on big airport projects which Icelanders have great experience of in Greenland. In the next decade the mining industry will undoubtedly require extensive construction and development. The largest towns will require new housing for people constantly migrating from villages in rural areas. The city of Nuuk is expected to double in size before 2030, and is already lacking aparments and new suburbs are being designed. Despite the complete absence of a road network outside the towns in Greenland, road construction is likely to emerge as an option by the end of the next decade in southern Greenland (see Section 2.5). On the west coast, a road from Sisimiut, the second largest town, to Kangerlussuaq Airport has long been planned. In addition, a number of projects in the hydroelectric sector are being planned for the next decade, as described in details earlier in this section. In a nutshell, ample opportunities for co-operation in the construction sector are on the horizon.

In conversations with Icelanders with past experience from Greenland in construction three factors in particular were mentioned where improvement would facilitate co-operation between the two nations.

**Imported Labour**

Large-scale civil engineering projects are permitted to import foreign labour on certain conditions. Icelanders do not require work permits in Greenland as the country is a member of the common Nordic labour market via Denmark. As Greenland is not part of the European Economic Area, it takes a minimum of six months to obtain a work permit for workers from outside the Nordic countries. The permits are issued and processed by an official department in Denmark (SIRI). Contractors consider it important to streamline the process and adopt a system similar to the Faroe Islands, where obtaining work permits for a foreign workforce is a much more expedient process. To this end, however, legislation which deals with border control and the granting of work permits, would need to be changed in both Greenland and Denmark.

**Invitations to Tender**

Larger settlements have a great deal of residential housing projects underway due to the migration from the rural areas. This particularly regards Nuuk, by far the largest town, and that trend is not likely to slow down in the fore-

195 Styrelsen for International Rekruttering and Integration (SIRI) https://uim.dk/siri
seeable future. Those construction projects are not put out to tender by the public sector, but individual contractors are allocated plots by the municipality and public leasing companies subsequently buy into the projects during the construction period. In most cases they eventually acquire the projects in full. The market is thereby, effectively, closed to Icelanders.

The leasing companies lose out on the benefits of public tenders and as a result the price of housing is higher than if the tenders were employed. It would be of great advantage to the public leasing companies, and thus the tax payer, if construction of apartments and housing operated by them would be tendered out in a transparent manner. Inevitably, this would lead to lower costs of housing and lower rents.

Language
Tender documents in Greenland are generally supplied in Danish, despite the fact that Greenlandic remains the official language, according to national law. For contractors outside Greenland, translating tender documents into English requires both expenditure and time. This, naturally, facilitates Danish constructing companies and is a part of a still very visible Danish influence in Greenland society that serves to protect Danish interests, for example in various industries. For Icelandic contractors it would be of great importance if changes are made to the tender process so as to ensure the pertaining documents would be published in the national language, Greenlandic, as well as English. In this respect it should be remembered, that from 2018 onwards, the policy of the Greenlandic government is to elevate the English language and to teach it in schools as the second language after Greenlandic.

Recommendation:

- The Foreign Minister should open discussion with authorities in Greenland on removal of technical obstacles in the civil engineering field, e.g. by issuing tenders for housing for public companies, to ease the issue of work permits for temporary foreign staff and to ensure tender documents be available in English (see also proposals on mining at the end of Section 7).
8.12 Aviation at Crossroads

The most extensive co-operation between Greenland and Iceland is in the field of aviation. Two Icelandic and one Greenlandic airline annually transport approx. 30 thousand passengers between three destinations in Iceland and six in Greenland. A 70 year old air travel agreement exists between the countries, amended only once, in 2011, when airlines of both countries were permitted fly to five away destinations. An extensive co-operation is between the two nations on air navigation through the Icelandic state entity Isavia, that controls air traffic in the entire jurisdiction of Greenland.

Reforms in four fields of aviation are considered to be of benefit to both countries.

a) Renewal of the existing Air Transport Agreement

b) Reorganisation of future co-operation with regard to air traffic control over Greenland

c) Measures to lower air fares between the countries

d) A new ad hoc consultative forum to resolve issues, outstanding and incidental, in relation to air traffic control and anticipated changes in tourist volume

a) A new air transport agreement

The current agreement is unwieldy and neither conducive to increasing the frequency of flights nor to attracting new airlines. It is not well suited to the needs of specialized aviation such as helicopter services. The 2008 Open Skies Aviation Agreement between the European Economic Area and North America demonstrated that removal of technical obstacles is likely to increase flight frequency and the number of new destinations. Ideally, a new agreement should adopt flexibility with a view to the “Open Skies” model.

Airlines of both countries should be enabled to fly to all destinations in the other country and transport passengers and goods domestically within both. This would greatly enhance the potential for joint marketing of Greenland and Iceland to attract more foreign tourists and put pressure on reduction of air fares between the two. A more flexible air transport agreement would, based on the results seen in Iceland, raise the number of passengers, particularly to Greenland. Greenland’s new international airports will be operational in 2023. With that in mind it seems logical to begin work on a new air transport agreement as soon as possible.
b) Air traffic control and Icelandic interests

The Icelandic air traffic control zone managed by Isavia covers a huge area that extends south and east of the Faroe Islands over Icelandic jurisdiction, most of Greenland’s jurisdiction and terminates at the North Pole (see Figure). A quarter of the continental flights over the pole pass through the region.

The cost of air traffic control and related meteorological observations in Greenland is shared according to a special agreement based on “cost-recovery”. In effect, this ensures that Isavia is not allowed to profit from the operation. From tariffs paid pr. flight through the zone the company is only allowed to recover the actual costs of the air traffic control of the zone. However, the costs decrease proportionally with the size of the control zones. The operational efficiency resulting from the huge size of the Icelandic air traffic control zone therefore constitutes a significant economic concern for Icelandic aviation. Other airlines benefit in a similar way.

The so-called lower air traffic zone over Greenland, which encompass mainly domestic flights, is controlled by the Greenlanders themselves. Above, in the upper part of the zone, air traffic control is still managed by the Danish aviation authorities. Isavia and the corresponding Greenlandic company,
Mittarfeqarfiit, have hitherto enjoyed a fairly successful co-operation. Isavia is responsible for providing various services for Mittarfeqarfiit, such as designing and testing approach routes and surveillance of airports. Since 2015 it has also been in charge of air traffic control on the Kangerlussuaq airport, a hub for domestic air travel, that also serves as the principal international airport in Greenland. Isavia also provides training in Iceland to the Greenlandic air traffic controllers. Co-operation in the field of air navigation and air traffic control constitutes a very important part of the countries co-operation in general.

For a long while the authorities in Greenland have maintained a policy of utilizing the activities of foreign companies in Greenland to strengthen domestic capacity and to create jobs for Greenlanders in the corresponding sectors. Understandably, the Greenland administration wants to increase the number of high-paying jobs for domestic staff in air traffic control in Greenland. The aim, eventually, is to establish a special air traffic control area staffed by Greenlanders controlling the Greenlandic air space.

Isavia has worked towards accommodating the wishes of Greenlanders by establishing a special subsidiary, Suluk AS, with the purpose of managing local projects in Greenland. According to a report from a bilateral ad hoc work group on common interests in aviation, active in 2016–18, Isavia had suggested two further steps: Firstly that the activities of Suluk should be increased, and that the Greenlandic authorities would have a significant role in ownership and management of the company. Secondly, that a special air traffic space would be defined in stages in the troposphere on Greenland’s west coast, with an upper limit sufficiently high to encompass nearly all domestic flights. Furthermore, the management of this air space would be by Greenlandic air traffic controllers, trained by Isavia. Additionally, the clear assumption was that Isavia would boost the activities of Suluk AS within Greenland by outsourcing tasks to Greenland, at least to the tune of four new jobs in the company.

The background scenario is increasing debate in recent years, mostly in Danish circles, on replacing the management of the area. This would constitute a blow to Isavia and be economically very unfavorable to Icelandic aviation interests. Formally, this decision will rest with the Danish aviation authorities. However, as the relationship between Greenland and Denmark has developed, in general, no such decision will be taken by Danish authorities without full Greenlandic consent. In view of this, it is very unfortunate for Icelandic interests that Isavia has not met the expectations of Greenlanders regarding the relocation of tasks to Suluk. Instead of Isavia outsourcing four jobs to Suluk it presently has a staff of only one, Icelandic. No steps have been taken
to increase the role of Greenland in management of Suluk. No decision has either been made on Greenlandic ownership. The idea of a special air traffic space on the west coast to cover most of domestic flights within Greenland has neither materialized nor been further developed. This needs to be swiftly remedied if Icelandic interests are to be ensured.

c) Reduction in air fares and airport fees
Expensive airfares between Greenland and Iceland pose a considerable hindrance with regard to travel between the countries. This restricts leisure trips of the general public and thus impedes increased relations between citizens. High fares also restrict efforts towards joint marketing to attract foreign tourists to Greenland and Iceland. New and extensive airports in Nuuk and Ilulissat, a smaller international airport in Qaqortoq, and eight new domestic airports will radically alter travel options for tourists. It is vitally important, therefore, that at this critical juncture that all possible means to reduce air fares are examined.

Among factors that need in-depth examination are the potential effects of a more flexible air transport agreement on competition for flight routes, airfares and airport fees. Temporary incentives in relation to the new international airports to attract more airline companies should also be investigated.

Other "out of the box" means to ease transport between the countries should not be ignored. The Greenland Committee was by representatives of the tourism industry introduced to an interesting idea that, in effect, entailed an experimental definition of flights from Reykjavik to Kulusuk in East Greenland as domestic flights. The reasons cited were the total isolation of East Greenland, low population and very low risk assessment for both airports. The implication was that if successful this might in future be considered for other destinations. Bold ideas like this should not be overlooked.

d) Venue for consultation
Important matters concerning aviation between the countries urgently need to be resolved as discussed earlier. Incidental matters are expected to emerge in the very near future in wake of the radical transformation in Greenland aviation ensuing from the new airports. A bilateral dynamic forum would be important for informal consultation with representatives of industry and officials and to discuss practical matters, such as air traffic control, ways to reduce air fares, new air agreement and incidental matters arising.

The nature, mandate and composition of the ad hoc bilateral working group, active in 2016–18, proved highly successful. A similar forum would be of use to ease and ensure smooth co-operation in all fields of aviation between the countries.
**Recommendations**

- The Minister for Foreign Affairs is encouraged to discuss with Greenland authorities to open negotiations regarding the creation of a new and flexible air travel agreement based on the "Open Skies" model.

- He should instruct aviation authorities, in consultation with Greenlanders, to define the future role of Isavia's subsidiary in flight despatch in Greenland's air space. Simultaneously, a decision should be made regarding ownership of the Company, and agreement regarding continued management by Isavia over the current air traffic control area.

- The Minister for Foreign Affairs should establish a consultative ad hoc venue to prepare and share ideas on solution of outstanding and incidental issues, such as air traffic control, reduction of airfares, increased flexibility in aviation, new air agreement and related matters.

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**8.13 New Age in Shipping – New Opportunities in Trade**

A historic agreement was reached in 2016 between the Icelandic shipping line Eimskip and the Royal Arctic Line (RAL) regarding a new navigation grid that will completely alter the landscape with regard to commerce between Greenland and Iceland. Sailing will take place on the route Reykjavík-Nuuk-Thorshavn-Aarhus. Already in the summer of 2020, weekly shipping began between Nuuk and Reykjavík and in the autumn between East Greenland and Reykjavík.

Under the RAL-agreement three new ships, built in China, will be sailing on the new route. Two are owned by Eimskip and one by RAL. Each has space for 1250 containers. The new ships will be the largest container carriers in the companies respective fleets. They are expressly designed for transporting goods in the vicious North Atlantic and reinforced for navigating through ice in accordance with the Polar Code requirements. The Agreement is based on the concept of “vessel sharing”, whereby the Companies share space in the ships while simultaneously competing with each other in pricing of transport. This is a known method in international shipping and aviation.
The Agreement will fully enter into effect in 2022. It will lead to three changes in maritime transport in the Arctic Region, all of which are important to Icelandic commerce:

First, the weekly route between the capitals, Nuuk and Reykjavík, will open a gate into the Greenlandic market for Icelandic products and goods from Icelandic suppliers, who originate from outside Iceland. There are high expectations that this will result in lower prices and a wider product range in Greenland. At the same time the new network will offer a swift route for Greenland to connect into the international fish transport network via Reykjavík. As Greenland’s main export is fish products (Section 5) this is hugely important.

Second, the RAL and Eimskip navigation grids will be connected to North America through Eimskip’s grid. The company’s American headquarters are located in Portland, Maine. The authorities and companies in Maine have for ten years devoted efforts to establish themselves as a future gateway to the Arctic. Importation from Maine will therefore result in even greater advantage for Greenlandic consumer as the Maine connection will ensure more competition in the Greenland market by way of American goods.

Thirdly, connected to the RAL-agreement are weekly sailing by a RAL freighter between Reykjavík and Tasiilaq in East Greenland during the ice free period (early July through November). A new freighter, Nanoq Arctica, built in Poland and specially equipped to access the small ports in the Tasiilaq area, commenced the route in November 2020, sailing from Kuummiut to Reykjavík. This route will greatly increase the access in East Greenland to fresh produce from Iceland, such as dairy products, vegetables and lamb. Fresh produce has mostly been brought in by air and has been very expensive. It will also be possible to import other goods, such as construction material, from Reykjavík. In its first journey to Reykjavík, Nanoq Arctica brought the summer catch of 90 dinghies, processed in a tiny fish plant in Kuummiut, the only one in East Greenland.

The RAL-agreement with the ensuing navigation network will therefore have immense influence on trade between Iceland and Greenland. For the public in Greenland, the greatest benefit would be, however, if Icelandic discount store chains can use it to establish branches, for example in Nuuk and other big towns (see below). That could lead to significant decrease in prices of daily consumer goods.
1. New opportunities in commerce

Staple consumer goods, construction material, electrical devices and other goods have mostly been imported to Greenland via Aalborg in Denmark. Trade with Greenland has for a long time been controlled from there, in fact a relic of the trade monopoly which was imposed by Denmark centuries ago. Fish exports from Greenland have also gone through Aalborg. The Greenlanders themselves claim that this destination lies outside the international fish transport system.

Weekly sailing will open a new market of 57 thousand people in Greenland to Icelandic producers and suppliers. The cost of transporting goods between the countries is lower than that of transporting between Greenland and Denmark. The purchasing system for Icelandic suppliers with regard to products from outside Iceland is quite as good as that for Danish suppliers. Iceland should therefore be able to offer goods to consumers and companies in Greenland, whether Icelandic or foreign, at competitive prices. Icelandic companies enjoy a particular advantage when it comes to fresh products of any kind. An example is the recent trade in bananas imported via Iceland under the old system, when sailings between Nuuk and Reykjavik were only once every three week. Despite that the bananas have become very popular in Nuuk due to their freshness and price. Weekly sailings will make import of all types of fresh products easier from Iceland.

With the weekly sailings between Reykjavik and Nuuk competition will increase in the market for daily necessities in Greenland. It is hoped that the product range will expand and prices will drop. A similar development is desired with respect to construction material, both from Iceland and Maine, and hopefully resulting in lower cost of construction.

Access to the international fish transportation system will be swifter and cheaper via Reykjavik. The new navigation network will therefore support higher prices for fish products exported from Greenland. Also, weekly sailing will make it possible to export fresh marine products by sea in containers to Reykjavik and subsequently by air to international consumer markets. This can significantly increase profits as seen by Icelandic experience. Icelanders export 8% of their maritime products by air that in turn yields 23% of the profits made by the sector.

It is important to take measures to maximize the new opportunities from start. The authorities can contribute to this by removing technical obstructions and by lowering duties and fees. Similarly, to attract attention to the new possibilities for Greenlandic fish producers in transport via Reykjavik the possibilities
of temporary incentives with regard to harbour and airport fees should be explored. Similar incentives were successfully used to attract trade from foreign airline companies to Keflavík.

In order to identify potential technical obstacles to trade with Greenland the Icelandic authorities should assign to the Iceland’s Chamber of Commerce the task of submitting proposals for amendments to laws, rules and official duties, such as excise duties on containers undergoing transhipment in Icelandic harbours. Joint efforts should also be made by the shipping companies, the Federation of Trade & Services and the diplomatic service in order to present the new opportunities in the Greenlandic markets to suppliers and producers in Iceland. Similar joint promotional efforts regarding the free trade agreement with China proved very successful.

2. Icelandic discount store chains in Greenland

Weekly sailing between Reykjavík and Nuuk will create a golden opportunity for Icelandic discount store chains to establish themselves in Greenland. According to the experience of such chains in Iceland the Greenlandic public may derive significant benefits from such enterprise. In Greenland, the introduction of discount store chains is a part of legitimate expectations for gains in living standards attached to the new navigation network.

The current commercial situation in Greenland is favourable for such enterprise. The market is oligopolistic, without excessive competition. Two large companies, Brugsen and Pisiffik, dominate the market with similar share in the 5–6 biggest towns. The authorities have attempted to keep prices acceptable to consumers by not levying VAT on goods. The competition between the two companies can only be described as inoffensive and is mostly evident in special daily offers. Due to them it is often possible to find deals at excellent prices in the shops in Nuuk.

Brugsen initially was a part of the European Co-operative movement and still boasts membership of 8 thousand Greenlanders. The majority of the other chain, Pisiffik A/S, is owned by a Norwegian store chain. A third company, Pilersuisoq, doesn’t as yet compete in the bigger towns, but serves a useful purpose in the rural areas, running 64 multifunctional shops in villages and smaller town. Apart from selling all types of goods and oil, they also provide the villages with a bank and postal services and sell helicopter tickets.

Weekly sailing will enable Icelandic discount stores to supply stores without significant stockholding costs in Greenland. The low population in Greenlandic towns is not a hindrance as the population in the biggest towns is
in some places larger than in some of the Icelandic towns where discount store chains successfully run shops. Nuuk is in fact considerably larger than most. The costs of transporting goods from Iceland are slightly lower than of importing goods from Denmark. The purchase prices which Icelandic chains pay for goods from foreign suppliers are no less favorable than that of Nordic discount store chains. In short, the weekly sailing route to Nuuk seems to create an inviting niche for Icelandic discount store chains in the Greenlandic market.

**Recommendations**

- The Minister for Foreign Affairs should invite proposals from Iceland's Chamber of Commerce on technical obstructions that should be removed in order to facilitate trade with Greenland.

- The Minister should thoroughly examine the possibility of using temporary incentives to encourage the export of fish from Greenland through Icelandic harbours and airports.

- The Minister for Foreign Affairs should assume leadership of a delegation of Icelandic companies in an open business conference that will be held in Nuuk under the aegis of the Icelandic Consulate General, where opportunities in connection with the new navigational grid will be presented.

- The Ministry for Foreign Affairs, in co-operation with the Federation of Trade & Services, is recommended to initiate efforts to promote marketing opportunities in Greenland among Icelandic suppliers and producers to increase awareness of opportunities pertaining to the new weekly shipping route to Nuuk.

- The Minister should request authorities in Greenland to jointly explore other ways (see Section 8.15) in which to promote investment from Icelandic discount store chains in shops located in the big towns in Greenland, with the aim of creating jobs and lowering prices of consumer goods.
8.14 Bilateral Trade Agreement

As yet, no bilateral trade agreement exists between Greenland and Iceland. In fact, Greenland has not done any such bilateral agreement on trade with any nation. For two reasons it is now timely for Greenland and Iceland to enter into negotiations on such an agreement:

First, because of the historic RAL-agreement ensuring weekly sailing between Nuuk and Reykjavik. This offers a unique opportunity to increase trade between the countries, not least to provide the Greenlandic public with lower consumer prices through increased competition. Simultaneously, a new market will open for Icelandic companies corresponding to one-fifth of the Icelandic market. A bilateral trade agreement would be an important way to maximize the use of the new maritime transport to increase commerce between the two countries. The benefits of such an agreement may, in fact, be the deciding factor on the entry of Icelandic discount store chains into Greenland.

Second, a bilateral trade agreement would serve as a symbol of solidarity between the nations and a declaration of their resolute will to partner in future. It would demonstrate a special relationship with Iceland if Greenland chooses her to be the first country to enter into an agreement with on trade.

Greenlanders have been wary of trade agreements. They deliberately after careful consideration opted not to be part of the West Nordic Höyvik-Agreement when signed in 1996. The Höyvik-agreement happens to be the most extensive trade agreement that Iceland has been a party to. It practically makes the signatory countries, Iceland and the Faroe Islands, into one common economic zone. For example, companies in the signatory countries are on an equal footing with regard to investment in all economic sectors, and few impediments are against trade in originating products. Greenlanders were apprehensive that ownership in the fisheries sector could be lost to strong Icelandic and Faroese companies, and also had concerns regarding their traditional and much loved sheep farming. At the time, Greenland was historically at a sensitive stage, between Home Rule and self-government, and the future was uncertain. Now, the situation is completely different. Greenlanders are in charge of their own country, and after more than ten years of successful self-government are making organized efforts to expand their economic connections at international level. In coming years Greenland is to be expected to take new steps by entering into trade agreements with neighbouring countries as well as trading partners further afield.
For many reasons it would be advantageous for Greenland if their first bilateral trade agreement was with Iceland. Iceland is a friendly neighbour state that achieved independence from the same colonial power from which Greenland is presently distancing itself. There is mutual trust between the two nations. Commerce between Greenland and Iceland is still at a relatively low level (See Appendix IV), and a trade agreement would have little effect on the income of the Greenlandic state. No balance would be disrupted. The countries also have various interests in common, and the administrations of both desire to increase co-operation. Greenlanders are aware their consumer market is in need of more competition, is characterized by an oligopolistic nature with price levels that are too high. A bilateral agreement, preferably on free trade, would serve the purpose of both nations. Icelanders also have, due to their own history, an understanding of the sensitive factors of the Greenlandic society, such as the role of sheep farming in the economy and the national psyche.

Import duties between the countries are not high at present, but yet have significant influence with regard to individual product categories. Icelanders have twice made unilateral steps by lowering import duties on Greenlandic products. When Greenland left the European Union in 1985, Icelanders entered into an agreement with Denmark whereby the same terms of trade were unilaterally granted as in the agreement between Iceland and the European Economic Community of 1972. It entailed tariff preferences with regard to major industrial goods (Chapters 25–97 in the customs tariff). Later, in 2017, Iceland abolished all duties on the relevant product categories with a unilateral decision. Greenland, however, has not granted any tariff preferences for Icelandic products in Greenland. They are subject to payment of the same fees as apply to products from other nations. Most are calculated by quantity (monetary amount pr. kg) and in some cases ad valorem duties are added. Still, these fees are low and apply to few product categories. Information about the fees can be found on a special website. About 1/14 part of the income of the Greenlandic state derives from fees levied on imports from other states, a total of DKK 500 million.

Beforehand, it is difficult to see serious problems arising with regard to negotiation on trade. Greenlanders will place most emphasis on abolishing import duties on processed reindeer meat to Iceland, as they have raised multiple times and Iceland should, anyway, acquiesce to regardless of special trade

agreement (see Section 8.15). They also are concerned about protecting their sheep farms in South Greenland. Traditionally, a subject of great pride, their number has dwindled and only 38 survive.

Every year, ten thousand lamb carcasses are imported in Greenland, once the domestic production has been exhausted. Icelandic lamb is rarely seen outside East Greenland and the seasonal imports are mostly from New Zealand and South America by way of Danish suppliers. That invites an obvious solution regarding sheep products in any prospective agreement on trade.

**Recommendation**

- The Foreign Minister is urged to initiate discussion on a bilateral trade agreement with Greenland

### 8.15 Duty-Free Game

The government of Greenland has several times requested abolition of tariffs on import of processed meat of reindeer to Iceland. It is, indeed, peculiar this hasn't been agreed to. Reindeer products play no part in the Icelandic economy. In 2018, reindeer products were imported for 40 million ISK, mostly from Sweden and Norway. The Greenland Committee strongly recommends that even if a prospective bilateral trade agreement with Greenland doesn’t materialize, authorities should abolish duties on products of all Greenlandic game, for example, reindeer and musk oxen. In fact, ptarmigan plays a bigger role in the Icelandic market for game, and yet is exempt from any duties if imported from Greenland.

At present, whole and half reindeer carcasses are duty-free whereas processed products are subject to a duty of ISK 843 per kilogram. In the customs tariff, musk ox products are classified as beef, subject to an ad valorem tax of 30%. Additional duty is also levied on musk oxen by quantity, which amounts to ISK 1,014 and ISK 357 and 703 per whole and half carcasses. In Greenland, reindeer are bred by the thousands in two farms, and wild herds also roam free. One of the farms is run by an Icelander, Stefn Magnússon, in Isortoq. Two accredited slaughterhouses are operative. Musk oxen are found only in the wild, in small herds, increasing at speed which has led authorities to recommend more hunting. Iceland abolished duties on whole and half reindeer carcasses when a company in North Iceland intended to import reindeer for
processing onto the international market. These plans evaporated. The authorities in Greenland believe that by abolishing tariffs on processed reindeer meat a market might be found in Iceland.

For tourists from Greenland, Icelandic authorities grant an exemption from veterinary requirement stipulating that products of reindeers be slaughtered at an accredited place for processing products. Tourists are permitted to bring ten kilograms of musk ox and reindeer meat to Iceland, of which three are duty-free. The meat must be frozen, packed in plastic and a permit for the importation must be obtained from the Icelandic Food and Veterinary Authority. The Authority has created a highly efficient system whereby applications for permits can be submitted online and are processed swiftly and satisfactorily.

Two groups of people take advantage of the exemption. First, Greenlanders domiciled in Iceland returning from visiting relatives. The Greenlandic diaspora in Iceland has petitioned authorities for permission to be able to bring back more than the 10 kilograms and against the high duties on most of the meat. Second, a small group of Icelanders go on game shooting trips to Greenland and make use of the exemption on their return. Shooting trips are an increasingly important source of income for tourism in individual parts of the country, and tourism operators and game hunters alike are of the opinion that it would result in more frequent game shooting trips from Iceland if au-

*Musk ox on the Greenland tundra. Photo: Alexey Seafarer / Shutterstock.com*
The Foreign Minister should initiate change in regulations that will enable tourists returning from Greenland to bring with them for personal consumption a maximum of 35 kg of reindeer or musk ox products, provided they have obtained a permit from the Icelandic Food and Veterinary Authority and are harvested from a single animal.

If a bilateral trade agreement is not enacted the Foreign Minister should with pertinent authorities ensure that all import duties of reindeer and musk ox products be abolished, cf. however paragraph 2 of preceding paragraph.

Many inhabitants of Greenland travel to Denmark by way of traveling to Reykjavik and continue to Denmark via Keflavik airport. Despite the permits granted by the Food and Veterinary Authority whereby frozen game meat packed in plastic can be brought to Iceland, the meat is usually confiscated in Keflavik. Hence, the same meat that a tourist can take directly between Greenland and Denmark without any permit required, or import to Iceland with the authorization of the Food and Veterinary Authority, is not allowed to pass through Keflavik if the passenger lands in Reykjavik earlier in the day. It would be of joy to the great nation of Greenland if benevolent government entities construe a way around this overzealous enactment of EU regulations.

**Recommendations**

- The Foreign Minister should initiate change in regulations that will enable tourists returning from Greenland to bring with them for personal consumption a maximum of 35 kg of reindeer or musk ox products, provided they have obtained a permit from the Icelandic Food and Veterinary Authority and are harvested from a single animal.

- If a bilateral trade agreement is not enacted the Foreign Minister should with pertinent authorities ensure that all import duties of reindeer and musk ox products be abolished, cf. however paragraph 2 of preceding paragraph.
8.16 Reinvigoration of the Greenland Fund

In 1980 all the parties with representation in the Althing joined forces to draft a bill for establishing the Greenland Fund. The main purpose was to commemorate that in the preceding year Greenland had acquired long awaited Home Rule. The memorandum to the bill made note of the fact that up until the time of Home Rule, the interactions between Icelanders and Greenlanders had been very limited “as Greenland has for the most part been a closed country”. It also stated that Greenlanders had been forced to endure “immense hardships and issues in their vast and rugged country, and there is every reason for us Icelanders to explore whether we can be of any assistance to them, yet in order for this to happen it will be necessary to establish closer ties between our nations”. The Greenland Fund was thus explicitly founded for the purpose of strengthening the ties between the nations, after the Greenlandic people took control of their own country.

For a long time, the Greenland Fund served its purpose quite satisfactorily. It maintained an important role in increasing the interactions between the nations. It supported a variety of activities, especially regarding non-governmental organizations, the arts and culture, sightseeing trips and even student exchange programs, as specially stipulated in the law. The Fund had at its disposal the interests gained on the initial capital, which was entrusted to the Central Bank, which, unfortunately, made poor investment choices with the money, as was subsequently criticized in the Althing. Between 2011 and 2016 no grants were delivered. Subsequently, the law was altered, and the Althing stipulated that the Fund should be run by drawing on the initial capital to which small funds from the state were added annually. Annual grants should total 3 M ISK until the Fund’s capital was depleted.

As requested by the Minister for Foreign Affairs, this report proposes a variety of actions to strengthen the ties between Iceland and Greenland. These include projects related to civil society, culture and arts, co-operation in the field of education and sports, as well as diverse forms of promotion of informative material, some digital, in order to enhance mutual knowledge of the societies. The Greenland Committee considers it important to put new financial pillars under the Greenland Fund in order to enable the Fund to support execution of several of the proposals contained in the report. Legal provisions on the Fund must also be altered so as to enable it to serve a new role in the future co-operation of the countries.
Recommendation:

- The Foreign Minister is recommended to ensure the Greenland Fund be provided with a sound financial base in the state’s annual budget that guarantees the Fund can serve its pivotal role in the revitalized relationship with Greenland, as proposed in this report. If needed, the government should prioritize suitable amendments to the legal provisions concerning the Fund.

8.17  "Greenland in the Arctic"
- An International Think Tank

For historical reasons the connection between Greenland and the rest of the world has been through Denmark, which formally is still in charge of the foreign policy of Greenland. In anticipation of future independence one of the tasks facing the Greenlandic people is to develop independent pathways to the global arena and to improve international skills in as many fields as possible.

A modest but well staffed diplomatic service has done an excellent work in this respect with regard to the administration. Still, the success of a small nation is no less dependent on strong international ties that extend far beyond the boundaries of institutions and administrations. Such ties are forged not least through interactions between academic communities, through commerce, political movements, participation in research and science, in international conferences and through participation in international non-governmental organizations. Iceland is a good example of how an extensive net of connections in varying fields can be a resource in and of itself, and a valuable asset for small nations in demanding times.

The Greenlanders have made excellent use of new avenues that have been created due to increased global interest in the Arctic within the international community. International conferences on Arctic matters are now on a regular basis, and the Greenlandic people have in an organized manner made use of them to gain new connections, influence and experience. International efforts of this kind have in fact become a formal part of the foreign policy, and specifically addressed in annual reports on foreign affairs from the Greenlandic administration. This type of unconventional diplomacy has proved beneficial for Greenlanders in various aspects, e.g. to expand their sphere of foreign influence with regard to Denmark, to increase Greenlandic influence on shaping of Arctic policies, and not least to add to connections and skills in international relations.

Iceland has through the Arctic Circle in Reykjavik directly contributed to the success that Greenland has enjoyed in this field of untraditional international outreach. The Arctic Circle has become Greenland’s most important venue in
In this respect. In the government’s last report on foreign affairs, written in 2019, the special status of the Arctic Circle is addressed in specific terms and the participation of Greenlanders described in detail.

Icelanders can employ other means to support the expansion of Greenlandic influence at the international level. So far there exists no powerful international think tank on Arctic matters and the role that Greenland can play in that space. At this point it therefore seems timely to launch a think tank with specific reference to Greenland in the context of the changing Arctic, in the digital world as well as in the real world. In ideal subject heading for such a project would be: “Greenland in the Arctic”.

Discussions and analyses would mostly take place online, whereas in the real world the think tank would also initiate conferences and seminars on a North-Atlantic level, and prepare events in Greenland featuring guest lecturers, link to academia and the economic sector, and encourage the participation of local associations and institutions. This would increase opportunities for Greenland to strengthen her pool of international skills and experience in fields that far exceed conventional administrative institutions.

Once the think tank has been established, it will be important for it to have a reliable sponsor with as close ties as possible to the centers of discussion on Arctic issues. That would ensure a successful start, influential participation, and ensure coherence in its work. The Greenlanders have themselves placed greatest emphasis on the Arctic Circle as the principal modern venue for matters Arctic. The Arctic Circle stands head and shoulders above other associations and institutions in that respect and considered by Greenland to be the most important venue for Arctic discussions. It would therefore be ideal as a sponsor for the new think tank. In addition, the Arctic Circle currently is establishing a special Mission Council on Greenland, in addition to other such Mission Councils active in defined fields. A think tank on Greenland in the Arctic seems a perfect fit for the new Mission Council on Greenland, and of mutual advantage.

The Arctic Circle would be given a leading role in the establishment of the think tank, for instance in co-operation with the Wilson Center in Washington and the Arctic Initiative at Harvard University. In other respects it would be an independent unit working within the Arctic Circle with the capacity of initiating analyses and seminars regarding any matter connected with the subject. Its analyses and reports would be presented at the Arctic Circles Assemblies. Participation in the think tank would be open to civil societies, institutions and scholarly communities anywhere in the world provided these are involved with Arctic matters.

Recommendation:

- The Minister for Foreign Affairs should request the Arctic Circle to establish an international think tank on "Greenland in the Arctic", e.g. in collaboration with the Wilson Center in Washington and the Arctic Initiative at Harvard University.

8.18 West Nordic Co-operation Network

In the context of the changed status of the Arctic and mounting geopolitical tension Section 1.10 argued that the West Nordic nations should seek ways to strengthen their position in the international arena. Research, such as done by the Centre for Small State Studies at the University of Iceland, have demonstrated that co-operation between small entities is a successful way to protect and develop their interest. With reference to that, it may be concluded it would be of interest to all parties concerned to establish a formal network of small nations and regions with ties to the Arctic. The West Nordic nations would form the core and invite relevant, interested parties to participate. Ideal invitees would be Maine and Alaska in the United States, Quebec in Canada, as well as Nunavut, a self-governing Inuit territory in the same country. In future, northern Norway would be well at home in such a group. Scotland has shown increased interest in the Arctic and Scottish leaders, such as First Minister Nicola Sturgeon, have visited and addressed the Arctic Circle Assemblies. Scotland has sought to define herself as a future gateway for mainland Europe into the Arctic and recently published an articulated Arctic Strategy. Even in Ireland, discussions are ongoing about forming Arctic connections through the neighbouring West Nordic nations. For the more distant future and with a view to Brexit it should not be forgotten that the UK has a strong Arctic past. Most of these countries and territories have sought to form ties to the West Nordic countries, some explicitly to use them as a stepping stone to form closer bonds with the Arctic.

Recommendation:

- The Minister for Foreign Affairs should in consultation with Greenland and the Faroe Islands prepare to establish a forum with regions and countries in the Arctic and North Atlantic, such as Quebec and Nunavut in Canada, Alaska and Maine in the USA, Scotland and other likeminded. The purpose would be to further common interest with respect to the Arctic. The next Assembly of the Arctic Circle in Reykjavik should be used for initial discussions with the relevant stakeholders.
“This geographical position offers to the West Nordic countries the possibility of acting as a center for trade, scientific work and international relations in the Arctic through co-operation with the great powers, the other Nordic countries and other interested parties. Joint efforts towards policy-making for the West Nordic region regarding the fields in which the countries’ interests overlap are a very important step towards strengthening the area.”
(mbl.is 4. September 2014)

Unnur Brá Konráðsdóttir,
Speaker of the Icelandic Parliament, Althing, 2017,
and Chair of the West Nordic Council, 2013-16.

8.19 Arctic Centre in Iceland

Ever since its foundation in 2013, the Arctic Circle has gradually developed into the principal force on discussion and creation of ideas regarding the Arctic. Its Assemblies in Reykjavik currently attract more than 2000 participants from 60–70 countries. It is now the largest venue in the world for the discussion of Arctic matters, attended by world leaders and young people alike who share a passion for the Arctic and for conserving the environment and the climate.

One of the characteristics of the Arctic Circle is that discussions take place on a basis of equality. The Greenlandic government’s last report on foreign affairs, written in 2019, brings special attention to the fact that within the Arctic Circle a tradition has developed that no distinction is made between states and nations/territories that belong to other states or unions. Discussion is direct and democratic. The Arctic Circle is the only venue for addressing issues concerning the climate and the Arctic, where scientists and activists can talk to the leaders of great powers and directors of international companies. In some cases, such interactions have altered the stance of major players on the international level. The strong position of the Arctic Circle is reflected by

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https://naalakkersuisut.gl/-/media/Nanoq/Files/Attached%20Files/Udenrigsdirektoratet/DK/Udenrigspolitiske%20redegørelser/UPR%202019%20da.pdf
Greenland and Iceland in the New Arctic

the fact that the leaders of nations, companies and organizations choose its meetings as venues to present ideas, announce important declarations and for policy-making speeches.

In addition to its annual meetings in Reykjavík, the Arctic Circle has hosted well-attended forums and conferences in various places in the world, both in countries that have a connection to the Arctic, such as Greenland, the Faroe Islands, Scotland, Canada and the United States, as well as in other countries, such as South Korea, Singapore and China. Similar forums are planned to be held in Germany, Japan, the United Arab Emirates and Greenland. The Arctic Circle leadership attends many annual meetings with universities, think tanks, public organizations and governments in many places in the world. In times of the Covid-19 pandemic Arctic Circle Virtual conducted regular sessions that attracted audience from 40 nations. The Arctic Circle therefore has influence far beyond the Arctic region.

Ever since its inception, Greenland has been a strong participant in the Arctic Circle and used it as an important venue to project its presence and views to the international community. The Prime Minister at the time, Kupiik Kleist, took part in the preparations for the first Assembly in 2013. His successor, Aleqa Hammond, gave one of the major speeches after it had been declared open. The current Prime Minister, Kim Kielsen, was one of the principal speakers at the opening ceremony for the Assembly, in 2019. The Arctic Circle forum in Nuuk, in 2016, was the biggest international conference ever held in Greenland up to that time, and at present discussions are ongoing regarding holding another one. The Arctic Circle also initiated the well-known "Greenland Dialogue" at the Wilson Center in Washington DC. That is presently the principal crucible for discussion on Greenland in North America. Within the Arctic Circle, the major investment fund Guggenheim Partners, with headquarters in California, began the registration of investment opportunities in the Arctic, with particular consideration of Greenland. This register is now stored at the Wilson Center under the title "Arctic Investment". The objective is to prepare for investments in the Arctic, including Greenland. The special Mission Council on Greenland, now being formed within the Arctic Circle, has already been mentioned.

Ólafur Ragnar Grímsson, who served for 20 years as the President of Iceland, was the founder of the Arctic Circle and its leader ever since. In 1998, three years before the Intergovernmental Panel of Climate Change published its first report, Ólafur Ragnar became the first head of state in the world to
publicly draw attention to Arctic issues in a decisive manner, in his New Year address to the Icelandic nation. Since then, Ólafur Ragnar has been a leading force in the international debate on issues concerning the Arctic. In 2000 he founded the Northern Research Forum, which held its first meeting that same year at two locations, Akureyri and Bessastaðir. This was the first international meeting that took place at the official residence of the Icelandic Head of State. The establishment of the Arctic Circle in 2013 was therefore a logical consequence of the previous work which the President has devoted to Arctic issues. The strong emphasis which he placed on those issues during his tenure as the President of Iceland is reflected in an interesting summary written by historian Guðni A. Jóhannesson about the issues addressed in the President’s meetings during the first half of Ólafur Ragnar’s last term of office. Examination of the minutes of 396 meetings over a period of nearly two years revealed that 43% concerned the Arctic.199

Ólafur Ragnar’s initiative towards establishing the Arctic Circle has placed Iceland at the centre of the international debate on the Arctic and climate issues. This has created a unique position for Iceland on the international stage, and had an effect far greater than could be achieved through conventional diplomatic activities. The effect has been priceless for the image and reputation of Iceland. Therefore, it is important to cultivate the Icelandic roots of the Arctic Circle, and to create a permanent place for it in Iceland for the foreseeable future. An effective way to achieve that would be to establish a base for the Arctic Circle in the capital of Iceland, in the form of a special Arctic Centre. In that manner a solid foundation would be built to support the activities of the Arctic Circle, and to ensure the Icelandic connection for the unforeseen future.

The Center would be intended to accommodate the headquarters of the Arctic Circle, and to provide temporary facilities for international guests (“Arctic Fellows”), who visit the Centre to do research on Arctic issues and to give public lectures. The Center would be owned by a non-profit institution, supported by a large number of foreign institutions, funds and organizations that work on Arctic issues and have a connection to the Arctic Circle, for the financing of operations and activities other than preparatory work.

It would be appropriate that the Icelandic government would initiate preparations for the Center in co-operation with the City of Reykjavík and the three

199 See: https://www.ruv.is/frett/raedir-malefni-nordurslo-da-a-43-funda?fbclid=IwAR13QcTWpVvLl0s2FeyUdXF7jJAXEDn0v7FgNAHn5rURgGsbacYLI
Icelandic universities involved with the Arctic Circle. The Centre would be an ideal place for an Arctic museum, the core of which could be based on the existing museum "Norðurslóð – Into the Arctic". In light of the increasing international interest in the Arctic, this would be a good addition to the country's international museum culture, and likely to attract a large number of international tourists and Icelandic visitors.

**Recommendation:**

- The Icelandic government is recommended to establish a working group to start preparations for the Arctic Centre in Reykjavík. The Centre will be the future base of the Arctic Circle, with facilities for foreign scientists, scholars and PhD students, as well as accommodating an Arctic museum. The support of the many foreign institutions, associations and funds associated with the Arctic Circle will be sought to strengthen the financial basis for projects and operations.
9. **East Greenlanders**  
- Iceland's Closest Neighbours

Across the Greenland Strait a mere 290 kilometres to the west of Iceland, the rocky shores of East Greenland rise from the sea. A few isolated and tiny communities of Inuit who speak their own language are hidden in the magnificent landscape. They are Iceland’s closest neighbours. The principal settlement is on the Ammasalik Island in the town of Tasiilaq, the seventh largest town in Greenland. Five much smaller villages are in the vicinity. The only other settlement on the entire east coast, Ittoqqortoormiit, is 840 kilometers to the north in the mouth of Scoresby Sound. The isolation of the East Greenland Inuits from the rest of the Greenlanders is reflected by the fact that the flying distance to Nuuk is far greater than to the nearest airport in Iceland, in Ísafjörður. Interestingly, flights to the Icelandic capital, Reykjavík, are much more frequent than to towns in Greenland, not least in summer, when daily flights with tourists are sometimes twice a day. The isolation of Ittoqqortoormiit in Scoresby Sound is greater still. From there the distance to Nuuk is almost three times longer than to Akureyri, the main town of North Iceland. The Icelandic airline Norlandair in Akureyri has for decades run scheduled flights to Scoresby Sound and this year adds a route from Reykjavik. The airline also transports the post and important fresh produce.

Relatively, Iceland has stronger ties with the east coast than other areas in Greenland. Apart from the scheduled flights between Scoresby Sound and Akureyri, around 6 thousand passengers fly out from Reykjavik to Kulusuk each year, mostly foreign tourists. Each year dozens of East Greenlandic children go to Iceland for swimming lessons. An Icelandic chess club, The Rook (i. Hrókurinn) has for a long time hosted regular chess and cultural festivals on the east coast. Icelandic travel companies have put their tents both in the Tasiilaq region and Scoresby Sound. In both places, Icelandic hospitals provide emergency medical services when needed. Iceland also has a role in creating jobs. The only fish processing plant in the Tasiilaq region is run by Icelanders, serving nearly 100 dinghies that operate in summer. In addition, 5-10 jobs are created on shore. The link to Iceland was fortified this year, when a new Royal Arctic Line freighter, Nanoq Arctica, commenced a weekly route to Reykjavik during the ice free season (July through November). Importantly, it is equipped to access the small ports in the villages and will transport fish products directly to Reykjavik from Kuummiut, where the only fish plant in East Greenland is located.

The East Greenlanders have for centuries survived in complete isolation from other parts of Greenland, not to mention the outside world. The international
whalers, who left an indelible mark in Greenland, always shied from sailing to Tasiilaq, afraid of the dense and noisy drift ice coming all the way from Siberia and the North Pole. The drift ice also staved off repeated attempts by the Danes to reach Tasiilaq from their missions in South Greenland, where the early missionaries and merchants believed remnants of the Norse settlers still survived. Captain Gustav Holm was the first Dane to set foot in Ammassalik in 1884, using native-built umiaqs, light skinboats oared by Inuit women. When Captain Holm stepped from his umiaq he found no trace of the Nordic vikings, only poorly dressed Inuit who stared at him in astonishment. He was the second white man to land in Tasiilaq, a year later than the Swedish-Finnish explorer, Nordenskjöld, who braved the drift ice in one of his expeditions to Spitzbergen.

Until very recently, the outside world knew little of the dire social problems that dominate the Inuit community on the east coast. In East Greenland the modernization process instigated by Copenhagen began considerably later than on the west coast. The crash between European modernity and the ancient life style of the hunting society was delayed accordingly. Its effects, however, were the same. The fate of generations was framed by unemployment, severe abuse of alcohol, widespread sexual abuse of children and the highest suicide rate recorded anywhere. The stubborn silence that was maintained about the enormous problems of the East Greenland Inuit was not broken until 2019 when a TV documentary was aired in Denmark on Tasiilaq and the suicides: The village where the children vanish. This finally elicited a response from the outside world.

In view of the prevalent social problems and the fact that the Inuit communities in East Greenland are by far the closest neighbours to Iceland a special chapter of the report is devoted to them. As next of kin in the North Atlantic the Icelanders are well placed to offer them more than moral support.

### 9.1 The Tasiilaq Area

The town of Tasiilaq is placed on the south part of the Ammassalik Island under a tall mountain by the Kong Oscars-fjord, aptly named The Sailor. Off the shore, the rapid East Greenland Current rages and tosses along thick packs of drift ice from the Arctic Sea. The population of Tasiilaq was 2,063 at the beginning

200 See: https://www.dailymotion.com/video/x7aua6h
of 2019. The number of inhabitants in the five villages ranged at the same time from 58–258. Kuummiut is the biggest village whilst the smallest one is Isertoq. On the east coast the population is declining, although the town of Tasiilaq is slowly growing due to steady migration from the villages around. Many of the emigrants from the villages move all the way to the west coast, and end up in Nuuk or some of the big towns. All are escaping poverty and seeking opportunities that don’t exist in East Greenland.

Tasiilaq and the five villages belong to the vast municipality of Sermersooq, which expands over the glacier from coast to coast. The municipal seat of the communities is located in Nuuk, 840 km across the enormous inland ice. East Greenland is the poorest area in the country. Rich fishing grounds are off the coast and Tasiilaq is by nature an excellent natural harbour. Nonetheless, a lack of capital in the poverty stricken region and the dense ice drifting from the Arctic combine to subvert all attempts to build a thriving fishing industry. From November to July the sea ice closes East Greenland off. A few times in summer the RAL freigters squeeze through the drift ice and navigate huge icebergs to bring supplies from Nuuk.

The town of Tasiilaq has the minimum of infrastructure to mimick a modern society. A health care centre with two doctors and a nursing staff is operated in town. Responders from Nuuk or Reykjavik provide medical emergency service. The primary school also brings youths from the region the first years of secondary schooling. In the five small villages, however, only the first years of primary education are offered and village children have to become borders in Tasiilaq to finish their obligatory education. If youths in East Greenland want to finish secondary education they have to move to the west coast. For many, this is an ordeal. The East Greenlanders speak their own tongue, sufficiently distant from the official Greenlandic to make them feel different and not accepted by their peers, even regarded as second-class citizens. Many students loose motivation, drop out, and return to East Greenland, where few opportunities await.

Like many Icelandic small towns Tasiilaq boasts a multi-purpose sports facility, that also is used to accommodate meetings, social gatherings and some forms of entertainment. The football pitch recently graduated to artificial grass, and local enthusiasm for football is enormous. Annual school tournaments take place between the schools in Tasiilaq and the five villages. Ev-

everybody follows the recent success of the North Atlantic neighbours with keen interest and a dream would come true if visits by Icelandic school teams could be arranged to try their luck in the annual school tournament. Tasiilaq has a 1.2 MW hydropower plant sufficient to provide electrical lighting but not enough to provide energy for electrical heating and instead oil is used to heat houses in East Greenland.

The local shops offer staple consumer goods transported from Aalborg in Denmark via Nuuk, with fresh produce sometimes brought by incoming planes from Iceland. The new weekly route in summer from Reykjavik by the new RAL freighter, Nanoq Arctica, will radically change supply lines from Iceland. The East Greenlanders hope the Icelandic connection will provide cheaper goods and a wider range of products, not least fresh produce such as vegetable, fruits, dairy and lamb meat.

The only airport in the area is in the village of Kulusuk through which every passenger to East Greenland must pass. By sea, the trip to the airport takes 1-2 hours from Tasiilaq and up to 4–5 hours from the remotest villages, depending on season and thickness of the sea ice. Helicopter rides are available but expensive. The locals use boats to move between villages and for hunting. In winter, they use snowmobiles or dog sleds. The East Greenland sled dog is a unique breed, and the law strictly forbids import of dogs from outside.

Kuummiut boasts the only fish processing plant in the area that barely survived until it was acquired by the Icelandic concern, Brim hf. A steady increase in the number of dinghies active in fishing has been experienced since. The Icelandic involvement is vital as the fish plant is the only one in East Greenland where the small dinghies can offset their catch. With Nanoq Arctica providing a weekly link between Kuummiut and Reykjavik in the fishing season this will lead to higher prices for the catch and increase yields to the dinghies.

9.2 Unemployment – Average Income – Poverty

East Greenland suffers the highest unemployment in all the country. On average, a quarter of residents aged 18–65 years was unemployed in 2017. In September 2019 unemployment was six times higher than in Nuuk. Between 2014 and 2017 unemployment decreased by half in the capital whilst rising in Tasiilaq. This is reflected in the average income, which in 2018 was close to 30% lower in East Greenland than the national average. Compared to Nuuk it was 46% lower.
In the five villages the average income is much lower than in the town of Tasiilaq (Image 10). Data, that may be processed from the Greenlandic Database, also demonstrate a surprising unequality in income related to origins. Residents born outside Greenland, a euphemism for Danes, have by far the highest average income. After 40 years of Home Rule, Danes still stand out as the high-income demographic in Greenland.

In all of Greenland, 16.2% of the population was below the poverty line in 2015. Statistics on poverty in the Tasiilaq region could not be found. Considering the high unemployment level it may be assumed a much higher percentage is living in poverty in East Greenland than on the west coast. Accordingly, the proportion of East Greenlanders who survive on benefits is much higher than the national average.

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9.3 Triple Isolation

The Inuit in East Greenland are fated to endure a triple kind of isolation. By geography they are physically separated from the rest of the country. Apart from Ittoqqortoormiit, 840 km to the north, no other communities exist on the entire east coast. Nuuk, the municipal seat of Sermersooq, is 640 km across the great inland ice. By air it is shorter to travel to Iceland than to any place in Greenland. For the biggest part of the year the sea ice closes off sailing routes. In summer, only the odd freighter braves the rapidly drifting packs of ice from the Arctic Ocean. As a consequence, the total geographical isolation of the communities amounts to an invisible wall that separates them and the rest of the Greenlandic people.

Another barrier of a linguistic nature also exists. The East Greenlanders speak tunumiusut. It is different from the West Greenlandic, the official language, to the extent to almost qualify as a separate language. Yet, the entire syllabus in the primary schools in East Greenland is in West Greenlandic. When the children enter school for the first time they do not understand spoken West Greenlandic. Some manage with difficulties to understand the West Greenlandic schoolbooks but for others it may take a long time to learn to read in West Greenlandic. The linguistic complexities are further exacerbated by a teaching staff of which the majority is either Danish or speak West Greenlandic. As a result, interpreters are indispensable in every class in East Greenland. A promising pupil might want to improve his or her chances in life by proceeding to secondary level, and move to the west coast for further education. There, yet another brick is added to the linguistic barrier in form of the third language, Danish. In every class in the secondary school Danish is still used, which the East Greenlandic youth do not understand any better than their Icelandic peers.

The third type of isolation that adds to the social seclusion of East Greenland is the low quality of internet connections. In today’s society, information is increasingly sought from the net, and work, leisure, education, huge amount of human interactions, even love, increasingly take place on the social media. The communities in East Greenland are to quite an extent deprived of this important part of modern society. This aggravates social isolation, and adds to the strain on social cohesion, already weak. Hopefully, this will be remedied in the close future, as Tele-Post plans to implement improvements of the telecommunications infrastructure on the east coast according to the Company’s three-year plan of action for 2020–23 (see Chapter 4.4).
GAMBLING ADDICTION AND ALCOHOL

“The children and adolescents who are most at risk for abuse are those in families where the parents drink and gamble and fail to take care of their children. Gambling addiction constitutes just as great a danger as alcohol consumption among parents, as both lead to the children having to fend for themselves in the absence of their parents...”

Report from the Greenlandic police on Tasiilaq

9.4 Social Problems

Social problems are far more disruptive and widespread in East Greenland than in the big towns on the west coast. They are expressed as serious alcohol problems, gambling addiction, prevalent sexual abuse of children, and the highest global rate of suicides ever recorded, not least among young people.

Similar development was exhibited everywhere in Greenland in wake of the rapid modernization process in the early 1950s. It led to closures of villages and thousands of Inuit being moved to Nuuk and the west coast. The process coincided with Greenland’s status being changed from a colony to an administrative province within Denmark. The modernization caused a forceful cultural clash between the traditions of an ancient hunting society and European modernity.

The dramatic social consequences continued to increase for fifty years. Only towards the end of the 20th century did the traumatic aftershocks begin to abate. The social recovery was first experienced in Nuuk and spread through-

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out the west coast. It never, however, reached the remote settlements in North and East Greenland. Those communities are still ravaged by social problems that can be traced to the modernization process. An Icelandic anthropologist, Guðrún Eyjólfsdóttir, long-time resident of Kulusuk, wrote in her master’s dissertation in 2012 that modernization had arrived later for the east coast than elsewhere, and added: “There is much talk of how the generation that was growing into adulthood at that time was hit the hardest, with the yoke of alcohol and cultural insecurity weighing them down.”

The damaged generation later had children and grandchildren, who still today are plagued by inherited social problems. The community of East Greenland is trapped in a vicious cycle of interlinked problems, where one fuels another: Unemployment, alcohol addiction, sexual abuse of children and extreme rate of suicides, esp. among young people. Nowhere else in Europe are entire communities so beset by social problems as the tiny Inuit communities in East Greenland. Yet, they are part of the famous welfare societies of the Nordic countries, and survive only a stone’s throw from their nearest neighbours in the affluent Iceland.

1. Sexual abuse of children

Following modernization the rate of sexual abuse of children increased at an alarming pace. At one point the percentage of victims was as high as 40% among the generation born in the mid-seventies. The rate of molestation abated as the century drew to a close, and in the big towns it fell by half, down to 20%, within the generations born in 1995 and later. A decline has not yet been seen in East Greenland where sexual abuse of children continued to increase. It finally reached a point of 60%, far beyond the highest recorded national average. Statistics from a detailed police report covering a five year period indicate that in the Tasiilaq region the percentage of victims is three times higher than that of the big towns.

Research has shown that more than 80% of girls and 40% of boys born after 1970 are victims of sexual abuse before they reach the age of 18 years. In the referred police report girls were 88% of the victims of reported incidences and boys 12%. The average rate is 61%. The average age of victims is 11 years. The abusers are men in 97% of cases, most between 15–30 years. Nearly 80% of abuse incidents occur within the home, most frequently the child's

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208 In this discussion, various sources are cited, or the following report is used for reference: Grønlands Politi. 2019. Tasiilaq: En kortlægning af seksualforbrydelser mod børn og unge i Tasiilaq i perioden 2014 – 2018 samt anbefalinger til forebyggende indsatser.
A TOXIC COMBINATION

"In the past, people used to drink in their homes but in recent years it has become common for them to gather together in public, even right outside the home, to drink and gamble in plain view of everyone, in front of their own children and other people's children. This slowly causes the children to think that such behavior is not only acceptable but a normal part of life when they grow up. Taking part in such gatherings becomes a rite of passage of sorts. Alcohol and gambling is a toxic combination in the community."

Interview with a teacher in East Greenland.

home, where the parents are either absent at drinking parties, or they are too inebriated by drugs or alcohol to be able to protect their children against abusers.209

The police report revealed that the greatest risk of abuse is when people gather for drinking and gambling parties. A teacher from East Greenland stated to the Greenland Committee that there were indications of "predators" going to drinking parties for the express purpose of finding out what parents were absent from their young children, and subsequently sneaking into their homes with intent to abuse. The teacher spoke of "a toxic combination of drinking parties and gambling". The police in Greenland concurred by specifically mentioning the synergy of these factors with regard to child abuse in their report. In addition to the high incidence of child molestation in East Greenland the number of rapes, irrespective of victim age, is also proportionally much higher in East Greenland than the national average. In 2017 there were more rapes in the Tasiilaq region (29) than in Nuuk (28) despite six times bigger population in Nuuk.210

In Denmark, one sexual abuse incident against children is reported annually per every six thousand residents.211 In Tasiilaq the rate is one incident per every one hundred residents. Thus the difference between Denmark and East Greenland is sixtyfold.

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210 See https://knr.gl/da/nyheder/tasiilaq-h%C3%A5rdt-ramt-af-kriminalitet

2. The highest suicide rate
The registered rate of suicides was very low in Greenland\(^{212}\) between 1900 and up to the point when the effects of the modernization process started to emerge. The incoming wave of suicides was first detected in Nuuk and the big towns on the west coast\(^{213}\) where it climaxed in 1980–84. When the cultural shock caused by modernization receded the suicidal wave started to fall, first in Nuuk, followed by other towns.\(^{214}\) In East Greenland the suicide rate never abated and still remains as high as ever.

In 10 out of 24 years in the period 1990-2003 more suicides occurred in the Tasiilaq region than in Nuuk, despite the latter having six times more inhabitants.\(^{215}\) The suicide rate among East Greenlandic youths tripled between 1970-1999. At the turn of the century it appeared to be 4–8 times greater, proportionally, than in Nuuk.\(^{216}\) According to the famous Danish TV documentary on the suicides in Tasiilaq, aired in 2019, 18 suicides had occurred in the two previous years and 24 suicide attempts. Despatches from a French TV station that sent a crew to Tasiilaq, also 2019, indicated that one suicide happened each month and that one in every four adolescents had attempted suicide. The Icelandic anthropologist Guðrún Eyiólfsdóttir who lived in Kulusuk, a village of just over 200 people, wrote in her thesis that probably one suicide happened each year. In Greenland the suicides are a national tragedy and in the Tasiilaq region they affect every family. One out of five deaths is caused by suicide.

Suicide is far more frequent among individuals that suffer sexual abuse during childhood and/or grow up in difficult social conditions marked by alcoholism and violence.\(^{217}\) In the estimate of a former East Greenlandic advisor to the government of Greenland such conditions apply to about 70% of young people in the Tasiilaq region.

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213 See discussion in Section 2.
214 See discussion in Section 2.
215 See http://bank.stat.gl/
“My brother committed suicide. It was a very difficult time for the family. Nobody came to console us. We are a tightly knit family and we were able to console each other. Suicides also occur under conditions much worse than those that we had to endure, in broken families that are plagued by alcoholism. In those cases there is nobody that can talk people through the trauma. In that state people reach for the bottle and numb their pain with more alcohol.”  

*Interview with a resident of Kulusuk.*

3. Psychological and social resources

Psychological crisis support or social resources have been almost entirely lacking in Tasiilaq. Children in distress can seek help from their school, which legally is obliged to report suspected violations or neglect to the municipality. In the Danish television documentary a teacher in the school Tasiilami Alivarpik stated she sent 109 reports to the authorities. Some of the children involved had for years been subjected to sexual abuse, including rapes, by family members. The response was practically none.

The police report included the following statement: "Many children go to bed hungry and many are afraid to go home because they are never certain about what awaits them. Many are unable to sleep due to drunk and disorderly behaviour, physical fights or fear of being sexually abused ..."

A monitoring report from the Parliament of Greenland218 from 2016 stated that only one social worker and two assistants were assigned to attend to 520 cases. The report furthermore stated that in addition to the enormous workload, the assistants are often hired on a short-term basis, resulting in discontinuity and less efficient processing and handling of cases.

In spite of the severe social problems no psychologist was stationed in Tasiilaq (see frame). A psychology team would come in from Nuuk every 3–4 months, rush through cases and leave after spending 2–3 days providing mental care services, mostly in Danish. For sufferers of trauma it is difficult to be only offered psychological support in a language that they may not under-

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218 The report is referenced in the report from the Greenlandic police, cf. the previous footnote.
stand. This was clearly expressed at a citizens’ meeting in Tasiilaq attended by Marta Abelsen, the Minister of Social Affairs, in 2019. The local school has tried to care for pupils in distress, and grieve counselling groups have been established after major traumatic incidents. In exceptional circumstances a crisis team is dispatched from Nuuk. When two young women took their own life and the third was murdered in one week in January, 2017\textsuperscript{219}, the Mayor flew from Nuuk with crisis experts in her entourage. She would later resign in wake of the uproar caused in Greenland and Denmark by the documentary on the suicides in Tasiilaq.

Excessive drinking of parents and drinking binges related to monthly payments of social benefits\textsuperscript{220} often result in neglect of young children to such a degree that the municipality is forced to take them into care. Sometimes the load on the system becomes too much and a lack of foster homes results in the children being sent to Nuuk. Sibling groups, often quite extensive on the east coast, have to be broken up and sometimes dispersed to different parts of the country.

In Tasiilaq 18 children were in 2019 in care at the Princesse Margrethe Børnehjem home for children, most of whom will grow up there. A small institution, Arni Quinnat, has done important work by running three small, free homes for children aged up to 11–12 years in Tasiilaq, Kulusuk and Kuummiut. Children can come at any time during the day up until evening, are fed and get a food parcel when they leave in the evening. The good people in charge of Arni Quinnat are getting on in age and the future seems uncertain.

The schools do their best to ensure the well-being of the children. They receive one meal a day, and a teacher at one of the village schools disagreed with the police report’s statement that some children went without food. During weekly life skills classes the children are informed of their rights and urged to inform their teachers if they are badly treated or feel in danger. In at least one village teachers have gone on marches to protest against drinking and gambling in public.

Until recently, child abuse has been a serious taboo in Greenland.\textsuperscript{221} Victims suffer in silence and the obvious connection between child abuse and high

\textsuperscript{219} See https://knr.gl/da/nyheder/kriseberedskab-i-tasiilaq-f%C3%A5r-ekstra-hj%C3%A6lp-fra-nuuk
9.5 Relations with Iceland

In spite of East Greenland’s geographical isolation from other parts of Greenland, the proximity to Iceland and frequent flight connections have ensured a growing variety of interactions with the Icelanders.

The Rook Chess Club

The chess club has for the last 17 years made close to 70 trips to Greenland where Icelandic chess players have volunteered to teach young Greenlanders to play chess. Every year The Rook has visited all the schools in East Greenland and have presented each child with a chess set. The Club’s chess festivals, which in latter years invariably featured clowns and musicians, have always been eagerly awaited by the youngest generations. Special bonds of friendship have been formed between the Rook and the town of Tasiilaq. For example, the club’s President brought a donation of DKK 75,000 to the new Red Cross branch in Tasiilaq to honour the memory of his mother.

The suicide rate among young people is rarely addressed. Teachers, however, who have seen first hand the relationship between the two evils have not shied from raising the issue in public – to no avail. Their concerns were expressed in Danish media long before the wall of silence was famously broken with the aforesaid TV documentary.

After the documentary Greenlanders asked for help from the Danes. In November 2019 a team of psychologists and social workers arrived from Denmark in order to try to mend the wounds. In addition, it was decided to appoint three social workers, two of whom would be Greenlandic, at the beginning of 2020. The report from the Greenlandic police indicates that due to the immense workload facing such workers in East Greenland it may be difficult to find candidates for the positions and those who take on the task tend to burn out quickly.


222 See https://kng.gl/da/nyheder/hj%C3%A6lpen-fra-danmark-socialarbejdere-i-tssiilaq-er-glade-opl%C3%A6ring?fbclid=IwAR2-jk0XK-gwiHh4j73WVp6Mp35vAJmDkeVpeigdtotD5Cwl3Gi13tTrVE
club has not left out the small villages. In connection with Christmas the Rook has for many years in co-operation with KALAK sent an Icelandic version of Father Christmas on a day trip to Kulusuk to bring Christmas presents to all the children in the village, close to seventy. For many years an annual Easter festival has been held in Ittoqqortoormiit where the traditional Icelandic Easter eggs of chocolate have been presented to all the local children. On the initiative of a mother of an Ittoqqortoormiit chess kid the club has since 2014 collected practical high-quality clothing in Iceland and distributed to Greenlandic children. Dozens of handicraftswomen from all over Iceland combine to knit heaps of traditional sweaters from the famously warm Icelandic wool. This has grown in volume and warm clothing has in later years been distributed in villages all over Greenland.

KALAK and the swimming project.
As no swimming pools exist as yet in East Greenland the kids in the region do not learn to swim. In East Greenland, this should be a basic skill of life, as seamanship and fishing are part of the traditional way of living off nature. Tasiilaq’s twin town in Denmark, Fredericia, initiated a project whereby each year children from the town of Tasiilaq were invited to Fredericia to learn swimming. However, nobody invited the kids from the five villages close by Tasiilaq to learn swimming. Fourteen years ago an Icelandic long-time resident in Tasiilaq, Chief Engineer Stefán Pór Herbertsson, therefore took the initiative to organize annual swimming trips to Iceland. All pupils in schools
in all the villages, including Ittoqqortoormiit in Scoresby Sound, are now invited to attend swimming classes in the pools of Kópavogur, a town bordering Reykjavik, and a twin town of Tasiilaq.

At present, 25–30 children, accompanied by 5–6 teachers, visit Iceland each year and learn swimming. They also meet Icelandic children their age and are invited to theater performances, cinemas and concerts. An afternoon visit to the President of Iceland in his official residence in Bessastaðir has become a tradition where the President invites them to cream cakes and warm chocolate with a lot of photo opportunities. The trip to Iceland invariably becomes an unforgetable experience and the children return to East Greenland with a very positive impression of Iceland.

The Icelandic Red Cross.

Following the 90th anniversary of its foundation in 2014, the Icelandic Red Cross decided to increase support and co-operation with its counterpart, the Red Cross in Greenland. A particular focus was placed on projects related to vulnerable demographics in Greenland. Subsequently the Icelandic Red Cross provided support to found a Red Cross branch in Tasiilaq. It has now successfully operated for two years, but, as a fledgling operation it still needs further support. The co-operation with Greenland on various projects has yielded good results, and the Icelandic Red Cross is much enthused about continuing activities in Greenland. A part of increased co-operation will be a special emphasis on Tasiilaq.

The twin town of Kópavogur.

Kópavogur is Iceland’s second largest town and is twinned with the town of Tasiilaq. Kópavogur, led by the able Mayor, Ármann Kr. Ólafsson, has been very active in providing support to grass roots organizations with cooperative ties to Greenland, such as the Rook and KALAK. The town has opened its sports facilities to accommodate the children, contributed a swimming instructor and swimming pool, and opened the schools for the East Greenlandic visitors during their annual sojourn in Iceland. Kópavogur’s involvement in the co-operation with East Greenland is a telling example of how the bonds between twin towns can be utilized in a highly effective and constructive manner.

Brim hf.

In Kuummiut the Icelandic fishing concern, Brim hf, is responsible for running the only fish processing plant in East Greenland. Due to the lack of harbour facilities and the presence of sea ice, all fishing is done by dinghies in the summer time. In at least two locations some fishing takes place through the ice. The plant originally provided work for 5 people, but at present it employs
up to 10 people. In a small village hampered by high levels of unemployment, these jobs are important. However, more importantly, the plant buys the catch from 90 small dinghy operators from all over the Tasiilaq region. This is vital for the local economy as due to the isolation of the region the dinghy operators would have no other way to sell their catch. The company has encouraged and assisted owners of dinghies, not active in fishing, to start operation by lending them funds to buy equipment, in particular winches for the boats. These efforts have made a very significant difference: Between the years 2017 and 2019 the number of small vessels who brought their catch to the plant increased from 57 to 92. The new regular route of Nanoq Arctica from Kuummiut to Reykjavik will increase the price of the catch, and thus the income of the small dinghy operators.

**Air Iceland Connect/Icelandair.**

Air Iceland Connect, a part of the Icelandair airline, has for decades been the main gateway between East Greenland and the outside world. The Icelandic airline is an indispensable anchor for local tourism, bringing close to 6,000 foreign passengers annually to East Greenland. Weekly scheduled flights are in winters but daily flights in the summer season, sometimes twice daily. Kulusuk has been AIC’s largest destination in Greenland. It is also serves as the back-up airport for flights to four other destinations in Greenland. Apart from tourists, the airline provides an important transportation route for the post
and also brings in various fresh produce from Iceland, such as vegetables, lamb and dairy products. AIC will play a vital part in resurging tourism to East Greenland when the Covid-19 pandemic succumbs.

Icelandic Mountain Guides.
The company runs a hostel in Kulusuk, and organizes 3 hour tours for day trippers who fly in with AIC. It has offered cross-country ski trips in the wintertime, and week-long summer trips where baggage is transported by boat between overnight locations. High-altitude mountaineering, walks across the Greenland glacier for small groups, and an 800 km ski trip between Scoresby Sound and Tasiilaq are good examples of unique trips developed by Icelandic Mountain Guides, based on highly trained Arctic guides with specialized skills. Each summer the company runs an important community project in Kulusuk (see Section 6) where youths from the village can attend free mountaineering courses – and feast on Icelandic meat soup in the evenings.

9.6 Living on the Edge - Ittoqqortoormiit

A little over 800 km to the north of Tasiilaq and 400 km beyond the Arctic Circle a remote and lonely settlement, Ittoqqortoormiit, is located on the northern tip of Scoresby Sound. The airport at Nerlerit Inaat (Constable Point) is 40 km away. The village lies on the boundary between the municipality of Sermersooq and the world’s largest national park. Last year, 2019, the population was 358.

Ittoqqortoormiit is the remotest settlement in all of Greenland. To reach the nearest domestic airport, in Kulusuk, the residents have to travel a distance of 820 km. Nuuk, the seat of the municipal council for Ittoqqortoormiit, is 1440 km away. For comparison, the Icelandic towns of Ísafjörður and Akureyri are only 305 and 560 km away, respectively.

The settlement was founded in 1925 by the Danish Arctic explorer Ejnar Mikkelsen, who wanted to bolster the claims of Denmark to the Northern part of Greenland. At the time it was also coveted by the Norwegians. Mikkelsen persuaded more than one hundred residents of Tasiilaq, and few from the west coast, to accompany him to better hunting grounds in Scoresby Sound. The settlers set sail from Tasiilaq on the Gustav Holm, a vessel named by the first Dane to arrive in Tasiilaq (1884) who also was Mikkelsens father-in-law. The expedition briefly stopped over in Ísafjörður in Northwestern Iceland to have their future priest properly ordained.
Famous images exist of the 1925 visit in the folk museums in Ísafjörður and Ittoqqortoormiit, and tales of the Icelandic sojourn are still retold three and four generations later.

Iceland is a very important link in the life of Ittoqqortoormiit. Usually, no doctor is in residence, only nursing staff. All medical emergency services are provided by the Hospital in Akureyri, North Iceland, as part of an agreement between the two countries. If a major accident occurs doctors will fly out from the Akureyri Hospital and bring patients back with the Icelandic Norlandair. The airline not only provides emergency medical airlift services but runs scheduled flights between Akureyri and Scoresby Sound, once weekly in winter and twice in summer. A route to Reykjavik will be added as of next summer, 2021. Greenland Air also provides weekly domestic flights to Kangerlussuaq and Nuuk. International tourists, flying in from Iceland, enjoy the natural wonders of Scoresby Sound in week-long sailing trips organised by the Icelandic tour company, Norðursigling, who pioneered whale-watching in Iceland. The Company’s fleet of three ships in Scoresby Sound includes the first electrically powered seaborne craft north of the Arctic Circle.

As stated, the chess club the Rook visits Ittoqqortoormiit every year at Easter time, holds a festival of chess and music, with an abundance of tradition-
The ship Gustav Holm in Ísafjörður harbour in 1925. The Greenlanders were led by Ejnar Mikkelsen on their journey from Tasiilaq to Scoresby Sound, where the expedition ended with the foundation of the village of Ittoqqortoormiit. Photo: Image Gallery of Ísafjörður

Icelandic Easter eggs of chocolate. In Scoresby Sound natural wonders abound. In addition to polar bears, musk oxen and whales of all sizes the buck-toothed narwhal still graces nature despite being endangered by over-exploitation and rising sea temperatures. A real surprise in the midst of the Arctic are the hot springs located just by the airport. International investors see an opportunity in a future boutique spa-hotel, provided research will confirm that plentiful hot water is available.

A very informative summary about Ittoqqortoormiit, the local residents and their attitude to life, as seen through the eyes of a visiting Icelander in the midst of winter, can be read in an entertaining description by a young Icelandic student from 2012. It also gives a frank insight into how educated Danes and West Greenlanders, temporarily stationed in Ittoqqortoormiit, view the local inhabitants.223

223 Hjördís Guðmundsdóttir 2011. *From a field trip to Ittoqqortoormit in East Greenland. https://skemman.is/handle/1946/9511
9.7 Friendship in Action

Various ideas on how to strengthen the relations between East Greenand and Iceland were brought to the attention of the Greenland Committee. Those presented below have in common that they can easily be implemented through co-operative efforts between Icelandic and Greenlandic stakeholders.

1. After School Centre in Tasiilaq

In Tasiilaq, no after school centre exists for the adolescent youth. Apart from their home and school, the teenage generations have no place in particular to gather and interact. In the Icelandic community, after school centres have proved to be important havens for young people to meet and mingle under the supervision of a social leader. They provide a sheltered environment where young people can learn to respect each other, to understand that everyone has their own particular characteristics, and that there is space for everybody. After school centres provide a platform for training in life skills where youths hone their skills at social interactions and developing friendship. In Iceland, they have played a part in successful social experiments that aim to eradicate bullying and isolation.

The teenage generation of Tasiilaq has initiated remarkable and brave projects to confront the two taboos that are part of the adolescent life in East Greenland, i.e. child molestation and suicides. Theatrical groups, literary projects, music and even short films have been used to vent their grief and sadness. Yet, the young people have few places to turn to where they can express their feelings and creative impulses in this manner. There is a sore need in Tasiilaq for a youth after school centre. Their closest neighbours, the people of Iceland, could make a gesture of solidarity by providing the youth of Tasiilaq with a after school centre. In Iceland, Save the Children (Barnaheill) and its sister organization in Greenland, Red barnet, have expressed a desire to run such a center in co-operation with the locals.

A report from the Greenlandic police regarding sexual offences committed against children in Tasiilaq indicates that part of the social problem comes from the lack of healthy alternatives for teenagers instead of alcohol, gambling and afterparties. These evils are particular risk factors in the context of sexual offences committed against adolescents and children in Tasiilaq.

People whose opinion was sought informed the Greenland Committee that for a relatively small sum of money by Icelandic norms a house could be purchased in Tasiilaq, that would be suited to function as an after school centre.
This was backed up with recent information on the real estate market in East Greenland. Such a gesture would emphasize the solidarity of the Icelandic people with their friends and neighbours in East Greenland. At the same time it would provide a much needed shelter of leisure to the demographic in East Greenland that simultaneously is the most valuable but yet most vulnerable, the young people.

**Recommendation:**

- The government, in consultation with Save the Children in Iceland and the municipality of Sermersooq, should contribute to cover the purchase of a house suitable as an after school centre and pay an employee’s wages for three years.

### 2. Micro Hydro Power Plants

A project to speed up energy transition in Greenland by co-operation on large hydropower plants (>10 MW) in towns on the west coast is proposed in Section 8.10. High costs due to long distances will prevent that rural villages can be provided with electricity from such sources. Today, all villages in Greenland are powered by oil. However, the Greenland Committee received confirmation from Danish experts that small-scale hydro potential is widely available in Greenland. This could easily be utilised for micro hydro power plants to provide most villages in Greenland with the renewable energy needed to enable transition from oil to electricity. However, mapping of potential in the rural areas is mostly lacking. Furthermore, the Greenlandic government has a heavy agenda ahead in large scale infrastructure higher on the list of priorities. Hence, lack of manpower and financial flexibility is likely to delay the introduction of such plants that would enable energy transition in Greenlandic villages.

Iceland has a long standing expertise in this field. A pioneering company in Northern Iceland has previously built several small hydro power plants used by farmers in South Greenland. Also, the National Energy Authority in Iceland is presently undertaking a survey of hydro potential for such plants in all of Iceland. The Director General of the Authority stated to the Greenland Committee that it is a feasible option to incorporate, for example, East Greenland, into the Icelandic survey. In view of the above, it is proposed that a trial project be conducted, based on the Tasiilaq region and the village of Ittoqqortoormiit in Scoresby Sound. The countries will cooperate to map the potential for micro hydro power plants in East Greenland. When results are in, they will
in common seek ways to finance construction of the plants, for example, through “green funds” within the Nordic and European systems, or by other means. If bilateral co-operation on the East Greenland project is successful, it will be discussed to expand the project to cover all villages in Greenland.

Small-scale hydropower potential has not yet been systematically mapped in Greenland. It was confirmed, however, in an e-mail from Kåre Hendriksen at the Danish Technical University (DTU) that “there are great opportunities for small scale development everywhere in Greenland”. Hendriksen has for decades been attached to infrastructure projects in Greenland.

The Tasiilaq region seems ideal as a starting a project. The town itself has a small hydropower plant (1,2 MW), that already is at full capacity and not large enough to produce energy for electrical heating. An enlargement will be needed for energy transition and new industries. An employee of Nukissiorfiit, the state owned Energy Company, confirmed that at least some hydro potential, not mapped as yet, is present in the vicinity. The five villages, 15 – 65 km out of town, will also need renewable energy sources. Icelandic companies have strong ties to two of them, Kuummiut and Kulusuk. It matters in this context that the government of Greenland has identified Kulusuk, as well as Ittoqqortoormiit in Scoresby Sound, as candidates for future renewable energy solutions.

In order to maximize result of the East Greenland project it is important to establish good professional connections between the National Energy Authority and the Nukissiorfiit branch in East Greenland. Representatives of the latter should be enabled to visit Iceland, familiarize themselves with Icelandic project, and structure a possible co-operation with the National Energy Authority.

It is not ascertained as yet if all the villages in East Greenland have suitable hydro potential. That needs to be researched and mapped. It is clear, however, that some villages in Greenland will due to their geographical location not be able to base a future renewable energy solution on hydro power. They simply lack the water resources. Such villages are located in archipelagos, on promontories, or in the Arctic deserts of North Greenland (Uummannaq, Upernavik and Qaanaaq).\(^{224}\)

The energy requirements of these villages can nevertheless be met by innovative multiple energy solutions that presently are being developed for small Arctic communities. Such solutions involve combinations of solar and wind

\(^{224}\) See: https://www.greenfacts.org/glossary/pqrs/polar-desert.htm
power attached to large batteries (energy banks). In some villages, where water resources are scarce, a modicum of hydropower can nonetheless be accessed to support the new technology solutions for a part of the year. In future, such stand-alone, off-grid solutions can be sustainable for most of the year.

Iceland is connected to the core of these developments. The National Energy Authority in Iceland directs an international project initiated by the Arctic Council to develop off-grid solutions for isolated and sparsely populated Arctic settlements. It would serve the interests of the East Greenland project if Greenland will take an active part in the Arctic Council project. Icelandic authorities can ensure that.

It is important that the governments start early to prepare to implement the results of the East Greenland project by searching for convenient finance. Apart from the Nordic Investment Bank, the European Investment Bank, various European funds and international initiatives connected with the Arctic and climate conservation, should be examined.

**Recommendations:**

- The Foreign Minister should instigate a co-operation between the National Energy Authority in Iceland and Nukissiorfiit on mapping of hydro potential for micro hydro power plants in East Greenland. Representatives from Nukissiorfiit should be enabled to attend work meetings in Iceland in order to make preparations for the East Greenland project.

- The Foreign Minister is encouraged to consult with authorities in Greenland on further steps, including working together on finding financial solutions to implement the results from the East Greenland mapping,

- Upon successful results from the mapping project in East Greenland the Foreign Ministry is recommended to support that the project be extended to include all of Greenland.

- The Foreign Ministry should seek to have East Greenland included in the Arctic Council project on new energy solutions for isolated communities in the Arctic.
3. **Stimulation of Start-Ups in Tourism**

Tourism in East Greenland has a promising future. It will, however, take time to develop. In the meantime it is important to use the base already in place to create more jobs for local people. From that perspective tourism in East Greenland is in need of more local entrepreneurs and a start-up spirit must be encouraged by all means.

At present, the quickest way to create more local jobs and revenue from tourism is to create products that attract the almost six thousand tourist coming from Iceland to extend their stay in East Greenland. Sadly, most of them are day-trippers that only spend few hours in and around Kulusuk. The Icelandic companies that bring them have a moral duty to find ways, on their own or in co-operation with local entrepreneurs, to entice them to stay longer. This would mean a lot for a tiny community suffering poverty and high unemployment.

Most of the tourism companies active in the region are foreign and bring most of their staff from outside. Very few Greenlanders are employed in the industry. The operators do not lack the will to hire locals, but trained staff, with practical experience of Arctic guiding, are not available. Graduates from the only school in Greenland that offers Arctic Guide courses cannot get internships within Greenland to develop the highly specialized skills demanded in Arctic guidance. This problem is discussed in more details in Section 6, on tourism in Greenland, and addressed in recommendations below. In essence, the solution proposed entails an agreement with Icelandic companies to provide internships to Greenlandic Arctic Guides. This will enable local guiding talent to acquire skills for jobs in tourism in East Greenland, presently filled by outside staff. Not least, it will attract back East Greenlanders that have graduated in Arctic tourism but not been able, for the same reason, to find suitable jobs on their home turf.

For East Greenland it is vital to encourage local entrepreneurs and start-ups to seize the opportunities that will be created with gradual increase in future tourism. Iceland can contribute by organizing visits by successful Icelandic entrepreneurs who motivate aspirant local entrepreneurs by their success stories. Local young entrepreneurs should also be invited to visit Iceland, create contacts, and be inspired by visiting successful start-ups in Icelandic tourism.

The seeds are already in place. Each year a number of students from East Greenland study tourism at Campus Kujalleq in South Greenland where start-
ups and entrepreneurial encouragement is part of the syllabus. Some of the students from East Greenland have trickled back home, wanting to start their own company, but very few have taken the jump. It is important to induce confidence in that kind of aspiring entrepreneurs. They combine East Greenland roots with enthusiasm and education in tourism.

East Greenland has much to offer that cannot be found elsewhere and few places can offer the same variety of experiences in a single trip. Icelandic Mountain Guides, which has been operating for years in East Greenland, stated to the Greenland Committee that the region is in the absolute top-class for adventure tourism. That segment in the market is presently the fastest growing one. Whilst the Covid-19-pandemic undoubtedly will slow down the development of tourism in East Greenland, as elsewhere in the world, this report argues (Section 6) that tourism in Greenland will be among the first to recover. All the present signs indicate that East Greenland can develop into a successful destination for adventure tourists in the future. Start-ups and entrepreneurs are very important to ensure that when the time comes East Greenland is ready to seize new opportunities.

**Recommendations:**

- The Foreign Minister should appoint a task force to bring forth ideas and proposals that aim to extend the stay of tourists flying from Reykjavik to East Greenland. The task force should consist, inter alia, of representatives from Visit Greenland, AIC, and companies active in East Greenlandic tourism.

- The Foreign Minister should request Promote Iceland to offer a “Weekend of inspiration” in Tasiilaq where successful entrepreneurs from the Icelandic industry will give inspirational talks and share experience and examples of successes.

- The Foreign Minister is requested to ensure that Arctic guiding aspirants from East Greenland be included in a special capacity-building course to be offered in Iceland (see Section 6) where practical experience in Arctic guiding will be provided (glacier walks, glacier skiing, ice climbing).

- The Foreign Minister should in co-operation with Visit Iceland, the Icelandic Tourist Board, Icelandair and The Icelandic Travel Industry Association organise a tour of up to five entrepreneurs from East Greenland to study Icelandic tourism and spend a week with 2-4 travel companies of their choice.
4. **Study Presentations in Iceland**

In East Greenland a very low percentage of young people continue their studies after primary school. The reasons can be traced to the social problems and the triple isolation of East Greenland (see Sections 9.1 and 9.3).

During the last class of primary school the pupils are offered to attend presentations of the options available for further studies on the secondary level of education. The purpose is to encourage the pupils to intensify their studies in their final primary year in order to obtain the necessary grades to be accepted in the secondary schools on the west coast. The presentations usually take place in Nuuk, with an emphasis on vocational studies and internships. The visits to Nuuk have not been very successful if judged by low enrolment from East Greenland in secondary schools on the west coast.

As discussed in 9.1 and 9.3 Nuuk may not be the promised land in the eyes of the adolescent generation in East Greenland. In view of that teachers and educational staff brought to the attention of the Greenland Committee the following idea: Instead of getting study presentations in Nuuk the pupils be invited to go to Iceland, and receive the presentations from Icelandic teachers. The purpose would be to reduce the drop-out rate between educational levels by creating a stronger motivation to continue studies than a traditional visit to Nuuk would inspire. The authors of the idea felt the local authorities would contemplate financing trips of this kind as an experiment, if the Icelandic system would offer the presentations.

Schools such as Technical College Reykjavík would be ideal for hosting a presentation of various kinds of vocational studies and professions.

**Recommendation:**

- The Foreign Minister should discuss with pertinent authorities to offer study presentations in Iceland to East Greenlandic primary school leavers. If so desired by Greenlandic authorities the Technical College Reykjavík should be assigned the task of hosting a presentation in consultation with the municipality of Sermersooq.

5. **Twin Town Football Matches**

Enthusiasm for football is enormous in East Greenland and the success enjoyed by Icelandic national teams at international level is closely followed and celebrated. There is great interest in establishing ties at youth level between Iceland and East Greenland in the field of football. The schools in
the six settlements in the Tasiilaq region have established an annual football tournament where the school teams compete. The tournament is a big event in East Greenland and much effort is devoted to training and preparations. It would be much appreciated if Icelandic school teams would visit and take part in the tournament.

The school in Ittoqqortoormiit, more than 800 km to the north, has not taken part in the Tasiilaq tournament due to the long travelling distance. It, however, is planning to participate in the coming years. The team from Ittoqqortoormiit will have to pass through Akureyri and Reykjavík in order to get to Tasiilaq. Dalvík is a twin-town with Ittoqqortoormiit and some exchanges have been between the two in the past. The football enthusiasts in Scoresby Sound therefore long to visit Dalvík, and play a training match with the local school team.

**Recommendation:**

- The Foreign Minister should request the relevant authorities to ensure that school teams from the twin towns of Tasiilaq and Ittoqqortoormiit, i.e. Kópavogur and Dalvík, will participate in alternate years in the Tasiilaq school tournament.

6. **Hot Springs**

A short distance from the airport in Scoresby Sound, far to the north of the Arctic Circle, the hottest springs in Greenland are located with surface temperature close to 60°C. Initial investigations conducted by Icelandic scientists in 1996 indicated that just below surface the temperature may be much higher. The results also indicated that the chemical composition of the water was suitable for bathing. Further studies are required to ascertain if the water resource can be used, for example, to build a swimming pool for locals and tourists, even spa-facilities in relation to a future hotel. Ideas regarding a boutique hotel for “once-in-a-lifetime” experience have been aired by investors in connection with the scheduled flights from Asia to Iceland. There is interest among Icelandic scientists to do further research on the geothermal heat source in a manner that will not entail special cost for the government.
Recommendation:

- The Icelandic government should obtain the required permits for Icelandic geoscientists who are interested in exploring further the geothermal heat sources in the hot springs by Scoresby Sound.

7. The Swimming Project

A strong connection has been forged with East Greenland through the annual swimming courses offered in Iceland to children from five villages on the east coast of Greenland. The project has been ongoing for 15 years and is led by volunteers from KALAK. It has become a symbol for the special link between Iceland and East Greenland, and is widely acknowledged as an indispensable link in the relations between the two countries. The project, however, has always been financially on the brink, sometimes to the point of desperation. After 15 years it deserves to be provided with a solid financial base.

Recommendation:

- The Foreign Minister is recommended to propose that a financial grant to KALAK to cover expenses with regard to the children's swimming project will be a fixed item in the annual budget pertaining to the Ministry of Education.

8. The Red Cross

Despite the widespread social problems in East Greenland scant psychological support is available to the victims. Systematic care or treatment is rarely on offer to those who suffer suicidal thoughts, or traumatized victims of sexual or domestic abuse, often very young, or to people that suffer a life-changing experience when a loved one commits suicide. Instead, people suffer in silence, often alone.

In such circumstances the organized activities of voluntary entities can be of paramount importance. Volunteers, trained to offer relief to mental suffering, can be of tremendous support to people in distress. It is very difficult, however, to develop voluntary capacity in isolated and sparsely populated areas with deep-seated social problems. Experience vividly shows, that the most effective way is by working closely with local residents, on their own conditions...
The Icelandic Red Cross has important skills and experience in this field. It has expertise in developing local capacity in difficult conditions through local networks, where volunteers are trained to offer psychological first-aid and psychological support in general. In Greenland it already has established a successful co-operation with the Greenlandic Red Cross. The two organizations together initiated a new Red Cross branch in Tasiilaq that presently has been operative for two years. In future, the new branch in Tasiilaq can be of tremendous support to the community if it is enabled by means, tools and technical advice to grow with the community. It therefore is important to assist the new branch to develop trained, local capacity that can on voluntary basis provide the psychological support needed by victims in distress. This is a typical example of how civil society in Iceland can join forces with counterparts in East Greenland to provide practical support.

In Section 8.3 the Greenland Committee argues a proposal regarding official support to the Icelandic Red Cross to enable the organization to continue and increase its already successful co-operative efforts with the Greenlandic Red Cross. In East Greenland the objective is to develop voluntary psychological aid through the Red Cross branch in Tasiilaq. With reference to that, the Greenland Committee makes no special recommendation regarding the Red Cross initiative in East Greenland, but urges the Foreign Minister to ensure the proposals in Section 8.3 be accepted and executed.
# Summary of recommendations

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A comprehensive fisheries agreement should be negotiated between Iceland and Greenland covering straddling stocks, including deep-sea redfish, other agreements that are listed above, co-operation between ministers, ministries and fishery institutions and agencies. The agreement should also cover actions proposed in Recommendations below.

Consultation meetings on fisheries and research, at minimum once a year, should be formalised between the directors and main experts of Pinngortitaleriffik and the Icelandic Marine and Freshwater Research Institute (Hafrannsóknastofnun). Ministers should also ensure that reciprocal working visits of specialists in various fields of fisheries be established between the institutes.

A channel should be created to share on a regular basis new, relevant data from fisheries and marine research. Furthermore, historical data on catches off Greenland should be made available for joint research projects, cf. the proposal on joint research on cod stocks.

Temporary exchange of experts, from research and administration, should be enabled to strengthen the relationship and communication of information and new knowledge between Pinngortitaleriffik and Hafrannsóknastofnun.
Summary of recommendations

3. Joint cod research

- Iceland and Greenland should organise joint research on cod stocks off East Greenland to assess migration, origin, and proportion of different stocks, including by tagging in Icelandic waters.

- Iceland should initiate a joint project on cod stocks in Greenlandic waters, based on MFRI’s historical samples from the last century and new research on tagging and genetics.

- The result of the above should be the basis for further co-operation, including in connection with fishing.

4. Business co-operation

- The Minister for Foreign Affairs should appoint a task force, including representatives of Fisheries Iceland, to examine ways to increase co-operation between Greenlandic and Icelandic businesses in the fisheries related sectors. This task force would also propose how authorities might facilitate the participation of Icelandic fishermen and companies in the development of Greenland’s fishing industry.

5. Training with fishing technology

- The Minister of Foreign Affairs should, in consultation with Greenlanders, entrust the Icelandic College of Fisheries in Grindavík with the task of organising courses aimed at increasing the skills of employees in the sector in accordance with the needs of high-tech fishing and fish processing, longline fishing and traditional coastal fishing with an emphasis on quality management. It will assume that the companies will fund the training of their employees.
The Foreign Ministers of the two countries should request framework proposals for a Nordic centre of excellence in the field of fisheries technology from the cooperative network of fisheries training programs in the West Nordic region. Subsequently, they should pursue consensus among NORA’s partner countries on planning for such a center.

6. Greenlandic ocean cluster

- The Minister for Foreign Affairs should in co-operation with the entrepreneurs and leaders of the Icelandic Ocean Cluster and Fisheries Iceland seek proposals on how Icelanders may best disseminate positive experiences on the cultivation of start-ups within the fisheries sector. On the basis of these proposals, the Minister of Foreign Affairs should explore the possibility of co-operation between the Ocean Cluster and Greenlandic parties, such as the Greenland Growth Fund (Grønlands Vækstfond), on how to disseminate Iceland’s experience, with the aim of strengthening value-adding start-up businesses within Greenland’s fisheries sector.

7. Processing of pelagic catches

- The Icelandic government should offer to share experiences and expertise to assess the potential for land-based processing of pelagic catches in Greenland. It should be explored whether temporary fiscal incentives, such as harvest rights, and financial subsidies for facilities and development can be used to attract core investors with experience in the industry from the pool of local talent and Icelanders.
Summary of recommendations

6. Tourism Prepares for Take-off
10 points of emphasis and 13 proposals

1. Joint Marketing
   - The tourism leadership, in collaboration with Visit Greenland, should form a common policy on the countries' marketing and branding strategy as Arctic travel destinations, aimed at the target group of experience and adventure travelers. Among other things, they should emphasise the small size of the population and Iceland’s and Greenland’s well-executed response to the Covid pandemic.

2. Collaboration of Tourism Administrations
   - The Ministers of Tourism of Greenland and Iceland shall agree on an annual bilateral consultation meeting. In connection with this, other tourism authorities will review the status and development of the industry, as well as new measures. Careful consultation is particularly important while tourism is working through the consequences of Covid-19.

3. Regular Workshops on Hot Topics
   - The Icelandic Tourist Board and Promote Iceland should hold meetings every few years, and as often as necessary, regarding policy making for the tourism industry of both countries in collaboration with Visit Greenland and the business bureaus of the municipalities of Greenland. Furthermore, workshops should be held with the participation of companies regarding defined topics, such as the tourism industry's responses to the Covid pandemic, cluster collaborations, mixed tours, product development, incentivising of entrepreneurial initiatives, and innovation. Special emphasis should be placed on introducing successful innovations from the last decade of Icelandic tourism (e.g. glacier walks, ice caves).
4. Dissemination of Solutions and Innovations

- The Icelandic Tourist Board should invite the Greenlandic administration to join a workshop in Greenland on projects that the Icelandic administration has undertaken, such as tourist safety, protection of vulnerable areas, development of new tourist destinations, load distribution, contingency plans, and problems that may arise with increased volume of tourists.

- Special emphasis should be placed on introducing Icelandic innovations such as destination agencies and the tourism learning center.

5. Icelandic Internship for Greenlandic Arctic Guides

- The Icelandic government should initiate an agreement between Campus Kujalleq and Icelandic businesses so that young Greenlanders who graduate as Arctic Adventure Guides should have the option of pursuing internships in Iceland in the future.

- In collaboration with Campus Kujalleq and Visit Greenland, a onetime course should be held in Iceland for working guides in Greenland on glacier hiking, ice and mountain climbing.

6. Tourism Satellite Accounts

- The Foreign Minister with pertinent authorities should establish a collaboration between the University in Bifröst and Visit Greenland on tourism satellite accounts.

7. Skills for Low-Cost Infrastructure

- Iceland should help establish a co-operation between the Icelandic Forest Service and Greenland’s tourism authorities on the dissemination of skill sets applicable to simple infrastructure development in tourist areas, such as construction of walls, footpaths and trails. Iceland should also open its strong network of international voluntary organisations in this field to Greenland.

8. Conservation of Icelandic Heritage Sites

- In memory of the settlement of Erik the Red and Bjóðhildur Jórunsdóttir in South Greenland, Icelanders, in collaboration with the
Summary of recommendations

custodians of the UNESCO World Heritage Site, should cooperate on establishing procedures for the protection of fragile archeological remains from the settlement, that are endangered by the increase in tourism.

- The Icelandic Government should finance a course in South Greenland where an Icelandic expert, Guðjón Kristinsson from Drangar, instructs interested volunteers from Iceland and Greenland on how to construct paths in protected areas. The aim is to protect the three most valuable historic sites that are currently most at risk: Hvalseyjarðarkirkja, the bishop's residence in Garðar, and Brattahlíð.

- Iceland and Greenland should take the initiative to establish a co-operation with other nations that have ties to the settlement, regarding the financing of a program aimed at strengthening and utilising the local capacity of volunteers to protect other significant Icelandic antiquities in South Greenland.

9. **ATWS Travel World Summit**

- The ministers of tourism from both countries should work to bring the ATWS Travel World Summit to both Greenland and Iceland in the coming years. The fair is the most important gathering for the experience-based tourism sector and a perfect occasion to present the countries as ideal destinations in the aftermath of the Covid-19 pandemic.

10. **Arctic Infrastructure Investment Fund**

- The Arctic Circle should be brought in to employ its extensive network in establishing an International Arctic Investment Fund based on the Arctic Investment Inventory established by Guggenheim Partners at the Wilson Center in Washington. The role of the fund would be, among other things, to stimulate business opportunities related to Greenland, such as the construction of hotels in relation to the expected increase in tourists.
7. Mining in Greenland

6 proposals

1. The Foreign Minister is recommended to include provisions in the General Framework Agreement (see Main Recommendation, p. 12) that encourage co-operation between Greenlandic and Icelandic service providers and also on possible co-operation or joint ventures in Iceland regarding raw materials, such as Rare Earth Metals, that may be difficult to refine domestically.

2. The government should devise a policy on temporary incentives to encourage mining companies in Greenland to seek co-operation in Iceland on services such as supply storage, transshipment and storage of raw materials from mines in East and North Greenland. The policy should also support further processing of raw materials in cases when such service is sought/needed outside Greenland.

3. The Foreign Ministry’s Directorate for External Trade and Economic Affairs should, in consultation with Iceland’s Chamber of Commerce and the Confederation of Icelandic Enterprise, perform an assessment of the type of support services mining companies in Greenland will need and the capabilities of the Icelandic industry to meet those needs.

4. Subsequently, the Ministry for Foreign Affairs and Iceland’s Chamber of Commerce should establish a web portal (one-stop-shop) where mining companies can obtain all the necessary information, links and system guidance on all aspects related to types of service that can be provided from Iceland (suppliers, temporary staff agencies, contractors, air service, general service companies, financial services, customs and taxation, etc.).

5. The Consulate General in Nuuk should be tasked with monitoring the issuance of licenses for research, prospeckting and mining, and to contact and/or meet with pertinent parties to provide a “resource package” to highlight the benefits of using Iceland and Icelandic industries with respect to mining activities in Greenland.

6. It is proposed the Minister of Foreign Affairs invites selected mining companies in Greenland to a meeting in Reykjavik to encourage co-operation with regard to services, construction, and possible processing of raw materials in Iceland that may need further processing outside Greenland.
Summary of recommendations

8. Extensive opportunities for Co-operation

19 points of emphasis and 55 proposals

1. Leaders, Ministries, Institutions

- Yearly, bilateral ministerial meetings should be introduced, and held alternately in each country. These, and other recommendations in this Section, should be included in a provision in the General Framework agreement, (see Main Recommendations, p. 12).

- A formal agreement should be made regarding bilateral consultations, meetings and work visits between the ministries responsible for the countries’ joint interests in the fields of fisheries, tourism, air travel, education and Arctic issues. Other ministries should assess whether there is reason for them to engage in bilateral co-operation in their respective fields.

- Icelandic institutions that work in policy areas connected to Greenland should formalize working relationships with their sister institutions where sharing is ensured of experience, data, innovations and other important information, and foundations laid for joint, practical work, such as research.

- Ministries and institutions should be given leeway every few years to exchange staff members and interns on a temporary basis with Greenland. It is suggested that the Foreign Ministry be the first by using the provision in the existing ministerial declaration from 2013.

- The Minister for Foreign Affairs should solicit ideas from ministries and institutions regarding desirable co-operation with Greenland, and submit to the government a proposal based on those ideas.
2. **Information, Knowledge, Image**

The Ministry of Foreign Affairs should support the following actions:

- The “Greenlandic Days” be held every other year in Iceland, and in the alternating years “Icelandic Days” in Greenland. Greenlandic artists (drum dancing, rock music, visual arts, handicraft) be invited to visit and presentation of interested tourism companies should play a part. KALAK is best suited to manage the project on Iceland’s behalf, and should be funded accordingly.

- Educational authorities in Iceland should be encouraged to promote material on Greenland suitable for primary pupils. School authorities should also encourage closer ties between Icelandic and Greenlandic schools at the primary level, for instance, through joint projects.

- An annual essay contest on Greenland be initiated among pupils in the last class of primary school, in co-operation with the Ministry of Education, the Greenland Fund and Icelandair. A trip to Greenland would be an ideal main prize.

- The band exchange program be revived, and the music scene be presented in a reciprocal manner to the younger generations of the countries.

- The Icelandic film festival in Nuuk should be consolidated as an annual event.

- For five years, two annual grants for trips to Greenland should be offered to the media, through the Greenland Fund.
Summary of recommendations

- A three year grant to a promising young Greenlander to study Icelandic should be offered every three years. In a similar manner, Icelandic students should be supported to study Greenlandic.

- Efforts should be made to promote the publishing of translated Greenlandic literature in Iceland.

- The administrations of both countries to explore ways to establish regular exchange of students and guest lecturers between Icelandic and Greenlandic universities.

- Authorities in Iceland are recommended to support KALAK in creating a website in Greenlandic and Icelandic, as well as Danish and English, where general information about both countries can be accessed, with focus on their history and cultures, along with basic information about the existing travel options between the countries.

3. Red Cross Support Project

- The Foreign Minister is strongly recommended to support the Icelandic Red Cross project in Greenland to be executed in close collaboration with its Greenlandic partner, KRK. In East Greenland the objective will be to lower the suicide rate and reduce all forms of violence committed against children, with a special focus on the target group between the ages of 15–30 years. In general, the project will pay particular attention to preventive measures and psychological support for vulnerable demographics. Four separate issues will be addressed:

  - Structuring and development of volunteer work: Recruitment and training of volunteers to support and empower young people to take on the challenges they face in a socially
fragile community. By taking part in the project, volunteers will obtain guidance, increase their self-confidence and receive training to be able to provide support to people their own age through play and work. The objective is to engage young people and encourage them to be a positive force in their immediate environment.

- **Mental health and psychological crisis help:** To use the methods and experience within the Icelandic Red Cross to empower volunteers to provide psychological support and help those who are suffering due to the high suicide rate and other social problems that weigh heavily on the East Greenlandic community.

- **Establishment of emergency services:** To increase the local capacity for emergency response and awareness of natural disasters and major accidents that due to climate change are more likely to happen in our days than before. The Greenlandic Red Cross will co-operate with the Icelandic Red Cross to increase first aid skills, with particular emphasis on Arctic conditions (“Arctic First Aid”), and train communities in providing crisis help when disasters occur, as has happened in recent memory.

- **Isolation of the elderly.** Continued co-operative efforts with KRK and Ilisimatusarfik, the university in Nuuk, towards breaking the isolation of elderly people.
Summary of recommendations

4. Prevention Model
   Planet Youth

   • The Ministry for Foreign Affairs is recommended to initiate co-operation involving the Icelandic prevention model between the community of Sermersooq, the City of Reykjavik, Reykjavik University and GIF, the Greenland sports association, for the purpose of counteracting substance abuse among young Greenlanders.

   • Icelandic authorities should provide funding for ensuring that the project can be launched.

5. Sports
   Co-operation

   • The Foreign Minister should in co-operation with relevant authorities invite the two sports associations, GIF and ÍSÍ, to a meeting in Reykjavik with representatives of the Ministries of Foreign Affairs and Education. The purpose will be to discuss ideas on future co-operation in all aspects of sports, with emphasis on youth activities, training co-operation and national games.

6. Distance learning
   - An Innovative project by the Universities in Nuuk and Akureyri

   • The Foreign Minister is recommended to initiate an agreement regarding the introduction of distance learning as an option in Greenland, and on dissemination of experience from Ilisimatusarfik to the University of Akureyri on structuring and preparing studies at PhD levels.

   • The agreement should enable Ilisimatusarfik and the University of Akureyri to have financial capacity to establish distance learning at university level, including the cost involved with contributing the teaching studies and technological requirements for building up a three-year demonstration project in selected fields of study.

   • The Icelandic authorities should offer Icelandic expertise in planning distance learning on the vocational and upper secondary level,
with specific advice and experience provided by the University of Akureyri.

- The countries should jointly seek the participation of Nordic funds in financing the introduction of distance learning in Greenland.

7. Health Care Co-operation

- The National Hospital and Akureyri Hospital should add a Greenlandic nurse and/or a licensed practical nurse to their staff, to make the treatment of Greenlandic patients easier.

- Health authorities are recommended to request the National Hospital with relevant authorities in Greenland to map the capacity of the Icelandic health system to Greenlandic needs. Particular attention should be given to cardiac catheterisation, brain catheterisation, elective operations, such as joint replacements, and fertility treatments.

- In particular, mental health solutions should be presented to the Greenlandic authorities, focusing on multi-factoral mental health response teams developed in the Reykjavik Capital Area.

- For medical studies, 1-2 places at the medical faculty of the University of Iceland/National Hospital should be reserved for students from Greenland.

- The Minister for Foreign Affairs is requested to update the health care agreement with Greenland to include the above recommendations.

8. Radiation Protection

- The Minister for Foreign Affairs should establish formal co-operation between the Icelandic Radiation Safety Authority and the health care authorities in Greenland to introduce standards for radiation protection and monitoring of radiation sources, based on the experience that Icelanders have accumulated.
Summary of recommendations

9. Search and Rescue

• Icelandic authorities should offer Icelandic expertise and experience to establish volunteer search and rescue organisations in Greenland, based on the experience and principles of ICE SAR, the Icelandic Association for Search and Rescue.

• The activities and organization of ICE-SAR should be introduced in a meeting in Greenland with the Civil Defence Minister of Greenland, representatives from institutions and ministries, interested municipalities and civil organisations.

• The authorities in Greenland to be invited to send representatives on a learning trip in Iceland for the purpose of observing first-hand the activities of ICE-SAR, and to make plans regarding eventual co-operation on the establishment of a similar voluntary structure in Greenland.

• Leadership training for enthusiastic pioneers from NGO’s or municipalities should be offered in Iceland.

• ICE-SAR should by Icelandic authorities be given the task of fostering a trial pilot project in a community selected by the Greenlandic authorities.

10. Hydroelectric Power in Greenland

• The government is recommended to promote co-operation with Greenlandic authorities on construction of hydropower plants, on market-based conditions, as a part of a wider co-operation to protect the Arctic climate.

• The Foreign Minister is encouraged to include a provision on bilateral collaboration in the field of renewable energy as part of a prospective General Framework Agreement between Greenland and Iceland (see Main Recommendations, p. 12).
11. Construction

- The Foreign Minister should open discussion with authorities in Greenland on removal of technical obstacles in the civil engineering field, e.g. by issuing tenders for housing for public companies, to ease the issue of work permits for temporary foreign staff and to ensure tender documents be available in English (see also proposals on mining at the end of Section 7).

12. Aviation at Crossroads

- The Minister for Foreign Affairs is encouraged to discuss with Greenland authorities to open negotiations regarding the creation of a new and flexible air travel agreement based on the “Open Skies” model.

- He should instruct aviation authorities, in consultation with Greenlanders, to define the future role of Isavia’s subsidiary in flight despatch in Greenland’s air space. Simultaneously, a decision should be made regarding ownership of the Company, and agreement regarding continued management by Isavia over the current air traffic control area.

- The Minister for Foreign Affairs should establish a consultative ad hoc venue to prepare and share ideas on solution of outstanding and incidental issues, such as air traffic control, reduction of airfares, increased flexibility in aviation, new air agreement and related matters.

13. New Age in Shipping – New Opportunities in Trade

- The Minister for Foreign Affairs should invite proposals from Iceland’s Chamber of Commerce on technical obstructions that should be removed in order to facilitate trade with Greenland.
Summary of recommendations

- The Minister should thoroughly examine the possibility of using temporary incentives to encourage the export of fish from Greenland through Icelandic harbours and airports.

- The Minister for Foreign Affairs should assume leadership of a delegation of Icelandic companies in an open business conference that will be held in Nuuk under the aegis of the Icelandic Consulate General, where opportunities in connection with the new navigational grid will be presented.

- The Ministry for Foreign Affairs, in co-operation with the Federation of Trade & Services, is recommended to initiate efforts to promote marketing opportunities in Greenland among Icelandic suppliers and producers to increase awareness of opportunities pertaining to the new weekly shipping route to Nuuk.

- The Minister should request authorities in Greenland to jointly explore other ways (see Section 8.15) in which to promote investment from Icelandic discount store chains in shops located in the big towns in Greenland, with the aim of creating jobs and lowering prices of consumer goods.

14. Bilateral Trade Agreement

- The Foreign Minister is urged to initiate discussion on a bilateral trade agreement with Greenland.

15. Duty-Free Game

- The Foreign Minister should initiate change in regulations that will enable tourists returning from Greenland to bring with them for personal consumption a maximum of 35 kg of reindeer or musk ox products, provided they have obtained a permit from the Icelandic Food and Veterinary Authority and are harvested from a single animal.
16. **Reinvigoration of the Greenland Fund**

- The Foreign Minister is recommended to ensure the Greenland Fund be provided with a sound financial base in the state’s annual budget that guarantees the Fund can serve its pivotal role in the revitalized relationship with Greenland, as proposed in this report. If needed, the government should prioritize suitable amendments to the legal provisions concerning the Fund.

17. **"Greenland in the Arctic" - An International Think Tank**

- The Minister for Foreign Affairs should request the Arctic Circle to establish an international think tank on “Greenland in the Arctic”, e.g. in collaboration with the Wilson Center in Washington and the Arctic Initiative at Harvard University.

18. **West Nordic Co-operation Network**

- The Minister for Foreign Affairs should in consultation with Greenland and the Faroe Islands prepare to establish a forum with regions and countries in the Arctic and North Atlantic, such as Quebec and Nunavut in Canada, Alaska and Maine in the USA, Scotland and other likeminded. The purpose would be to further common interest with respect to the Arctic. The next Assembly of the Arctic Circle in Reykjavik should be used for initial discussions with the relevant stakeholders.

If a bilateral trade agreement is not enacted the Foreign Minister should with pertinent authorities ensure that all import duties of reindeer and musk ox products be abolished, cf. however paragraph 2 of preceding paragraph.
Summary of recommendations

19. Arctic Centre in Iceland

• The Icelandic government is recommended to establish a working group to start preparations for the Arctic Centre in Reykjavík. The Centre will be the future base of the Arctic Circle, with facilities for foreign scientists, scholars and PhD students, as well as accommodating an Arctic museum. The support of the many foreign institutions, associations and funds associated with the Arctic Circle will be sought to strengthen the financial basis for projects and operations.
9. East Greenland – the Closest Neighbours
8 points of emphasis and 12 proposals

1. After School Centre in Tasiilaq
   - The government, in consultation with Save the Children in Iceland and the municipality of Sermersooq, should contribute to cover the purchase of a house suitable as an after school centre and pay an employee’s wages for three years.

2. Micro Hydro Power Plants
   - The Foreign Minister should instigate a co-operation between the National Energy Authority in Iceland and Nukissiorfiit on mapping of hydro potential for micro hydro power plants in East Greenland. Representatives from Nukissiorfiit should be enabled to attend work meetings in Iceland in order to make preparations for the East Greenland project.
   - The Foreign Minister is encouraged to consult with authorities in Greenland on further steps, including working together on finding financial solutions to implement the results from the East Greenland mapping.
   - Upon successful results from the mapping project in East Greenland the Foreign Ministry is recommended to support that the project be extended to include all of Greenland.
   - The Foreign Ministry should seek to have East Greenland included in the Arctic Council project on new energy solutions for isolated communities in the Arctic.

3. Stimulation of Start-Ups in Tourism
   - The Foreign Minister should appoint a task force to bring forth ideas and proposals that aim to extend the stay of tourists flying from Reykjavik to East Greenland. The task force should consist, inter alia, of representatives from Visit Greenland, AIC, and companies active in East Greenlandic tourism.
Summary of recommendations

- The Foreign Minister should request Promote Iceland to offer a “Weekend of inspiration” in Tasiilaq where successful entrepreneurs from the Icelandic industry will give inspirational talks and share experience and examples of successes.

- The Foreign Minister is requested to ensure that Arctic guiding aspirants from East Greenland be included in a special capacity-building course to be offered in Iceland (see Section 6) where practical experience in Arctic guiding will be provided (glacier walks, glacier skiing, ice climbing).

- The Foreign Minister should in co-operation with Visit Iceland, the Icelandic Tourist Board, Icelandair and The Icelandic Travel Industry Association organise a tour of up to five entrepreneurs from East Greenland to study Icelandic tourism and spend a week with 2-4 travel companies of their choice.

4. Study Presentations in Iceland

- The Foreign Minister should discuss with pertinent authorities to offer study presentations in Iceland to East Greenlandic primary school leavers. If so desired by Greenlandic authorities the Technical College Reykjavík should be assigned the task of hosting a presentation in consultation with the municipality of Sermersooq.

5. Twin town football match

- The Foreign Minister should request the relevant authorities to ensure that school teams from the twin towns of Tasiilaq and Ittoqqortoormiit, i.e. Kópavogur and Dalvík, will participate in alternate years in the Tasiilaq school tournament.
6. **Hot Springs**

- The Icelandic government should obtain the required permits for Icelandic geoscientists who are interested in exploring further the geothermal heat sources in the hot springs by Scoresby Sound.

7. **Swimming Project**

- The Foreign Minister is recommended to propose that a financial grant to KALAK to cover expenses with regard to the children’s swimming project will be a fixed item in the annual budget pertaining to the Ministry of Education.

8. **The Red Cross**

- See recommendation 7.3
No non-governmental organisation has cultivated as strong ties to Greenland as the chess club Hrókurinn, led by Hrafn Jökulsson. Hrókurinn first came to Greenland in order to encourage interest in chess among the locals 16 years ago. Since then, the club has organised 80 trips all over Greenland. With reliable support from sponsors Hrókurinn has donated thousands of chess sets to school children in Greenland, promoted the establishment of chess clubs in various parts of the Country, and initiated the foundation of the Greenland Chess Society. Hrókurinn has placed particular emphasis on cultivating connections with the disadvantaged inhabitants of East Greenland. Through its work the club has created a lot of goodwill towards Iceland, not least among the youngest generation.

In 2003 Hrókurinn hosted the first international chess tournament in the history of Greenland, with the participation of chess champions from 10 countries. The Greenlandic Minister of Education stated in an interview on that occasion that this tournament was the largest sport event ever held in Greenland up to that time. Even though there is much emphasis on encouraging more chess activities in Greenland, Hrókurinn is engaged in many other projects of varying kinds. Therefore, the chess players are usually accompanied by musicians, visual artists, circus performers, students and teachers, or representatives from the media. A good example of the success achieved and the experience which the locals have had of Hrókurinn's activities can be found in the municipality of Sermersooq, which encompasses both Nuuk and the communities on the east coast, where the locals have decided to put chess on the elementary school curriculum.

Hrókurinn has also been involved in a great many community projects in Greenland in recent years, and with support from thousands of individuals and companies in Iceland the club has sent a vast amount of practical, high-quality clothing to many places in Greenland in the past five years. The club has also pioneered individual projects that have been carried out in co-operation with societies such as the Icelandic Red Cross, the Kiwanis-movement, Save the Children in Iceland and the Icelandic Cancer Society. The national fundraiser Vinátta í verki, which members of Hrókurinn initiated after a natural disaster in the bay of Uummannaq on 17 June 2017, when a
tidal wave hit a small village and swept eleven houses out to sea, killing four people. Over ISK 40 million were raised. The welfare fund Vináttavéki was established for this fundraiser, and it has invited applications for projects that can benefit children and young people in the disaster area. Previously, Hrókurinn and KALAK, the Greenland-Iceland friendship society, initiated and took charge of a collection in response to the fire that destroyed the music hall in Kulusuk.

Among the efforts which Hrókurinn has devoted to East Greenland it is worth mentioning that for thirteen years in a row the club has visited the most remote settlement of Greenland, Ittoqqortoormiit in Scoresby Sound, every Easter, to hold festivals for children and adults with an emphasis on chess. More to the south of the east coast, Hrókurinn has forged a special bond of friendship with Tasiilaq, the capital of East Greenland, and Hrafn Jókulsson, President of Hrókurinn, donated DKK 75,000 to the new Red Cross branch in the town to honor the memory of his mother, Jóhanna Kristjónsdóttir. The conditions in Tasiilaq are among the worst in Greenland, and there is much need for extending a helping hand and to demonstrate friendship in action. In addition, the club usually makes two visits every year to the capital, Nuuk, and it has organized festivals in many places on the west coast and in the south of Greenland. Kristjana Guðmundsdóttir Motzfeldt, who for a quarter of a century served as kind of unofficial Icelandic ambassador to Greenland, stated in an interview with Kolbrún Bergþórsdóttir that Hrókurinn had done great work in Greenland: "... the activities of Hrókurinn are like a nunatak that stands out for all to see."

Hrókurinn has introduced Iceland to many civil societies and government officials, and visited schools all over Greenland to make presentations about Iceland. Thus, through the club’s efforts a strong connection has been formed with students and teachers, the media, civil servants, municipalities and non-profit organizations. Hrókurinn has in this manner successfully expanded Iceland’s sphere of influence to do good though all settlements in Greenland, added to our knowledge about our neighbour to the east, and it is probably no exaggeration that no Icelandic club has tied as strong a bond between the two countries.

225 Interview with Kristjana Motzfeld in the newspaper Morgunblaðið in 2013. https://www.mbl.is/greinasafn/grein/1475769/
Appendix II
Ministerial Visits to Greenland

- Guðlaugur Þór Þórðarson, Minister for Foreign Affairs, on a work visit in the south of Greenland at the invitation of Ane Lone Bagger, the Foreign Minister of Greenland, in August 2019.

- Kristján Þór Júlíusson, Minister of Fisheries and acting as proxy for the Minister for Foreign Affairs, on a visit to Nuuk, 2019, the West Nordic Council.


- Þórdís Kolbrún R. Gylfadóttir, Minister of Tourism, on a visit to Ilulissat in 2018, attending a theme conference held by the West Nordic Council.

- Sigurður Ingi Jóhannsson, Minister of Transport and Local Government, visiting in February 2018.

- Óttarr Proppe, Minister of Health, on a visit in 2017 to Nuuk, in a meeting with the Ministers of Health from the Faroe Islands, Iceland and Greenland.

- Gunnar Bragi Sveinsson, Minister for Foreign Affairs, visiting Nuuk in 2013 for the opening of the consulate general in Nuuk and for a tour of the Parliament of Greenland at the invitation of Lars Emil.

- Guðbjartur Hannesson, Minister of Health, visiting in March 2012.

- Ögmundur Jónasson, Minister of Internal Affairs, on a visit to Greenland in 2012 at the invitation of Anton Frederiksen, who was the Minister of Internal Affairs at the time. Meeting of representatives from all municipalities in Greenland.

- Álfheiður Ingadóttir, Minister of Health, on a visit to Nuuk in 2010. Signing of a co-operation agreement regarding more co-operation in health care matters. Agatha Fontain was the Minister of Health at the time.

• Sturla Böðvarsson, Minister of Transport, on a visit in 2004. South Greenland. Sightseeing tour with representatives from the Ministry of Transportation, Samik, Air Iceland Connect and the Tourism Council.

• Björn Bjarnason, Minister of Education, on a visit to Nuuk in 2000, attending a conference on cultural matters held by the West Nordic Council and other bodies.

• Davíð Oddsson, Prime Minister, visiting Nuuk in 1998 at the invitation of Jónathan Motzfeldt, the Chairman of the National Administration (development efforts and an allocation of 20 million for reconstructing the farmhouse of Eric the Red in Brattahlíð).

• Halldór Blöndal, Minister of Transportation, on a visit in 1997 at the invitation of Peter Grønvold Samuelsen, Greenland's Minister for Employment and Transportation.

• Halldór Ásgrímsson, Minister for Foreign Affairs, visiting in 1997 for the Nuurek conference.

• Halldór Blöndal, Minister of Transportation, on a visit in 1993, signing an agreement between Greenland and Iceland regarding the lowering of travel fares and more trips between the countries. Meeting held in Kangerlussuaq during a travel trade fair. Also went to the south of Greenland.

• Óssur Skarphéðinsson, Minister for the Environment, visiting in 1994, in a day-long meeting with Ove Rosing Olsen, the Minister for the Environment of Greenland. Also a meeting between Nordic Ministers for the Environment, chaired by Nils Helveg-Petersen, the Foreign Minister of Denmark.

• Halldór Ásgrímsson, Minister of Fisheries, visiting in 1990 at the invitation of Kaj Egede, Minister of Fisheries.

• Jón Helgason, Minister of Transportation, on a visit to Nuuk in 1986, conference/trade show concerning Icelandic products.

• Steingrímur Hermannsson, Minister of Fisheries, visiting in 1981, invited by Lars Emil Johansen.
The West Nordic Council (WNC) is a forum for parliamentary co-operation between the Faroe Islands, Greenland and Iceland. The Council comprises 18 Members of Parliament, six from each country. A three-member Presidium, consisting of one member from each delegation, administers the Council’s work and activities between the annual general meetings. The presidency rotates annually between the representatives in the Presidium. The Council may also establish working committees on individual issues or policy areas.

The Council was established in Nuuk, Greenland, on 24 September 1985, under the name of the West-Nordic Parliamentary Council. A new instrument of incorporation was approved in 1997, and the name of the Council was changed to the West Nordic Council. Its secretariat, located from the beginning within the office of the Parliament of Iceland, was established the year. The Secretary General of the Council manages the office and oversees day-to-day operations. Sigurður Ólafsson is at present the Director of the Council.

The objective of the Council is to work towards achieving the interests of the West Nordic countries, to preserve the natural resources and the culture of the North Atlantic region, to follow up on co-operative efforts between the governments and national administrations in the West Nordic countries, to increase co-operation in Nordic joint efforts and to be a parliamentary contact point between co-operating parties in the West Nordic countries and other multinational interest groups and governmental organizations.

The WNC convenes twice every year: once for an annual general meeting that usually takes place in late summer, and again for a theme conference in late January. The countries rotate hosting the meetings.

The annual general meeting is the Council’s supreme authority, electing the Presidium and President until the next meeting is held. In the annual general meeting any business is discussed that can have significance for the co-operation. The Council may adopt resolutions that are submitted to one or more of the national parliaments. The Council has also directed its resolutions to the Nordic Council of Ministers and the EU among others.
The Council’s theme conferences are focused on a particular issue to be discussed at an open conference. These annual conferences are held alternately in the three countries and include lectures on the featured theme. The conventions are open to the public.

The West Nordic Council is actively involved in international co-operation. The Council participates as observer in the Arctic Council and the Standing Committee of the Parliamentarians of the Arctic Region (SCPAR). The WNC cooperates closely with the Nordic Council, and the Council meets annually with the European Parliament’s DEEA delegation. The Council’s delegates also attend the Northern Dimension Parliamentary Forum, held every other year, and are active participants in Arctic Circle meetings.

The three countries that make up the West Nordic Council are different as regards their international law status. Iceland is an independent and sovereign state, whereas the Faroe Islands and Greenland are part of the state of Denmark. The Faroese people and Greenlanders do not decide their own foreign policies, although they are in charge of matters concerning climate change and fisheries. It is the Danes that decide the Arctic policy of the Danish state. The West Nordic Council became an observer in the Arctic Council in 2017, which means that Greenland indirectly has more influence within the Arctic Council.

The West Nordic Council also cooperates closely with the parliaments and governments of the three countries, the West Nordic Loan Fund and NORA, the regional co-operation programme of the Nordic Council of Ministers for matters concerning the West Nordic council and coastal Norway. In connection with that arrangement a representative of the Storting in Norway is invited to attend both annual meetings and the Council’s theme conferences.

The West Nordic Council’s Children and Youth Literature Prize is awarded every second year.

The West Nordic Council has passed resolutions regarding various matters, including environmental and natural resources issues, increased educational co-operation between the countries and collaborative efforts in school and sport projects, to name but a few. The resolutions of the West Nordic Council are submitted in the national assemblies of the constituent countries, including the Althing, in the form of proposals for parliamentary resolutions.
Following are some of the Council’s resolutions for the national assemblies that are still under discussion, and related parliamentary resolutions which have been passed in the Althing.

- West Nordic Council resolution no. 2/2017 regarding the exploration of possible co-operation between the countries in fisheries technology studies (fisheries science).

- Parliamentary resolution no. 13/148 on West Nordic co-operation in fisheries science education. The Althing resolves that the government shall be called upon to examine the possibility of co-operation between Iceland, the Faroe Islands and Greenland in the field of fisheries science education (148th parliamentary session 2017–2018. No. 13/148. Parliamentary document 855 — Case 117.)

- West Nordic Council resolution no. 3/2017 on the initiation of research of micro plastics and the proliferation of plastic contamination in the North Atlantic.

- Parliamentary resolution no. 15/148 on research of micro plastics in marine organisms in the North Atlantic. The Althing resolves to call upon the government to initiate co-operation with the national administrations of the Faroe Islands and Greenland regarding research of micro plastics in marine organisms and the proliferation of plastic contamination in the North Atlantic.

- West Nordic Council resolution no. 1/2018 on the examination of possible co-operation between the countries in organized sports for children and adolescents.

- Parliamentary resolution no. 37/149 on West Nordic co-operation in organized sports for children and adolescents. The Althing resolves to call upon the government to promote co-operative efforts of Iceland, the Faroe Islands and Greenland regarding organized sports for children and adolescents. (149th parliamentary session 2018–2019. No. 37/149. Parliamentary document 1761 — Case 462.)

- West Nordic Council resolution no. 2/2018 on the establishment of a formal venue for co-operation in matters concerning the future of the West Nordic languages in a digital world.

- Parliamentary resolution no. 38/149 on co-operation between the West Nordic countries in matters concerning language in a digital world.
The Althing resolves to call upon the government to consult with the national administrations of the Faroe Islands and Greenland to establish a formal venue for co-operation between the West Nordic countries with regard to matters concerning the future of the Icelandic, Faroese and Greenlandic languages. The first step should be to form a work team with one or two representatives from each country, who have knowledge of grammar and language technology. The role of this work team will be to compose a report with a summary of the status and future prospects of these three languages, as well as a summary of the language technology resources (software and databases) that are available for each language, and submit proposals for co-operative efforts to provide language technology resources and work out other responses to the digital revolution. (149th parliamentary session 2018–2019. No. 38/149. Parliamentary document 1762 — Case 463.)

- West Nordic Council resolution no. 2/2019 on support for the establishment and financing of a West Nordic "maritime environment award" which will be awarded to parties that have engaged in special actions and projects that result in sustainable management and utilization of the living resources of the sea, and simultaneously contributed to increase the diversity and health status of the ocean.

- Parliamentary resolution no. 24/150 on a West Nordic maritime environment award. The Althing resolves to call upon the government to explore the possibility of creating a West Nordic maritime environment award in co-operation with the national administrations of the Faroe Islands and Greenland. (150th parliamentary session 2019–2020. Parliamentary document 1012 — Case 511.)

- West Nordic Council resolution no. 1/2019 on examination into how low fares can be ensured for young people who travel between the West Nordic countries.

- Parliamentary resolution no. 25/150 on subsidizing airfares for young people travelling between the West Nordic countries. The Althing resolves to assign to the government the task of exploring if it is possible to reach an agreement with the national governments of the Faroe Islands and Greenland regarding the subsidizing of air travels of young people between the three countries. (150th parliamentary session 2019–2020. No. 25/150. Parliamentary document 1013 — Case 512.)
Appendix IV
Icelandic Trade with Greenland

The figures for 2020 are half-yearly figures and influenced by the effects of the COVID-19 epidemic.

Primary items of trade

Exports by product categories
- Petroleum, petroleum products and related materials: 3,403,000,000 ISK (79.36%)
- Other manufacturing products: 2,343,000,000 ISK (5.87%)
- Cuttlefish: 2,343,000,000 ISK (5.87%)
- Other marine products: 2,343,000,000 ISK (5.87%)
- Fishing equipment: 2,343,000,000 ISK (5.87%)

Imports by product categories
- Fish, crustacean and molluscs, and preparations thereof: 2,185,000,000 ISK (69.29%)
- Crude animal and vegetable materials, nes: 2,185,000,000 ISK (69.29%)
- Petroleum, petroleum products...: 2,185,000,000 ISK (69.29%)
- Professional, scientific, control...: 2,185,000,000 ISK (69.29%)

Source: Statistics Iceland and The World Bank