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Greenland: geostrategic and geo-economic challenges

David versus Goliath?

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ast summer, 97% of the ice-sheet in Greenland melted in only four days¹. Beyond the environmental aspect, this event also raised huge strategic and economic questions. Located in an area whose geopolitical importance considerably increased due to global warming, the largest island in the world still belongs to the Kingdom of Denmark. Nevertheless, it got self-rule and the right to become independent from Copenhagen in 2009. This possible independence attracts several States interested in the wide range of possibilities the already – very – autonomous territory has to offer.

A geostrategic key-point

For the United States of America

Before the environmental and commercial issues renewed the geopolitical importance of the 2,166,086 km2-island, Washington already considered Greenland as a strategic key-point in the 19th century. This interest grew further during the Second World War. In 1941, the US authorities signed the US-Danish Defense Agreement. This allowed them to build meteorological stations and military bases of vital importance for the continuation of the war. However, "the agreement was legally unconventional"²: Henrik Kauffmann, the Danish ambassador at that time, signed, contrary to the orders from Copenhagen which was under German occupation. This juridical problem was only solved with the inclusion of Denmark in NATO.

Within this specific institutional framework, a new agreement was signed in 1951. It led to the construction of the notorious Thule Air Force Base (AFB) which hosted nuclear and even thermonuclear weapons during the early years of the Cold War³. An early-warning Radar Station was also built in Thule in 1953⁴. It was updated in 2004 during the first three-party dialogue between Nuuk (Home Rule Government), Copenhagen and Washington. This meeting took place in a very particular context⁵: at that time, the question of the "National Missile Defense" proposed by George W. Bush divided the Old Continent.

Nowadays, Thule AFB hosts "the 21st Space Wing's global network of sensors providing missile warning, space surveillance and space control to North American Aerospace Defense Command and Air Force Space Command." The installations are also home of the 12th Space Warning Squadron which is in charge of detecting and tracking ICBMs launched against North America. Finally, "Thule is also host to Detachment one of the 23rd Space Operations Squadron, part of the 5oth Space Wing's global satellite control network."

^{1 &}quot;Greenland ice sheet melted at unprecedented rate during July", *The Guardian*, 24 July 2012, http://www.guardian.co.uk/environment/2012/jul/24/greenland-ice-sheet-thaw-nasa, visited on 25 February 2012.

² OLESEN Thorsten Borring, "Tango for Thule. The Dilemmas and Limits of the "Neither Confirm nor Deny" Doctrine in Danish-American Relations, 1957–1968", *Journal of Cold War Studies*, vol. XIII, n^2 , p. 119.

³ All kind of nuclear activities ceased in Greenland after a B-52 crashed with four thermonuclear bombs in January 1968.

⁴ Dozens of Inuit families were forced off their lands in 1953 to allow expansion of the base. The Inuit community called for the closure of Thule AFB in 2003, while the US authorities wanted to update their facilities. See: "Inuit battle to shut US air base", BBC News, 3rd November 2003, http://news.bbc.co.uk/2/hi/europe/3236083.stm, visited on 26 February 2013.

^{5 &}quot;Thule Upgraded Early Warning Radar", *Missile Threat*, 30 November 2012 http://missilethreat.com/defense-systems/thule-early-warning-radar/, visited on 26 February 2013.

^{6 &}quot;821st Air Base Group", Peterson Air Force Base, http://www.peterson.af.mil/units/821stairbase/index.asp, visited on 26 February 2013.

Should Greenland be fully independent, it seems obvious that its 57,000 inhabitants will not be really able to assure their security. Therefore, as Damien Degeorges writes: "the closer US-Greenland ties can be seen as an investment from the United States on a possible future Greenlandic independence." As the United States intends to remain the major power in the area, it does not hesitate to use its soft power in a crucial domain for the future State: education. Initiatives like "Students on Ice" or "University of Arctic" are specifically aimed at enhancing the academic cooperation between Nuuk and Washington. Fulbright grants are also available for Greenlandic students.

For the Kingdom of Denmark

If the United States becomes the protector of a future Greenlandic State, it should not be forgotten that Denmark still runs the defense and foreign policies of its former colony. Ties between Nuuk and Copenhagen date back to the beginning of the 18th century and are still strong. "Ten percent of the population lives in Denmark; they study, work or are being treated at hospitals there for free." The royal family could also be an important bond in case of a future independence.

Beyond these "low politics" elements, other dimensions need to be taken into account. Nuuk offers to Copenhagen a real "window on the Arctic" of crucial importance given the current geopolitical situation. Through Greenland, Denmark enjoys a strategic position on the Northwest Passage, a potential commercial route that could be open three to six months a year in the near future. However, its navigation will remain complicated due to the presence of icebergs. It also offers fewer advantages than the Northeast Route in terms of distance".

As for Greenland, the extension of the Danish EEZ is a more important issue. As a reminder, the Arctic "accounts for about 13 percent of the undiscovered oil (and) 30 percent of the undiscovered

natural gas"¹². About 84% of these reserves are supposed to be offshore. Therefore, each Arctic State seeks to expand its influence on the region through the legal means provided by the United Convention on the Law of Sea (UNCLOS). As a result, Copenhagen has to deal with two border disputes:

- After four decades, the Lincoln Sea dispute between Canada and Denmark seems to be nearly resolved: in December 2012, both countries decided to strike a line equidistant from each coastline. Nevertheless, the agreement "does not address the sovereignty of Hans Island, a 1.3 square kilometer (...) rock that sits between Ellesmere and Greenland." On the one hand, Ottawa fears that by giving up its claims on this tiny island, it would send a negative signal to Washington in the case of the Beaufort Sea dispute. On the other hand, the Danish do not want to lose face in front of the Greenlandic people.
- The Lomonossov Ridge dispute, which does not only involve Ottawa and Copenhagen but Moscow this time.

As Lasserre noted, the risk of regional escalation seems very limited. Cooperation between the different Arctic States is real. Nevertheless, the stability provided by the Danish Army – especially by its Navy – is another element that continues to link Nuuk with Copenhagen. The reinforcement of its presence in Thule and in Nord Station, the Sirius patrols¹⁴ and the commissioning of three new Ivar Huitfeldt class-frigates¹⁵ can be seen as various ways for the Danish to reaffirm their stakes in the area. The creation of a Danish "Commonwealth" in which Copenhagen would insure Greenland's security could be a solution in case of independence¹⁶.

For the European Union

⁸ DEGEORGES Damien, *The Role of Greenland in the Arctic*, Paris: Institut de recherche stratégique de l'Ecole militaire, Laboratoire de l'IRSEM, n°7, avril 2012, p.45.

⁹ http://denmark.usembassy.gov/gl.jc.study.html

^{10 &}quot;No, Greenland Does Not Belong to China", New York Times, 20 February 2013, http://www.nytimes.com/2013/02/21/opinion/no-greenland-does-not-belong-to-china.html, visited on 4 March 2013.

¹¹ LASSERRE Frédéric, "Géopolitiques arctiques : pétrole et routes maritimes au cœur des rivalités regionals", *Critique internationale*, n°49, avril 2010, p.141.

^{12 &}quot;90 Billion Barrels of Oil and 1,670 Trillion Cubic Feet of Natural Gas Assessed in the Arctic", U.S. Geological Survey, 23 July 2008, http://www.usgs.gov/newsroom/article.asp?ID=1980 - .US81MzCQUZk, visited on 5 March 2013.

^{13 &}quot;Canada, Denmark closer to settling border dispute", *The Global Mail*, 29 November 2012, http://www.theglobeandmail.com/news/national/canada-denmark-closer-to-settling-border-dispute/article5831571/?page=all, visited on 5th March 2013.

^{14 &}quot;Each autumn, six dog sledge teams - each manned by two soldiers from the Royal Danish Navy - spend up to six months patrolling an area of 160,000 sq km." These dog sledge patrols are used by Copenhagen to reaffirm its presence in the region. For more information, see: "Greenland by dog sledge: The Sirius Patrol in numbers", BBC News, 30 November 2011, http://www.bbc.co.uk/news/magazine-15940985, visited on 5 March 2013.

^{15 &}quot;La classe Huitfeldt à la mer", Défense et Sécurité Internationale, http://www.dsi-presse.com/?p=5034, visited on 5 March 2013.

¹⁶ DEGEORGES Damien, op. cit., p.42.

The European Union (EU) is closely linked to Greenland's recent history. The island was granted home rule in 1979, after Denmark joined the European Economic Community (EEC) against Greenlanders' will in 1973. The Greenlandic authorities finally decided to leave the EEC in 1985 because of the fishing issue. However, even if the island is not part of the EU, it is listed as one of the 25 "Overseas Countries and Territories". Therefore, Nuuk enjoys various benefits from the EU in "economic and trade co-operation, sustainable development and regional co-operation and integration."

Beside these regular measures, Greenland also concluded various agreements in different areas. "Under the terms of the new [EU-Greenland Fisheries Partnership Agreement], the EU will annually provide a financial contribution, including sectoral support, to Greenland, to a maximum amount of €17.8 million." On the whole, the financial support from Brussels to Nuuk between 2007 and 2013 should amount to € 25 million (in 2006 prices). With such figures, the EU still remains Greenland's main backer. Environmental issues are also at the heart of several agreements involving the European Environment Agency (EEA).

A key area for the future of the relationship between the EU and Greenland may be education. In this domain, the "soft power" elements are currently playing in favor of Brussels (Erasmus and Comenius programs for example). The European unique currency also seems to have a good attractive power. The younger generations are indeed more pragmatic towards the Union, which could be interesting in the long term¹⁹.

Should Greenland be independent, the EU would lose the only territory that grants it a direct access to the Arctic region. Even if six of its Member States have the status of permanent observers at the Arctic Council, the main decisions are not taken within this institutional framework. Some Arctic States, especially Canada and Russia, would like the debate to take place between the only five bordering States (United States, Canada,

Denmark, Norway and Russia)²⁰. This is a real challenge for the EU whose interests in the Arctic are not only geostrategic...

The raw materials issue

Beside the environmental and geostrategic issues, various raw materials are also at the heart of great powers' interests in Greenland. Rare earth elements, uranium, gas and oil can be extraordinary assets for the future of the Greenlandic people. However, they could also undermine its possible independence.

Rare Earth Elements and uranium

The importance of rare earth elements (REE) grew further over the past decade. If these 17 chemical elements (15 from the "lanthanides" group plus yttrium and scandium) are more abundant than other minerals, "they are not concentrated enough to make them easily exploitable economically."²¹ These REE can be used in a wide number of domains: "green energy" (hybrid motors), information technology (hard drives), medicine (medical X-ray units) and defense (jet fighter engines).

According to the European Commission, Greenland could stock 9.16% of world's total rare earth reserves²². The Kvanefjeld ore in the South of the island could turn out to be one of the biggest deposits of REE in the world. According to some specialists, "[this ore] is not just extremely large, [it] also contains a favourable mix of rare earth elements."²³ With such figures, the arrival of non-Chinese exploitation firms (like the Australian Greenland Minerals and Energy Ltd that is exploring the area) in Kvanefjeld could solve the global supply problem. For the moment, China, whose REE reserves are estimated at a level between 36 and 50% of world reserves, is the source of "over 97% of the global supply."²⁴

The rare earth elements are of major importance for several powers, especially for the neigh-

^{17 &}quot;EU relations with its associated Overseas Territories and Countries", European Union External Action, http://eeas.europa.eu/oct/index_en.htm, visited on 6 March 2013.

¹⁸ Developing a European Union Policy towards the Arctic Region: progress since 2008 and next steps, Brussels: European Commission, 2012, p. 18. Available on: http://eeas.europa.eu/arctic_region/docs/join_2012_19.pdf

¹⁹ DEGEORGES Damien, L'Arctique : une région d'avenir pour l'Union européenne et l'économie mondiale, Brussels : Fondation Robert Schuman, Question d'Europe, n°263, January 2013, p. 4.

²⁰ EIFFLING Vincent, STRUYE DE SWIELANDE Tanguy, L'Arctique: nouvel Eldorado?, Louvain-la-Neuve: Chaire InBev-Baillet Latour, Note d'analyse, n°15, March 2011, p. 45.

²¹ HUMPHRIES Marc, Rare Earth Elements: The Global Supply Chain, Washington: Congressional Research Service, CRS Report for Congress, June 2012, p. 2.

²² Greenland's raw materials potential and the EU strategic needs, Brussels: European Commission, 13 June 2013, p.1.

^{23 &}quot;Rare Earth Elements at Kvanefjeld", Greenland Minerals and Energy LTD, http://www.ggg.gl/rare-earth-elements/rare-earth-elements-at-kvanefjeld/, visited on 12 March 2013.

²⁴ MORRISON Wayne M., China's Rare Earth Industry and Export Regime: Economic and Trade Implications for the United States, Washington: Congressional Research Service, CRS Report for Congress, April 2012, p. 1

boring EU. In 2010, the European Commission ranked these elements as "critical to the health of Europe's manufacturing base". Accordingly, EU Commissioner Antonio Tajani met Prime Minister Kuupik Kleist in June 2010 to try to conclude a win-win agreement between both parties (preferential access to raw materials in exchange for technology and environmental expertise). However, in January 2013, Kleist announced he refused to promote EU's interests at the expense of other powers', i.e. China.

Beijing seems to be a major concern for several scholars who consider that the country intends to be the only producer on the rare earth market²⁶. After having kept low prices for years, the authorities decided to restrict the export quotas in 2009 in order to spare these valuable minerals. This measure led the United States to reopen the Mountain Pass facility in 2012. The latter was closed ten years earlier, when the Chinese dramatically increased their production²⁷. Besides, these rare earth elements can also be used as a "trade weapon". In 2010, as part of the Senkaku/Diaoyu dispute, China blocked its REE exports to Tokyo. This incited the Japanese authorities to look for alternatives (discovery of new deposits²⁸ and conclusion of an agreement with India last November²⁹).

According to some specialists, Greenland could supply at least 25% of global REE demand in the future. However, the rare earth elements in Kvanefjeld are closely connected to radioactive materials - especially uranium -, which raises two distinct problems:

- The lack of skilled workers. This issue was finally solved by a bill passed by the island's parliament in December 2012. It is now possible for non-Greenlandic firms to bring their own workers in the island in order to develop large mining projects. This measure has been criticized "for allowing companies to employ cheap foreign workers, at

the expense of local employment."³⁰ The fear is so real that this massive arrival of non-Greenlandic workers could threaten the traditional way of live.

- The real problem is related to the exploitation of uranium itself. If Nuuk can freely exploit its raw materials, this radioactive mineral raises various questions in Copenhagen. Denmark has indeed always been at the forefront of the environmental issues. Among the Greenlandic political elite, divisions are also deep between the supporters of the "zero-tolerance policy" on the one hand and the partisans of the exploitation on the other hand.

The March 2013 parliamentary elections were mainly held about this sensitive topic. These polls were won by the centrist Siumut Party whose leader, Aleqa Hammond, intends to lower the pace as far as immigration of foreign workers is concerned. Nevertheless, her party is "ready to accept uranium mining if the ore contains a maximum 0.1 per cent uranium oxide" while Kleist's party adheres to a zero-tolerance policy³¹.

Other resources

Beyond the rare earth elements and uranium, Greenland also contains various valuable resources. As for hydrocarbons, the island does not have any proven gas or oil reserve for the moment. Several exclusive exploration and exploitation licenses were granted to companies such as Cairn Industry (Scotland), ConocoPhillips, Exxon Mobil, Chevron (USA), Shell (UK and Netherlands), GDF Suez (France), Maersk Oil, Statoil (Norway), NUN-AOIL (Greenland), DONG Energy (Denmark), Husky Oil (Canada) and PA Resources (Sweden)³².

Hitherto, nothing was discovered in the investigated areas, i.e. the Baffin Bay and the Davis Strait. Nevertheless, the USGS estimated the Northeast Greenland reserves to 31.4 billion barrels of oil equivalent of oil, gas, and natural gas liquids. "In comparison to the world's 500 other oil and gas provinces, if this resource is proved and realized, northeastern Greenland would rank 19th."

²⁵ The EU's Developing Raw materials diplomacy, Washington, DC: Bertelsmann Foundation, 2011, p. 1.

²⁶ De RAVIGNAN Antoine, "Jeu de dupes sur le marché des terres rares", Alternatives économiques, Hors-série $n^{\circ}11$, juillet 2012, p. 77.

^{27 &}quot;A Visit to the Only American Mine for Rare Earth Metals", *The Atlantic*, 12 February 2012, http://www.theatlantic.com/technology/archive/2012/02/a-visit-to-the-only-american-mine-for-rare-earth-metals/253372/, visited on 12 March 2013

^{28 &}quot;Japan finds major rare earth deposits", News.com.au, 2 August 2012, http://www.news.com.au/business/breaking-news/japan-finds-major-rare-earth-deposits/story-e6frfkur-1226412676374, visited on 12 March 2013.

^{29 &}quot;Japan Signs Deal With India on Rare Earth Production", Supply, Bloomberg, 16 November 2012, http://www.bloomberg.com/news/2012-11-16/japan-signs-deal-with-india-on-rare-earth-production-supply.html, visited on 12 March 2013.

^{30 &}quot;Danish U-turn clears way for uranium mining in Greenland", Euractiv, 29 January 2013, http://www.euractiv.com/specialreport-rawmaterials/turndenmark-ready-uranium-adven-news-517403, visited on 18 March 2013.

^{31 &}quot;Mining Proponents Win Greenland Election", Eye on the Arctic, 13 March 2013, http://eyeonthearctic.rcinet.ca/mining-proponents-win-greenland-election/, visited on 18 March 2013.

³² See the map of current exploitations released by the Greenlandic Bureau of Minerals and Petroleum: http://bmp.gl/images/stories/minerals/list_of_licences/Licence_map.pdf

^{33 &}quot;USGS Releases New Oil and Gas Assessment of Northeastern Greenland", U.S. Geological Survey, 28 August 2007, http://www.usgs.gov/news-room/article.asp?ID=1750, visited on 19 March 2013.

The island is also supposed to contain up to 10% of the global fresh water reserves. Such figures are interesting for countries that suffer from water shortages. To this extend, China is one of the great powers that could be the most interested in such a hydraulic potential in the next decades. Beyond this aspect, Greenlandic water reserves could also have a major impact on the production of hydroelectric energy. According to some scholars, Nuuk could ensure 2% of the US electric consumption through a network of cables³⁴.

Iron is another mineral that attracts foreign investors. "London Mining, a British company, wants to open a \$2.3 billion iron ore mine that would be financed, built, and operated mainly by the Chinese."35 However, even if talks were held between this firm and a Chinese State-owned Company based in Sichuan, no concrete result has been reached so far. Moreover, the Siumut's victory, opposed to the massive immigration of foreign workers, could put an end to this project. The same situation arose with Alcoa's project. On the one hand, the implantation of the world aluminum giant in Maniitsoq (2000 inhabitants) could solve the unemployment problem. On the other hand, it would also involve the arrival of Chinese workers and would generate, according to some local political leaders, crime problems due to prostitution³⁶.

Conclusion

Due to the melt of the Arctic, Greenland is at the center of a new geopolitical key-area. How will the island tackle the challenges that are looming up? In order to try to answer this question, we will pick up some elements of the small powers realist theory.

As examined before, with only 57,000 inhabitants spread over a huge territory, Greenland is really limited in terms of material means. Its population is so small that it cannot exploit its own natural riches, which raises crucial questions about the near future of this strategic island. This limitation is one of the most important criteria used by Asle Toje to define a small power³⁷. Another important

34 DEGEORGES Damien, Terres rares : enjeu géopolitique du XXIe siècle, Paris : L'Harmattan, 2012, p. 30.

theoretical point in order to grasp the Greenlandic situation is the fact that small powers cannot rely on their sole capabilities to ensure their own security: they have to appeal to more powerful States. Accordingly, these countries can remain neutral, play the card of the "balance of power" or resort to alliances. However, "the balance of power" strategy requires "a relative equilibrium among the Great Powers" which is not always the configuration of the international system. Therefore, small powers tend to use the "alliances strategy" to guarantee their security.

These theoretical considerations give us interesting clues to analyze the future of the island. First and foremost, the independence should not be taken for granted: ties between Nuuk and Copenhagen are still strong and if this should happen, they would not disappear. As for security matters, Denmark could always have a major role to play in the framework of a structure like, for example, a "Danish Commonwealth". The role of Washington should not be neglected neither. Even if it is exaggerated to claim that Greenland will be the 51st State of the United States of America, it is clear that ties between the two capitals will strengthen because of the presence of both Thule AFB and raw materials, especially rare earth elements, whose China still controls 97% of world produc-

More than ever, Greenland is the mirror of the challenges the international system is confronted with. At the forefront of the climatic changes, the Greenlandic authorities are still closely linked with Western powers, especially Denmark and the United States. Nevertheless, Nuuk has to deal with the growing influence of China that seeks to secure its provisions in raw materials. Finally, the big loser of the current situation may be the European Union itself. In case of independence, the EU would indeed lose its only direct access to a key geopolitical area, whose resources might help it to diversify its sources of supply in various raw materials.

^{35 &}quot;Chinese Workers—in Greenland?", *Bloomberg Business Week*, 10 February 2013, http://www.businessweek.com/articles/2013-02-10/chinese-workers-in-greenland, visited on 19 March 2013.

^{36 &}quot;Small-Town Greenland Prepares for Influx of Foreign Workers", *The Epoch Times*, 31 October 2012, http://www.theepochtimes.com/n2/world/small-town-greenland-prepares-for-influx-of-foreign-workers-309919.html, visited on 19 March 2013.

³⁷ TOJE Asle, "The European Union as a Small Power", Journal of Common Market Studies, 2011, vol. IL, n° 1, pp. 47-48.

³⁸ ROTHSTEIN Robert L., Alliances and Small Powers, New-York: Columbia University Press, 1968, p. 12.

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