The Political Economy of Uranium in Greenland:
It’s not elemental at all

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Paper prepared for presentation at the ECPR Conference,
Oslo, Norway, September 2017

Early, unabridged draft – please do not quote before inquiring about an updated version

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Keywords: Greenland, Uranium, Mining Industries in the Arctic, Liberalism (IR), Mixed Methods,
‘Agree-to-disagree’-theorem, Shadow of the Future-conjecture revisited
Abstract

The uranium-debate in Greenland has been on and off for decades. While the first discovery of uranium deposits dates back to World War II and more solidly in the mid-1950's, the subject keeps dividing the political and public spheres, as well as the relationship with Copenhagen in the Danish Realm. In 2013, the 25-odd years (informal) 'zero-tolerance' moratorium in relation to a ban on uranium extraction was lifted. However, the standard phrase at several levels of analysis is still iteratively to 'agree to disagree', i.e. postponing the hard decisions to an indefinitely future. In other words, paraphrasing Sherlock Holmes in a negated manner: The element of uranium is by no means elementary in the case of Greenland. This paper trace historical, legal, and political developments at different levels of analysis. In addition, it applies mixed methods, i.e. combining survey data and qualitative interviews, to map the preferences of key actors in both Nuuk and locals close to the Kvanefjeld-project in Southern Greenland. We argue that the standard Liberal game-theoretical notion in IR of 'the shadow of the future' works in murky and somewhat counterproductive ways. Thus, different 'agree to disagree'-uncertainties across issue domains (economical, political, and environmental etc.) can be detected in several local and domestic arenas, and within 'Rigsfælleskabet' in relation to Denmark proper. Hence, the uranium-case is arguably off the equilibrium path on the Pareto-frontier, in order to provide a sustainable decision to either move forward or, vice versa, put an end to the, for some, pipeline dream of an immensely profitable uranium venture.

Introduction

“Greenland needs money. Is a uranium mine the answer?” reads a headline in the Washington Post from February 2017. Less than a fortnight earlier The Guardian also ran a story about uranium in Greenland by bringing a report from the town of Narsaq located on the southern tip of Greenland; the zenith of attention since the 1950’s in regards to the uranium-ordeal. The latter part of The Guardian’s title is “The Battle for Greenland’s uranium”, indicating that this question is highly salient and imperative in Greenland’s quest for greater economic independency and political autonomy. The first part of the title from the Guardian piece, “You can’t live in a museum”, is a quote from Ib Laursen, the Operations manager of the Australian/Chinese exploration and development company GME (Greenland
Minerals and Energy A/S), suggesting that Greenland should go on with an uranium venture to provide sustainable revenues from mining, because Greenland, and let alone Southern Greenland, cannot live from fishing or tourism alone. However, critical environmental concerns, inter alia, makes mining explorations controversial, to put it mildly. As a local principal puts it: “When the last fish is caught and rivers are polluted, you can’t eat money” (quoted in The Guardian, 28 January 2017).

On the other hand, at the time of writing, the subject is to a large extent subdued in political debates. In the Fall of 2016, the two main anti-uranium and left-wing parties, Inuit Ataqatigiit (IA) and Partii Naleraq (PN), joined the biggest party in Greenland, the social-democratic Siumut, in a reshuffle of the coalition in Naalakersiusut, i.e. the government of Greenland. Only slightly simplifying, the previous pro-uranium coalition, including Siumut and the two bourgeois parties Atassut and Demokraatit, formed after the latest parliamentary election in 2014, changed to a pro-independence government. In order to do so, the centre-left coalition first had to call a truce in regards to uranium. An ‘agree to disagree’-deal was installed for the remaining part of the election period as the deadlocked bargaining solution and modus operandi. Hence, circumventing internal division to surface into governmental oblivion, the veto-player-induced policy status quo prevails, for now.

This, again, run contrast to the situation less than five years ago. At that time, massive public demonstrations in the capital of Nuuk, Narsaq, and several other towns and cities were assembled against uranium extraction. In the political arena, the uranium-question loomed all over the electoral campaigns before the parliamentary ballots in both 2013 and 2014, and

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2 After a cabinet reshuffle in April 2017, the two main anti-uranium parties each hold the title of Naalakkersuisoq (minister) of both ministerial department with the main jurisdiction related to uranium and mining of other rare mineral, namely the Minister of Mineral Resources (IA) and the Minister of, inter alia, Industry/Commerce (PN). However, the Premier Minister of Greenland, Kim Kielsen (Siumut), is also involved in this specific policy sector as de facto acting Minister of Environment and Nature. To readers somewhat unfamiliar with Greenland’s political system, the relevant parties, as well as the historical and legal, and post-colonial relations to Denmark prober, are described and elaborated below in later subsections.
in the subsequent coalition-negotiations. The biggest demonstration in Greenland’s history followed when, on 24 October 2013, the ban against exploiting uranium in Greenland was lifted in Inatsisartut (the Greenlandic parliament) by the tiniest possible majority. Lifting the so-called ‘zero-tolerance’ moratorium ended a 25-odd year’s ban on uranium mining, although this was only an informal institution since it was never officially drafted and ratified.

In sum, the debate over uranium extraction has been on and off in Greenland for decades, but within the current Naalakkersuisut the internal disagreement is side-stepped. This deadlock can also be detected in local politics in Southern Greenland where many of the same dynamics can be observed by comparatively zooming in within the case study. Until recently, when a partial agreement was finally signed in January 2016, the ‘agree to disagree’-notion was also present in relation to Denmark proper within the Danish Realm, because of uranium’s dual-use good status of having both civilian and security purposes. In September 2013, after heated debate vis-á-vis the then prime ministers of Denmark and Greenland, Helle Thorning-Schmidt and Aleqa Hammond, the latter manifestly stated: “We’re agreeing to disagree” (quoted in Politiken, 15. September 2013; authors’ translation).

In other words, paraphrasing Sherlock Holmes in a negated manner: The element of uranium is by no means elementary in the case of Greenland.

The puzzle this paper addresses is as to why this standard phrase of iteratively ‘agree to disagree’ can be detected at several level of analysis, i.e. postponing the hard decisions to an indefinitely future. From a formal bargaining theory perspective, the ‘Agreement Theorem’ (Aumann 1976) even deductively states that actors “cannot agree to disagree”. Similar arguments can be derived from the so-called ‘Coase’s Theorem’ (Coase 1960) and ‘the Shadow of Future’ axiom (Axelrod 1984). The former posits that if negotiations over time is relatively costless, then actors should be able to find a common negotiated solution on e.g. environmental externalities, whereas the latter argues that cooperation becomes more credible if the actors is facing the same issue over and over again in e.g. a Prisoners’ dilemma-like situation. Especially the latter conjecture is the Rosetta Stone of many neo-
Liberal accounts in International Relations, which is the theoretical point of departure of this paper, albeit partially in a critical sense.

We argue that the standard Liberal game-theoretical notion in IR of ‘the shadow of the future’ works in murky and somewhat counterproductive ways in a case study of the uranium-ordeal in Greenland and the different ‘agree to disagree’-uncertainties across issue domains ( economical, political, and environmental etc.). Hence, the case is arguably off the equilibrium path on the Pareto-frontier in order to provide a sustainable decision to either move forward or, *vice versa*, put an end to the, for some, pipeline dream of an immensely profitable uranium venture.

Methodologically, this paper applies mixed methods, i.e. combining survey data and qualitative interviews, to map the preferences of the political parties, the public, and other key actors in both Nuuk and locals close to the Kvanefjeld-project in Southern Greenland.2

The paper unfolds in the following manner: First, we introduce the theoretical framework by briefly discussing the literature and state of the art of the specific configuration of the case study, followed by a neo-Liberal point of departure, including discussions of Aumann’s ‘Agreement Theorem’, Coase’s Theorem, and Axelrod’s ‘Shadow of the Future’ conjecture. Second, the data and research design is presented. Third, the analysis commence with the historical and legal context, followed by three with-in cases, namely the Kingdom of Denmark, Greenland, and the region of Southern Greenland. Lastly, we offer some (tentative) concluding remarks and avenues for further research.

2 NB: Scheduled interviews and field research in Narsaq/Kvanefjeldet awaits funding. Hence, this version of the paper will be considerably extended in this regards. In the current version only one interview has been conducted in relation to the local level of analysis, namely an interview with a former politician in the Kujalleq municipality (see method-section below). Several other interviews in Nuuk and Copenhagen will be also be included in later drafts.
Theory

State of the Art

A number of reports and studies from multi-disciplinary perspectives about uranium, or mining more general, in the Greenlandic case has surfaced in recent years (e.g. Boersma and Foley 2014; Keulen et al. 2014, To the Benefit of Greenland 2014; Sikkerhedsredegørelse for udviklingen i Arktis 2016). In addition, various official reports emanating from the Greenlandic government.3

However, while several scholars in recent years have provided discussions and analyses of the Greenlandic case in relation to uranium (e.g. Vedby 2013; Vestergaard 2014; Vestergaard & Thomasen 2015), the vast majority of existing studies are merely descriptive; thus, inapplicable of disentangle country-specific idiosyncrasies from more general patterns (Przeworski & Teune 1970; King et al. 1994; Elman 2005).

There are a few notable exceptions. From an ethnographic perspective, Bjørst (e.g. 2016; 2017) has offered several theoretically guided analyses utilising both discourse analysis and actor-based network theory. From a history of (natural) science perspective, Nielsen and Knudsen (2013; 2016) provide insightful accounts of the historical context dating back to World War II and especially during the Cold War, as well as discussions about the brawl about sovereignty within the Kingdom of Denmark. More recently, from an International Relation perspective, the Securitization framework of the Copenhagen School has been applied in an analysis of the Greenlandic case and de-securization of uranium-speech acts and narratives (Merkelsen & Rasmussen forthcoming). Several of the abovementioned descriptive account are also implicitly vested in International Relations, Security Studies, or Political Science.

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For example Vedby (2013) argues that “Greenland’s minerals constitute a symbolic as well as economic bridge between Greenland of the past and a future independent nation. Any discussion about the island’s mineral wealth is therefore by its very nature (geo)political”. But he also opens the black box of traditional state-centric positions like foremost neo-Realists in order to fit Greenland into a geopolitical account⁴:

“In spite of uranium’s potential use in nuclear weapons, the real issue behind the occasionally heated debate on the issue between Nuuk and Copenhagen was not security narrowly defined, but the Naalakkersuisut’s scope and ability to manage its own affairs within the self-rule arrangement” (Vedby 2013: 3).

The International Relation (IR) point of departure is also applied in this paper, and we opens the black box even further by also including the local level of analysis in Southern Greenland, but unlike most previous studies, we take a neo-Liberal perspective rather than a Social Constructivist account that has recently populated the field.⁵

But first, we will introduce some related theorems to elaborate on the ‘agree-to-disagree’-puzzle presented in the introduction.

**Agree-to-disagree: The Aumann and Coase’s theorems**

In the so-called ‘Agreement-theorem’ from 1976, Nobel-laureate in Economics Robert J. Aumann formally proved that: “If two people have the same priors, and their posteriors for an event A are common knowledge, then these are equal”. In less convoluted, formal

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⁴ Analysing primarily Greenland-EU relations (and other OCT’s), Adler-Nissen & Gad (2013, 2014) rightfully counter-argue the standard neo-Realist point of departure of fixed, undividable sovereignty. See also the discussions about Para-diplomacy in a subsequent section below.

⁵ Keohane and Nye were seminal in the 1970’s in introducing transnational and transgovernmental relations in IR that has been further developed in the field of e.g. Para-diplomacy in the study of different subunits, also including non-governmental and socio-economic actors (see e.g. Cohn and Smith 1996 for further discussions).
Bayesian language this means that people “cannot agree to disagree” (Aumann, 1976: 1236). As Aumann stated the key notion is common knowledge.

Hence, Aumann proved something rather unexpected about common knowledge often assumed in Bayesian game-theoretical models where beliefs and background information are updated with new information: if two actors have the same prior probabilities, and the posterior probabilities they assign to some proposition are common knowledge, then those posterior probabilities must be equal. That is so even if those posterior probabilities are based on completely different evidence because common knowledge of posterior probabilities negates asymmetric evidence.

As already indicated in the introduction to this paper and the puzzle forwarded herein, the ‘Agreement Theorem’, though impeccably deductive valid, is empirically vacuous in the case under scrutiny. Obviously, the litmus test of any theoretical argument lies in its concurrence to the empirical phenomena it is supposed to elucidate (King et al. 1994). However, the tenable absurdity of the theorem’s conclusion suggests that common knowledge is lacking and that asymmetric information in one way or the other must play some configurative role in the case-study. In other words, the ‘Agreement Theorem’ provide the normative counterfactual to which we can look for possible ‘black swans’.

A somewhat similar theorem is the offered by Coase (1960). In the presence of, say, environmental issues from externalities, the involved actors themselves can negotiate a Pareto-optimal solution if the transaction-cost of bargaining is insignificant. The Coase’s theorem is the backbone in many institutional versions of neo-Liberalism in IR. This is neatly summarised in the following quote from one of its most seminal contributors, Robert Keohane:

*When states can jointly benefit from cooperation, on the other hand, we expect governments to attempt to construct such institutions. Institutions can provide information, reduce transaction costs, make commitments more credible, establish focal points for coordination, and in general facilitate the operation of reciprocity. By seeking*
to specify the conditions under which institutions can have an impact and cooperation can occur, institutionalist theory shows under what conditions realist propositions are valid (Keohane & Martin, 1995: 42).

Hitherto, the theoretical discussion has arguably been much ado about very little explanatory power in relation to the actual case-study, but neo-Liberalism, as the latter part of the quote suggests, also explicate under what conditions cooperation is scarce.

**Neo-Liberalism’s ‘The Shadow of the future-argument’ revisited**

Another well-established argument in the neo-Liberal tradition is that of ‘the Shadow of the Future’ in Prisoner’s dilemma-like situations (Axelrod 1984; Keohane 1984; Baldwin 1993; see figure 1 below). It stipulates the temporal conditions under which reciprocal cooperation becomes much more likely if the game is iteratively played over time. In the oft-used strategic analogy of *tit-for-tat* (denoting: “I’ll cooperate in the next round if you did in the last”), the sub-optimal Nash-equilibrium of mutual defection can be circumvented by the rewards over time as long as the other actor also cooperates (if we denote P=2 and R=3, it becomes perhaps more accessible to readers not used to formal theory jargon). If the discount-factor is sufficiently high, i.e. that future gains from is weighted relatively to immediate gains of the temptation to defect, ‘the Shadow of the Future’ can deter defection and, thus promote cooperation.
As mentioned in the introduction and elaborated below, uranium deposits has been known in Greenland for more than half a century and in 2009, with the introduction of the new Self-Government Act, Greenland soon received the competence over all its natural resources. Hence, we should expect a fairly long ‘Shadow of the Future’, which, however, does not seem to alter defection.

In fact, changing the transitive payoff order to ‘P,P’ being the most preferred, we now see a Deadlock-game akin to the ‘agree-to-disagree’-notion that constitutes the puzzle addressed above.

There are several possible reasons within the IR-bargaining literature why obstructions integrative cooperation are difficult to surmount. First, there can multiple agreements that the actors would all prefer to agree on compared to no agreement at all, but the actors disagree in their ranking of the issues and no side-payment is viable to soothe the disagreement (Schelling 1960). Second, domestic politics can be the main obstacle for cooperation (ibid, Putnam 1988; Milner 1997); or local politics for that matter if it shapes the aggregation of preferences. Third, a long ‘Shadow of the Future’ also work the other way around, since actors can bargain harder, delaying agreements in hope of a better deal if it has ramifications in the long run: “Necessary to make cooperative deals sustainable, it
nonetheless may encourage states [or other actors] to delay in bargaining over terms” (Fearon 1998: 271). Finally, asymmetric information, or lack of common knowledge as assumed in the abovementioned ‘Agreement Theorem’ and Coase’s Theorem, is often a problem in bargaining games.

### Data and research design

This paper presents a case-study of conflict dimensions at three levels of analysis in relation to the question of uranium extraction in Greenland. The levels are, first, in relations within the Kingdom of Denmark, or, in other words between Denmark proper and Greenland; second domestic politics in Greenland and primarily the capital of Nuuk; third local politics in Southern Greenland.

We can detect the negligent ‘agree to disagree’-leitmotif on each level of analysis, but some movement away from the suboptimal deadlock equilibrium in relation to Denmark proper can be detected in early 2016, meaning we have variation on the dependent variable as well as temporal variation over time.

To [eventually] evaluate the explanatory power of each level of analysis, we apply a mixed methods research design combining survey data and qualitative interviews, in order to map the preferences of the political parties, the public/civil society, and other key actors in both Nuuk and locals close to the Kvanefjeld-project in Southern Greenland. The qualitative part is the most dominant source utilised (cf. Creswell 1995), since quantitative data are hard to come by. A recent book-chapter from 2016 states that no reliable opinion polls exists, citing

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6 This constitutes the main area of interest in regards to uranium, because of its vicinity to the Kvanefjeld (Kuannersuit in Greenlandic), which has been known for more than a century to host a number of Rare Earth Minerals – and later on also uranium - and the site for early explorations from the mid-1950’s and sample drilling.
a newspaper article from 2010 (Nielsen & Knudsen, 2016: 257; cf. Weekendavisen 17 September 2010).\textsuperscript{7}

At both the domestic and local level of analysis within Greenland, we still initially present the finding from time-series surveys from 2010, 2012, and 2016 collected by the Nuuk-based HS Analyse. However, it must be stressed that survey data utilized is not without problems from a more rigorous scientific threshold and that some criticism has been directed at HS Analyse from a leading Danish scholar in survey-data, Søren Risbjerg Thomsen – to which HS Analyse concur (Sermitsiaq, 6 June 2014). On the other hand, with these caveats in mind, these surveys is the best available proxy in this regards.

The paper is foremost puzzle-driven, it must be stressed. In other words, we do not attempt to indulge in arguments for or against uranium extraction, but are merely interested in scrutinizing as to why the status quo via the abovementioned ‘agree-to-disagree’-notions to a large degree prevails by zooming in on different levels of analysis.

Note to self: To impose analytical rigour, we need to clearly specify all prior assumptions and the causal mechanism and argument. This e.g. includes the relevant actors; the legal settings and contextual factors, which determine the payoffs; and the mechanism of public choice, which provides the link between the individual elements of the framework (cf. Geddes, 2003: 191).

**Analysis**

**Contextual and Legislative Matters**

The first law in relation to onshore and offshore industrial extraction in Denmark was passed in 1932. However, during this time it was only possible to enforce laws in Greenland through

\textsuperscript{7} However, briefly mentioned in Uran-bjerget (Knudsen & Nielsen 2016[b]) in the Introduction... Update...
Nielsen & Ackrén: The Political Economy of Uranium in Greenland

a Royal Decree. The law was implemented also in Greenland in 1935. At the time Greenland was functioning as a colony, so all major decisions were made in Copenhagen (Ackrén, 2016). This, however, still presented some dilemmas when the first signs of uranium deposits became apparent:

“The government was painfully aware that uranium might be discovered by geological expeditions to Greenland and that such discoveries might cause trouble. This kind of fear was clearly reflected when the government’s most prominent legal expert, Max Sørensen in 1947 expressed his conviction that ‘it would be best [for Denmark] if [uranium] explorations give negative results’” (quoted in Nielsen & Knudsen 2016).

The Danish law on industrial extraction was modified in 1950 and the statement was clear that "all resources in Greenland soil belonged to the Danish state" (Boersma and Foley, 2014).

In January 1960, the Danish Ministry for Greenland appointed a commission to prepare a specific law on mineral resources in Greenland. The outcome was a law, which was implemented in 1965. The aim was to attract foreign investors to invest in extraction activities in Greenland. Later on in 1975, political negotiations between Greenland and Denmark took place regarding the future constitutional status of Greenland. These negotiations ended in a referendum in favor of Home Rule in 1979 following the Faroese model (Hansen, 2014; Ackrén and Lindström, 2012). During the negotiations on Home Rule, the issue of ownership of minerals and petroleum in the subsoil of Greenland was discussed, but a separate law, Law on Minerals in Greenland of 1978, established a joint administration and responsibility over the area. A committee consisting of an equal number of Greenlandic and Danish parliamentarians was to make decisions on permits to companies who wished to start operations in Greenland (Ackrén, 2016).

In 1988, the Law on Minerals in Greenland of 1978 was amended for the first time. The principle of sharing revenues from the extractive field shifted in favor of Greenland and the joint Greenlandic-Danish company, Nunaoil A/S was strengthened (Hansen, 2014). In 1991,
further minor changes were made in relation to the Law on Minerals in Greenland, the most significant being the requirement to provide more information to the public in Greenland of all activities going on in the field of extractive industries (Ackrén, 2016). In 1998, a further step towards managing extractive industries was taken when the Greenlandic Home Rule Government established the Bureau of Minerals and Petroleum (BMP). The new Mineral Resources Act was passed in 2009 and came into force in 2010 (*The Mineral Resources Act*).

Greenland took over the control of subsurface resources on 1 January 2010 as a result of the new Self-Government Act from 2009 as well as the new Mineral Resources Act. This meant that Greenland could now have direct negotiations between Greenlandic authorities and companies interested in developing Greenland’s resources (Nuttall, 2013; Ackrén, 2016). The Mineral Resources Act regulates onshore and subsoil activities. The Act states that all activities should take social (health and safety), environmental and sustainability considerations in mind. Furthermore, international practices and best practices are acknowledged (*The Mineral Resources Act*).

BMP has been responsible for management, administrative and regulatory tasks regarding the extractive industries and had sole authority and decision-making power to issue licenses for prospecting, exploration and production until 2013 (Ackrén, 2016). However, as of 1 January 2013, BMP was renamed the Mineral License and Safety Authority (MLSA). The responsibilities of the former BMP were distributed across several administrative units - the Ministry of Industry and Minerals and a new Environmental Agency for Mineral Resources Activities (EAMR), which falls under the Ministry of Nature and Environment (*Report to Inatsisartut on Mineral Resource Activities in 2013*).

On Thursday 24 October 2013, two historic decisions were made in the Greenlandic Government (*Naalakkersuisut*) and the Greenlandic Parliament (*Inatsisartut*) respectively. The first decision made in the Government was related to an agreement, which gave the UK-based company, London Mining, a development and exploitation license for the Isukasia
project, located 150 km north-east from Nuuk. The second decision made by the Parliament was a narrow favor (by 15-14) of repealing the zero-tolerance policy on the mining of uranium and other radioactive materials (Nuttall, 2013).

The Mineral Resources Act from 2010 was improved in 2014 to include a possibility for applying for funding for various stakeholders in order to do their own investigations. This initiative helps locals, NGOs and associations to gather information from neutral sources already at the stage of the scope study. Another improvement is the inclusion of pre-consultation and consultation in the Act (Ackrén, 2016).

**Level of Analysis**

*Relations between Denmark and Greenland*

Although the demonstrations in 2013 mentioned in the introduction were the biggest in Greenland’s history, the uranium question had earlier attracted heated protests. For example, the first protest occurred in September 1977 when the then Prime Minister of Denmark proper, Anker Jørgensen from the Social Democrats, was met by demonstrators when arriving on a visit to Greenland. Here he was met with protesters wearing signs saying “Stop the destruction of Greenland” and “No to Uranium”, and had eggs thrown at him (Nielsen & Knudsen, 2016, p. 251f) Prime Minister Jørgensen from the Social Democrats had shortly before stated in a parliamentary debate: “The subject is not open for discussion! If you want property rights over the subsoil of Greenland you must accept the consequences, i.e. cut the ropes to Denmark” (quoted from *Ibid*).

In recent years, international companies have begun to explore the prospects and opportunities for uranium mining, either directly or as a by-product of rare earth elements

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8 For a more detailed description of this project see Ackrén, 2016.
extraction, with the Australian-owned company Greenland Minerals and Energy (GME) focusing on potential development of both uranium and rare earth elements at Kuannersuit (known as Kvanefjeld in Danish), a plateau near the south Greenland town of Narsaq, which has a population of about 1500 (Nuttall, 2013). Even though, GME has been active there since 2007, the prospects of uranium mining at Kuannersuit have been subject of speculation for almost 60 years (Nuttall, 2013; Nielsen and Knudsen, 2013). Kuannersuit is estimated to consist of 575 million pounds of uranium and 10.3 million tons total of rare earth elements (Bjørst, 2017).

In April 2013, 48 NGOs from around the world signed an appeal to the Greenlandic and Danish governments to keep the zero-tolerance policy in place (Bjørst, 2017). But in October 2013 the Greenlandic Parliament lifted this ban as mentioned before. There are disputes that have taken place between Denmark and Greenland due to the mining of uranium and other radioactive substances. Denmark sees the extraction as part of the foreign- and security dimension, while Greenland looks at it as part of internal, domestic policy in relation to other natural resources.

Rare earth elements (REE) are to be found both at Kuannersuit (Kvanefjeld) and Kringlerne in the Ilimaussaq complex, also located in Southern Greenland. These elements are used in modern technology, everything from wind turbines, solar panels, batteries, iPads, computers to pumps and weapons. China is here seen as the major investor, since China controls about 97 per cent of the production of REEs in the world (Mortensen, 2013). It has been prohibited to explore and exploit radioactive elements in Greenland from the 1980s until the lift of the ban in October 2013 (Mortensen, 2013). However, in the post-war years Denmark was interested in promoting the use of nuclear energy. This included access to uranium within the territories of the Realm (hence Greenland). From 1955 and for a few years following there was exploration for uranium in Greenland. Three nuclear reactors were operated in the period of 1957-2000 (Nielsen and Knudsen, 2013; Mortensen, 2013).
Denmark’s interest in nuclear power came to an end with the Parliament’s decision, B 103 of 29 March 1985. As a matter of fact, the only nuclear power plant (a non-test reactor) in the Danish Realm was situated in Greenland at the US Research station Camp Century about 200 km east of the Thule base (Pituffik). It was only in use from October 1960 to July 1963 (Mortensen, 2013).

The prohibition for and exploitation of uranium deposits is therefore seen as a logical extension of the Danish policy. Greenland has in the past had bad experiences of mining operations due to environmental damage. Mining waste has caused problems, including polluting marine flora and fauna. In reference to uranium mining the problem is not as much the radioactivity but the fact that uranium is a toxic metal, which can lead to health problems and environmental pollution in the area where such a metal is extracted (Mortensen, 2013). The prohibition of exploration and exploitation of uranium mining, the so called ‘zero-tolerance’ policy in Greenland, has been strongly politically motivated. As also stated by the MLSA before the lift of the ban regarding licenses: ‘The license covers prospecting for all mineral resources except hydrocarbons and radioactive elements, unless otherwise indicated in the license’ (quoted in Mortensen, 2013).

To the extent that Greenland becomes an exporter of uranium, it will have to comply with the special rules of the International Atomic Energy Agency (IAEA). Mining operations in themselves are not covered by these rules, but they apply at the moment as enriched substances or as usage for fuel. Greenland is not covered by the agreement between the EU and the IAEA, but there is a separate safeguard agreement for Greenland (Mortensen, 2013).

Greenland is already covered as part of the Kingdom of Denmark by the Treaty on the Non-Proliferation of Nuclear Weapons. Export controls and relevant regulations on uranium exploitation and exports are likely to have to go through Denmark (Boersma and Foley, 2014). Denmark is party in a number of treaties within the non-proliferation regime. Amongst these are the Non-Proliferation Treaty already mentioned and the Comprehensive Nuclear-Test Ban Treaty. These are at the moment in force for Denmark, but not for
Greenland. Changes in competences between Greenland and Denmark may have consequences for these treaties.

As mentioned by Bjørst (2016) there are two major discourses in Greenlandic politics when it comes to uranium mining. The risk analysis or discourse concentrated around the issues of how uranium mining will destroy the local community and global nature as such. This discourse is usually framed by NGOs and hesitant local people. The other discourse is in line with the Government of Greenland to look for a brighter future with economical gains from the mining industry and where the local community will be saved with new job opportunities and benefit the Greenlandic economy as such (Bjørst, 2016). These discourses are very much in conflict with each other.

In January 2016, the Greenlandic and the Danish governments signed an agreement on exploitation and export of uranium and other radioactive substances. This agreement consists of an overall agreement regarding specific foreign-, defense- and security political relations, which are related to exploitation and export of uranium from Greenland. It also includes a joint declaration about security control over nuclear material and a joint declaration regarding export control over products and technology, which can be used for both civil and military purposes (dual-use). Furthermore, the agreement includes an agreement around the safeguard of Greenland’s nuclear security in relation to the mining industry (Aftale med den danske regering om uran 2016). Uranium is a dual-use good, since it is both a mineral and can be used for foreign and security issues. There is overlapping legislation in this field, since we do have laws which are underneath the Greenlandic Government (such as the Mineral Resources Act), the Self-Government Act, the Danish constitution, Danish law, and also international law regarding nuclear non-proliferation, some of which applies to Denmark but not to Greenland.

All activities within Greenland regarding the uranium mining itself are under the competences of the self-government, but as soon as uranium leaves Greenland, the situation might change, and the Danish Government becomes responsible for the control of the
further process. This can be seen as a triggering factor for the ‘agree to disagree policy’ between Greenland and Denmark. In practice, Greenlandic authorities will issue licenses for pre-studies, investigations and exploitation of uranium and other radioactive material. Any company or other actors involved in these activities will deal with the Greenlandic authorities only. However, nuclear safety is a common competence of both governments. The self-government has the responsibility for all nuclear facilities that are built and run in connection with mining and the direct processing of uranium (*Aftale med den danske regering om uran*). The Danish foreign ministry and the Greenlandic self-government will cooperate closely and share information both ways on all issues relating to the nexus of nuclear material and foreign-, security-, and defense policy (*Aftale med den danske regering om uran*).

**Greenland**

Having addressed the historical and legal context, as well as the conflict dimensions and partial solution in relation to Denmark proper, we now turn to the internal dynamics in a within-case-study of Greenland. First, we analyse the quantitative data, before we dig a bit deeper by offering thicker description via the qualitative data.

HS Analyse has since 2010 made biannual surveys in relation to the uranium-question, but the 2014-survey only asks about whether a referendum should be convened and not the specific attitude towards uranium extraction; as to why it is excluded from the analysis. Some of the surveys also include question from a bigger local sample in Southern Greenland, used in the subsequent section, and whether the uranium-question should be put to a referendum, and differences between voter’s party affiliation and other background information such as age, education, and sex. As mentioned, unfortunately the 2014-survey only include the referendum-question, as to why we do not include this below.

Table 1 shows preferences of the voters on an aggregated level in the available years.
**Table 1: Attitudes towards uranium extraction in Greenland over time**

<table>
<thead>
<tr>
<th>Year</th>
<th>Very much for</th>
<th>Mostly for</th>
<th>Mostly against</th>
<th>Very much against</th>
<th>Don’t know</th>
<th>Total</th>
<th>Positive attitude *</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>19</td>
<td>37</td>
<td>12</td>
<td>10</td>
<td>22</td>
<td>100</td>
<td>72</td>
<td>781</td>
</tr>
<tr>
<td>2012</td>
<td>31</td>
<td>25</td>
<td>12</td>
<td>13</td>
<td>19</td>
<td>100</td>
<td>69</td>
<td>795</td>
</tr>
<tr>
<td>2016</td>
<td>17</td>
<td>28</td>
<td>11</td>
<td>28</td>
<td>16</td>
<td>100</td>
<td>54</td>
<td>761</td>
</tr>
</tbody>
</table>

Notes: * = very much for + mostly for after excluding the Don’t knows from the sample

Source: HS Analyse, Nuuk, Greenland

At a first glance, a substantial majority of voters holding a positive attitude towards uranium extraction can be observed, but it has recently plummeted. Still, a majority leaning towards a positive attitude persisted in the latest survey from 2016, except for the capital of Nuuk.

On the other hand, the uranium-question did spur the biggest protests in Greenlandic history when the ‘zero-tolerance ban’ was lifted in 2013. The anti-uranium organisation NOAH even wrote an op-ed criticising the lift and stating that it stipulated a “phasing out democracy” in Greenland (*Arctic Journal*, 9 September 2014). One persistent activist made a prolonged demonstration in front of the parliament building in Nuuk and later filed a complaint to the Office of the United Nations High Commissioner for Human Rights (OHCHR) against the Government. Accusing it of violating indigenous rights and not complying with criminal and environmental laws.

The protesters can roughly be divided into two groups, the ‘Urani? Naamik’-group (no to uranium), reusing the famous slogan-signs from the 1970’s, and the somewhat softer stance of a group mainly against the GME uranium-project because of the scarce information about the environmental implications. According to an activist who was co-arranging the protests in 2014, many also within IA are not as much against the uranium-project *per se*, but feel they lack common knowledge about the ramifications (interview with organising activist
conducted in April 2017). The protesters came from different political observations and were largely organised by using social media such as Facebook.

As recent as April 2016, protests were again assembled in Nuuk roughly at the time when the agreement was negotiated with Denmark proper, but later that same year a new coalition was surprisingly formed. Within the new coalition, as of October 2016, Inuit Ataqatigiit and Partii Naleraq are against uranium mining in general, while Siumut are officially against exploiting radioactive materials only if it damages the sustainability of the environment (*Koalitionsaftalen*, 2016); in other words, to a large extent for moving forward.

The deadlock, however, is not necessarily without problems in the longer term. An example can be derived from a so-called §37-question on the matter of the Government’s uranium-policy from then Naalakkersuisoq of Foreign Affairs, Vittus Qujaukitsoq’s, answer to then parliament member and currently Naalakkersuisoq Mûte B. Egede’s question:

Mûte B. Egede, Inuit Ataqatigiit: “What will the consequences be for Greenland, if Greenland Minerals and Energy Ltd.’s application for exploiting uranium is rejected?”

Vittus Qujaukitsoq, Siumut: “In relation to the raw material sector, a rejection of a mining permit, where the conditions are fulfilled with regard to the provisions in the Law of Raw Materials about ensuring safety, health, environment and societal sustainability, will make Greenland appear as an untrustworthy partner in relation to exploiting raw materials, and possibly cause a decrease in the interest of the raw material industry in investing in exploration and exploitation of raw materials in Greenland.”

To be elaborated...

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9 Naalakkersuisoq of External Affairs, Vittus Qujaukitsoq’s, answer to Mûte B. Egede’s §37 question on the matter, 26 February 2016 (authors’ translation)
Local level: Kvanefjeld in adjunction to the town of Narsaq

Uranium can feasibly be extracted several places in Greenland (Keulen et al. 2014), but for some time the main area of interest has been placed in relation to the Kvanefjeld in the vicinity of the city of Narsaq in Southern Greenland. Since 2007 GME have under license been working on an exploration assessment as to whether it is feasible (and economically sound) to extract rare earth minerals as well as uranium from the mining site.

Table 2: Attitudes towards uranium extraction in Southern Greenland over time

<table>
<thead>
<tr>
<th>Year</th>
<th>Very much for</th>
<th>Mostly for</th>
<th>Mostly against</th>
<th>Very much against</th>
<th>Don’t know</th>
<th>Total</th>
<th>Positive attitude *</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>41</td>
<td>31</td>
<td>9</td>
<td>9</td>
<td>10</td>
<td>100</td>
<td>80</td>
<td>453</td>
</tr>
<tr>
<td>2012</td>
<td>40</td>
<td>25</td>
<td>6</td>
<td>14</td>
<td>15</td>
<td>100</td>
<td>76</td>
<td>439</td>
</tr>
<tr>
<td>2016</td>
<td>27</td>
<td>21</td>
<td>5</td>
<td>37</td>
<td>10</td>
<td>100</td>
<td>53</td>
<td>157**</td>
</tr>
</tbody>
</table>

Notes: * = very much for + mostly for after excluding the Don’t knows from the sample
** = In 2010 and 2012 extra interviews were conducted on top of the countrywide survey (cf. table 1) in the towns of Nanortalik, Qaqortoq, and Narsaq. This was not replicated in the latest survey from 2016, but this includes answers from five different geographical areas in Greenland including the Southern region, which with the earlier mentioned caveats in mind can serve as the best available proxy.
Source: HS Analyse, Nuuk, Greenland

As with the national polls, we see a majority in favour, but also a substantial fall in the last survey from 2016. Moreover, qualitative interviews point to a lack of knowledge about the ramifications of mining and that many locals are still in the process of making up their minds (Bjørst 2015). Interestingly, Southern Greenland is the area covered by the survey that has
lowest positive attitude in regards to convening a referendum in the most recent 2016-survey.

In local politics, several of the same dynamics as at the other level of analysis can be detected in regards to an ‘agree-to-disagree’-deadlock. Even though the informal zero-tolerance moratorium was lifted several years ago, some parties are acting as if it was still in place. Uranium is a topic that is being kept away from the political agenda. One exception emanated in December 2014 when Siumut suggested to start discussing a minimum threshold for how much nuclear material in other mining other minerals (interview with former local politician from the Kujalleq municipality). However, just to instigate a discussion on this matter was vetoed by IA. Hence, the notion of ‘Agree to disagree’ still persist in Southern Greenland.

Conclusions

In lieu of a conclusion, as this paper constitute a first rough draft, we can point to some tentative findings worth elaborations:

1) It is well-established in the scholarly literature that the zero-tolerance moratorium was never formally institutionalised (Nielsen and Knudsen 2013, 2016), but as an informal institution, it still plays an important role, especially for the party IA.

2) Formal bargaining theory point to the fact that ‘agree-to-disagree’-deadlocks should not occur. But in the present case-study they abound. As to why? is going to be scrutinised in

3) There is a suboptimal ‘Catch 22’-equilibrium in Greenland. Better information and political cooperation awaits an environmental assessment (VVM), and the assessment and cooperation with local actors and civil society is postponed because of the murky political and legal context.
**References (not updated)**


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