2018

Grønnedal Arctic Resort Feasibility Study

From liability to asset

Version 2.02

Andreas Brogaard Buhl

Arsuk Fjord Real Estate IVS

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Grønnedal as seen from the summit of the Kungnait mountain 2016 *Photo: Thomas Krog*

1. Executive Summary

Introduction

This document was prepared by Arsuk Fjord Real Estate IVS in order to establish a development project in Grønnedal before the Danish Navy invest hundred million Danish crowns in the demolition of buildings that could have been used to create economic growth and activities in one of Greenlands most beautiful and historically interesting areas. In economic sense, this project intends to convert a liability to a valuable asset by establishing a cash flow from the global tourism streams, which will inject money into the local economy to the benefit of the local community at Arsuk and Southern Greenland as a region.

Outline of the proposed development

This project proposes to establish a tourism facility in the existing buildings at Grønnedal. The facility which eventually will include more than 25 buildings and 4000 m2 under roof. The facility will be developed in a three-phased approach over 10 years through an investment of 60 million Danish Kroner. The ambitious development is possible at this cost only because the buildings are already there and can be acquired for a symbolic payment.

The target will be to attract up to 4.000 tourist every year each spending up to a week on the site. The facility will offer activities aimed at the general globetrotter tourist open for some engagement in local activities with appetite for an “light Arctic” experience. Although this profile will constitute the majority of guest, the destination Arsuk Fjord has plenty of things to offer to the more specialised tourist such as arctic trophy hunting, sportsfishing for arctic charr, kayaking, mountain climbing, hiking and Mountain biking. Visits to nearby local village Arsuk is also an opportunity.

The Arsuk Fjord has been identified by WWF as an area of international interest. The biodiversity is high and the Fjord has a glacier, a 1.418 m tall signature mountain Kungnait, a seabird colony and several hundred rare underwater atolls. The nearby former cryolite mining site at Ivittuut tops up it up with a very interesting history and geology. The area is also known as the middle settlement and therefore full of Norse ruins and archaeological sites, so by all standards the destination Arsuk Fjord, Ivittuut and Grønnedal is indeed a unique place to visit.

The first phase of the development will be a “**Proof of concept**” whereby 17 + 6 family houses will be refurbished and rented out to a global audience of visitors open to a light Arctic experience with emphasis on family groups travelling together. This phase will also include a small café and shop.

The next phase will be a “**hotel expansion”**, which will add 32 standard hotel rooms and 10 apartments to the facility. This will be further add to capacity and tap into the existing and new market of tourists. This will most likely be available at a convenient time coinciding with the development of a new airport facility in Qaqortoq, Southern Greenland.

The third phase “**Arctic resort”** will include an upgaded restaurant and Arctic health, spa and conference facilities which will make the facilities attractive for activities also in the shoulder season thus expanding the operational season and making even better use of the facilities. With this element in place it might be possible to expand to include snow driven activities such as skiing in the fabulous spring months of March and April.

Tourism

The project will support the general economic strategy of Greenland to increase revenues from tourism. It is also aligned with the new air transport developments planned for Greenland by offering capacity, discoveries and adventures once the tourist has arrived in Greenland. The facility at Grønnedal will further strengthen South Greenland as a destination worthwhile visiting and the connectivity within that region through ship and boat services going back and forth between villages.

The project will provide job opportunities for local people in the area. It is estimated that more than 10 direct jobs will be created on-site and additional 30-50 indirect jobs will be created in services and support functions associated with the development. From hotels in isolated areas like the Maldives such job creation

also include other services related to supplies and logistics. In this case jobs in Narsarsuaq, Qaqortoq and Narsaq and other places in the circuit of South Greenland tourism.

A massive increase in tourism to the Arctic has taken place over the last ten years. This include tourists arriving both by air and sea. In Iceland there has been an increase of 600% increase in 10 years. Greenland does not yet have the airlines, the airports and the hotels to support such an increase and the pricing policy of Air Greenland has effectively stopped any potential tourist putting together their own itinerary including Greenland. However, if one or more new airports are built as proposed the volumes must increase to make ends meet. These new volumes will need attractive destinations to explore and Grønnedal is fitting exactly into this scenario.

Demand and supply analysis

With a projected increase in volume there will also be a need for different types of capacity. Should the pricing for air travel to and from Greenland go down significantly the flow of tourist is expected to double or triple from 80.000 to 240.000 tourists. A preliminary analysis shows that there is a demand for family oriented packages in Greenland and that this segment will have a tremendous growth potential as international access increases.

The supply analysis shows that Greenland has sufficient hotels for the present volumes on an annual basis. However, an increase in tourists in the summer season can only be accommodated by more capacity during May-September. In Southern Greenland there is at present very little possibility for family holidays and the family villas at Grønnedal will provide a very much need offering.

Financial estimates

The financial calculations in this study shows that with a modest investment it is possible to create the cash flow that is necessary to operate an Arctic Resort at Grønnedal. Apart from the first two years revenues more than pays for operating expenses and the profit will enable a pay-back of loans and interest as well as accommodate for depreciations of refurbished buildings and new equipment.

By planning a three-phased long-term investment the build-up of Arsuk Fjord as a new destination for international tourists can take place limiting the risks and interest bearing debt to a minimum allowing for revenues to grow and expansion to take place

Main conclusions

The development of Grønnedal will provide both Danish Defense, Sermersooq Municipal, Naalakkersuisut and private investors with a unique opportunity to do something good for Southern Greenland.

Grønnedal is an attractive investment opportunity both from a profit perspective and from a development impact perspective benefitting the local community and the region. This study shows how the buildings through investment can be converted from a liability to a valuable asset over a 10 year period.

Grønnedal Arctic Resort
Income statement (DKK)

	Phase one				Phase two			Phase three			
BUDGET, YEAR 1 - 10	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**	**TOTAL Year 1 - 10**
Total revenues	3.384.000	7.896.000	9.732.800	11.369.600	16.058.000	19.119.000	22.396.000	30.607.200	31.917.600	33.313.800	185.794.000
Total variable expenditures	1.682.400	3.925.600	4.866.400	5.684.800	7.513.400	8.706.900	10.145.200	13.483.500	14.138.700	14.752.300	84.899.200
Total fixed expenditures	2.940.600	4.124.935	4.199.381	4.509.727	6.216.798	6.424.754	6.599.676	8.671.896	8.391.339	8.105.303	60.184.408
EBITDA	**-1.239.000**	**-154.535**	**667.019**	**1.175.073**	**2.327.802**	**3.987.346**	**5.651.124**	**8.451.804**	**9.387.561**	**10.456.197**	**40.710.392**
EBITDA margin %			7%	10%	14%	21%	25%	28%	29%	31%	22%

For more details see expanded results table on page 40

2. Introduction

Background

The Danish Government decided back in august 2011 to establish an Arctic Command and to close down its Greenland Command center at Grønnedal. The decision was implemented in 2012 with a final closure September 2014. During first quarter of 2013 the facility was advertised for sales at a Danish website, but due to various liabilities regarding the obligation of the buyer to handle subterranous pollution no buyer stood forward.

From 2014 and onwards various discussion were held between Danish Defense and Government of Greenland regarding the removal of buildings and clean-up of oilspills in particular near the harbour. In 2015 a tender was conducted on the removal of building to the tune of 150-250 million Danish kroner, meanwhile several people were proposing alternative use of the buildings, and in 2016 also a Chinese company made a formal request to enter into discussion about a take-over.

However, the speculations ended in December 2016 by a decision by Danish Government to re-establish a maritime support unit on site making use of the port, the oil tanks, warehouses and boatyard. With this decision came also the decision to deploy staff on-site by first of September 2017, and to re-address the potential use of buildings during the autumn of 2017.

Thus it is in this light that this feasibility study has come about in order to pave the way for a commercial tourism development on the site and to entice both Government of Greenland, Sermersooq Municipal and Danish Ministry of Defence to collaborate with the private sector and jointly promote a new beginning at Grønnedal.

Outline of research methodology

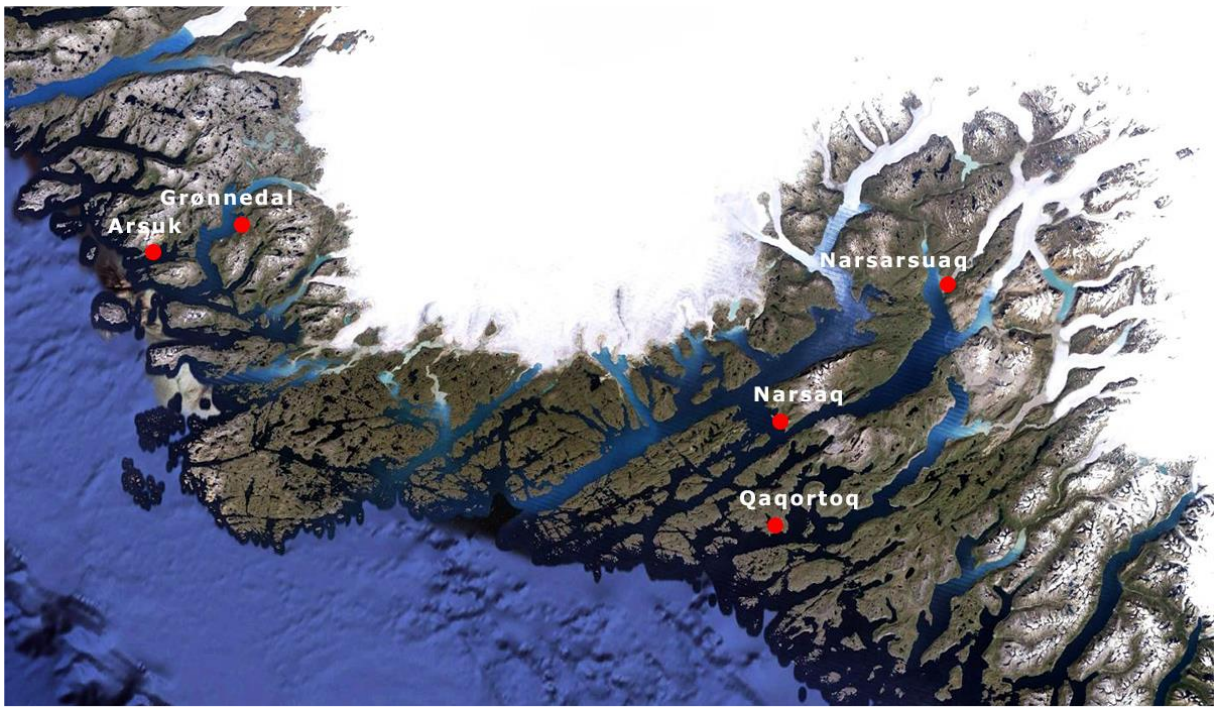
The content of this document has been compiled by studying documents freely available on the internet as well as books and documents listed under references. In addition the study was based on selected interviews with key persons in the tourism industry and discussions with potential investors in Denmark and Iceland and information gathered at the West Nordic Travel Mart 18-20 September in Nuuk.

The numbers and calculations used in the study are industry standards used in other feasibility studies for hotel developments. The analysis has largely been prepared on the basis of a large EXCEL sheet allowing for easy calculations and changed assumptions under different scenarios. The accounting principles used is based on international standards.

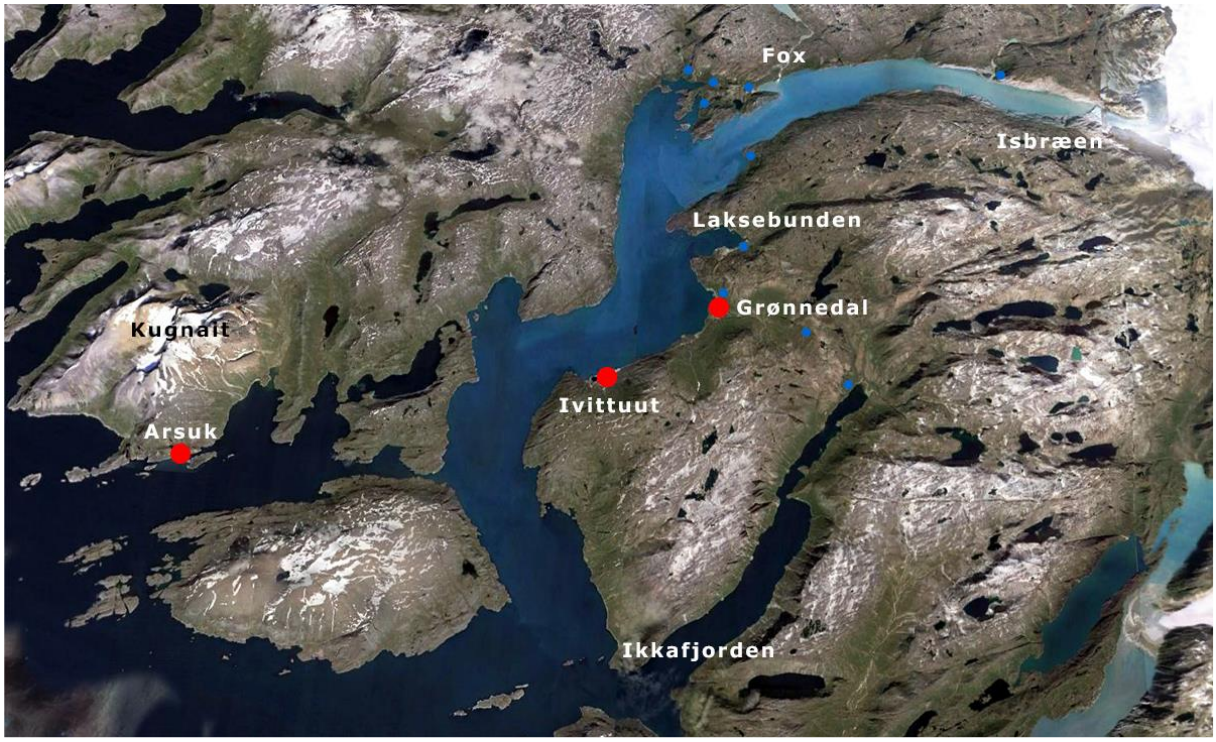
3. Proposed Hotel Facilities

Location and site

The proposed hotel facilities is found at the former naval station Grønnedal which is situated 61º13’42 North 48º06’04 West on the Southern shores of the Arsuk Fjord in the South Western part of Greenland. The scenic Arsuk Fjord is a 46 km long and 700 meter deep fjord surrounded by 500 meter high rounded mountains. At the deep end there is a glacier breaking into the Arsuk fjord. The area is very beautiful with the signature mountain Kungnait towering 1418 meter over sea level and intriguing subsea formations at Ikka fjord. Nearby is found the historical mining town of Ivittuut and the small village Arsuk on the outer coast to the West.



South western tip of Greenland with Grønnedal, Arsuk, Narsaq and Narsarsuaq International Airport © Google Maps



Arsukfjord with main features as seen from space © Google Earth

Existing infrastructure

The infrastructure left at naval station includes almost 100 buildings with a total area of more than 14.000 square meters all worth an estimated 100 million Euro. However, without economic activity they are now almost worthless and actually a liability to both the Danish Ministry of Defense and the Municipality of Sermersooq. Status on the state of infrastructure and buildings is varying. It goes from buildings erected in the 1960'ies to newer buildings built after year 1983 and 2010 by the former Ivittuut Municipality now merged into Sermersooq Municipality. It is also clear that having not been in use since September 2014 has caused damage to some of the buildings.

Photo: © Jan Bøgsted

Hotel and family villa facilities

The proposed tourist facility consists of 17 family family villas and some hotel like rooms and apartments formerly used by military personnel at the former Danish Greenland Command. The accommodation will be renovated and updated to suit the contemporary adventurous traveller

Area utilisation by sub-component

Object	Number of units	Capacity (beds)	Area (m2)	Total Area (m2)	Total capacity (beds)
Family s	17	6	73+	1.241	102
Hotel double rooms	32	2	739	739	64
Apartments	10	4	1458	1.458	40
Conference building (old school & admin)	3	NA	800	800	
Additional houses (staff housing)	6	NA	75	450	
Total				**4.688**	**206**

Accomodation Capacity

The capacity of the facility will gradually increase over the years, and so should the room rates. The family Villas can be rented out through a base price of 4.000 per week with additional one thousand kroner per inhabitant. If the average guest number is 4 per house this will result in a payment of 8000 per week or 286 kr. Per person per day – a very competitive price in the Greenland market low enough to attract the family travel segment. Based on results this price will be possible to increase as soon as the capacity is fully booked year after year.

Guest Hotel accommodation (Family Villas)

Year	Average Room Rate (DKK)	Expected Room Occupancy rate in open season	Total Capacity	Average Visitors/day Bednight
1	286	60	40	24
2	286	54	102	56
3	286	54	102	56
4	286	63	102	64
5	286	63	102	64
6	286	63	102	64
7	286	71	102	72
8	321	71	102	72
9	321	71	102	72
10	321	71	102	72

It is expected that the occupancy rate gradually will increase as the reputation and name of the facility will be spread within the tourism industry in Greenland starting with a low occupancy rate of 60 percent for the summer open season increasing over the first five year to a steady level of 80+ within the season. If the occupancy rate is considered on an annual basis it should be half of the numbers below accounting for a 7 months long winter with no activity.

Guest Hotel accommodation (hotel)

Year	Average Room Rate (DKK)	Expected Room Occupancy rate in open season	Total Capacity	Visitors Bednight
5	750	25	64	16
6	750	50	64	32
7	750	63	64	40
8	750	71	104	74
9	750	71	104	74
10	750	76	104	79

Restaurant, Bar, Café and conference facilities

From the very beginning a small café and shop will be catering for supplementary meals, basic supplies and souvenirs.

At phase two of the development, the facilities will include a high-end Arctic maritime inspired restaurant seating at least 60 people, where guests from the hotel and family villas can eat well with emphasis on local Arctic food as well as imported food to the international palate. The restaurant will also include a maritime bar / officers mess. It is expected that the facility will be able to attract chefs from Europe/ North America interesting in an Arctic adventure.

At phase two the former school and municipal buildings will also be refurbished as an updated conference facility with a capacity of up to 60 business guests which can be accommodated either in family villas, in hotel rooms or apartments.

Health, Spa and leisure facility

An Arctic Spa, fitnesssports and leisure annex will be added to the facility in phase three. This will include a fully equipped fitness room, indoor and outdoor spa and bathing facilities as well as sauna and massage. The Spa facility will be inspired by similar facilities in size and lay-out for instance one found at Torekov Hotel at the coastal end of Hallandsåsen in South Sweden, which also started as a village of small cabins.

Outdoor activities and local excursions

The Arsuk Fjord contains many interesting sites for outdoor activities and local excursions. There is a number of hiking huts in the Fjord. Eight principal destinations can be mentioned here:

1. Ivittuut historical mining town 5 km by road (only two towns connected in Greenland)
2. Kungnait Mountain 16 km boat
3. Arsuk village 17 km by boat
4. Fox water fall, 20 km by boat
5. Ika Fjord underwater atolls 25 km by boat
6. Arsuk Fjord Ice glacier 30 km by boat
7. Laksebunden with waterfall and fishing for Arctic charr
8. Laksefjeld and walks to the Icesheet

A wide range of outdoor adventure activities can easily be organized from Grønnedal:

Sportsfishing for arctic charr, halibut, cod and sea wolf, Trophy hunting for Arctic Musk Oxen, Sportsdiving on Ika atolls, Mountain climbing at Kungnait Mountain, Kayaking in the fjord systems, Cryolite and mineral hunting at Ivittuut, fossil hunting at Qoornoq, Norse ruins exploration, Northern light observation and general hiking trips in the mountains beyond the green valley of Grønnedal.

Golf course and gravel runway for fixed wing planes

Grønnedal holds the potential for additional features such as a 9 whole golf course which can be operational throughout the season from May to October due to the benign weather conditions which exist in Southern Greenland. Furthermore lay-out the landscape also makes it possible to build a 1.000 meter gravel runway for small passenger planes such as the Dash-6-400 Twin Otter Light Utility Aircraft. These additional features are not included in the budget.

Suppliers and sub-contractors identified

The hotel development will rely on local suppliers and sub-contractors as well as local workers for several services related to its operations.

This include boat transfers, cleaning, boatmen, spare parts and skilled worker services as well as food and supplies purchased locally in Arsuk and in Narsaq or Qaqortoq depending on tasks and assignments. The hotel will aim at growing some of its vegetables close to the former Norse cultivation tracts on the slopes of the famous Grouse Mountain (Rypefjeld).

It is expected that some collaboration between the Danish Ministry of Defense, Sermersooq Municipality can be expected with regards to supply of electricity, water and sanitation on-site in Grønnedal.

This collaboration will be mutually beneficial with regards to sharing costs and optimizing facilities on-site. The Government of Greenland has some obligations to its small villages like Arsuk (Forsyningspligt) and what that means in connection with civilian use of Grønnedal will be further developed through negotiations between the parties as part of the project preparations.

Sustainable environment, energy, waste water and solid waste handling

Grønnedal will have to be a green and environmentally sustainable operation to attract and inspire the global tourist in year 2020 and beyond.

It lies explicit in the name Green Valley and future owners should emphasize on this aspect. Grønnedal Arctic Village will initially be dependent on electricity from existing power supply. The vision is that the facility becomes emission free. Those solar pannels already established on site by the then Ivittuut Municipality and since 2009 owned by Sermersooq Municipality could once repaired contribute to heating. Additional panels integrated into each of the buildings could provide future electricity. During the summer period there is abundant sunlight during most of the day and night due to its high latitude location.

As for future solid waste management, a small incineration facility is already in place on the road toward the “Løjnantens Dal”. This processing plant could probably be reused. It will require a pick- up truck to collect waste from buildings on a weekly basis. This will be part of the operating organization's routines.

Management of the proposed resort

The management of the proposed resort can either be operated by a permanent staff or outsourced to a hotel management company at a fee. The first option will enable close control with expenses and give a better idea of what it takes to operate the facility under new management. However outsourcing the management from will also offer the opportunity to bring in a professional operator from day one. For the purpose of this feasibility study a full calculation of the first option of running the facility through an in-house management has been included.

Should the other option become relevant some indicative levels for fees are listed below.

Some typical management fees as seen in the hotel industry

Management Fee	Indicative Fee basis
Base fee	3 % of total revenue
Management incentive fee	10% of adjusted gross operating profit after deduction of base fee
Marketing / advertising contribution	2.5 % Gross room revenue
Reservation fee	Euro 10 per reservation room

4. General information about Southern Greenland

Introduction to Greenland

Greenland is the largest island on the planet. It is more than 3000 km from North to South. It covers land areas closest to the North pole and several types of Arctic climate zones. Greenland is a part of the Danish realm which also include the Faroe Island. It's very scarcely populated and the major part is covered by a 2-3 kilometer thick icesheet.

International Airport and main towns in Southern Greenland

The existing international Airports in Greenland are Kangerlussuaq in the middle of Greenland and Narsarsuaq in the Southern tip of Greenland. The runways at these two airports are 2810 by 60 m and 1830 by 45 meter respectively thus both able to take transatlantic flights.

The capital of Greenland is the city of Nuuk with about 18.000 inhabitants. Other major towns include Illulissat, Manitsoq, QQQ (Godhavn), Sisimiut, Paamiut and Qaqortoq on the west coast and Tassilaq and Ittoqqortoormiit (Scoresbysund) on the East Coast.

Southern Greenland is characterized by numerous deep fjords and tall mountains, glaciers and rivers. It has many ruins and historical buildings from Greenlands rich history and several small towns are found within a distance of less than 150 km from the international airport Narsarsuaq (International abbreviation UAK) which was originally established as an airbase for the US Air Force planes on the way to Europe. From 1942-1957 it was known as Bluie West one.

Nature around the Arsuk Fjord

The natural beauty of the Arsuk fjord has been described by several authors and institutions. E.g. WWF has in their RACER report for Greenland 2014 identified the area as biological very diverse and worth preserving from a biodiversity point of view. Furthermore in geological terms the area is most interesting with a rare intrusion at Ivittuut and many rare and spectacular minerals in the mountains nearby. The tourism opportunities have been viewed from many angles – most recently by Jan Bøgsted in his 2016 photobook "Arsuk Fjord - superior class nature discoveries" (In Danish: Arsukfjorden, Naturoplevelser I særklasse, forlaget Grønlandskalender). For further reading on the local nature please refer to the list of references.

Climate around Arsuk Fjord

Being located at the Southern tip of Greenland, the climate is generally warmer with more snowfall than average in Greenland. The temperature is generally above zero degrees Celcius from April through to end of September. Only occationally the sea freezes up forming ice in the coldest month of January and February. Generally larger vessels can service the port all year round.

Climate data for Ivittuut [hide]

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Record high °C (°F)	13.3 (55.9)	14.4 (57.9)	15.6 (60.1)	16.1 (61)	23.3 (73.9)	30.1 (86.2)	23.3 (73.9)	21.7 (71.1)	21.1 (70)	19.4 (66.9)	17.8 (64)	15.6 (60.1)	30.1 (86.2)
Average high °C (°F)	−4.4 (24.1)	−3.3 (26.1)	−0.6 (30.9)	3.3 (37.9)	8.3 (46.9)	12.2 (54)	13.9 (57)	12.8 (55)	8.3 (46.9)	4.4 (39.9)	0.0 (32)	−2.8 (27)	4.3 (39.7)
Average low °C (°F)	−11.1 (12)	−11.1 (12)	−8.9 (16)	−4.4 (24.1)	0.6 (33.1)	3.9 (39)	5.6 (42.1)	5.0 (41)	2.2 (36)	−1.7 (28.9)	−5.6 (21.9)	−8.9 (16)	−2.9 (26.8)
Record low °C (°F)	−27.8 (−18)	−28.9 (−20)	−27.2 (−17)	−20.6 (−5.1)	−10.6 (12.9)	−2.2 (28)	0.6 (33.1)	−1.7 (28.9)	−5.6 (21.9)	−12.8 (9)	−17.8 (0)	−26.7 (−16.1)	−28.9 (−20)
Average precipitation mm (inches)	83.8 (3.299)	66.0 (2.598)	86.4 (3.402)	63.5 (2.5)	88.9 (3.5)	81.3 (3.201)	78.7 (3.098)	94.0 (3.701)	149.9 (5.902)	144.8 (5.701)	116.8 (4.598)	78.7 (3.098)	1,132.8 (44.598)

Source: Sistema de Clasificación Bioclimática Mundial[5]

History and culture around the Arsuk Fjord

The area around Arsuk Fjord is known as the Norse Middle Settlement. A large number of houses, ruins and graves can still be found in around the Fjord which in the period between 1100-1300 was quite well populated.

In 1854 the mineral Cryolite was discovered and a mine to extract this was established and was in operation for the next 130 years creating unprecedented wealth and development in Greenland as well as in Denmark. During the peak operations it was the main port of entry for Greenland with regular ships going to United States and Denmark.

During the second world war the mineral Cryolite was considered a strategic resource essential for the aviation industry and a US naval station “Bluie West Seven” to protect it was established at Grønnedal in 1943 to complement the 1.000 soldier strong camp established at the Ivittuut mine. During the second world war the cryolite mineral from Ivittuut paid for all of Greenlands supplies and assistance coming from America as the ties to Denmark was temporarily cut off.

In 1951, Denmark took over the US military base at Bluie West Seven. Under the name "Grønnedal" it was headquarters for the Danish military presence in Greenland in the following 63 years. In 2012 the Danish military established a new Arctic Command in Nuuk and the marine station was abandoned in 2014. From September 2017, the Danish Defense has re-deployed a small unit to man the station again and work is underway to decide which facilities should be rehabilitated for long term use as a maritime logistics support unit.

In many ways the history of Ivittuut and Grønnedal is unique in the world as it is both world history, industrial history of Denmark and at the same time a special chapter in the history of Greenland. This is a story that deserves to be told and not many if any other locations in Greenland is so rich in historical records.

Government and political conditions

The establishment of Grønnedal Arctic Resort will reverse the negative trend around Arsuk fjord and pave the way for more economic activity and employment in the area based on sustainable global tourism.

Taking national and regional development aspirations into account this proposal is in line with the principles of the Government of Greenland investment strategy 2012 on financial accountability, sustainability and fiscal sustainability (Referenced)

It is also fully aligned with the 2016 tourism strategy of the Government of Greenland stressing the necessity to development tourism capacity in Greenland further over the next five years. (Ref 3.)

As a main stakeholder Danish Ministry of Defense is negotiating with the Government of Greenland regarding the transfer of selected buildings. Sermersooq Municipal council is also part of the negotiations as they own some of the key buildings including the school and former municipal administration buildings. The outcome of negotiations will be key for the terms and conditions for the use of buildings for this project.

Access and transport connectivity in Southern Greenland

Tourist travelling to Greenland arrive either from Denmark or from Iceland. There are no flights from North America directly to Greenland. All major towns are connected by either air or sea and the connectivity situation is that the towns can be compared to that of an island economy. The main entry point is Kangerlussuaq in central Greenland. From this airport passengers are distributed to smaller airstrips in smaller airplanes similar to the situation in for instance the Maldive Islands. However, this is bound to change with the expansion of the three new airports at Illulissat, Nuuk at Qaqortoq to be able to receive transatlantic air traffic within the next 3-4 years.

Sourthern Greenland is dominated by the small towns of Qaqortoq and Narsaq. The airport at Narsarsuaq continues to serve as the main entry point for fixed wing aircrafts from Reykjavik, Iceland and Copenhagen Denmark and domestically from Nuuk and Kangerlussuaq. In addition to Narsaq and Qaqortoq there are a number of smaller villages including the main Southern Norse Settlement at Qassiarsuk.

Passenger statistics for Greenland

Historically the arrival of tourists to Greenland in large numbers has largely been prevented by the price of approximately 1.000 Euro for flights to Kangerlussuaq from Copenhagen. This has meant a constant number of tourists at around 70.000-90.000 per annum for many years. This is in great contrast to the last ten years development in Iceland where the number of tourists has increased 10-fold from around 300.000 to almost two million per year (expected level for 2017). With three new airports that are able to take transatlantic flights the cost of flying to Greenland may become even more expensive if maintaining only little more than the present level of visitors. As a consequence, the three new airports and the opening up of Greenland to the global tourists will have to entail much larger volumes and much lower prices in order to generate the turnover necessary to make them economically viable and this perspective of lower prices and much larger volumes is indeed an interesting scenario for this project.

Communications

Greenland is connected to the global information streams by a large intercontinental sub-sea fiber optic cable of high capacity to the capital city of Nuuk that pass Arsuk at a distance of about 20 km. However, Arsuk is not directly linked to this major sub-sea cable, but is serviced by radio-link to Nuuk and Qaqortoq. The radio-link also hooks up Grønnedal and Ivittuut, so there is good Internet and affordable telecommunications through the existing line.

Grønnedal has 17 family villas suitable for visiting families © Peter Barfoed

5. Socio-economic analysis

Trends in population and demographics

The population is mainly Inuit (40.000), but a fair number of people with Danish background (approximately 12.000) also live and work in Greenland. The population is concentrated in a few larger towns on the West coast of Greenland. The capital in Nuuk with approximately 18.000 inhabitants is growing and further urban expansion (the Siorarsiorfiik project) is planned so that by 2030 Nuuk will reach 30.000. The smaller villages and settlements are struggling and many places will most likely have to close down as the young people find opportunities in towns more attractive. This includes villages like Arsuk next to Grønnedal.

Political environment

Naalakkersuisut, The Government of Greenland is seated in Nuuk on the West Coast of Greenland. The self-rule controls most aspects of public affairs except for Defense and Foreign Policy, which is still managed by the Government of Denmark. Greenland receives an annual subsidy of 3.7 billion DKK from Denmark. Greenland would like to become fully independent, but this is not likely to happen soon due to many challenges not least in the field of finances. Greenland is contrary to Denmark not member of the EU, which gives rise to some legal challenges in certain aspects.

The proposed facility at Grønnedal is situated on the Southern limits of Sermersooq Municipality, which is also covering the capital as well as part of the East coast. The more natural association would have been Greenlands Southernmost municipality Kujaleq Municipality as this encompass the Southern region town of Qaqortoq and the Southern International airport at Narsarsuaq.

Arsuk Settlement Council (Bygderåd) is a very local body covering the approximately 100 persons living in the small settlement of Arsuk 17 km from the proposed facility. In general Arsuk Settlement Council is positive towards any development that will bring jobs and economic growth to the area. However this must not be done at the expense of existing activities such as the fishing and hunting in the neighbourhood. The fish caught locally in the Arsuk Fjord are mainly halibut and wild salmon.

Local economy and investment climate

The Greenland economy is centered around fishing (mainly prawns, cod, halibut and mackerel). The public sector is important and a large part of the local economy is sponsored by the Danish Government. Several major enterprises are owned by the Government of Greenland. Greenland Airports own hotels in Kangerlusuaq and Narsarsuaq. The investment climate in Greenland and Denmark is considered very good with stability, no corruption, rule of law and investor protection. For more information see the Greenland Benchmark Report (Referenced)

Private sector development

After a decade of various unsuccessful attempts to kick off the extractive industries (offshore oil and mining), tourism is slowly becoming the new hope for an economic expansion in Greenland. However, until the airport investments are confirmed for Nuuk, Ilulissat and Qaqortoq there are uncertainties with regards to how this will play out in reality. Several major projects in Ilulissat, Nuuk and Qaqortoq will depend on a final green light for airport construction, however for Grønnedal there is little difference in arriving at a new airport at Qaqortoq or the old airport at Narsarsuaq.

A couple of major mining projects may also take off in Southern Greenland over the next 10 years. This include Greenland Minerals and Energy project at Kvanefjeld and Tanbreez project at Kringlerne both near Narsaq and both mining for rare earth elements. If these projects materialize approximately 1.000 men will be looking for leisure activities in the region, which could make Grønnedal an attractive destination for them as well. Australian company Rimbal Pty has a concession for the remaining minerals at Ivittuut, but it is not expected to take off due to legal complications.

Land matters and rights to property

It is not possible to own land in Greenland, so the land is not titled and not for sale anywhere. Buildings can be owned and title on buildings exists. You can also lease the use of government owned buildings for

instance for 30 or 50 years. All the buildings in Grønnedal belongs either to Danish Ministry of Defense or Sermersooq Municipality. There has been little interest from either of these authorities to continue owning buildings in Grønnedal, however with the recent decision of continuing with maritime activities in Grønnedal, the Ministry of Defense is re-considering its options and will by the end of 2017 decide which buildings to renovate for their future use and which will have to be abandoned.

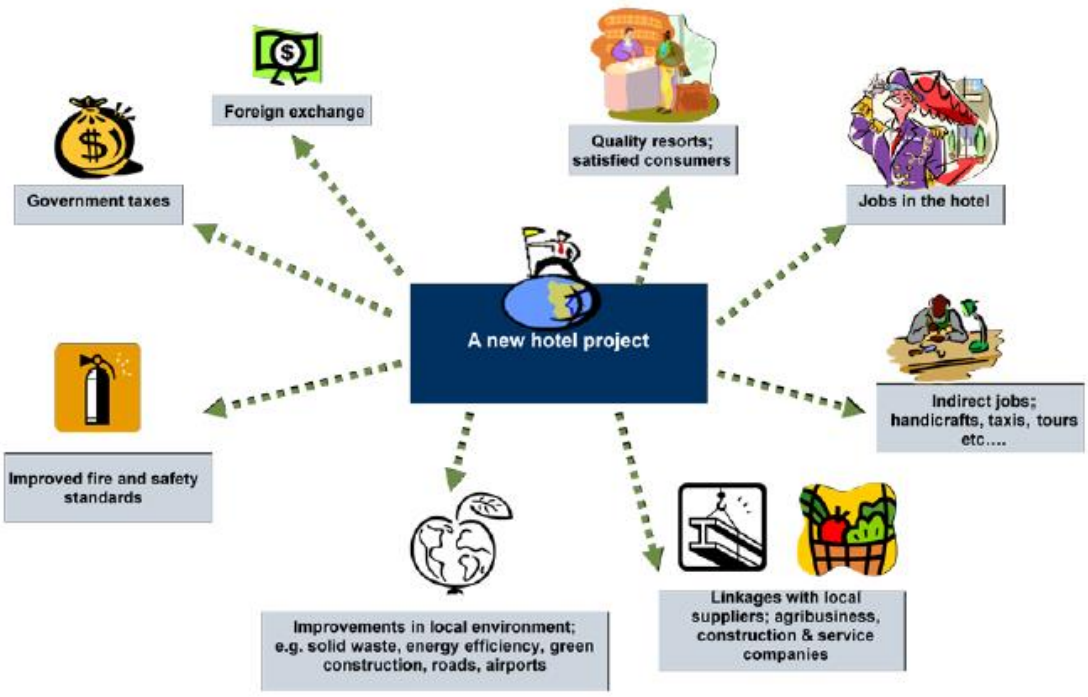
It will therefore be vital that a clear interest from the private sector is expressed end of 2017 or beginning of 2018 in order for this wish to be considered and negotiated with the present owners. Since there is no economic activity at Grønnedal at present the buildings are considered without value even though the cost of building them originally was several hundreds of million Danish Kroner. From this it is clear, that by organizing financially viable activities in the buildings, they will within a few years be transformed from liabilities to valuable assets – exactly the purpose of the Grønnedal Arctic Village and Resort project.

Development Effects of the proposed tourism development at Grønnedal.

The project will support the general economic strategy of Greenland to increase revenues from tourism. It is also in support of the intension to spread tourist activities out in a wider geographical area of Greenland to protect nature. The facility will further strengthen South Greenland as a destination worthwhile visiting and the connectivity within that region through helicopter, ship and boat services going back and forth between villages including occasional visits from large cruise ships.

Large international investment funds providing capital for investments for emerging markets has invested in various hotel projects for many years with the view of creating growth and employment in developing countries and lately in support of the 17 global Sustainable Development Goals. The assessment by major international investors such as International Finance Corporation and also the Danish state-owned fund IFU is that hotels have a very good development effects in terms of direct jobs, indirect jobs and contracts for service providers and suppliers (see IFC references and detailed impact model in appendix).

Figure 1: IFC Model of Development Impact from Hotel Investments



Grønnedal Arctic Village and Resort will also provide job opportunities for local people in the area. It is estimated that more than 10 direct jobs will be created on-site and additional 30-40 indirect jobs will be created in services and support functions associated with the development. From hotels in isolated areas like the Maldives such job creation also include other services related to logistics and food supplies etc.. In this case this will mean jobs in Narsarsuaq, Qaqortoq and Narsaq and other places in the circuit of South Greenland tourism (See reference 3, 11 and 12),

For investors seeking to create local impact this project offers the opportunity to support a local community that most likely will disappear within the next decade without new economic activity in the area. Shared benefits will also be improved logistics that will not only benefit visitors but also the local people and the South Greenland region.

Applicable taxes

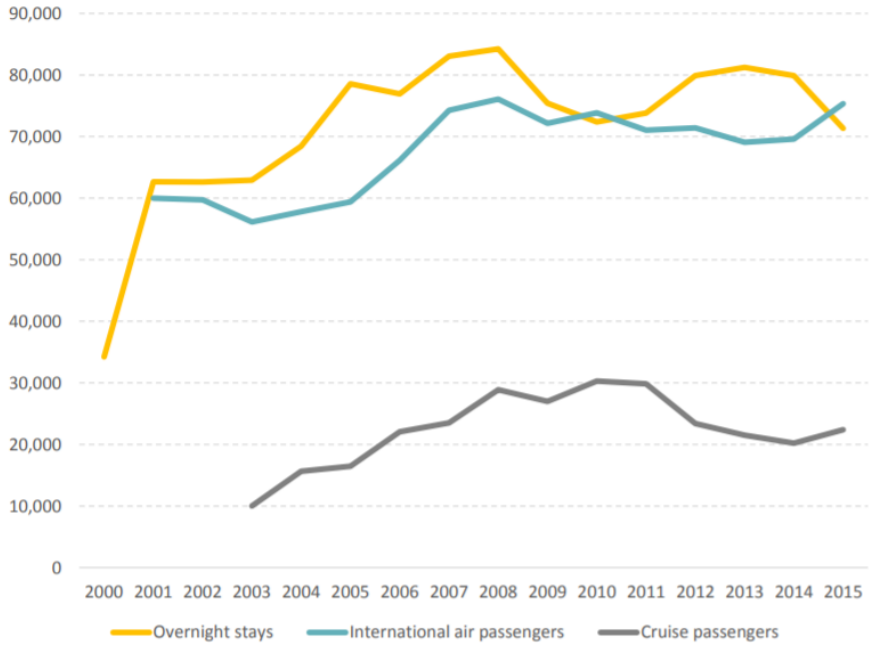
Type of tax	Standard rate	Relevance and application to this investment
Corporate Income tax	31.8	The Corporate income tax applicable for the proposed business is XX%. A tax holiday may apply. Losses can be caried?
Turnover tax	0	Not applicable
Excise duty	0	Not applicable
Customs import duty	Various	Duty for capital goods from outside Greenland. Vary according to articles
Withholding tax		No withholding tax on interest Applicable for repatriated profits
Value added tax	0 %	Greenland has no VAT and purchase in DK should be considered a sale outside of EU
Royalty tax	10 (30)	Not applicable for this business
Dividend tax	35	This is applicable to dividends from this business

6. Tourism in Greenland in general

Background

Greenland has been a destination for the dedicated few. Over the past many years the number of tourist has been relatively steady at 60-80.000 persons per year. If Greenland is going to reap significant benefits and enough visitors to pay for three international airports serving a population of only 50.000 people this number will have to increase by two or three fold within a few years.

It is clear that Air Greenland for many years has financed its expensive domestic service in Greenland by excessive pricing on their transatlantic flights (typically 1.200 Euro roundtrip), thereby creating a bottleneck for development of the tourism sector. With the general decrease of airfares in Europe and North America, it is clear that Air Greenland's monopoly soon could be challenged by cheaper airlines that would like to bring tourists to Greenland.



Source: Greenland Benchmark Survey 2016, data from Greenland Statistics

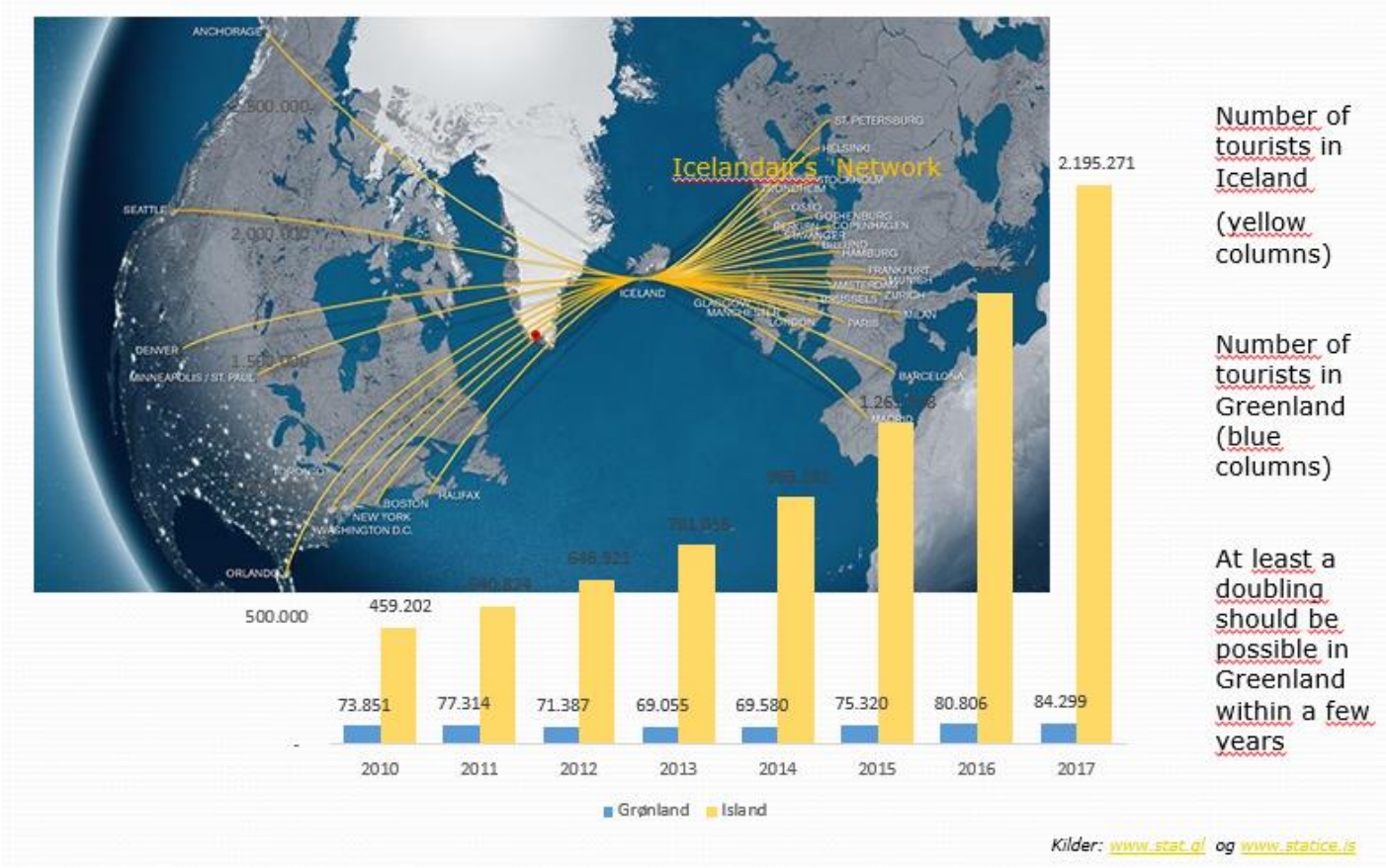
Arctic tourism trends from Svalbard, Iceland and Greenland

The global tourist is always looking for new places to go and global tourism continues to grow at high rates as the middle class emerge in many middle-income countries including China. Arctic tourism is expanding rapidly with Iceland taking the lead. Over the last decade the number of visitors to Iceland has increased six times from around 300.000 to 1.800.000. In addition to visitors staying in Iceland the transit volume has exploded with almost 9 million passengers expected through Keflavik in 2017 using the Airport as a hub between Europe and North America.

It is estimated that if the 1.8 million tourists in Iceland stays 6 days and spend about 1.000 dkk per day the total market size of this is 10.8 billion dkk per year. Due to Icelands location as a transatlantic hub, and the lack of facilities and infrastructure in Greenland it is not realistic to envisage the same numbers coming to Greenland, but recent analysis stipulates [Ref. 5] that Greenland should be able to increase by 5 % annually and double its number of visitors within a few years. Tripling the numbers should also be perfectly possible based on the huge market potential. It is expected that Grønnedal will obtain its majority of guests from this new business.

Apart from the expansion in nearby Iceland Northern Norway and Svalbard is also experiencing an increased interest from overseas tourists arriving by air and by cruise-ships putting pressure on local infrastructure and hotel facilities. This flow of tourists may also spill over to Greenland when cruiseships increasingly make a North Atlantic loop as part of their circuit.

The market potential for arctic tourism is huge



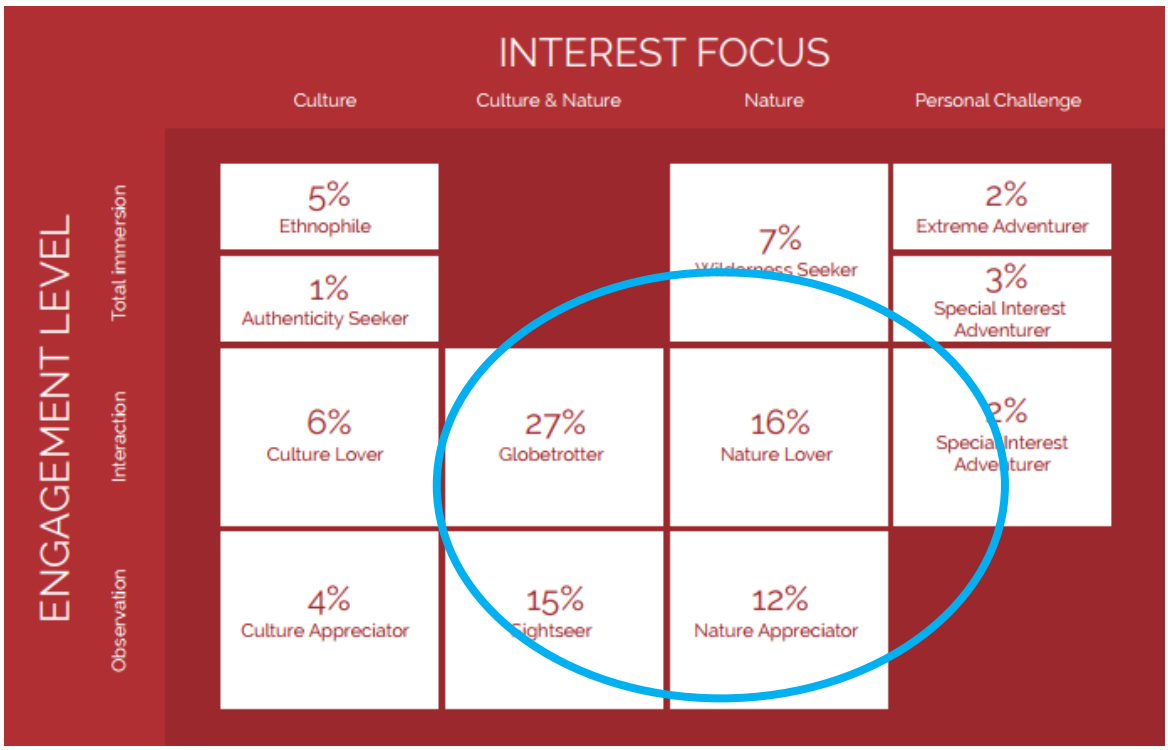
Types of tourism in Greenland, segments as identified by Visit Greenland

The present tourism in Greenland can be divided into several sub-segments. In 2015 Visit Greenland published a thorough market segmentation study identifying 11 market segments. This project will target the mainstream tourists, where the largest volumes can be expected (blue circle).

When looking at the tourists arriving in Greenland Visit Greenland has made a finer segmentation as shown in the figure on the next page. From this table it is clear that the bulk of visitors are found among the segment that seeks relatively little interaction such as the globetrotter, the nature lover, the sightseer and the nature appreciator – all more or less mainstream tourist – see [Ref. 4].

Nevertheless, to add the expedition or pioneer touch at the proposed Grønnedal Arctic Resort activities such as diving, mountain climbing, kayaking, hunting, sportsfishing etc will be available for limited volumes of tourist seeking some kind of light interaction (i.e. Globetrotter and Nature Lover).

It is obvious that these segments will continue to be relevant for the future expansion, but it is also clear that the mainstream type of tourists will emerge in much larger numbers when Greenland is accessing major flows from the international tourism stream passing through Iceland or coming directly from home explicitly for a few days light Arctic adventure in Southern Greenland.



Source: Greenland be a pioneer, Market segmentation in Greenland, Visit Greenland 2015

Supporting infrastructure

Unfortunately, all of Greenlands towns are completely isolated from each other and only accessible either by air or by ship. In addition, their energy supply is not from a large grid, but from local hydro-power or diesel-power supply. So in many ways Greenland cities are de facto infrastructure islands in the sea.

This means that Greenland from a tourism point of view has much in common with island states like the Maldives and other places with similar challenging logistics. Based on experience from these locations it is clear, that the notion of **connectivity** will be crucial for Greenlands further development of the tourism industry.

Airports, heliports and shipping connectivity

Access to Grønnedal is possible either by helicopter service to the existing heliport or by boat from the nearest international airport at Narsarsuaq or Qaqortoq. The existing transfer options entail either a 45 minutes helicopter flight, a 4-6 hour fast small boat ride (Blue Ice Explorer or Disko Line) or a much slower 10 hour passengership transfer for a cruiselike experience (MS Saffaq Ittuk operated by Royal Arctic Line).

Relevant concessions, permits and authorisations

The operation at Grønnedal Arctic Resort will have to acquire a number of business licences and permits. These will be given to the Greenland registered company operating the resort.

- Regional tourism concession for Arsuk Fjord and environs (2016 regulations) will be issued by the Government of Greenland, Department for industry, Labour and Energy
- Hotel, restaurant and general tourism permit will be issued by the Council of the Municipality of Sermersooq
- Recreational hunting and fishing permits can be issued on the internet by the local hunting and fishing control officer of the Municipality of Sermersooq.
- Permissions for collection of sample minerals can be obtained by internet request to the government of Greenland, Department of Mineral Resources.

Manpower

Staff at hotels in Greenland are mainly local people supplemented by seasonal workers from Denmark and other Scandinavian countries. In the case of Grønnedal nearby Arsuk could provide some general support staff, as well as people from the next major towns of Narsaq and Qaqortoq.

A fairly large number of nature guides in Greenland comes from Denmark for the reason, that it takes a good understanding of both the destination and the origin of the visiting tourist to make the connection and to story tell into current international agendas top of mind such as climate change, global warming, biodiversity conservation and sustainability aspects.

Fortunately, an increasing number of Greenlandic tourist guides are educated these years in anticipation of more tourists coming to Greenland and it is expected that Grønnedal Arctic Village and Resort will be able to employ several of them.

Existing buildings to be renovated and included in Grønnedal Arctic Resort, photographed early April 2017 photo: Jan Bøgsted

7. Demand analysis

Tourism in Southern Greenland

With a total of 5.000 tourists per year for the time being arriving in the Southern part of Greenland the proposed facility is an ambitious project. The existing tourists in this region are to a large extent travelling around locally between the villages and small towns. Important destinations are Qassiarsuk Norse settlement, Igaliku, Qaqortoq and Nanortalik. Blue Ice Explorer and Tasermiut South Greenland Expeditions, a Spanish zodiac adventure company is providing logistic support within the region. Activities include hiking and kayaking in the Fjords. Grønnedal Arctic Resort would become a most welcome Northern destination of the South Greenland circuit.

Market positioning of the subject resort facility

With a potential for 2.000-4.000 tourist per year the proposed facility will be able to cater for a substantial part of the existing tourists in Southern Greenland.

However, it is expected that the number of tourists will grow two or three-fold in the next 10 years to come. In this perspective it is not unrealistic that every fourth or fifth tourist to Southern Greenland will also want to go to Grønnedal at one point during his/her stay in the region. Thus most of the tourists will come from a larger market and not from carving out a marketshare in the present volume of tourists to Southern Greenland.

With time it is also expected that the proposed facility may attract destination visitors that specifically travels to South Greenland to stay for one week around Grønnedal, Ivittuut and the Arsuk Fjord. It is expected that the new Grønnedal Arctic resort will place great emphasis on the Internet and positioning through various platforms such as AirBnB and other travel and accommodation websites that reach out to the global tourist.

Family and relations holidays demand

Greenland is missing the opportunity for families to come and stay as a family. It has been a very expensive destination outside the reach of an ordinary European middleclass family not only because of excessive pricing of airfares to and from Greenland, but also because of limited family oriented accommodation. The 17 family villas in Grønnedal will provide exactly this for a family of up to six people.

"*One of the accommodation forms, several interviewees pointed to were the hut villages situated in close proximity to grand nature. The advantage of this type of accommodation is that accommodation and the experience of nature combined in one product, which is strong in relation to the tourist segments that are particularly relevant for Greenland. Another advantage is that the cottages can be closed down out of season and thus can be adapted to the Greenlandic tourist season." Tourism development and growth through changes in airport structure* ", [Ref. 2]

Two responses to this demand have been built in the Disko Bay area: Ilimaneq cabins built in a public private partnership by World of Greenland, Qaasuitsup Municipality and Realdania. The other is Glacier Lodge Eqi built by Topas Greenland A/S. No such development exists in Southern Greenland. Furthermore, the family villas at Grønnedal will be of a much higher standard than the other developments.

The size of the global market for week long packages is very large and the competion is fierce. The opening up of Greenland to this segment hold potential for a significant boost in tourist volumes for Southern Greenland requiring much more transport, accommodation and services.

Nature holidays and leisure demand

The unique nature around the Arsuk Fjord is expected to attract many types of “nature lovers”. The sportsfishermen, the sports diver, the hunter, the hiker, the mountaineer, the kayaker, the mineral hunter, and many more. The availability of quality sports equipment and experienced guides will be key to provide a holiday with various degree of interaction in an awesome nature truly special and appreciated with and without expert interpretation guide. The risk for oversaturation at the level of 100-150 people visiting a day in the 46 kilometer long Arsuk Fjord complex is negligible.

Business demand, Conference and corporate group demand

The domestic market for conferences in Greenland will be interested in going new places. Grønnedal will be such a place and up to a dozen events could be expected annually. However the real potential for business events will materialize as soon as the accessability improves. If just one of several potential mining operations in Southern Greenland materialize blue and white collar workers will be looking for a place nearby that can take them out of their everyday routines on a regular basis. Grønnedal Arctic Village and Resort would be an obvious choice.

Research

French researchers used Ivittuut for their baseline study on climate change for several years due to the long historical track record of measurements there. The Arrsuk fjord dynamics and its surrounding is particularly suited for this type of studies and there is potential for more international research along the lines of organisation of the New Ålesund research station at Svalbard (www.kingsbay.no), where several European universities have their field stations. The project will be in a position to offer logistical support and accommodation at a fee and this may become an additional source of income not included in this study.

MS Fram at Ivittuut with Grønnedal in the background Photo Hurtigruten/Hilde Foss

Cruise tourism demand

In 2017 almost 10.000 tourist visited Southern Greenland aboard cruise ships. Although this number is very impressive experience shows that unless international standard accommodation, museums, shops and facilities are available, limited economic benefits are accruing locally from this type of tourist.

The Norwegian operator “Hurtigruten” is looking at the possibility to establish a Northern and a Southern loop out of Nuuk as soon as the new airport for the capital city is established. The Northern loop will include Disko Bay and the Southern rute will cover destinations in the Southernmost part of Greenland. If these plans materialize the port in Grønnedal and the historical mining town of Ivittuut inclusive the temporary closed down mining museum will form a natural break and potential visiting point, where people can get on and off the cruiseship if they would like to spend some days ashore.

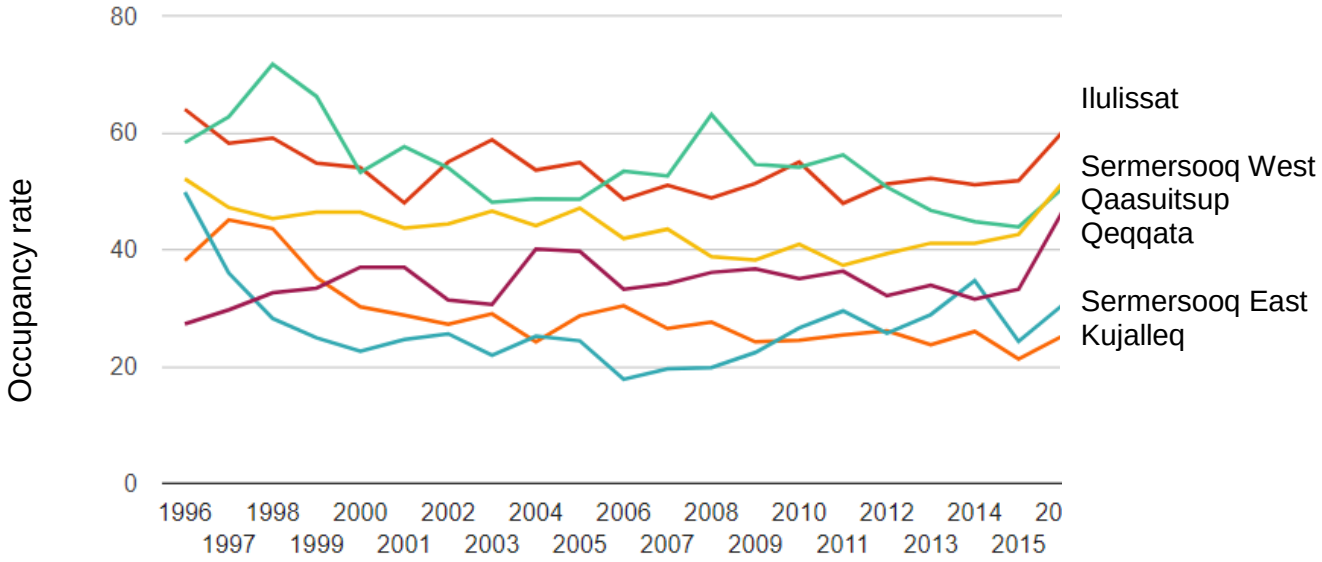
A visit to Ivittuut mine and the Ikait subsea columns are already part of the standard itinerary of several Arctic cruise ships from companies like Hurtigruten (MS Fram) and Hapaq-Lloyd (MS Hanseatic) visitors options and travel combinations could be greatly expanded if better local facilities were available.With a large capacity cruiseship in a regular coastal route along the southern coast of Greenland this source of visitors could become extremely relevant for the project in the long run. In addition to Hurtigruten and Hapaq-Lloyd’s large cruiseliners will also have the opportunity to moore and use Grønnedal Arctic Resort guides and day-

trips offerings as well as buying local handicraft and eating ashore perhaps after some days at sea between Iceland and Greenland.

8. Supply analysis

Introduction

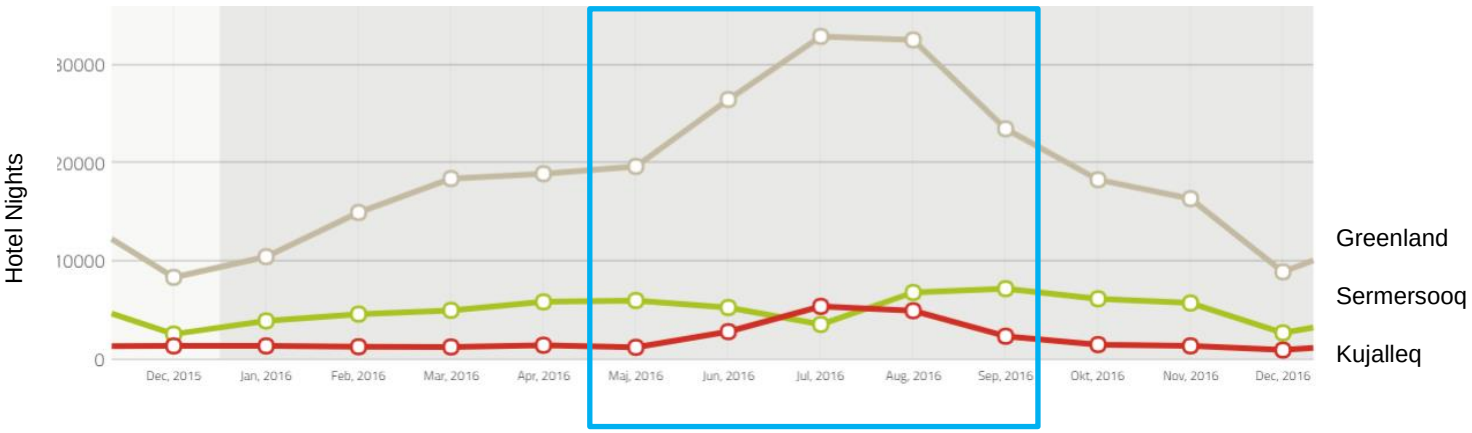
Hotels in Greenland are generally fairly expensive (800-1.800 dkk per person per night) and dominated by three star rated accommodation. Only two hotels (Arctic in Ilulissat and Hans Egede in Nuuk) has the four star rating (see table and annex for details).



The average annual occupancy rate is very fluctuating in Greenland as can be seen from the above graph (data from Greenland Statistics). In general the occupancy rate range from 20-60 percent corresponding to very low occupancy (10-20 %) during winter and a very high occupancy (+80%) during summer. According to industry sources summer of 2017 had several hotels completely sold out during the months of June-July-August.

Seasonality

As can be seen from the graph depicting number of nights in hotel accommodation below there is a strong seasonaility in Greenland with a peak between May and October (data from Greenland Statistics). The capital and Sermersooq Municipality however receives less visitors as compared to South Greenland region (Kujalleq). This project intends to be in operation in the summer months only in the first couple of years slowly expanding into the shoulder season thus capturing the bulk of tourists.



Seasonal window of highest occupancy
adressed by this project

Existing tourist facilities and services in Southern Greenland

In Southern Greenland only few hotels exist. The largest Hotel Arctic (LINK) is found at the international airport at Narsarsuaq (UAK). Another important hotel in the region is found in Qaqortoq (LINK). In addition there is a hotel in Narsaq (LINK). The company Blue Ice Explorer service the incoming tourist with regional boat transfers between villages and hiking routes (LINK) . Another company Tasermiut South Greenland Expeditions (LINK) offers packages holidays exploring South Greenland and both companies will be interesting in terms of collaboration on services to and from Grønnedal. Disko Line also operate local boat transfers on a concession from the Government of Greenland. A number of other travel agencies offers trips to South Greenland as combinations of boat travels, hiking, kayaking etc. With a new destination in Grønnedal there will be scope for extending the routes and tourist circuit considerably as will the possibilities to connect to the coastal steamer Saffaq Ittuk and other vessels.

Local area competitive supply

It has not been possible to obtain exhaustive data from the major hotels. However the table below is an attempt to show the situation. The table will be updated if new and more accurate information becomes available.Verified numbers (in blue boxes) and indicative numbers for Grønnedal Arctic Resort (in rose boxes). It can be noted that the average length of stay is considerable longer for the family Villa product because the per person per night cost is much lower than at hotels.

Hotel Competitive Supply	Rating	Capacity – no of beds	Conference capacity	Summer Occupancy rate	Total number of visitors annually	Average Stay	Total number of hotel nights	No of employees (high season)
Arctic Hotel Narsarsuaq	***	180	75	60	3.000	2	6.000	30
Narsaq Hotel Narsaq	***	54+60	0	80	2.000	2	4.000	15
Hotel Qaqortoq, Qaqortoq	****	50+10	30	80	3.000	2	6.000	20
Hotel Hans Egede, Nuuk	****	156+20	120	70	8.000	2	16.000	100
Hotel Kangerlussuaq, Kangerlussuaq	***	150+40	40	80	16.000	1.5	24.000	55
Hotel Icefjord Ilulissat	***	60	60					
Hotel Arctic, Ilulissat	****	120+	120	80-90	4.000	3	12.000	80
Grønnedal Arctic Resort (phase1)	***	100	30	60-90	2.000	4-6	10.000	10+20

New hotel developments

Minor expansions of the existing hotels is expected over the next couple of years. As soon as the final location for Greenlands new airports has been decided (Qaqortoq incl.) it is expected that some more smaller hotels will materialize in the urban centers. It will however take several years and they will mainly cater for tourists in the circuit or domestic travellers as they don't have similar concentration of attractive discoveries, natural resources and history as can be found at Grønnedal, Ivittuut and Arsuk Fjord.

Product Pricing

It is key that in order to access the global tourism streams the Arctic product must be competitive. In the past price levels for Greenland has been non-conducive to broader flows of tourists. The unexpected success of Iceland in recent years can partly be explained by an aggressive pricing policy combined with clever marketing of the Iceland tourist product most notably vulcanoes and wild and untamed nature. Furthermore Iceland has really worked on packaging tours and trips and establish internal connectivity by air, sea and road throughout the island.

The global tourist will increasingly plan his travel from his home computer. This means that the initial airfare pricing constitutes a gate to pass. In the past pricing of transatlantic fares has been prohibitive for this kind of modern tourist. Only occasional campaigns has made it possible to fly to Narsarsuaq (UAK) for around 3.000-4.000 dkk and it is this type of pricing or less that will facilitate larger volumes to Greenland.

Furthermore the global tourist can go anywhere provided that both the price and the package is right. It is our conviction that price elasticity on travel to Greenland is much greater in the global market than described by Rambøll in their analysis of the existing (mainly domestic Danish) market (see Reference). This means that as prices come down the demand will go up and more will be open to travel to the unexplored Greenland.

Below is shown some competitive packages with different elements in place. It is also clear that internal transfers of high cost and long duration could also be an issue unless the voyage is made proactive part of the discoveries and adventure. In Maldives transfers of 4-6 hours on the open ocean with nothing to see on the way is much less attractive than a cruise in the Greenlandic Archipelago with glaciers, mountains and icebergs.

From the calculations below it can be seen that the family houses on offer is considerably less costly per person than hotel rooms. This aspect should also be brought to attention in relation to local competition between hotel accommodation in Greenland, where the Arctic village at Grønnedal actually represents a completely new product. With the village at Grønnedal there is an opportunity to offer a global market penetration pricing that will not take market shares from the existing hotels, but instead attract completely new global tourists to Southern Greenland.

Family holidays for 4 persons (Price estimates in DKK)	**Grønnedal** Per person, or per day	Per week Per family, 4 persons	**Egypt** Per person, or per day	Per week Per family, 4 persons	**Maldive Isl.** Per person, or per day	Per week Per family, 4 persons
Airfare roundtrip	4.000	16.000	4.000	16.000	4.000	16.000
Aditional costs:	Copenhagen Narsarsuaq		Copenhagen-Sharm El Sheik		Copenhagen - Male	
Local transfer, speed boat, taxi etc.	1.250	5.000	400	1.600	900	3.600
Accomodation, cabin, hotel, guesthouse		8.000	900	10.800	1.100	13.200
Food and Beverages	200	5.600	300	8.400	200	5.600
2 Ekskursioner, boat trips, bus tours	1.000	4.000	1.200	4.800	800	3.200
Local transfer, public transport	1.250	5.000	400	1.600	900	3.600
Souvenirs and miscellaneous			300	1.200	200	1.200
Total expenses	**7.700**	**43.600**	**7.500**	**44.400**	**8.100**	**46.400**

Notes:	Notes:	Notes:
Air fare in summer season	Air fare cheaper out of season	Air fare , normally more expensive
Accomodation in cabin for 6 persons	Transfer in bus	Accomodation in two rooms
Food and drinks bought in Arsuk	Accomodation in two rooms	Food and beverage from local café
Excursions with speed boat	Food and beverage at buffet	Excursions with speed boat
Lokal transfer med Sarfaq Ittuk	Excursions via hotel/agency	

Furthermore, the availability of local tours and discovery adventures should be taken into consideration when a family makes up their mind on a certain destination. Here Grønnedal also have both completely unique and general arctic adventure to offer (see annexed photos).

Transfer options

Airlines

With the projected number of tourists will eventually become possible for the project to negotiate a separate airline arrangement once per week during the season. This can be done with Air Greenland, Air Iceland Connect, Icelandair or other companies such as Jettime. In the meantime the project will have to rely on existing airlines and connections out of Narsarsuaq.

Passenger ships

On the West coast of Greenland Arctic Umiaq Line is operating the traffic liner Sarfaq Ittuk in a one week long loop from Ilulissat in the North to Qaqortoq. At present this slow moving liner stops at Arsuk and onward transfer to Grønnedal takes about half an hour in speedboat. With a larger number of tourists going to Grønnedal it may be possible ask the operators to include a stop in the port of Grønnedal. The capacity of Sarfaq Ittuk is up to 200 passengers and the transfer between Narsaq or Qaqortoq takes about 8 hours of scenic cruising between fjords and glaciers. From a tourism point of view the transfer is a discovery in itself and should be marketed as such.

Fast RIB boats and ordinary Targa type of boats

The transfer in smaller boats can be done much faster. Depending on the exact boat type and under good weather conditions it will take between 4-6 hours. The advantage of smaller boats is that they can operate in the sheltered waters of the fjords and cut across a small passage in the Southern region archipelago (The Nyboe channel) reducing the distance travelled. Several companies are already in place in Southern Greenland providing this service (see appendix) and large RIB of up to 25 persons are also available on the market. However a boat with some shelter like the Targa type of boats is better for all year operations.

Helicopter transfer

Grønnedal has a heliport facility already. However transport by helicopter is rather expensive, so this option is probably mostly going to be used for express deliveries and VIP's. The transfer by helicopter will take only 45 minutes for the 144 km between Grønnedal and Narsarsuaq. Air Greenland has a helicopter at Narsarsuaq and Danish Meteorological Institute has an Ice Patrol Helicopter also available for charter flights.

Water planes

The use of water planes in Greenland has been applied by the Danish Navy for almost a hundred years. For many years the Catalina was the only regular provider of mail and urgent supplies to Grønnedal. In similar settings in Canada the Twin Otter 14 passenger water plane opened up the frontier by enabling access for hunters to the most remote places in the Northern territories. Furthermore, the investment needed at both ends will be a small floating platform for passenger transfers.

It is expected that as the volume of tourist increases a regional operation of water planes in Southern Greenland would become feasible which would also benefit the flow of tourist to Grønnedal. Interestingly it is a Danish owned company that opened up connectivity of the Maldive Islands, which enabled the booming of atoll resorts 15 years ago and the same company operates the daily Copenhagen-Aarhus flight.

M/S Saffaq Ittuk operated by Arctic Umiaq Line

Targa type of boat opeated by Blue Ice Explorer

Air Greenlands Bell 202 Helicopter

Nordic Sea Planes Twin-Otter

9. Financial analysis

General assumptions and number of visitors

Generel Assumptions

	Phase 1				Phase 2			Phase 3		
Year 0	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Length of season days	**140**	**140**	**154**	**154**	**168**	**168**	**168**	**182**	**182**	**182**
Length of season weeks	**20**	**20**	**22**	**22**	**24**	**24**	**24**	**26**	**26**	**26**
Villa guests mean per day	**24**	**56**	**56**	**64**	**64**	**64**	**72**	**72**	**72**	**72**
Hotel guests mean per day	**-**	**-**	**-**	**-**	**16**	**32**	**40**	**60**	**60**	**64**
Conference guests mean per day					**8**	**10**	**11**	**13**	**13**	**14**
Total number of guest per/day	**24**	**56**	**56**	**64**	**88**	**106**	**123**	**145**	**145**	**150**
Villa guest total/year	480	1.120	1.232	1.408	1.536	1.536	1.728	1.872	1.872	1.872
Hotel guests total /year	-	-	-	-	384	768	960	1.560	1.560	1.664
Conference guests total/year	-	-	-	-	100	150	200	450	450	450
Total number of guest per/year	**480**	**1.120**	**1.232**	**1.408**	**2.020**	**2.454**	**2.888**	**3.882**	**3.882**	**3.986**
Number of nights in villas/year	3.360	7.840	8.624	9.856	10.752	10.752	12.096	13.104	13.104	13.104
Number of nights in hotel/year	-	-	-	-	2.688	5.376	6.720	10.920	10.920	11.648
Number of nights in conference/year	-	-	-	-	300	450	600	1.350	1.350	1.350
Total number of nights/year	**3.360**	**7.840**	**8.624**	**9.856**	**13.740**	**16.578**	**19.416**	**25.374**	**25.374**	**26.102**

A number of assumptions has been made in order to calculate operational data for the new arctic resort facility. In general a five month operational season is anticipated from May to September resulting in 140 days increasing to 182 days at the end of phase 3. In the beginning only few family villas will have been refurbished. Furthermore, it is not realistic to have all units rented out at all times due to maintenance and repairs etc.

It is expected that the facility development will take place in 3 phases: The first phase of the development will be a “Proof of concept” whereby 17 + 6 family houses will be refurbished and rented out to a global audience of visitors open to an Arctic village experience with emphasis on family groups travelling together. This phase will also include a small café and shop.

The next phase will be a “hotel expansion”, which will add already existing 32 standard hotel rooms and 10 apartments to the facility. This will further add to capacity and tap into the existing market of tourists. This is planned to be available coinciding with the development of a new airport facility in Qaqortoq, Southern Greenland.

The third phase “Arctic resort” will include an upgraded restaurant and Arctic health, spa, and conference facilities, which will make the facilities attractive for activities also in the shoulder season thus expanding the operational season and making even better use of the facilities.

The overall ambition level of this project is to double of number of tourist in South Greenland (both in numbers and in overnight stays) over 10 years!

Project pre-operation and start date

The preparation for a new tourism facility will take some time and much of the paperwork will have to be handled by a project organisation, which should take care of government relations, Municipal and Village Council relations as well as optaining permits etc.

From a logistical point of view, it would be very convenient if the FES could be convinced to shift from plan and execute the dismantling and instead plan and execute the renovation work prior to a commercial takeover. It is most likely that the company that is actually is going to do the on-site work will be either a local Narsaq or Qaqortoq based company or the long-lasting service partner for FES called DanStruct A/S. Since much of the rehabilitation work can only be done during the summer season timing is crucial. With a phased approach the project can start off slowly with the rehabilitation of half the family villages at Grønnedal. Then the following year the other half can be renovated.

Based on the schedule that the Danish Ministry of Defence has provided at a meeting in June 2017 it will be crucial that investors and future operators are identified end of 2017 early 2018. By that time a plan for which building will be re-used should be ready and the Danish Defence can open the doors to negotiations with interested parties.

Hopefully then in the summer of 2018 the planned renovation can be assed and carried out during the summer of 2019 with a realistic opening of the facility in 2020.

Revenue generation

The analysis of the different type of accommodation available at Grønnedal points to several distinct revenue streams: Accomodation in family villas (cabins), Accomodation in hotel type of rooms, accommodation in self-contained apartments and business conferences. The revenue form food and beverage, boat transfers and local boat trips are separate activities which could be the responsibility of a single operator or independent companies. Outsourcing some of these activities to reduce risks is tempting, but the decision will depend on how the project evolve over time and which operators will be keen to do it. Quality and reliability is also key parameters which should be factored in such calculations.

The family villas option is a new product in Greenland and it will target families and relations travellers that would like to stay longer than seen in the hotel market. Typically they would stay at the resort 5-10 days depending on their circumstances. As each cabin will have the capacity of up to six beds it is expected that normally four guest would be renting this type of accommodation.

In the beginning there is a good potential for revisits among the 5.000 ex-service men and their families that spent time at Grønnedal and they can be targetted through their existing dedicated homepage and the Grønnedal Association. In the long term as the facility in Grønedal becomes more well known internationally the facility is expected to be fully booked in the season 90% occupancy corresponding to an annual occupancy of 45 %. This occupancy rate is similar to the annual occupancy for existing hotels in Greenland.

Accomodation in cabins (phase one)

		Phase 1				Phase 2			Phase 3		
Rental of villas	**Year 0**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Number of villas		10	20	20	20	20	20	20	20	20	20
Average guests/villa		4	4	4	4	4	4	4	4	4	4
Number of weeks/year		20	20	22	22	24	24	24	26	26	26
Base price per villa per week		4.000	4.000	4.000	4.000	4.000	4.000	4.000	5.000	5.000	5.000
Additional price per guest per week		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Average price per villa per week		8.000	8.000	8.000	8.000	8.000	8.000	8.000	9.000	9.000	9.000
Occupancy rate during the season		60%	70%	70%	80%	80%	80%	90%	90%	90%	90%
Revenue from villas		**960.000**	**2.240.000**	**2.464.000**	**2.816.000**	**3.072.000**	**3.072.000**	**3.456.000**	**4.212.000**	**4.212.000**	**4.212.000**
Average number of villa guest in season		24	56	56	64	64	64	72	72	72	72
Total number of villa guest per year		480	1.120	1.232	1.408	1.536	1536	1728	1872	1872	1872
Number of days per year (season)		140	140	154	154	168	168	168	182	182	182
Average length of stay in days		7	7	7	7	7	7	7	7	7	7
Total number of villa nights per year		3.360	7.840	8.624	9.856	10.752	10.752	12.096	13.104	13.104	13.104

Standard accommodation in hotel like rooms will also be made available after year four. This is a product that already exist in South Greenland, but it will supplement the offering for tourists who are only travelling in couples or single tourists who would like to be on their own. It may be possible that this form of accommodation can be activated earlier should the need become evident. The calculations take into consideration a fairly low occupancy rate in the beginning and most likely not as high as the family villas. The hotel element will add the necessary volumes that will be required for additional facilities such as high-end restaurant, health and spa facility etc.

Accommodation in hotel (phase two) and apartments (phase three)

Hotel and apartments	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Hotel number of double rooms						32	32	32	32	32	32
Apartments double room									10	10	10
Price per night (double room)						750	750	750	750	750	750
Average number of rooms per day						8	16	20	30	30	32
Average number of hotel guests per day in season						16	32	40	60	60	64
Total umber of hotel guest per year						384	768	960	1560	1560	1664
Number of days per year (sæson)						168	168	168	182	182	182
Average number of days per stay						7	7	7	7	7	7
Total number of hotel guest nights						2.688	5.376	6.720	10.920	10.920	11.648
Total number of rooms night						1.344	2.688	3.360	5.460	5.460	5.824
Occupancy rate during the season						25	50	63	71%	71%	76%
Revenue from hotel and apartments						**1.008.000**	**2.016.000**	**2.520.000**	**4.095.000**	**4.095.000**	**4.368.000**

Conferences and groups

Conference facilities	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Number of facilities					1	1	1	1	1	1
Number of guests per conference event					20	20	20	30	30	30
Number of events per year					10	15	20	20	20	20
Average number of days per event					3	3	3	3	3	3
Additional price per guest per day					1.000	1000	1000	1000	1000	1000
Average price per conference guest					3.000	3000	3000	3000	3000	3000
Occupancy rate during the season					50%	50%	50%	75%	75%	75%
Revenue Conferences					**300.000**	**450.000**	**600.000**	**1.350.000**	**1.350.000**	**1.350.000**
Number of conference guests per year					100	150	200	450	450	450
Number of conference nights per year					300	450	600	1.350	1.350	1.350

The revenues from conferences and business groups will depend on the general outlook for business in Greenland. If some of the airports and mining projects materialise it will probably be very good business to offer a regional retreat in the vicinity of the construction sites area etc. The conference business will most likely really kick in during phase three.

Revenues from Food and beverage could become a lucrative business area contributing significantly to the bottom line. The fact that there are no alternative providers of café and restaurant service is both a serious responsibility, but also potentially very good business. The visitors staying in the family villas could bring their own food or buy it from the café-shop in phase one. In phase two the café-type of shop will have to be upgraded to a full-fledged restaurant and hopefully to a high-end Arctic kitchen type of operation. Based on experience from elsewhere is most likely that the revenue stream could become even more prominent as the resort facility develops. The calculations are based on an average of 50 percent profit margin on food and beverages and potentially over time a total of as much as 450 kroner per person per day. The sales include all sorts of items sold from the café-shop and restaurant.

Food & Beverages in Cabins and hotel

Sales in shop and cafe	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Total number of guests/year	480	1.120	1.232	1.408	2.020	2454	2888	3882	3882	3986
Food and beverage per guest per day	150	150	200	200	250	250	250	300	400	450
Profitmargin sales	50%	50%	50%	50%	50%	50%	50%	50%	50%	50%
Sales per day	3.600	8.400	11.200	14.400	22.000	26.400	30.800	43.560	58.080	67.320
Revenue shop, food and beverage(Gross)	**504.000**	**1.176.000**	**1.724.800**	**2.217.600**	**2.688.000**	**2.688.000**	**3.024.000**	**3.931.200**	**5.241.600**	**5.896.800**
Profit from sales, food and beverage	252.000	588.000	862.400	1.108.800	1.344.000	1.344.000	1.512.000	1.965.600	2.620.800	2.948.400

Food & Beverages, alternative way of calculating

Facility/meal Period/function	Average daily covers served as % of bed occupancy	Average spend served incl beverage (DKK)	Average daily covers served	Minimum daily revenue (DKK)
Restaurant breakfast	90	75	54-126	4.050
Restaurant lunch	60	150	36-84	5.400
Restaurant dinner	90	225	54-126	12.150

The transfers between Grønnedal and the existing Narsarsuaq Airport (or alternatively a future Qaqortoq Airport) is a business that should be expected to operate at almost cost price in order to reduce the initial upfront costing of a trip to Grønnedal Artic Resort. The pricing is based on existing prices for transfers in the Region by small targa type of boats. The pricing with Saffaq Ittuk is significantly lower as this ship can take large groups. Although the pricing of fuel and shipboard personnel is higher than elsewhere the prices below are similar to prices for boat transfers in for instance Maldive Islands where this form of transport is normal over long distances. Outsourcing this to regional operators would be the smart option, however differential long and short-term interest and issues over pricing could become topics that would point towards keeping transfers at the control of the project.

Transfers Grønnedal – Narsarsuaq (Qaqortoq)

Boat Transfers to/from Grønnedal	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Total number of guests/year	**480**	**1.120**	**1.232**	**1.408**	**2.020**	**2.454**	**2.888**	**3.882**	**3.882**	**3.986**
Boat trips per guest	2	2	2	2	2	2	2	2	2	2
Pricre per guest per trip	1.250	1.250	1.250	1.250	1.250	1.250	1.250	1.250	1.250	1.250
Revenue from boat transfers	**1.200.000**	**2.800.000**	**3.080.000**	**3.520.000**	**5.050.000**	**6.135.000**	**7.220.000**	**9.705.000**	**9.705.000**	**9.965.000**
Expense level boat transfers %	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Profit margin boat transfers %	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Profit per year boat transfers	120.000	280.000	308.000	352.000	505.000	613.500	722.000	970.500	970.500	996.500

Local boat trips in Arsuk Fjord, Ikka Fjord and Qornoq

The local boat trips will be possible in various types of boats. The fuel cost for these trips will be limited as the distances typically are less than 30 km. Here it is possible to charge a price which is considerably higher than the cost. Therefore, it is expected that local boat trips and excursions can become an important revenue stream for the project. Local boat trips are closely related to the dissemination of historical and natural scientific knowledge from the sites and thereby part of profiling the resort. It should therefore remain under the control of the project. It is expected as the volumes increase local boat trips can be conducted in a very cost-effective way allowing up to 50 % profit on this activity.

Local Boattrips in Arsuk Fjord

Local boat excursions	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Price per boat excursion per person	500	500	500	500	500	500	500	500	500	500
Number of local boat excursions per person	1	1	2	2	2	2	2	2	2	2
Total number of guests per year	480	1.120	1.232	1.408	2.020	2.454	2.888	3.882	3.882	3.986
Expense level local boat excursions %	66%	66%	66%	66%	50%	50%	50%	50%	50%	50%
Profit margin local boat excursions %	33%	33%	33%	33%	50%	50%	50%	50%	50%	50%
Revenue from local excursions	**240.000**	**560.000**	**1.232.000**	**1.408.000**	**2.020.000**	**2.454.000**	**2.888.000**	**3.882.000**	**3.882.000**	**3.986.000**

For comparison typical cost of sales as applied in other hotel projects is found below. This table shows that the projected revenues in this project are realistic and well below what can be found elsewhere in the industry. It is possible that this can be further refined with data from Greenlandic hotel and tour operators.

Cost of sale assumptions (typical industry benchmarks)

Revenue line	% Cost of sales	% Profitmargin	% Profit margin applied in Grønnedal Arctic Resort
Accommodation	2 %	98 %	80 %
Conference facilities	10 %	90 %	80 %
Food	23 %	77 %	50 %
Beverage	35 %	65 %	50 %
Boat excursions	30 %	70 %	33-50 %

The above table shows that as the volumes of visitors will come up there is room for further increase in profit margins from the different revenue streams.

Fixed Operational expenditures

Staff salaries, administration	Phase 1				Phase 2			Phase 3		
	Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Monthly Salary 1 - Managing Director	70.000	71.400	72.828	74.285	75.770	77.286	78.831	80.408	82.016	83.656
Salary monthly 2 - Janitor handyman	40.000	40.800	41.616	42.448	43.297	44.163	45.046	45.947	46.866	47.804
Salary monthly 3 - Assistant Cleaning	35.000	35.700	36.414	37.142	37.885	38.643	39.416	40.204	41.008	41.828
Salary monthly 4 - Chef/Cook/shopkeeper	-	45.000	45.900	46.818	47.754	48.709	49.684	50.677	51.691	52.725
Salary monthly 5 - Nature guide	50.000	51.000	52.020	53.060	54.122	55.204	56.308	57.434	58.583	59.755
Salary monthly 6 - Hotelhost					45.000	45.900	46.818	47.754	48.709	49.684
Salary monthly 7 - Assistant kitchen					35.700	36.414	37.142	37.885	38.643	39.416
Salary monthly 8 - Assistant Hotel					35.700	36.414	37.142	37.885	38.643	39.416
Salary monthly 9 - Assistant laundry						36.414	37.142	37.885	38.643	39.416
Salary monthly 10 - assistant Hotel									38.643	39.416
Salary increases		2%	2%	2%	2%	2%	2%	2%	2%	2%
Number of employees	3	4	5	6	8	9	9	9	9	9
Assistants for the season, estimate	100.000	150.000	200.000	250.000	300.000	400.000	500.000	600.000	600.000	600.000
Number of additional man months outside season	2	2	1	1	1	1	1	1	1	1
Total number of man months	7	7	7	7	7	7	7	8	8	8
Telephone & internet expense per month/person	500	500	500	500	500	500	500	500	500	500
Transatlantic travels per person	2	2	2	2	2	2	2	2	2	2
Price per transatlantic travel	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000	6.000
Computer per person Year	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000	3.000
Total computer expenses	9.000	12.000	15.000	18.000	24.000	27.000	27.000	27.000	27.000	27.000
Total travel expenses	36.000	48.000	60.000	72.000	96.000	108.000	108.000	108.000	108.000	108.000
Total telephone & internet	10.500	14.000	16.250	19.500	28.000	31.500	31.500	33.750	33.750	33.750
Total salaries (Gross)	1.815.000	2.142.900	2.108.369	2.122.252	3.153.911	3.465.887	3.729.205	4.111.830	4.182.066	4.253.708
Total, staff salaries & administration	**1.870.500**	**2.216.900**	**2.199.619**	**2.231.752**	**3.301.911**	**3.632.387**	**3.895.705**	**4.280.580**	**4.350.816**	**4.422.458**
Energy and water for buildings	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Number of houseunits	10	20	20	20	30	30	30	40	40	40
Number of week in use	20	20	22	22	24	24	24	26	26	26
Number of week out of use	32	32	30	30	28	28	28	26	26	26
Energy per house per week in use	1.000	1.000	1.000	1.000	1.000	1000	1000	1.000	1.000	1.000
Energy per house per week out of use	-	-	-	-	-	0	0	-	-	-
Water per house per week in use	200	200	200	200	200	200	200	400	400	400
Water per house per week out of use	-	-	-	-	-	0	0	-	-	-
Water per house per year	4.000	4.000	4.400	4.400	4.800	4.800	4800	10.400	10.400	10.400
Total water expenses per year	40.000	80.000	88.000	88.000	144.000	144.000	144000	416.000	416.000	416.000
Energy per house per year	20.000	20.000	22.000	22.000	24.000	24.000	24000	26.000	26.000	26.000
Total energy expense per year	200.000	400.000	440.000	440.000	720.000	720.000	720000	1.040.000	1.040.000	1.040.000
Total Energy and water for buidings	**240.000**	**480.000**	**528.000**	**528.000**	**864.000**	**864.000**	**864000**	**1.456.000**	**1.456.000**	**1.456.000**
Buidings and maintenance	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Antal huse	10	20	20	30	30	30	30	40	40	40
Omk. pr. hus. pr Year	15.000	15.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000	25.000
Total maintenance buildings	**150.000**	**300.000**	**500.000**	**750.000**	**750.000**	**750.000**	**750.000**	**1.000.000**	**1.000.000**	**1.000.000**

Variable Operational Expenditures

Variable/direkte omkostninger	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Boat to/from Grønnedal per person per trip	1.125	1.125	1.125	1.125	1.125	1.125	1.125	1.125	1.125	1.125
Boat transfer, total per year	**1.080.000**	**2.520.000**	**2.772.000**	**3.168.000**	**4.545.000**	**5.521.500**	**6.498.000**	**8.734.500**	**8.734.500**	**8.968.500**
Local boat excursions	330	330	300	300	250	250	250	250	250	250
Local boat excursions, total per year	**158.400**	**369.600**	**739.200**	**844.800**	**1.010.000**	**1.227.000**	**1.444.000**	**1.941.000**	**1.941.000**	**1.993.000**
Purchase of food and beverages for sale per day	1.800	4.200	5.600	7.200	11.000	13.200	15.400	21.780	29.040	33.660
Purchase of food and beverages for sale per year	**252.000**	**588.000**	**862.400**	**1.108.800**	**1.344.000**	**1.344.000**	**1.512.000**	**1.965.600**	**2.620.800**	**2.948.400**
Sales expenses % of villa turnover	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%
Sales expenses, total	**192.000**	**448.000**	**492.800**	**563.200**	**614.400**	**614.400**	**691.200**	**842.400**	**842.400**	**842.400**
General sales and marketing	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Total general sales and marketing	100.000	500.000	500.000	500.000	400.000	400.000	400.000	400.000	400.000	400.000
Consultants, lawyer, auditors										
Lawyers	30.000	30.000	30.000	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Auditors	30.000	30.000	30.000	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Consultants	30.000	30.000	30.000	30.000	30.000	30.000	30.000	30.000	30.000	30.000
Total consultants, lawyer, auditors	**90.000**	**90.000**	**90.000**	**90.000**	**90.000**	90.000	90.000	90.000	90.000	90.000
Other expenses	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**	**Year 7**	**Year 8**	**Year 9**	**Year 10**
Unforeseen expenses in % of fixed expenses	20%	15%	10%	10%	15%	12%	10%	20%	15%	10%
Other expenses, contingency	490.100	538.035	381.762	409.975	810.887	688.366	599.971	1.445.316	1.094.522	736.846
Finance Charges										
Depreciation										
Interest Expense										
Interest Income										
Income Tax (0%*)										

Expenditure assumptions, fixed and variable costs

Management and staff salaries

In the hospitality business staff salaries are important cost not to be underestimated. Staff often provide key services that hotels are judged on. In the case of Grønnedal it is expected that houses will be made available on a weekly basis thus reducing the amount of daily work that is normally found in hotels. Further more each unit will be fully equipped with modern amenities such as dish washer, washing machine, dryer etc. making people stay just like home even in the Arctic. Being a seasonal operation the core team will be hired on permanent contracts, however several staff members will be only there for the season 6-8 month at the time. A fair proportion of the staff will be temporary staff assisting for 3 months in the peak season, similar to what is seen in other Greenlandic hotel operations.

Electricity, heating and water

Electricity and heating will ideally be provided from renewable sources through small stand-alone systems mounted on each house. By using the most updated energy efficient systems including LED lighting it is expected that consumption can be kept low taking into consideration that daylight will be long during the Arctic summer. Heating will be probably required during the month of May and September, as will a frost free environment inside buildings during winter. If electricity is available from the Danish defence facilities this may also represent an optional supply at least in the beginning.

Maintenance

Buildings will need continuous maintenance and repair.This will be a permanent assignment for practical janitor assigned to the facility. Most likely he will have to get assistance from painters, plummers and carpenters assigned from Narsaq or Qaqortoq. A percentage of 5 % as well as a fixed amount is set aside in the budget for maintenance

Boat transfers and boat excursions

Cost of boat transfers has been estimated on the basis of existing speedboats operating in the region. Cost takes into consideration boatmen as well as fuel consumption and a boat capacity of 10-14 people. The transfers could be shortened using a small canal (Nyboes Canal) enabling sailing in protected waters throughout the transfer and cutting of some 40 (?) km off the distance.

Cost of boat transfers has been estimated on the basis of existing speedboats operating in the region. Cost takes into consideration boatmen as well as fuel consumption and a boat capacity of 10-14 people.

Food and beverages

Food and beverage has been calculated based on cost estimates elsewhere plus and additional mark-up. It is clear that cost of raw materials, fruits and vegetables is rather high in Greenland. Based on this it has been calculated with a fixed percentage margin.

Sales costs and marketing

Sales cost relates to the cost of selling stays through Greenlandic, Danish and international travelagencies. It also relates to marketing expenses which is actually budgeted twice to ensure that especially internet marketing is comprehensive and targeted the right segments especially in the first couple of years after opening the Grønnedal Arctic Resort facility.

Capital expenditures

The principal assumption is that an agreement can be made regarding the long-term use of the existing facilities at Grønnedal. Ideally a very reasonable lease with the option to buy them at a fixed price after 10 years would be ideal minimizing risk for all parties. Such arrangement could be directly with Danish Ministry of Defence if the buildings are not yet handed over to Government of Greenland. It could also be with Sermersooq Municipality if the buildings are handed over to them.

Should the choice be that the Danish Ministry of Defence and FES lead the renovation project as part of their investment in the site the expenses incurred will simply be converted into shares and accounted for at the exit. This same goes for rehabilitation investments made by Sermersooq Municipality. Since the buildings are without value the initial lease should be no more than a symbolic price and so should the fixed sales price. Afterall when the project becomes a success the Danish Ministry of Defence will have saved a large sum of money for dismantling and decommissioning and probably only invested a small fraction of this. By investing in a company that can be sold it is even possible to receive some gains from taking the risk in a public private partnership. In addition, there will be synergies on operational expenses for Ministry of Defense and tax payments for many years to come for Sermersooq Municipality.

The budget for capital expenditures has been divided in three phases in order to minimize capital risks and only invest resources based on previous success. The phases will be the same irrespectively of who is leading the rehabilitation. The budget for each phase has been assessed so that operations can continue at the achieved level of operation until ripe for further investment. Each of the three phases represents a certain level of resort maturity along several parameters and each phase will be a natural succession level of sophistication.

Phase One

The first phase will be a proof of concept period, where family villas are taken into operation and where the product is tested and adapted. This means not only the actually rehabilitation of housing and infrastructure, but also the seamless operation between arrivals at the airport, the transfers, the supply situation and boat trips and local adventures. The first year half of the houses will be brought up to standard followed by the rest the second year. According to recent reports the state of most houses but two are fair and it is estimated that this phase can be achieved with an investment of about 20 million dkk, which is much less than having to erect completely new buildings anywhere in Greenland. Phase one also include the procurement of vehicles and boats. The boat constitutes a major investment, but is deemed necessary in order not to be completely dependent on local tour operators for boat transfers. A contingency has been included and is set at 10 percent of phase one and 5 percent for subsequent phases.

Phase Two

Phase two will entail further developing accommodation aspects including hotellike rooms and self-contained small apartments as found in the buildings on the Eastern side of the river. This accommodation will double the capacity from approximately 100 beds to 200 beds. This expansion will require more focus on hotellike functions, but also provide the volumes necessary for alternative transfer mechanisms by larger ships or by sea plane etc. It is estimated that this phase can be completed with an estimated investment of additional 19 million dkk.

Phase Three

The last phase will emphasize on additional facilities such as **conference rooms**, arctic **health and spa facilities** and an Arctic **gourmet restaurant**. This phase will enable the facility to become a true Arctic resort and it will lay the foundation for its prominent position in the market in all of Greenland. It is estimated that this phase can be completed with an estimated investment of additional 24 million dkk.

Grønnedal Arctic Resort
Investment plan for year 1-10

INFRASTRUCTURE INVESTMENTS	Antal	Enhedspris	Phase 1 Year 1 2018	Year 2 2019	Year 3 2020	Year 4 2021	Phase 2 Year 5 2022	Year 6 2023	Year 7 2024	Phase 3 Year 8 2025	Year 9 2026	Year 10 2027	Total CapEX
Halv-Tolv Arctic Village			**1.900.000**	**1.900.000**	-	-	-	-	-	-	-	-	**3.800.000**
Upgrading package, renovation, painting and cleaning	20	100.000	1.000.000	1.000.000									2.000.000
Plumming and electric rehabilitation	20	50.000	500.000	500.000									1.000.000
Inventory package, furniture, beds and linen	20	40.000	400.000	400.000									800.000
Hotel and apartments							**7.420.000**			**13.120.000**			**20.540.000**
Upgrading package							2.000.000			1.000.000			3.000.000
Plumming and electric rehabilitation							500.000			500.000			1.000.000
Renovation and structural improvements							4.000.000			2.000.000			6.000.000
Inventory package, furniture, beds and linen							920.000			620.000			1.540.000
New Spa facility 600m2										9.000.000			
Café, restaurant og conference faciliteties			**1.200.000**	**500.000**	-	-	**2.400.000**	-	-	**500.000**	-	-	**4.600.000**
Old school and offices renovation	1	200.000	200.000				100.000			100.000			
Upgrading package, renovation, painting and cleaning	1	200.000	200.000				200.000			200.000			600.000
Plumming and electric rehabilitation	1	100.000	100.000										100.000
Municipal buildings, shop, café, restaurant	1	100.000	500.000	500.000			2.000.000			200.000			3.200.000
Upgrading package, renovation, painting and cleaning	1	80.000	100.000				100.000						200.000
Plumming and electric rehabilitation	1	100.000	100.000										100.000
Energy and watersupply (Villas, Hotel and apartments, Conference)			**2.500.000**	**800.000**			**5.900.000**	-		**4.900.000**	-	-	**14.100.000**
Re-connection of aux. generator (radiostation)	1	200.000	400.000				100.000			100.000			600.000
Solar photovoltaic panels for basic lights			500.000	400.000			2.000.000			2.000.000			4.900.000
Adjustments in electrical system and cables			200.000				400.000			400.000			1.000.000
Renovation of heating system (oliefyr) Halvtolv	1	300.000	300.000				500.000			500.000			1.300.000
Renovation/re-establishment of solar heating system			500.000	400.000			2.000.000			1.500.000			4.400.000
Re-establishment of water supply from river (Bryggeren:	1	200.000	200.000				400.000			400.000			1.000.000
Re-establishment of solid waste treatment plant			400.000				500.000						
IT, Communikation mv.			**450.000**	-			**200.000**			**200.000**			**850.000**
Re connection to Internet via the Arsuk Storø station	1	150.000	150.000										150.000
PC's, servers, local Wifi	1	100.000	100.000				100.000		100.000	100.000			400.000
General upgrading communication			200.000				100.000		100.000	100.000			500.000
Means of transport			**3.800.000**	-	-		**1.500.000**	-		**3.900.000**	-	-	**9.200.000**
Transfer boat, indoor seating +14 passengers, 2*200 HK	1	3.000.000	3.000.000							3.000.000			6.000.000
Fast RIB - capacity +14 persons 200 HK	1	1.000.000					1.000.000						
Small speedboat, kapacitet 6 personer, 1 X 90 HK	1	300.000	300.000							400.000			700.000
5 small open dinghies, 6 seats with 40 HK	5	100.000	500.000				500.000			500.000			1.500.000
Vehicles for local transport			**900.000**	**200.000**		-	**200.000**	**150.000**		**750.000**			**2.200.000**
Toyota Hi-Lux pick-up truck, utility vehicle 2 persons	2	150.000	300.000					150.000		150.000			600.000
Mini-bus for excursions to Ivittuut 8-10 persons	1	600.000	600.000							600.000			1.200.000
Electrical golf car type of vehicles / quatbikes	2	100.000	200.000	200.000			200.000			200.000			800.000
Udstyr til oplevelser			**466.000**	**90.000**	**252.000**	**220.000**	**162.000**	**180.000**		**292.000**		-	**1.662.000**
Seagoing kayaks	12	15.000	180.000		90.000	90.000	90.000	90.000		90.000			630.000
Mountain bikes	12	7.000	84.000		90.000								
Water spectacles, fishing nets mv.	12	1.000	12.000		12.000		12.000			12.000			48.000
Equipment for sportsfishing	24	1.000	24.000		24.000		24.000			24.000			96.000
Mountaineering equipment packages	12	3.000	36.000		36.000		36.000			36.000			144.000
Diving equipment, tanks, regulators, weights	6	15.000	90.000	90.000		90.000		90.000		90.000			450.000
Small portable diving compressor	1	40.000	40.000			40.000				40.000			120.000
Unforeseen expenses			1.000.000	500.000	500.000		1.000.000			1.000.000			
I alt			**12.216.000**	**3.990.000**	**752.000**	**220.000**	**18.782.000**	**330.000**	-	**24.662.000**	-	-	**60.952.000**

Selskabsdannelse, egenkapital	600.000					
Egenkapital indskudt 1/3	20.000.000	**Fase 1:**	**17.178.000**	**Fase 1+2:**	**36.290.000**	Fase 1+2+3: **60.952.000**
Lånekapital 2/3	40.000.000					

Financial estimates and performance results

Overall summary of projected results over a 10 year period.

Grønnedal Arctic Resort
Income statement (DKK)

BUDGET, YEAR 1 - 10	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	TOTAL Year 1 - 10
Revenues												
Revenue from villas		960.000	2.240.000	2.464.000	2.816.000	3.072.000	3.072.000	3.456.000	4.212.000	4.212.000	4.212.000	30.716.000
Revenue from hotel and apartments		-	-	-	-	1.008.000	2.016.000	2.520.000	4.095.000	4.095.000	4.368.000	18.102.000
Revenue Conferences		-	-	-	-	300.000	450.000	600.000	1.350.000	1.350.000	1.350.000	5.400.000
Boat Transfers to/from Grønnedal		1.200.000	2.800.000	3.080.000	3.520.000	5.050.000	6.135.000	7.220.000	9.705.000	9.705.000	9.965.000	58.380.000
Revenue from local excursions		240.000	560.000	1.232.000	1.408.000	2.020.000	2.454.000	2.888.000	3.882.000	3.882.000	3.986.000	22.552.000
Equipment rental revenues		480.000	1.120.000	1.232.000	1.408.000	1.920.000	2.304.000	2.688.000	3.432.000	3.432.000	3.536.000	21.552.000
Sales in shop and cafe		504.000	1.176.000	1.724.800	2.217.600	2.688.000	2.688.000	3.024.000	3.931.200	5.241.600	5.896.800	29.092.000
Total revenues		**3.384.000**	**7.896.000**	**9.732.800**	**11.369.600**	**16.058.000**	**19.119.000**	**22.396.000**	**30.607.200**	**31.917.600**	**33.313.800**	**185.794.000**
Operating expenses												
Variable expenditures												
Boat transfer, total per year		1.080.000	2.520.000	2.772.000	3.168.000	4.545.000	5.521.500	6.498.000	8.734.500	8.734.500	8.968.500	52.542.000
Local boat excursions, total per year		158.400	369.600	739.200	844.800	1.010.000	1.227.000	1.444.000	1.941.000	1.941.000	1.993.000	11.668.000
Purchase of food and beverages for sale per year		252.000	588.000	862.400	1.108.800	1.344.000	1.344.000	1.512.000	1.965.600	2.620.800	2.948.400	14.546.000
Sales expenses, total		192.000	448.000	492.800	563.200	614.400	614.400	691.200	842.400	842.400	842.400	6.143.200
Total variable expenditures		**1.682.400**	**3.925.600**	**4.866.400**	**5.684.800**	**7.513.400**	**8.706.900**	**10.145.200**	**13.483.500**	**14.138.700**	**14.752.300**	**84.899.200**
Revenuse less variable expenditures		**1.701.600**	**3.970.400**	**4.866.400**	**5.684.800**	**8.544.600**	**10.412.100**	**12.250.800**	**17.123.700**	**17.778.900**	**18.561.500**	**100.894.800**
Fixed expenditures												
Total, staff salaries & administration		1.870.500	2.216.900	2.199.619	2.231.752	3.301.911	3.632.387	3.895.705	4.280.580	4.350.816	4.422.458	32.402.628
Total Energy and water for buidings		240.000	480.000	528.000	528.000	864.000	864.000	864.000	1.456.000	1.456.000	1.456.000	8.736.000
Total maintenance buildings		150.000	300.000	500.000	750.000	750.000	750.000	750.000	1.000.000	1.000.000	1.000.000	6.950.000
Total consultants, lawyer, auditors		90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	90.000	900.000
Total general sales and marketing		100.000	500.000	500.000	500.000	400.000	400.000	400.000	400.000	400.000	400.000	4.000.000
Other expenses, contingency		490.100	538.035	381.762	409.975	810.887	688.366	599.971	1.445.316	1.094.522	736.846	7.195.780
Total fixed expenditures		**2.940.600**	**4.124.935**	**4.199.381**	**4.509.727**	**6.216.798**	**6.424.754**	**6.599.676**	**8.671.896**	**8.391.339**	**8.105.303**	**60.184.408**
EBITDA		**- 1.239.000**	**- 154.535**	**667.019**	**1.175.073**	**2.327.802**	**3.987.346**	**5.651.124**	**8.451.804**	**9.387.561**	**10.456.197**	**40.710.392**
EBITDA margin %				7%	10%	14%	21%	25%	28%	29%	31%	22%
Finance Charge												
Depreciation												
Interest Expense												
Interest Income												
Income Tax (0%*)												
Net Income												

Comments to the overall summary of profit and loss account

The overall result will be weak during the first couple of years when the operation of the facility is in the start-up phase. However, it is important that the initial investment shows a positive result in year 4 and onwards. The decision to continue into phase 2 and phase 3 will be dependent on the results achieved. It is also clear from the above projections that the main profit of the project lies in the larger volumes, which can be achieved through the investments in phase 2 and phase 3.

The financial costs and down-payment of loans will depend on the actual financing, but it is clear that the project can cover both payment of interest and down payment of loans with the above mentioned assumptions and projections of revenues and expenses.

Additional comments regarding cash flow budget and balance sheet

With a prudent three phased approach to the investment, the envisaged revenue streams will be more than enough to cover depreciation, interest and down payments on loans. In addition to the projected profit and loss, a detailed cash flow budget and a projected balance sheet will be developed through dialogue with private equity investors and lenders and available upon request.

Depreciation rates applicable

Item description	Depreciation rates	Useful life
Land	Not applicable in Greenland	Not applicable in Greenland
Buildings – rehabilitation costs	5%	30 years
Hotel and restaurant equipment, furniture, fittings	20 %	5 years
Boats and equipment	20 %	5 years
IT, telephones and computers	33 %	3 years

Applicable replacement costs of fixtures, fittings and equipment, typical cost benchmark

Year	% of total revenue
Year 1	2 %
Year 2	3 %
Year 3	4 %
Year 4 and thereafter	5 %

10. Financing plan and assumptions

Taking the stakeholder analysis into account different interests, roles and responsibilities emerge which should be taken into account when furthering the establishment of Grønnedal Arctic Resort

Grønnedal Arctic Resort
Financing plan A for fase 1 (år 1-4)

Financing sources	Year 0	Year 1	Year 2	Year 3	Year 4	TOTAL
Private Equity (paid in)	800.000					800.000
Private investor/Touristoperator (paid in)	3.200.000					3.200.000
Equity Sermersooq / Kujalleq Kommune (paid in)?	3.000.000					3.000.000
Danish Defence ? Eventually in kind contributions	2.000.000					2.000.000
Loans for assessts (Nordik Bank?)		3.000.000	240.000			3.240.000
Long term senior loan for buildings (Vækstfonden)		3.000.000	3.000.000			6.000.000
Long term senior loan for buildings (EIB?)						
Operation surplus (overskud fra driftsbudget)	-			667.019	1.175.073	1.842.092
Total	**9.000.000**	**6.000.000**	**3.240.000**	**667.019**	**1.175.073**	**20.082.092**
Anvendelse af midler						
Capital Expenditures		12.216.000	3.990.000	752.000	220.000	17.178.000
Operations deficits (underskud fra driftsbudget)		1.239.000	154.535			1.393.535
Financial costs lån 1%	120.000					
Other start-up expenses	800.000	-				800.000
Legal assistance, company setup	380.000					380.000
Buffer	323.000	-				323.000
						-
Total	**1.623.000**	**13.455.000**	**4.144.535**	**752.000**	**220.000**	**20.074.535**
BALANCE	**7.377.000**	**- 7.455.000**	**- 904.535**	**- 84.981**	**955.073**	**7.557**

In its essence the investment in Grønnedal can be considered to be that of a real estate development company. This means that normally you would be able to get a low interest mortgage loan with security in the property. The challenge in Grønnedal is that basically the buildings are worthless without the cash flow from tourism activities. It is therefore unrealistic to fund the renovation and refurbishment through a traditional real estate set-up.

On the other hand, there are considerable stakes related to the demolition, removal and clean-up back to nature. At one point in time it was estimated that the Danish Ministry of Defence would be liable to pay as much as 250-300 million DKK for a complete swipe of all infrastructure on the site.

With the 2016 decision to continue some operational activities on the site, the cost for removing buildings not to be used will probably be reduced to less than one third depending on the exact extent of buildings reserved for the maritime logistics support center. This means that the liability for Danish Defense could be as much as 75 million for removal of the remainder and for Sermersooq Municipality probably 25 million for removal of their buildings to be paid to the same contractor as per earlier agreement between the Municipality and the Danish Ministry of Defense.

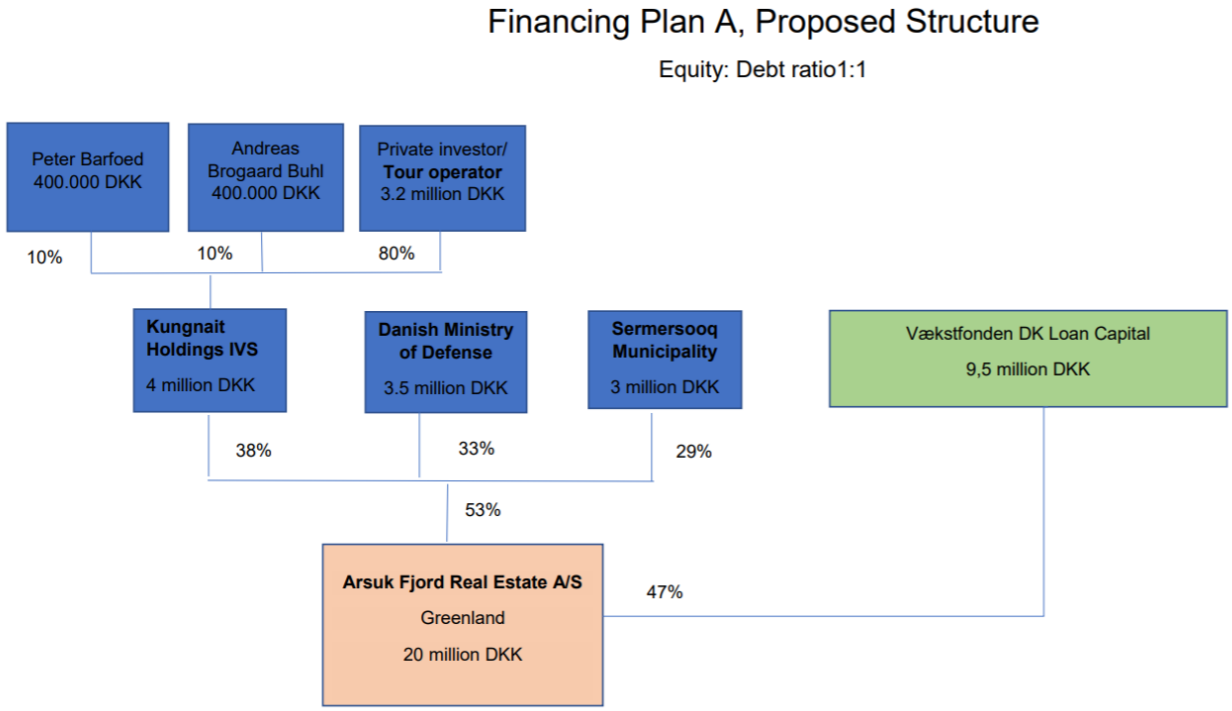
Financing Plan A: Phase one financing in a public private partnership

In this light and from an economic point of view it would make sense if both Danish Defense and Sermersooq Municipality would become a shareholder and invest in the buildings by means of renovating them for a cost of 3 million each. If both entities could provide renovation up to international tourism standards of their respective property, then this cost could be converted to shares, which eventually would be paid out and returned to taxpayers with interest after 10 years and a successful lift-off of the project.

The last shareholder component should then be a private company in the form of a tour-operator also with 3 million DKK thus making up three equal term of shares in a public private partnership. Potential candidates for this component include Albatros Travel, Topas Travel, Greenland Travel, Norwegian Hurtigruten or an Icelandic company within tourism. Alternatively, if this does not materialize the future management and his/hers associates could take some of this private equity component to be fully engaged and motivated to creating an upside for the company over and above the wages offered.

Then the remainder of the cost could be provided as a loan from Vækstfonden or EIB to pay for recoverable items such as boats and equipment. At a project meeting end November 2017 Vækstfondens Greenland team has indicated that it would be interested in providing a loan of 5-10 millioner with a precondition that a similar amount of private equity is mobilised preferably also with participation from a local Greenland bank. This would provide a favourable standard 1:1 loans/equity configuration for a start-up enterprise.

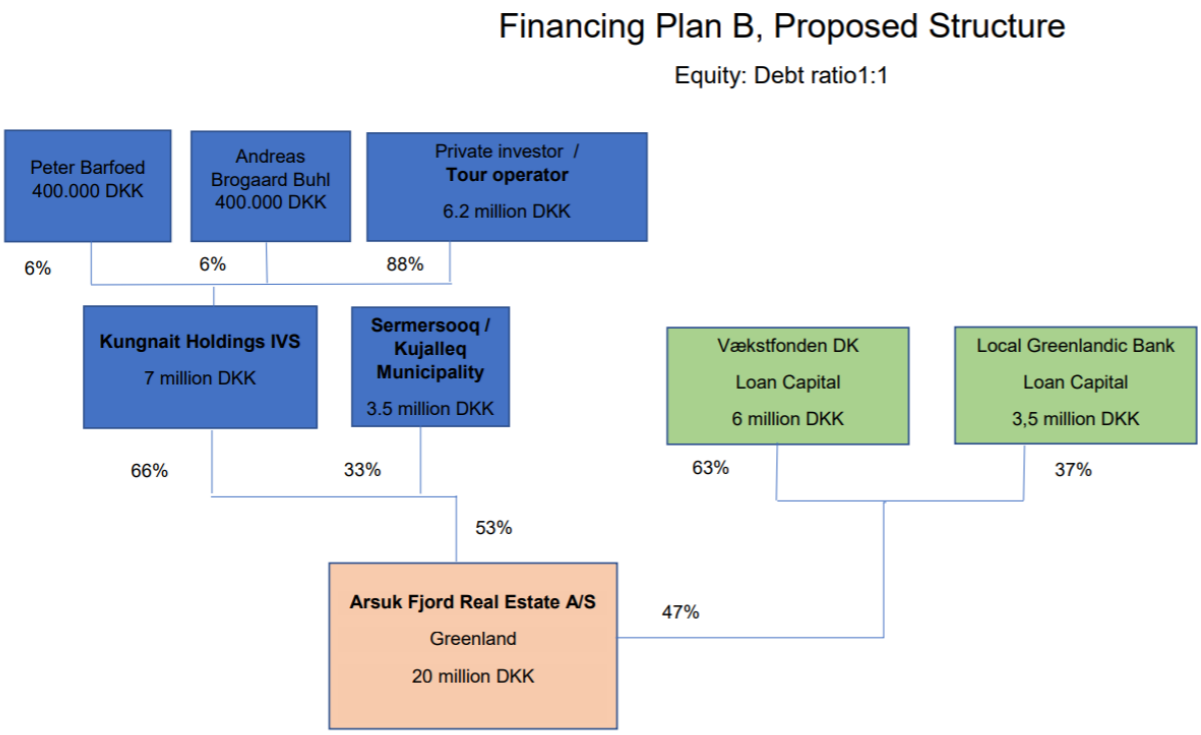
Given that the expenses for demolition and removal is so much higher, the amounts and risks of going into this arrangement should be limited and very much be worthwhile for all the stakeholders mentioned. In addition to the financial advantages this option also has the practical aspect that the renovation and rehabilitation could be organized by the Ministry of Defense and the FES using their project organisation to handle tenders and contractors etc. Unfortunately, neither the Danish Ministry of Defense nor Sermersooq Municipallity is very interested in this type of public private partnership.



Financing Plan B: Phase one financing

As the present owners do not see the immediate benefits of participating in the development, it is possible instead to aim at an alternative financing plan where only one major shareholder steps in. This could be a larger company operating in the tourism sector or an airline in the region. This plan would entail a single shareholder taking a stake of 9 million DKK, and the responsibility for loans unchanged. Candidates for this would be international companies such as Air Greenland, Icelandair, Hurtigruten, Albatros, Topas or a Greenlandic company. Ideally this shareholder should be a company with access to the potential clients such as the airlines and some of the Danish, Norwegian and Icelandic tour operators.

Depending on negotiations to be held this alternative financing plan B involves a higher risk exposure which in the past at least Danish companies have shown little appetite for i.e. the local Danish tender of the entire Grønnedal facility back in 2013. Given that this tender was flawed confusing liability for subterraneous oil spill and other issues it may be possible that a new tender that has resolved these issues with Naalakkersuisut could yield a different result. The advantage of a single large private shareholder would be that collaboration would be less prone to internal and political discussions and in that way more agile to respond to the market etc..



Financing Plan C: Phase one financing

The last alternative evolves around the present owners of the buildings renting out the premises to a tour operator. This will basically not entail the vision of handing over the buildings and the operator will only be offered a long-term lease of up to 10 years. The present owners would finalise all rehabilitation and refurbishment and the operator would rent it at a very modest rate initially gradually increasing as the number of visitors increase. The operator should be motivated by the outlook of a possible purchase of buildings at a fixed price after the initial phases have been completed. The risk for the owners is that this day may never come and that the realistic rent in the long run will not cover the actual operating expenses. It should be noted that Ministry of Defense has had similar arrangements at Christiansø for over 150 years.

Financing of subsequent phases

As no one knows the future of politics in the Arctic, the Danish Defense might find it attractive to keep more main station buildings for later use for the proposed Greenlandic Home Guard and other purposes. Thus a phased approach would probably be advantageous for all parties irrespective of financing plan A, B or C.

With regards to subsequent phases a decision will have to be made based on performance after 3-4 years. The question will be whether or not to expand the project to include additional features such as the hotel like accommodation on the station area and new conference facilities as well as a high-end restaurant and a full Health and Spa facility to become a full serviced Arctic resort. It is expected that the initial shareholders will be offered a continued stake in the project up to their level of shareholding in the first phase (non-dilution). If not interested the other shareholders should be offered this share before including new parties to the scheme. Financing subsequent phases should be easier both in terms of equity and in terms of loans, since the concept and the destination must have proved its worth by then. It could be expected that at the later stages a lower interest 20-30 year mortgage could be obtained from a local Greenlandic or Danish real estate credit facility.

Exit valuation, put and call options

For investment funds like Vækstfonden their exit must be planned before actually entering into a financial agreement. This is normally done by agreeing on the investment period, the valuation method and rules for selling and buying the shares of other shareholders. It is quite normal that companies of this type sell at 6-8

times EBITDA which in this case scenario would be as much as 25-48 million DKK. The actual price will be decided upon as of when the shares are sold and how many loans would remain in the company. In a favourable mid-range scenario this would then give back the shareholders originally investing 4 million approximately 12 million after 10 years or an IRR of approximately 13 %.The exact financing contract and shareholding agreement could be provided using the model from Vækstfonden. It would be expected that the private tour-operator would be the first choice of buyer, but it could also be others interested in expanding their activities in Greenland with a proven concept in a South Greenland location such as Norwegian or Icelandic commercial interests.

Hand-over of existing liabilities

The elegant part of an initial joint Ministry of Defence, Sermersooq Municipality and private operator ownership is that the handover can be done at any convenient time since both of the two liability affected parties are part of the financial construction. From a strategic point of view, and to reduce their risks the Ministry of Defence may want to keep the property on their hands as long as possible and only formalizing the handover gradually. Since phase one is strictly aimed at the family villas in the Halv Tolv area the physical delineation or demarcation of the project should be easily done accordingly avoiding any potential conflict of users. With regards to the private operator participating it must be made clear from the beginning in the shareholding contract that he/she is not part of historical liabilities of the two other parties (including any environmental liabilities) and that he/she is only committed to the new capital and loans provided to the real estate company.

Summary analysis of the 3 proposed financing plans

Financing plan characteristics	Plan A Consortium Public-Private Partnership	Plan B One major private shareholder	Plan C Lease arrangement
Attractive profit available after 10 years	✓	✓	No motivation
Even distribution of upside	✓	✓	No Solely accruable to operator
Even distribution of downside	✓	✓	Solely accruable to operator
Even distribution of risks exposure	✓	✓	No most exposure on owners
Investor comfort in ownership structure	✓	Maybe	Not applicable
Gradual transfer of liability / assetts	✓	✓	No, unresolved
Direct and smooth authority relations	✓	Maybe	✓
Network and outreach to future tourists /customers	✓	✓	Not among owners
Advantageous local inclusion / participation	✓	Not necessarily	Maybe
Simplicity in ownership structure and decisions	No	✓	✓
Strong corporate governance and board	✓	✓	Not applicable
Long term financial sustainability	✓	✓	No unresolved, unless sold later
Capable organization to handle construction phase	✓	Maybe	✓

Proposed company structure and board

It is proposed that a special purpose vehicle is established on-site in Greenland that will own and operate the buildings associatied with tourism at Grønnedal. This company will hold all the necessary permits and agreements with the Ministry of Defence and the Municipality. It will also make contractual arrangement with local service providers or alternatively hire local staff to provide the desired services.

A Danish holding company will own the special purpose vehicle which will be financed through equity and loans from interested parties including Vækstfonden and European Investment Bank. This holding will also be able to own other companies that may be established in the local area.

It is also anticipated that the key stakeholders Sermersooq Municipality and Ministry of Defense will convert their rehabilitation efforts into equity as 1/4 or 1/3 shareholders in the SPV with the view of full recovery of their anticipated investment at exit within a 7-10 year timeframe. Depending on the actual equity composition a non-executive board of directors will be formed reflecting major shareholders of the company.

It is expected that at the end of each phase a re-assessment of company value will take place and Management and Kungnait Holdings awarded more shares for continued motivation enabling this company to take controlling ownership of the SPV in the end.

Working capital assumptions on equity and loans

For private equity capital an IRR of 10-12 percent should be targeted to make this investment attractive

Debt interest rate for phase 1 is anticipated to 6 % with a tenor of 10 years and a grace period of 1-2 years. Front end fee will be according to lender policies – typically around or less than 1 %. An extended grace period will be very important to ensure that there is not too much stress on the liquidity and cash flow.

For the later stages it is expected that the equity shareholders will be offered shares on equal terms and that dilution will not take place.

For the loans at later stages it can be assumed that the more real estate like arrangements with a lower interest rate of 2-3 % can be obtained, but this will have to be negotiated before financial close. Once phase 1 has been successfully completed demonstrating the expected turnover and operating profit the transaction should be more similar to other real estate deals. The real estate loans financing could be through Real Danmark, RealDania, Pension Denmark, PKA or others willing to place funds in more secure long term real estate development in Greenland.

Planned investor exit

Share capital investors should invest in this project for two main reasons: Local impact and long term return. The project is indeed an impact investment with significant benefits for the local community and regional business.

The return should be looked at in a long perspective thus a 7-10 years horizon would be desirable. At an investor exit the valuation of the assets would be based on a multiple of the EBITDA in the range of 6-8 depending on the exact time for exit.

The benefit of the proposed plan A is that it provides great comfort for investors, it gradually eliminates the risks and as the operation becomes economically viable it also provide return on the investment, so that after 7-10 years the initial investors will be able to recover their original investment.

Projected operating statistics

Financial viability measures

These more detailed scenarios will be developed with the group of private equity investors and lenders

Sensitivity analysis performed over base scenario

Typical sensitivity analysis will be conducted on the consequence of variation in key economic parameters and assumptions:

a. Number of guest reduced by 20 percent
b. Family houses and room rates reduced by 20 percent
c. Length of season extended by two months (8 weeks)

Occupancy and rate risks

As in all hospitality business the number of guests is key to success. In other upcoming locations there has been a certain sensitivity in the flow of tourism. Flows to and within Greenland depends very much on the number of airlines competing (In the past Air Greenland has had almost a monopoly), the number of airports operating and the general global economic development.

The ability to attract tourist will also depend on the smoothness of logistics once in Greenland. Seamless coastal connection is still a major challenge also in the coming years. Despite the high level of local costs, Greenland as a destination will have to compete on equal terms with other destinations on the global market, but the uniqueness of Greenland makes it highly appreciated and it was named a World Top 10 tourist destination by Lonely Planet in 2016.

Comparator statistics

At this point in time no detailed comparator statistics is available. This may become available over the next coming months. Especially interesting would be benchmark data from Ilimaneq and Glacier Lodge Eqi cabin villages.

Kungnait (1418 m) the majestic signature mountain of the Arsuk Fjord © Jan Bøgsted

11. Analysis of Risks and Opportunities

SWOT Analysis

In order to summarise important risks and opportunities a Strenght-Weaknesses-Opportunities and Threats matrix was developed according to the concept of internal/external and helpful/harmful effects.

	Greendale Arctic Resort (Grønnedal Hytteby)	
	Helpful	**Harmful**
	Strenghts:	**Weaknesses:**
Internal	• Relative warm and comfortable Sub-Arctic climate, long summer season • Interesting location, High mountains and deep fjords, glacier and water falls • Unique geological resources Ice, rivers, semi-precious stones and minerals • Unique living natural resources (fishing, hunting) • Unique history at Ivittuut covering 150 years of mining activities, Danish industrial history and WW2 • Potential for numerous adventure sport activities (Mountain climbing, Icesheet exploration, diving mountain biking, kayaking, hiking and relaxation • Ideal destination for family and relations holidays • Nearby local community settlement at Arsuk • Possibility for cultural experiences	• Poor or no utilization during winter • High local costs in a global market • Limited access to key staff – both specialized and general maintenance staff only available from Arsuk, Narsaq and Qaqortoq or elsewhere • Some environmental issues related to sub-terraneous oil spills still pending •
	Opportunities:	**Threats:**
External	• Large and expanding market • Significant increase in tourism volume expected • Large volume of tourist in nearby Iceland • Possibilities for expansion of accommodation • Mining museum re-established at Ivittuut • Quartz mining at Ivittuut • Facilities for international researchers • Numerous topics to study including fjord dynamics and climate change, arctic oilspill clean-up with bacteria etc. • Space for a 9-hole golf course • Landscape suitable for 1000m gravel airstrip • Hydropower potential at Langesø • Agri-business and farming opportunities for vegetables at Grønnedal • Establishment of UNESCO World Heritage site at Ikka Fjord • Winter activities like heli-skiing and northern light observations	• High trans-atlantic airfares on the Internet scare people away leading to few visitors • Airline irregularities and strikes • High local transfer costs • Challenging transfer logistics at times • Limited supply channels and few suppliers • Low connectivity in coastal transports • High maintenance costs involving skilled workers from afar • Issues with staff and suppliers • Extended periods of bad weather

Stakeholder Analysis

This project is very much a collaborative effort and therefore the the involvement and active management of all stakeholder will be the key to success. The table below summarise the contributions that different stakeholders can make to the project:

Stakeholder name	Impact (low, medium, high)	Influence (Low medium, high)	What is important to the stakeholder	How could the stake-holder contribute to the project	How could the stake-holder block the project	Strategy for enganging the stakeholder
Danish Government	High	High	Global security Good relations with USA & Greenland	Access to state institutions and state funds	To block civilian activities	To keep an open an transparent dialogue at all times
Ministry of Defense and Defense Building authority (FES)	High	High	Owners liabilities: Huge demolition, environmental rehabilitation costs, lower operating costs reputation	Renovation of buildings Joint utility services, Joint logistics Technical organisation Financial participation	To block civilian activities,	To propose collaboration on solutions to the problems encountered
Naalakkersuitsut Greenlands Government	High	High	Good relations with Denmark, Liabilities in relation to environmental clean-up	To signal thumbs up and willingness to provide licences	To refuse transfer agreement To block licenses & permits	To emphasize on economic growth and future contributions
Sermersooq Municipality	High	High	Owners liabilities: demolition, environmental rehabilitation costs, 30-40 new jobs, development of Nuuk as the capital	Renovation of buildings Joint utility services, Joint logistics Technical organisation, Financial participation	To refuse transfer agreement To block licenses & permits To neglect areas that may seem remote	To emphasize on economic growth and future contributions
Kujjalleq Municipality	High	Medium	Better connectivity in the southern region, more turnover in local companies and 30-40 more jobs in South Greenland	Technical organisation, Financial participation		Kujjalleq is a natural partner in the future - most of the benefits will be accruing to local business in Narsaq and Qaqortoqh

Arsuk Village Council	High	Medium	Better access & connectivity in the southern region, more local jobs Maintaining the village	To signal thumbs up and desire to develop tourism	To oppose tourism development	Benefit sharing agreement Use of competitive local service providers will be a priority
Air Greenland	High	Medium	Increased volumes of tourists to Greenland	By making available seasonal flights to UAK and fair priced tickets	By keeping prices high on transatlantic flights	Bulk sales agreement Purchase of a large number of tickets for visitors to Grønnedal
Icelandic Airlines:	Medium	Low	Increased volumes of tourists to and from Iceland	By shunting a small proportion of tourists from Iceland to Southern Greenland	Not applicable	Bulk sales agreement Purchase of a large number of tickets for visitors to Grønnedal
Nordic Seaplanes, Denmark	Medium	Low	Volume of passengers to establish South Greenland operation	By establishing a seasonal operation in South Greenland	Not applicable	Agreement Ideal if a seaplane would be in service in the region
Arctic Umiaq Line, Greenlandic Passenger Shipping	Low	Medium	Increased number of local passengers	By making a stop at Grønnedal or Ivittuut, fair priced tickets	By no longer stopping in Arsuk	Bulk Agreement Purchase of large number of tickets for visitors
Hurtigruten Norwegian / Arctic cruise passenger shipping line	Low	Medium	Increased number of local passengers	By making a stop at Grønnedal or Ivittuut	Hop on – hop off schedule on the coast	Bulk Agreement Purchase of large number of tickets for visitors
International travel agencies, Icelandic, Norwegian, US & Canadian	High	High	Increased number of guests staying longer longer season	Source of new global stream of tourists	Key in selling packages if not done directly on the Internet	Contracts with fee incentives
Danish travel agencies and tour operators **Topas A/S Albatros A/S**	High	Medium	Increased number of guests staying longer longer season	Source of existing stream of tourists Could become involved in operations	Key in selling packages	Contracts with fee incentives
Greenlandic travel agencies & Visit Greenland **Greenland travel**	Low	Low	Increased number of guests staying longer extended season	Destination partners for development to access new volumes Service providers	Key in selling packages Reputational risk	Collaboration & contracts with fee incentives

Tour operators in South Greenland Service providers	Medium	Medium	Increased number of local passengers, longer season	Establishing new circuits & Southern Greenland destination Transfers	Not willing to transport guest in transfer	To try and engage with them through collaborative contracts (transfer)
Hotels in South Greenland	Low	Low	Increased number of guests staying longer longer season	Establishing new circuits & Southern Greenland destination	Not willing to refer guests	To collaborated by referring guests
Service providers in South Greenland	Medium	Medium	Increased number of assignments / turnover	Offer maintenance jobs and services	Not willing to do jobs in Grønnedal	To make sure service contracts are always duly advertised
Brugseni, supermarkets and other regional shops	Medium	Medium	Increased turnover	Supplier of food and beverages to the resort	Not willing to provide supplies	To order food and supplies through local shops in Arsuk, Qaqortoq and Narsaq
Grønnedal Association of 1985	Low	Low	200 members Enthusiasts	Potentially source of first wave of visitors	Reputational risk	Keep them informed
Grønnedal Facebook group	Low	Low	1600 strong member group	Potentially source of first wave of visitors	Reputational risk	Keep them informed

If the above stakeholders could be aligned in an interest to expand economic growth and employment in South Greenland then it would highly benefit the project and result in more investor comfort and highly mitigated risk levels..

If the above mentioned stakeholders were working together also a great deal of synergy could be achieved.

Grønnedal Arctic Village as seen from the South, notice solar panels for heating already installed to the far right © Jan Bøgsted

Risk overview and mitigation measures

The table below summarize the main risks and proposed mitigation measures

Risk	Likeli-hood	Conse-quence	Mitigation measure / comments	Preliminary Assesment
Airfares too high	High	Serious	Negotiate packages with Air Greenland and other companies	Serious
Airtraffic projections unrealistic	Moderate	Serious	Collaboration with all relevant parties to reduce prices, increase connectivity and open access	Serious
Transfers by ship not operational	Small	Moderate	Alternative use own spare RIB boat	Serious
Supply of food & beverage interupted	Small	Serious	Alternative use own boat or 'RIB	Serious
Local staff shortage	Moderate	Serious	Use students and workers from Narsaq and Qaqortoq to substitute for professonals as required	Moderate
Local resistance to developments	Moderate	Serious	Existing Arctic Trophy hunting not interested in others using the area To maintain a continuous dialogue and include them in access to clients	Moderate as many bulls have been eliminated recently
Qaqortoq Airport construction delayed	moderate	Limited	Narsarsuaq is already operational, functions well and good regularity with easy access to Iceland	No threat
Danish Defense change their mind	Very Low	Serious	Not so obvious why they should	Minimal
Permissions not given or given to others	Low	Serious	Maintain good dialogue with Nuuk and with Arsuk Village council continuously Create alignment between stakeholders	Moderate
Interests of Sermersooq and Kujalleq Municipalities not aligned	moderate	moderate	Commercial interests could be better aligned with a stronger affiliation to Kujalleq	Moderate
Siltation of the Nyboe channel and Qipisaqqo	Low	Low	The channel could fairly easy be made deeper to allow even larger boats	Low

The above risks can be taken out or mitigated substantially if the local authorities take active part in the initial phase of the project.

12. Way Forward and Must-win-battles

1. Secure support from both local council at Arsuk, Sermersooq and Kujalleq Municipalities
2. Secure support for activities from Danish Ministry of Defense
3. Include one or more established tourism operators in the project
4. Seek Clearance in principle from one major financial institutions like Vækstfonden and EIB

5. Establish dedicated legal entity in Greenland / Denmark
6. Conduct site visit with investors (Summer 2018)
7. Establish formal contracts with tour-operators and owners of buildings (Danish Ministry of Defense, Sermersooq Municipality).
8. Secure binding commitment for funding of phase one
9. Close agreement financial transaction

10. Recruit management and few core staff (Operator)
11. Re-habilitate houses (Contractor)
12. Market the new product Grønnedal Arctic village and resort (Operator)
13. Recruit rest of the staff and mobilise on-site (Operator)
14. Operate facility for three years

15. Make profit according to plan
16. Expand to Phase Two and Three…

13. Time schedule

Major phases and major milestones

Phase one: Proof of Concept

This phase is the initial proofing of the site and facilities. The focus during this phase is to get the facilities back into shape and market the destination to the outside world.

Phase two: Hotel Development

This phase is the expansion into a full-fledged hotel. The focus during this phase is to get both the family villas and the hotel like accommodation to function together as a whole

Phase three: Spa and Conference

This phase is the completion of the facilities adding the luxury components and the business conference concepts using inspiration from similar facilities such as Torekov Spa Hotel in Sweden, XXX in Tromsø, Norway and YYY in Canada. The focus during this phase is a consolidation of earlier achievements

Preliminary Gant Chart (horizontal formatted

Grønnedal Arctic Village and Resort Date 10. Sept 2017

Timeschedule

Item No.	Activity	2018				2019				2020				2021				2022	2023	2024	2025	2026	2027
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q	Q	Q	Q	Q	Q
1	**Project preparation**																						
1.1.	Min.Defense decision on building use																						
1.2.	Reservation of buildings for tourism use																						
1.3.	Formation of project organisation																						
1.4.	Negotiations with Min.Defense																						
1.5.	Negotiations with Sermersooq Municipality																						
1.6	Negotiotions with Naalakkersuisut																						
2.	**Financing**																						
	Establishment Greenlandic Business entity																						
2.1	Identification of main partner companies																						
2.2.	Identification of source for PE capital																						
2.3.	Identification of source for Loans																						
2.4	Clearance in principle																						
2.5	Site visit with investors and lenders																						
2.6	Due diligence and project improvement																						
2.7.	Binding committment																						
2.8	Financial close																						
2.9	Payment to project																						
3	**Rehabilitation and civil works**																						
3.1	Cabin Rehabilitation tender																						
3.4	Rehabilitation works, water & sanitation																						
3.5	Rehabilitation works, electricity																						
3.6	Rehabilitation works, heating																						
3.7	Rehabilitation works, IT systems																						
3.8	Painting inside and outside																						
3.9	Authority buildings approval																						
3.10	Pernissions and Authorisations																						
4	**Boats, Vehicles, Furniture and sports equipment**																						
4.1	Ordering of boats and vehicles																						
4.2	Shipping of boats and vehicles																						
4.3	Decision and ordering of equipment																						
4.4	Shipping of equipment																						
4.5	Decision on furniture package IKEA																						
4.6	Shipping of furniture containers IKEA																						
4.7	Furniture assembly																						

14. Appendices

List of present owners and users

Representatives of the present owners and users of infrastructure and buildings at Grønnedal

	Address / Phone / Email	**Management /contact person**
Danish Ministry of Defense Forsvarsministeriet Departementet www.fmn.dk	Holmens Kanal 9 DK- 1060 Copenhagen K Denmark Tel +45 72810000 Email: fmn@fmn.dk	Trine Kristiansen Head of Infrastructure CHPIM@fmn.dk Deputy Head Kåre Theis Thorsen kth@fmn.dk Senior adviser Brian Roth bro@fmn.dk
Danish Ministry of Defense Property Management Authority - Forsvarets EjendomsStyrelse FES www.forsvaret.dk/fes	Arsenalvej 55 DK 9800 Hjørring Tel: +45 72813000 Email: fes@mil.dk	Deputy Head Torben Gade Fes-chpd@mil.dk Head of Section Birgitte Weber Blicher
Arctic Command – Danish military Forces in Greenland & Faroe Islands Operations Center www.forsvaret.dk	Postboks 1072, 3900 Nuuk, Greenland Tel: +299 364000 Email: vfk@mil.dk	Head Kim J. Jørgensen Ako-ch@mil.dk Michael Hjorth, Operations Ako-op001@mil.dk
Sermersooq Municipality Technical Department for buildings and environment www.sermersooq.gl	Postboks 1005 3900 Nuuk, Greenland Tel:+299 367000 Email: kommuneqarfik@sermersooq.gl	Mike Jakob Kristiansen Direktør mjkr@sermersooq.gl
Sermersooq Municipality Planning Department www.sermersooq.gl	Postboks 1005 3900mNuuk, Greenland Tel:+299 367000 Email:kommuneqarfik@sermersooq.gl	Head of Department Bilo Høegh Stigsen bhst@sermersooq.gl
Government of Greenland Naalakkersuitsut Department for Environment http://naalakkersuisut.gl/en	Imaneq 4, Postboks 1015 3900 Nuuk, Greenland Tel:+299 345000 Email: info@nanoq.gl per@nanoq.gl pan@nanoq.gl	Søren Hald Møller sham@nanoq.gl govsec@nanoq.gl l Mette Skaregaard Pedersen mesp@nanoq.gl Karen Arleth knar@nanoq.gl

List of major Greenland hotels

Hotel	Address / Phone / Email	Management
Hotel Narsarsuaq www.hotelnarsarsuaq.gl	P.O. Box 504, Narsarsuaq, Greenland Tel +299 665253 receptionnar@mit.gl	Ernst & Rina Lund Managing directors
Narsaq Hotel Aps www.hotelnarsaq.gl	Alangunguup Saqqaa B-819 3921 Narsaq, Greenland Tel +299 661290 / 497728	Kattie Nielsen Managing director
Hotel Qaqortoq Aps, Qaqortoq www.hotel-qaqortoq.fl	P.O.Box 509, 3920 Qaqortoq Greenland Tel: +299.642282 mail@hotel-qaqortoq.gl	Jim Riis Manager
Hotel Hans Egede A/S, Nuuk www.hhe.gl	P.O. Box 1052 Aqqusinersuaq 3900 Nuuk, Greenland Tel +299 324222 booking@hhe.gl	Jørgen Bay-Kastrup CEO
Hotel Kangerlussuaq, Kangerlussuaq www.hotelkangerlussuaq.gl/	P.O.Box 1006 3910 Kangerlusuaq Tel. +299 841080 kangbook@mit.gl	Morten Nielsen CEOI
Hotel Arctic A/S, Ilulisat www.hotelarctic.com	P.O:Box 1501, Lufthavnsvejen B-1128 3952 Ilulissat, Greenland Tel +299 944153 booking@hotel-arctic.gl	Erik Bjerregaard CEO
Hotel Icefjord, Ilulissat www.hotelicefjord.gl	P.O. Box 458 Jørgen Sverdrupip Aqq 10 3952 Ilulissat, Greenland Tel +299944480 Booking@icefjord.gl	Topas rejser Jørgen Sølvsteen Nielsen

List of major South Greenland Tour Operators

South Greenland Tour operators	Address / Phone / Email	Management
Blue Ice-Explorer http://blueice.gl (Owned by Topas Group)	P.O.Box 58 3923 Narsarsuaq, Greenland Tel +299-665499 info@blueice.gl	Jacky Simoud Manager
Disko Line https://www.diskoline.dk/en (Owned by Topas Group)	P.O.Box 305 Kussangajaannquaq 13 3952 Ilullissat Tel +299 945301 info@diskoline.gl	Finn Hansen Managing Director
Tasermiut South Greenland Expeditions https://tasermiutgreenland.com	P.O.Box Qassiarsuk 873, B 3921 Narsaq Tel +299 522822 Booking@tasermiut.com	Director Ramon Hernando de Larramendi Manager Javier Galvez
Arctic UmiaqLine A/S http://aul.gl/en/experience-greenland/	P.O.Box 1580 Aqqusinersuaq 48 A 3900 Nuuk Tel +299 349190 info@aul.gl	Aviaja Lyberth Lennart Managing Director lbp@ral.gl

List of Greenlandic, Icelandic, Norwegian and Danish Operators

Tour operator	Address / Phone / Email	Management
Air Greenland www.airgreenland.gl	Postbox 1012, DK – 3900 Nuuk Greenland Tel: +299 701212 info@airgreenland.gl	Jacob Nitter Sørensen, CEO Mogens E. Jensen CFO Maliina Abelsen, CCO mabelsen@airgreenland.gl
Greenland Travel www.greenland-travel.com	Wildersplads 13A, 1 DK 1403 København K Denmark Tel: +45 33131011	Peter Bastrup, Managing Director pb@greenland-travel.dk
Mittarfeqarfiit www.mit.gl	Grønland Airports Postboks 1036 3900 Nuuk Tlf: +299 70 16 00 E-mail: mit@mit.gl	Marie Fleischer Managing Director mfle@mit.gl Peter Christensen CFO pech@mit.gl
Visit Greenland https://visitgreenland.com/	Hans Egedevej 29 3900 Nuuk +299 34 28 21 Email: info@greenland.com	Lykke Geisler Yakaboylu Acting Managing Director lykke@greenland.com
Albatros Travel A/S www.albatros-travel.com	Tøndergde 16, DK 1752 København V Tel. +45 36989898 E-mail: info@albatros-travel.dk	Søren Rasmussen Owner and managing director sr@albatros-travel.dk
Topas Travel A/S www.topasgroup.com/	Bakkelyvej 2 DK 8680 Ry Denmark Tel +45 86893622 info@topas.dk	Jørgen Sølvsteen Nielsen Owner and managing director jn@topas.dk Klaus Nordvig Andersen ka@topas.dk
Hurtigruten A/S www.hurtigruten.us	Fredrik Langes Gate 14, N 9291 Tromsø, Norway Tel +47 970 57 030 Email: firmapost@hurtigruten.com	Thomas Westergaard Senior Vice-President, Oslo Thomas.Westergaard@hurtigruten.com
Air Iceland Connect https://www.airicelandconnect.dk/	Icelandair Group Reykjavík Airport 101 Reykjavík Iceland Tel: +354 50 50	Arni Gunnarsson Managing Director CEO
Icelandair www.icelandair.dk	Icelandair Group Reykjavík Airport 101 Reykjavík Iceland Tel: +354 50 50 300	Birkir Holm Gudnason, CEO
Icelandair Hotels	Icelandair Group Reykjavík Airport 101 Reykjavík Iceland Tel: +354 50 50	Magnea Hjalmarsdottir Managing Director
Wow Airlines https://wowair.co.uk	Bríetartún 13, 105 Reykjavik marketing@wow.is	Skuli Mogensen Owner and Managing Director

Project Proponents

Andreas Brogaard Buhl (born 1964) andreas.brogaard.buhl@gmail.com

Andreas is educated as a biologist at University of Copenhagen. As a former director of a research and discovery center in Kerteminde he has been involved with knowledge based tourism development and been a board member in FynTour a regional tourism development company in Denmark. He has worked with sustainable development for Danida, Danish Ministry of Foreign Affairs and the FAO of the United Nations. As Head of the Department for Ecology and environment at DHI he has been engaged in environmental projects in Greenland.

Andreas has lived in Grønnedal 1973-1976 and visited Greenland many times since. Andreas has held several talks and presentation about Grønnedal at Naturama, the Greenland Society, and University of Copenhagen. In his present position as Head of Sustainability at the Investment Fund for Developing Countries (IFU) Andreas is working towards creating sustainable Danish investments all over the world.

Peter Barfoed (born 1947) peter@tegnestuen.gl

Peter Barfoed is educated buildings architect. Since 1984 he has been working with the Nuuk based company Tegnestuen Nuuk A/S, from 1987 as partner. For many years he has initiated impressive projects in Greenland among others 10 years with the Nuuk Snow Festival. During his years in Greenland, he has been involved in many larger development projects.

Peter lived in Ivittuut from 1952-1965. He has also served in the Danish Navy at Grønnedal 1979-1980 as a carpenter and since then visited the area 8 times. At his own expense he has produced a large photo exhibition, which has been exposed at museums in Denmark (Sophienholm and Naturama 2015) in Nuuk in 2016 and as well at the West Nordic Travel Mart 2017 also in Nuuk. Peter has extensive knowledge about the history of Ivittuut and Grønnedal and he has a comprehensive collection of documents about the place.

CV's of management team – Key staff

- Managing Director
- Arctic village and Hotel host
- Restaurant, café and shop manager
- Tour guide

Necessary Permits

- Regional tourism concession for Arsuk Fjord and environs (2016 regulations)
- Hotel, restaurant and general tourism permit
- Recreational hunting and fishing permits
- Collection of sample minerals permits

Letters of Intent / Commercial agreements

- Air Greenland, Icelandair, Others – to be inserted in bankable study
- Shipping Lines, Arctic Umanaq Line – to be inserted
- Tour Operators, to be inserted
- Renovation and rehabilitation offer from DanStruct A/S or similar– to be inserted

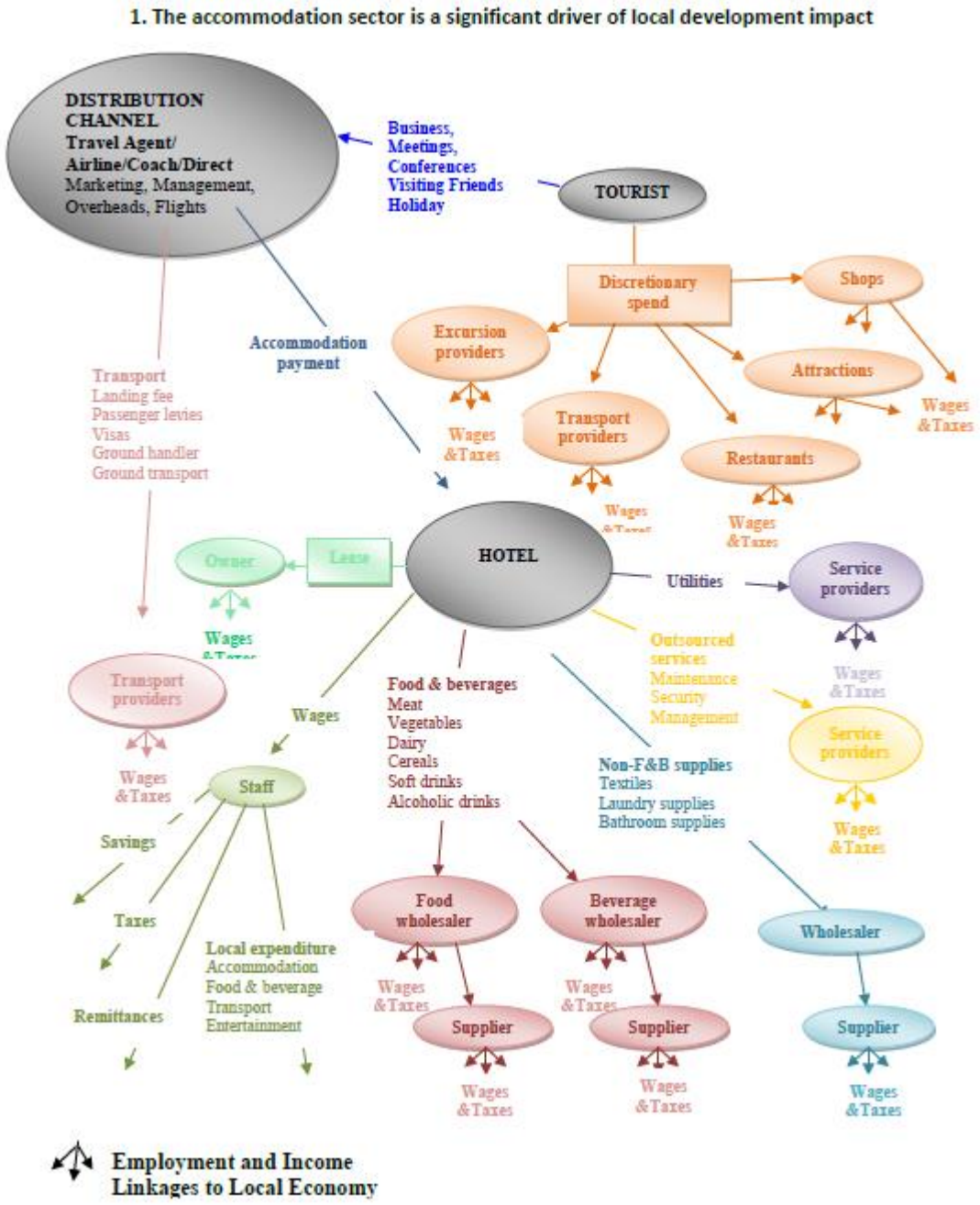
Letters of support / agreements on use of premises

- Danish Ministry of Defense - to be inserted
- Naalakkersuisut Government of Greenland – to be inserted
- Sermersooq Municipality – to be inserted

Financial accounts of the developers and main partners

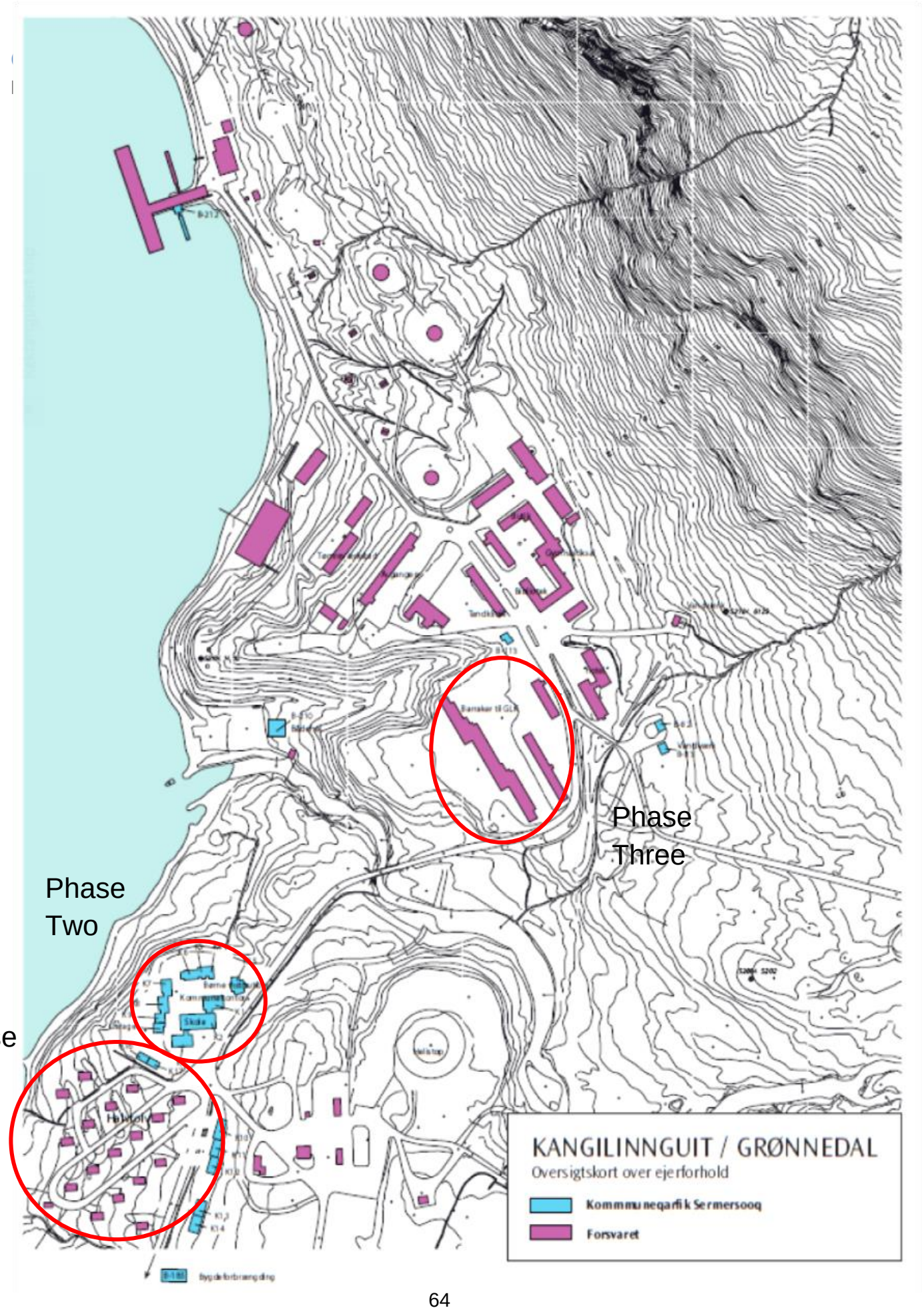
Business Model Canvas

IFC Development impact model for hotels



Note in relation to Greenland

According to the Danish Transport Commission (2010) for each 1.000 visitors 4.5 million is generated in revenue and secure up to 9 direct and indirect jobs in Greenland (See Greenlands Tourism Strategy for details). Thus 2000-4000 new visitors to Grønnedal will create between 18-36 new jobs and increased revenues of additional 10-20 million DKK locally.


Phase
Two
Phase
Three
Phase
one
KANGILINNGUIT / GRØNNEDAL
Oversigtskort over ejerforhold
Kommuneqarfik Sermersooq
Forsvaret

Photographs

Grønnedal and Ivittuut offers some unique discoveriets which include some of the following highlights::

The historical Cryolite mine

Arctic Trophy hunting

Mountain climbing Kungnait

Waterfalls & seabird colonies

Ikait atolls

Arctic Diving Ikafjord

In addition the Arsuk Fjord has all the other features of a South Greenland adventures:

Kayak adventure

Ice sheet walks Arsuk Isbræ

Mountainbiking trails

Sportsfishing

Excursion to satelite cabins

Community visits at Arsuk

References

References – In English and Danish (D)

[1] Greenland Benchmark Study, Arctic Cluster of Raw Materials,Danish Industry Confederation 2016 (LINK)

[2] Rambøll, 2015 “Turisme, udvikling og vækst gennem ændret lufthavnsstruktur” D (LINK)

[3] Naalakkersuisut, 2016 “National Sektorplan for Turisme 2016-2020” D (LINK)

[4] Visit Greenland – be a pioneer, Market Segmentation in Greenland, Visit Greenland 2015 (LINK)

[5] Visit Greenland tourism strategy 2015-2019 (LINK)

[6] Greenland.com Promotion tools, Visit Greenland 2015 (LINK)

[7] Peter Barfoed og Andreas Brogaard Buhl, Grønland kan blive et attraktivt turistmål, Kronik i Politiken den 30.juni 2015: (LINK)

[8] Setting up business in Greenland – a guide to investors, Naalakkersuisut 2010 (by Niras A/S) (LINK)

[9] Information guide how to set up a business in Greenland, Deloitte 2015 (LINK)

[10] IFC investments in hotels – development impact of hotels, International Finance Corporation, Washington, USA (LINK)

[11] A hotel is not just a place to sleep, IFC investments in hotels – development impact of hotels, International Finance Corporation, Washington, USA (LINK)

[12] Development Impacts in the Tourism Sector through the Lens of Two IFC Hotel Investments: What They Show and What We Can Learn (LINK) [

[13] Rapid Assessment of Circum-Arctic Ecosystem Resilience (RACER) Western Greenland, WWF Denmark 2014 (LINK)

[14] Jan Bøgsted 2016: Grønnedal – Forslag til 13 vandreture i Grønnedal og omegn D (LINK)

[15] Jan Bøgsted 2016: Arsukfjorden, Naturoplevelser I særklasse, forlaget Grønlandskalender D (LINK)

[16] Rapport vedrørende placering af værnsfælles arktisk kommando, Forsvarsministeriet 2011 D

[17] Minister of Defence speaking points 28. Januar 2016 Talepunkter udarbejdet af Forsvarsministeriet til samråd i Folketingets Forsvarsudvalg D

[18] Niras A/S Environmental reports on sub-terraneous pollution in Grønnedal 2010 and 2011 D

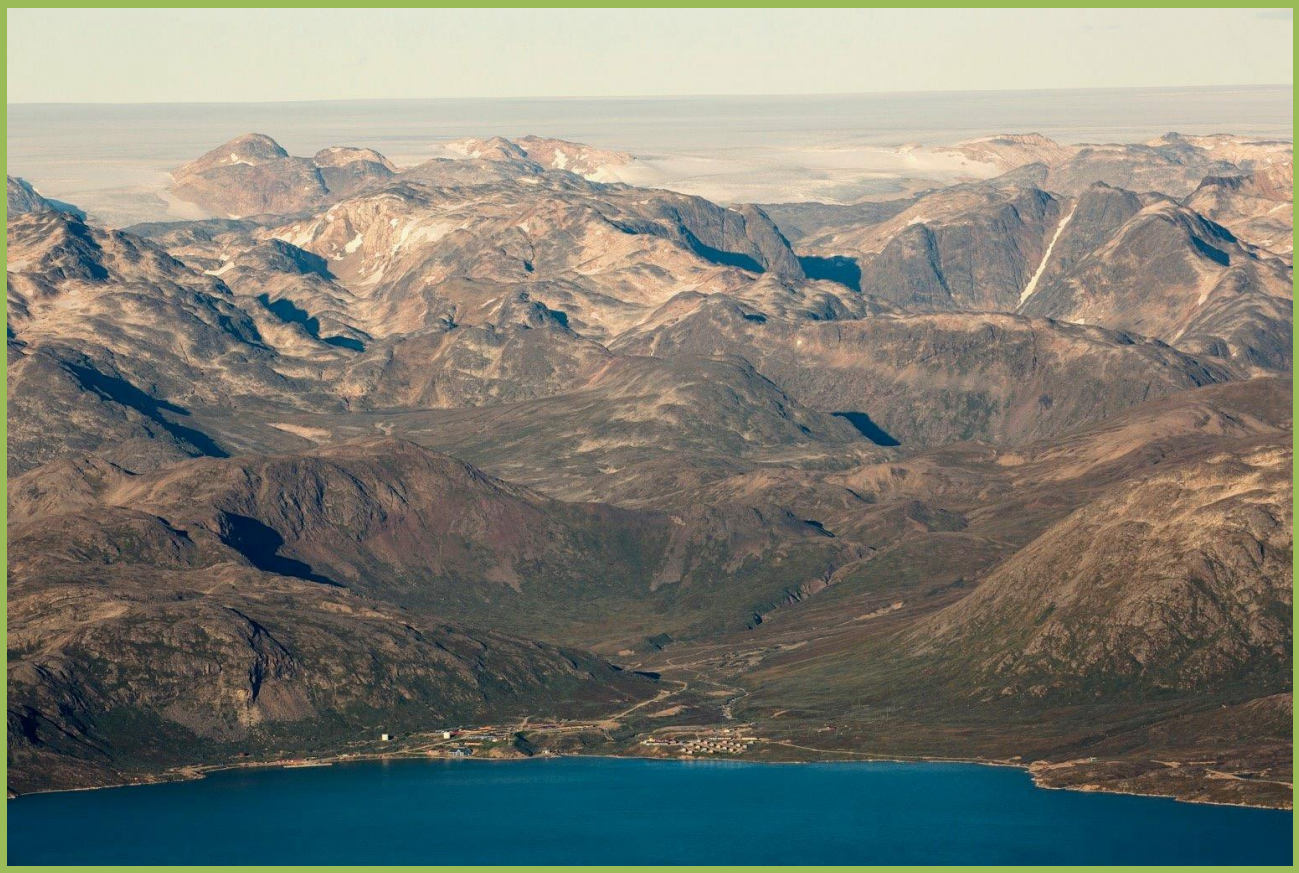
[19] Andreas Brogaard Buhl 2016 – Kangillinnguit Grønnedal en oplagt investering i Grønland, Under Dannebrog nr.2 April 2016, (LINK) D

[20] Ulrik Luckow og Jørgen Fisker: Arsukfjorden, Ivigtut, Grønnedal, Arsuk, Nordiske Landes Bogforlag, 3 udgave 1996 D

[21] Per Herholdt Jensen: Grønlands Kommando 50 år, Aschehoug Forlag D

[22] Sven Stigø, Eventyret om kryolit, Kryolitselskabet Øresund 1987: Grønlands Kommando 50 år, Aschehoug D

[23] Claus Bering1990: Arsuk Fjorden fillm 45 min. (LINK)



Grønnedal as seen from the summit of the Kungnait mountain 2016 *Photo: Thomas Krog*

Arsuk Fjord Real Estate IVS
(Selskab under etablering)
Andreas Brogaard Buhl
Læhegnet 1
DK – 3450 Allerød
Denmark
andreas.brogaard.buhl@gmail.com