To
Mineral Resources Authority

Document type
Term of reference

MAJOQQAP QAAVA
TERMS OF REFERENCE (TOR) FOR EVALUATION OF SOCIAL IMPACT ASSESSMENT

RAMBØLL Bright ideas. Sustainable change.

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1. INTRODUCTION

This report contains the Terms of Reference (TOR) covering the Social Impact Assessment (SIA) for Greenland Anorthosite Mining's (GAM) project proposal 'Majoqqap Qaava'.

GAM is a Greenlandic mineral exploration company established in 2019, which is owned by several private investors, the Greenlandic pension fund SISA, Vækstfonden[1] and Greenland Venture [2],[3]. GAM is preparing an application for an exploitation license for the development of the Majoqqap Qaava project. The purpose of the project is to extract and process anorthosite in Greenland, which can be used in the production of a range of different products, including fiberglass, insulation materials (stone wool), fillers for the paint industry and in the production of other aluminium-based materials.

Majoqqap Qaava is located in the inner part of Qeqertarsuatsiaat Kangerdluat. The project is located approx. 130 km southeast of Nuuk and 40 km northeast of the village Qeqertarsuatsiaat (Fiskenæsset), which is a small settlement with 169 inhabitants[4]. The project will generally consist of an open pit and a possible waste rock storage 12 km from the coast and a permanent mine camp on the coast containing accommodation, processing plant, tailings site and a port facility. In addition, a road (15-18 km) will be established between the mine and the mine camp. An annual production of between 300,000 and 800,000 tonnes of processed material is expected annually.

As part of the application process, GAM wishes to submit an assessment of the project's social impacts (SIA), which describes the potential impacts of the project, as well as what measures GAM will initiate to reduce any negative impacts and maximize any positive impacts[5].

With this TOR, GAM wishes to:

- To describe the SIA process and its purpose
- To describe the project, including the social and local conditions, the location of the project and the most important elements of the project
- To present the most significant impacts of the project for Greenland, the local area and the individual citizen
- To describe the most important stakeholders and a proposal for how these are involved in the further process.

The final TOR for the SIA report will be prepared based on this version and the public pre-consultation.

The report is structured so that **section 2** contains a description of the purpose of the SIA work and the process for it, **section 3** describes the project and the social and local conditions. **Section 4** focuses on the potential impacts of the project, while **section 5** contains an overview of the relevant stakeholders, as well as how they will be involved in the process.

[1] Vækstfonden is the Danish state's financing fund. The fund helps to establish new growth companies by making capital and skills available.

[2] Greenland Venture A / S is a venture company, established and owned by the Government of Greenland

[3]The Anorthosite project has historically been owned by the company Greenland Gold Resources Ltd., but the license was transferred to the Greenlandic company Greenland Anorthosite Mining ApS at the end of 2020.

[4] Grønlands Statistik, Population in the localities per. January 1, 1977-2020 (BEDST4).

[5] In addition, GAM also submits an EIA, which describes the environmental impacts of the project.

2. OBJECTIVE OF SOCIAL IMPACT ASSESSMENT

The Government of Greenland (Naalakkersuisut) has a stated goal of developing the raw materials industry to become one of the most important sectors (measured by economic activity) in Greenland. The Government of Greenland therefore adopted in 2009 Greenland Parliament Act No. 7 of 7 December 2009 on mineral resources and activities of importance for this (the Mineral Resources Act). The Mineral Resources Act contains the detailed regulatory basis and guidelines for raw material activities in Greenland.

The Mineral Resources Act strives at ensuring that the raw material activities are carried out responsibly with regard to the environmentally and socially sustainable development of Greenlandic society (cf. section 1 (2) of the Mineral Resources Act). This report deals with the social impact development, while environmental issues are in focus in the terms of reference for a parallel EIA report.

The Mineral Resources Act also stipulates in sections 73 and 76 that no permit is granted for activities such as mining, which are expected to have a significant impact on Greenlandic society befor the Naalakkersuisut (Government of Greenland) has approved an EIA or a SIA report for the project. The SIA process is described in more detail in 'Guidelines on the process and preparation of the SIA report' published by the Naalakkersuisut in April 2016, which together with the Mineral Resources Act forms the basis for the preparation of this TOR.

It is a focus area for the Government of Greenland that the development of the minerals sector takes place in close collaboration between the mineral exploration companies, the relevant authorities, the Greenlandic society and interest groups. The SIA process therefore focuses on an early and comprehensive involvement process, where all relevant citizens and stakeholders are informed about the project and have the opportunity to provide input to the study.

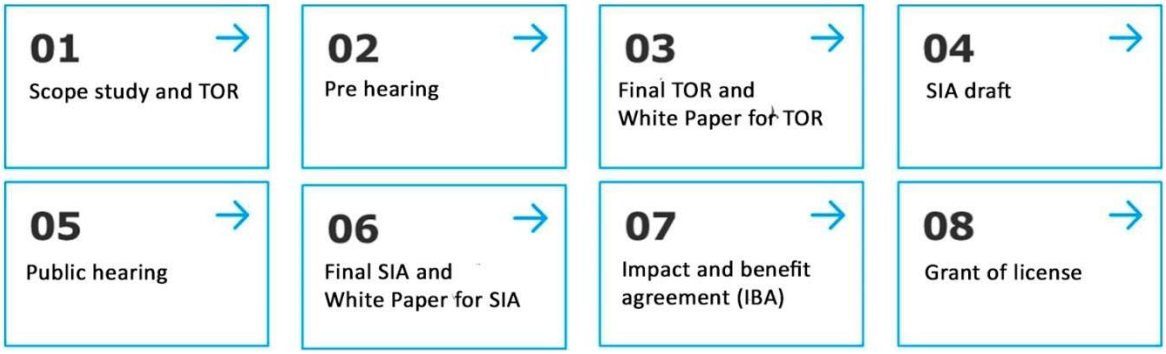
The overall purposes of the SIA process can be summarized as:

- To ensure the early involvement of relevant citizens and stakeholders through an ongoing dialogue
- To give a detailed description of the socio-economic conditions in the Greenlandic society before the project is started (baseline)
- To assess the positive and negative impacts for the local community and for Greenland as a whole in the project
- To develop measures that reinforce the positive impacts and minimize the negative impacts of the project
- To develop a plan for dealing with the positive and negative impacts (Benefit and Impact Plan).

2.1 The SIA process

The preparation of the SIA report is only one element in the entire SIA process. The process also includes a number of statutory public hearings as well as an ongoing regulatory process. The figure below outlines the eight main elements of the SIA process.

Figure 2-1: Overall process for the SIA



The individual steps or elements in the process are briefly described in the following:

1. The first element is the preparation of **scope study** and **TOR** (this report).
2. A public **Pre-hearing** is then conducted, which primarily aims to ensure a meaningful involvement early in the process. The pre-hearing itself runs over 35 days, where the material is available on the Government of Greenland's consultation portal (naalakkersuisut.gl). Upon completion of the pre-hearing, the material will continue to be available on the portal together with the consultation responses received.
3. On the basis of the public pre-hearing, a revised **TOR** is prepared, which is subsequently sent to the authorities for approval. TOR must contain a description of the project, a preliminary socio-economic baseline (which is continuously adapted and expanded during the work) as well as a description of what potential impacts the project may have on the local area and Greenland as a whole. In addition, the comments from the pre-hearing and any subsequent changes that have arisen on that basis must appear in TOR. These must also be reproduced in the White Paper for ToR.
4. A **draft of the SIA report** is then prepared on the basis of TOR and the socio-economic baseline. The report analyses the degree of impact and the probability of the individual impacts, and measures are identified that can minimize the negative impacts and maximize the positive impacts. Data for use in assessment are collected through a combination of desk research of existing knowledge and analyses, stakeholder meetings, citizen meetings and interviews with stakeholders and the affected citizens.
5. The draft SIA report is sent for **public consultation** for a minimum of 8 weeks, where the material is made available on the Government of Greenland´s consultation portal. During this consultation period, citizen meetings are held in towns/villages that are particularly affected by the project, cf. the Mineral Resources Act to §87c. The consultation meetings are held by the authorities with the participation of the company, relevant ministries, scientific advisers - and possibly more.
6. After the public consultation, the **final SIA report and white paper** will be prepared. The White Paper contains answers to any questions that may arise in connection with the public consultation on the draft SIA. The White Paper also contains an indication of and reference to where the SIA report has been adapted on the basis of this.
7. A tripartite negotiation is then initiated between GAM, Kommuneqarfik Sermersooq and the Government of Greenland. The negotiations will lead to a **co-operation agreement (IBA)**, which contains several initiatives which, among other things, will ensure the involvement of Greenlandic labour and companies in the project, knowledge and competence building in Greenland and socio-cultural conditions.
8. The Naalakkersuisut then processes the case and decides whether the documents and the project are to be approved (cf. section 76, subsection 1 of the Mineral Resources Act).

2.2 The regulatory framework

The primary relevant legislation for this project is Greenland Parliament Act No. 7 of 7 December 2009 on mineral resources activities (the Mineral Resources Act), which entered into force on 1 January 2010 (including the subsequent amendments - latest amendment no. 39 of November 28, 2019). The Government of Greenland´s executive order no. 8 of 26 February 2020 of the Greenland Parliament Act on mineral resources and activities (the Mineral Resources Act) is a compilation of all the amendments. The most relevant provisions of the Mineral Resources Act for the SIA process are summarized in the table below.

Table 2-1: The Mineral Resources Act's most relevant provisions for the SIA work

Provision	Content
§ 18, pcs. 1	The use of Greenlandic labour
§ 18, pcs. 2	Use of Greenlandic companies in contracts, deliveries and services
§ 18, pcs. 3	Processing of extracted mineral resources in Greenland
§ 76	Provision for the implementation of the SIA
§ 77, pcs. 2	Demonstration, description and assessment of direct and indirect influences on societal conditions
§ 77, pcs. 4	Notice to the public on the Government of Greenland´s website (naalakker-suisut.gl). or in any other appropriate way
§ 78a	The legal basis for the IBA
Chapter 18a	Provisions on pre-hearing and hearing.

In addition, there are a number of other legislation and international conventions that are relevant to the project. These are shown in the table below.

Table 2-2: Other relevant legislation and international conventions

Other relevant legislation
• Aviation (Danish law BL 5-24 regarding regulation of aviation in Greenland) • Conservation and other cultural heritage protection of cultural monuments (Act no. 11 of 19 May 2010) • Criminal law (Danish law no. 306 of 30 April 2008) • Immigration (Danish law no. 150 of 23 February 2001) • Maritime safety (Regulation No 882 of 25 August 2008) • Working environment (Regulation No. 1048 of 26 October 2005, covering Act No. 295 of 4 June 1986, Act No. 321 of 18 May 2005 and Act No. 193 of 26 March 1991) as well as specific devices relating to the working environment • Taxation (Act no. 12 of 2 November 2006, as well as the amendments to Act no. 3 of 30 November 2009, Act no. 20 of 18 November 2010, and Act no. 37 of 9 December 2015) • Inatsisartutlov no. 14 of 26 May 2010 on rescue preparedness in Greenland and on fire and explosion prevention measures • Greenland Parliament Act No. 4 of 4 June 2012 regarding Greenland Oil Spill Response A/S • Building Regulations 2006, Br06, Directorate for Housing and Infrastructure, February 2006 • Legislation, rules and executive orders issued and administered by the Greenland Electricity Authority • Executive Order no. 16 of 16 July 2017 on explosive substances • Traffic Act for Greenland
Relevant international conventions
• Convention on the Protection of the World Cultural and Natural Heritage (UNESCO) • European Convention on Human Rights • Extractive Industries Transparency Initiative (EITI) • ILO Convention 169 on Indigenous and Tribal Peoples in Independent States • ILO Convention 87 on Freedom of Association and Protection of the Right to Professional Organization • ILO Convention 98 on the right to professional organization and collective bargaining

- ILO Convention 138 on Minimum Age
- ILO Convention 100 on Equal Pay
- ILO Convention 111 on Employment and Occupational Discrimination
- ILO Declaration on Fundamental Principles and Rights at Work
- The International Convention on Economic, Social and Cultural Rights
- The International Covenant on Civil and Political Rights
- International Union for Conservation of Nature
- OECD Guidelines for Multinational Enterprises
- UN Convention against Corruption
- UN Declaration on the Rights of Indigenous Peoples

3. PROJECT DESCRIPTION

The purpose of the Majoqqap Qaava project is to extract and process anorthosite, which can be used in the production of a variety of products, including fiberglass, insulation materials (stone wool), fillers for the paint industry and in the production of other aluminium-based materials.

This chapter contains a brief description of the location of the project, the local conditions in Qeqertarsuatsiaat and at the project itself, including the various parts of the project (e.g., the port facility and processing plant) and the expected need for manpower in connection with the construction phase, operational phase and at closure of the mine.

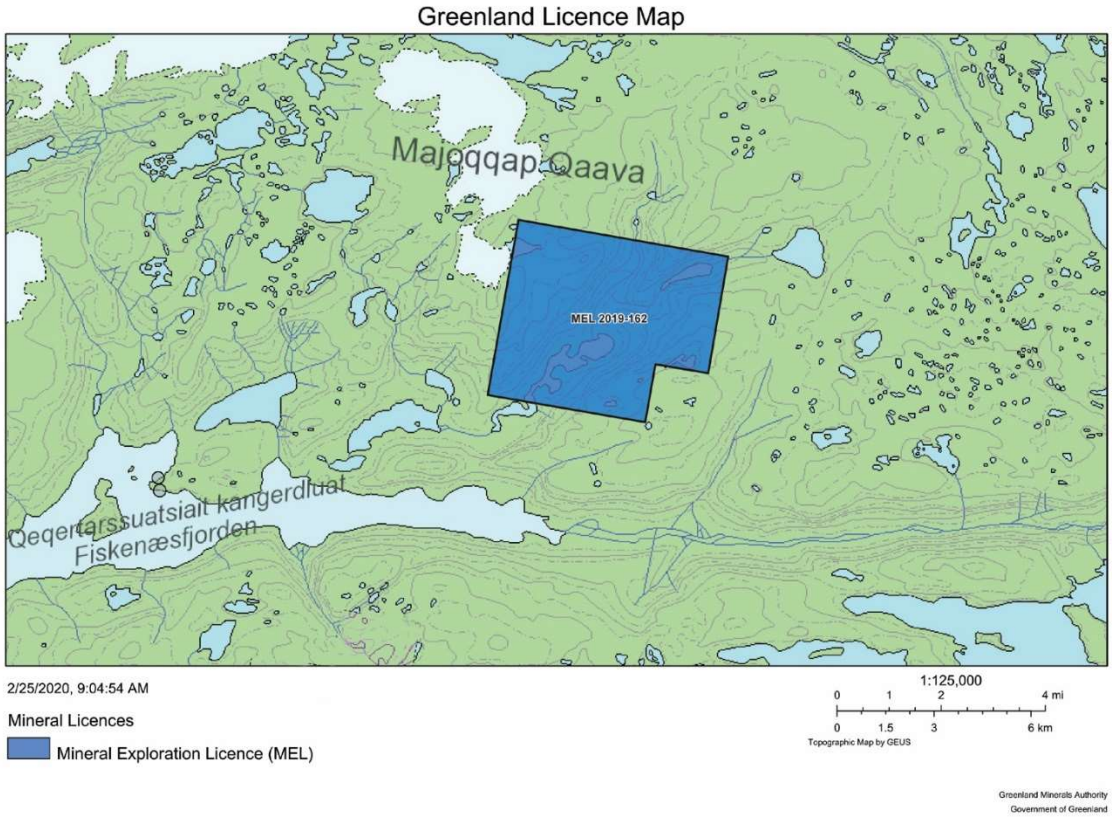
3.1 Project location

Majoqqap Qaava is situated in Kommuneqarfik Sermersooq in West Greenland at latitude 63° 13'N and longitude 50° 12'W. The license area, as shown in Figure 3-1, has a size of 34 km^2 and is situated 130 km southeast of Greenland's capital Nuuk and 40 km northeast of the nearest settlement Fiskenæsset. The project area is located in the inner part of the Qeqertarsuatsiaat Kangerdluat along the Kuussuatsiaat valley.

The topography in the Fiskenæs region varies from low-lying areas (0-500 m), dominated by low mountain ridges with moderate to dense vegetation along the coastal areas, to areas with greater relief (up to 1500 m) in the inland area next to the Inland Ice. In the region, there are several deep fjord systems, which are predominantly ice-free all year round. GAM´s project area includes terrain from sea level up to approx. 1000 m altitude near the summit of Majoqqap Qaava. The anorthosite deposit itself to be exploited is placed an altitude of 300-400 m. From the mining area follows a system of lakes in the Kuussuatsiaat valley for approx. 12 km before ending on the north coast of Qeqertarsuatsiaat Kangerdluat.

There is currently no infrastructure that connects the project area with the rest of Greenland, which is why in connection with the project there is a need for the establishment of port facilities, road connections and accommodation for the employees at the mine (see further description in section 3.3).

Figure 3-1: Overview of the license area



3.2 Local conditions

Majoqqap Qaava is located, as described above, approx. 40 km east of Qeqertarsuatsiaat, a village of 169 inhabitants[6]. Qeqertarsuatsiaat was founded in 1754 by Anders Olsen as part of the colony Godthåb. Qeqertarsuatsiaat means in Danish 'the rather large islands', which at that time were the centre of large cod stocks in the fjord areas. The district is governed by a publicly elected district council, which is elected for a four-year period and follows the election period for the municipal council.

Qeqertarsuatsiaat became the subject of attention in the 1920s, when Faroese fishermen sought permission to fish at the mouth of the fjord, where it was possible to catch cod all year round. Following a series of political discussions, the Faroese fishermen were allowed to fish in the area. This meant that several fishermen in the village also acquired "Faroese motorboats" and a fish factory was set up to process the cod. However, this adventure ended with the cod more or less disappearing in the mid-1980s[7].

In connection with the population concentration in the 1950s and 1960s, most of the residents from the areas around Qeqertarsuatsiaat - Kangillermiut, Akunnaat, Ujarassiorfik, Kangerluarsussuaq (Grædefjorden) - were moved to Qeqertarsuatsiaat. This meant that construction of type houses in the village was initiated and the number of inhabitants increased. When there were most inhabitants in the village, there were approx. 500 inhabitants, but the population has since

[6] Grønlands Statistik, Population in the localities per. January 1, 1977-2020 (BEDST4).

[7] Kommuneqarfik Sermersooq's website and Wikipedia.

then fallen sharply to the current level of 169 inhabitants. The population development thus follows the general trend throughout Greenland and Kommuneqarfik Sermersooq, where the population in the settlements moves to the larger cities, including Nuuk and Paamiut[8].

A previous study concludes that outdoor activities such as fishing, hunting and traditional cooking are still an important part of the upbringing of children and young people in the village. The survey also shows that a large proportion of the inhabitants make extensive use of traditional Greenlandic food caught locally[9].

A closer look at the population composition of Qeqertarsuatsiaat shows that approx. 16 pct. is under 16 years, approx. 70 pct. are between 16 and 65 years old, while the remaining 14 pct. is older than 65 years. Compared with Greenland as a whole, there is a smaller proportion of young people under 16 and a larger proportion over 65 in Qeqertarsuatsiaat[10].

In Qeqertarsuatsiaat there is a local school which offers tuition up to and including the 7th grade. The school has almost 20 students and a teacher rating of 3.35[11]. Students who want a graduation from primary school are offered (free) accommodation at a dormitory in Nuuk[12]. Students who want to continue their schooling after 9th grade can take various educations in, for example, Nuuk or other cities in Greenland. There is no publicly available data on the population of Qeqertarsuatsiaat and their level of education and skills. These data will therefore be collected in the context of the present assessment of societal sustainability.

Qeqertarsuatsiaat is a smaller settlement, with a limited number of local businesses. The village has its own supermarket (Pilersuisoq), a fish factory owned and operated by Royal Greenland, fuel supply (Polaroil), telecom and post centre, a youth hostel and a few small shops and one-man businesses. The fish factory is the largest workplace in the village with approx. 30 employees in the high season and up to 5 in the low season. The primary species processed at the factory are crabs, cod and roe in barrels.

An extract and review of the Danish Business Registry (CVR) shows that 31 companies and associations have been registered in Qeqertarsuatsiaat per. December 4, 2020[13].The table below shows the companies by main industry.

[8] Community Profile Qeqertarsuatsiaat, 2016.

[9] True North Gems Inc. (2014): Draft Assessment of Social Impact in the Aappaluttoq Ruby Project.

[10] Grønlands Statistik, Population in the localities per. January 1, 1977-2020 (BEDST4).

[11] Schools' quality report 2018/2019 - Kommuneqarfik Sermersooq.

[12] https://sermersooq.gl/da/forvaltninger/Elevhjem.

[13] Based on an extract from virk.dk, with a filter on postcode 3900 Nuuk. After this, a manual review of addresses has been carried out to find the companies registered in Qeqertarsuatsiaat.

Table 3-1: Registered companies and associations in Qeqertarsuatsiaat

Main business	No of companies
031100 Sea fishing	7
433200 Carpentry and joinery	3
432200 Plumbing and plumbing businesses	3
949900 Other organizations and associations	2
931200 Sports Clubs	2
941200 Professional associations	2
237000 Cutting and polishing of stones	1
561020 Pizzerias, grill bars, ice cream parlors, etc.	1
942000 Trade unions	1
467600 Wholesale of other raw materials and semi-finished products	1
452020 Car body workshops and car paint shops	1
452010 Car repair workshops etc.	1
329900 Other manufacturing	1
889910 Associations, grants and foundations for disease control, social and charitable purposes	1
017000 Hunting, trapping and related services	1
471110 Grocers and 24-hour kiosks	1
949200 Political parties	1
960900 Other personal services	1

Source: CVR-registeret, 4th of december 2020.

In addition, there are a number of public institutions, including kindergarten, nursing home, senior citizens' collective, church and town hall, power plant and water supply (Nukissiorfiit).

The potential workforce of Qeqertarsuatsiaat includes 118 people (inhabitants between 17 and 64 years). There are no official statistics available on unemployment in Qeqertarsuatsiaat, but previous studies suggest that unemployment is very limited in summer and slightly higher in winter. In the final SIA, this will be verified via data collection through interviews and possibly other secondary sources. Previous studies also show that 50 pct. of the respondents in Qeqertarsuatsiaat prefer to work for pay, 25 pct. prefers fishing and hunting, while the last 25 pct. prefers a combination of paid work as well as hunting and fishing[14].

Additional baseline data will be collected in connection with the next phase of the SIA process.

3.3 The Majoqqap Qaava project

The purpose of the Majoqqap Qaava project is to extract anorthosite, which is a white rock composed primarily of the chemical components; aluminium, silicon and calcium. The deposit at Majoqqap Qaava is unique in its size and chemical composition, which makes it especially ideal as a feedstock material for the production of fiberglass, which i.e., can be used in the wind turbine industry, for cars, boats, aircrafts, etc. Anorthosite can also be used in the production of insulation materials (stone wool), road materials and cement as well as filler material in paints and surface coatings and others aluminium-based products.

[14] True North Gems Inc. (2014): Draft Social Impact Assessment for The Aappaluttoq Ruby Project.

The mine will be in planned operation 7 days a week during the operational season for the mine and the processing plant, which will be 36-40 weeks/year. For the remaining period, the mine will run in a maintenance-scenario with fewer employees. Once GAM has entered into the necessary long-term contracts with potential buyers, the current mineral resource will correspond to a mining period of a minimum of 25-30 years, but the area contains expected resources for a minimum of 50-100 years of further operation.

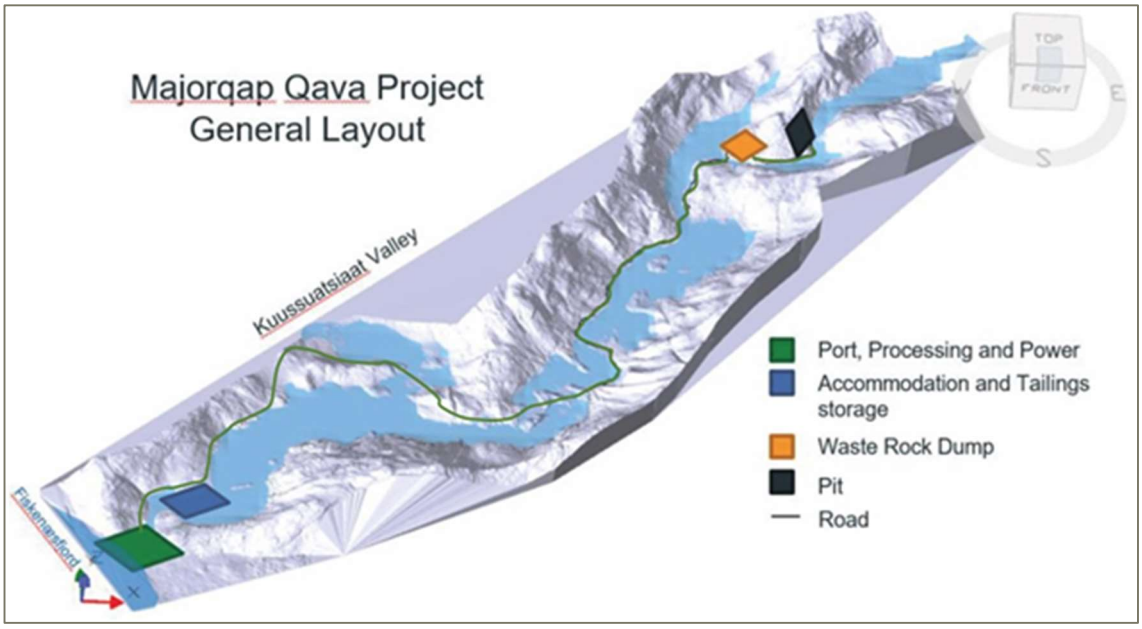
GAM considers different scenarios for production, which differ in relation to the quantities and types of materials produced. The project description therefore presents a minimum scenario (scenario A), which consists of a simple circuit, where feedstock material for E-glass, ceramic products and fillers for paint is produced, and a maximum scenario (scenario B) that involves a more complex circuit, which - in addition to the materials in scenario A - also include fine grinding of anorthosite down to 45 µm and production of materials for stone wool. GAM's intention is to establish a mine that is both profitable and "green" - thereby minimizing the impact on the local environment and using the most optimal logistical set-up. Several key parameters thus dictate which production scenario that ultimately will be chosen, including the approach to green energy sources, the price of energy, logistics, handling of products and the establishment of the necessary off-take agreements with end-users.

The project is expected to extract between 400,000 and 1,000,000 tonnes of raw anorthosite per year with a subsequent processing and shipping of approx. 300,000 to 800,000 tons of finished material for Europe and North America (depending on whether scenario A or B is chosen). In the first years of the mine's lifetime, a reduced production plan is expected, as the mine is scaled up and purchase agreements are established.

3.3.1 Project layout and elements

The general layout of the project is shown in the figure below.

Figure 3-2: Layout of the Majoqqap Qaava-project



As can be seen from the figure, the project generally consists of the following elements:

- Mine and possible waste rock depot at mine
- Harbour facilities

- Processing plant and run of mine depot
- Tailings depot at the coast
- Accommodation
- Haul road
- Other infrastructure

Mine and possible waste rock depot at mine
The project presupposes an open pit mine and includes drilling and blasting of solid rock, loading and transport of ore from the mining area to the processing plant. The crude anorthosite will be drilled and blasted using ANFO (explosive consisting of ammonium nitrate and diesel). Since the deposit is directly exposed on the surface, there will be no need to first remove surface cover or other rocks that are not part of the resource.

The planned mine design and the actual mine production are not expected to produce significant amounts of waste materials. Waste materials will occur if anorthosite materials are extracted which are not included in the resource calculation and therefore cannot be classified according to this. Such materials will consist of coarsely blasted anorthosite, which has the same composition as the material included in the resource calculation. The material will not contain harmful materials or cause dust nuisance during disposal. If necessary, a waste rock depot is established approx. 3.5 km west of the mine along the haul road to the processing plant and port facilities.

Harbour facilities
Ships of up to 45,000 DWT (Handymax bulk carriers), with a length overall size [LOA] of up to 180 m length, 28.5 m width and 10.5 m draft, are expected to dock at the port. In order to create the greatest possible operational flexibility, the quay facility will be dimensioned for marginally larger vessel sizes (Supramax bulk carriers) with a total size [LOA] of 199 m length, 32 m width and 12.2 m draft.

GAM has not yet decided which solution will be used to establish a port facility. However, this will certainly consist of a floating barge quay attached to a fixed port installation and will depend on the dialogue the company has with the construction company, which will carry out the task.

A mechanical ship loader will be placed on the quay to be able to effectively load bulk carriers. The ship loader is equipped with suitable dust-absorbing studs and shielding plates that minimize dust nuisance and ensure an even distribution of materials in the ship's hold.

Processing plant and storage area
GAM does not expect to store large quantities of unprocessed anorthosite. At times, it may be necessary to store smaller quantities if extraction rates exceed the production plans at the processing plant. There will be storage of larger blocks of anorthosite, so the storage will not be associated with dust or leaching problems. The storage area is expected to be located in the immediate vicinity of the processing plant.

The processing of anorthosite requires different steps and generally consists of the following:
- Primary crushing with jaw crusher
- Primary screening
- Optical sorting
- Secondary screening
- Secondary crushing with cone crusher
- HPGR grinding
- Magnetic separation circuit

- Fine grinding circuit (scenario B only, if possible after further analysis).

In addition, there will be a number of technical differences in what goes on in the individual steps in resp. Scenario A and Scenario B, the latter involving several product types to be pre-ground and sorted.

Storage of dry products can take place on the coast as close as possible behind the quay. However, it must be ensured that there is free movement of vehicles on a reinforced road area connected to the jetty and the access ramps. Depending on the production scenario, storage of product materials will take place in up to three different formats; outdoor storage (Scenario B), covered storage (Scenario A + Scenario B) and silo storage (Scenario B). Fixed and mobile transport units will be located so that they can easily move product materials from the storage facilities to a mobile ship loader on the quay.

Tailings depot at the coast
The waste material consists of two main types of materials: Coarse 20-120 mm pegmatite material and fine-grained (<500 µm to > 75 µm) magnetic material. In addition, in scenario A, fine material <75 µm may be sorted out, if this material cannot be mixed with other product types. At present, it is assumed that waste materials do not contain toxic or harmful elements and do not pose a risk with regard to leaching of harmful metals. This will be finally verified by GAM once ongoing geochemical studies are completed.

Two possible areas for waste disposal have been located north of the maintenance and accommodation area. One site involves a land-based tailings site, while the other involves a tailings site in the lake immediately east of the mine camp. The main advantage of both locations is the proximity to the processing plant.

Accommodation
As described in section 3.1, the project is located approx. 40 km from Qeqertarsuatsiaat, which is the nearest settlement. This means that in connection with the project, a permanent accommodation for the employees must be established. The accommodation is located, cf. Figure 3 2, in the immediate vicinity of the port and the processing plant. The accommodation area consists partly of buildings with rooms, including common areas, including TV and living room, kitchen and canteen.

The accommodation units will consist of prefabricated modules. The total capacity of the camp is based on 2 x 12-hour shifts, so there is room for the two shifts to be replaced and overlapped with two new shifts. In addition, 20 pct. additional capacity is included for unforeseen personnel (delays, skewed shifts, etc.).

Haul road
Today, there is no connection between the mining area and the location of the processing plant and the port facilities. In connection with the project, a road (15-18 km) will be established from the mine to the processing plant at the port. The transport route is expected to be a one-lane road with continuous fixed extensions of the road, where two trucks can pass each other on the way to and from the mine. The transport route is designed to follow the terrain in the most optimal and cost-effective way, so that the amount of blasting and road construction can be limited as much as possible.

Other infrastructure

In addition to the above main elements of the project, there will also be other infrastructural elements to support the mine operation:

- Administrative office buildings
- Shift room (drying room)
- Workshop for vehicles and spare parts
- Workshop and warehouse
- Fuel depot
- Nursing station and emergency aid (which can also be used by citizens of Qeqertarsuatsiaat)[15]
- Helicopter platform
- Laboratory
- Explosive's depot
- Power plant
- Waste and wastewater treatment plant.

3.3.2 Expected number of employees

The construction phase is expected to start in the first half of 2023, depending on how quickly the project is granted the necessary permits. During the construction phase, the crew will live in a camp in the project area built by GAM. The crew will work in rotating shifts, and the construction of infrastructure and buildings is expected to be completed in 2024.

GAM expects that 30-40 men will be involved in the construction phase. The following job functions will be needed: Construction manager and foremen, surveyors, construction economists, boiler operators, welders, plumbers, fitters, electricians, carpenters, concrete workers, machine operators, crane operators, painters, plumbers, miners and workers.

At present, it is not possible to accurately estimate the number of employees in the operational phase of the project. GAM has initially assessed that in scenario A there is a need for approx. 60 employees and in scenario B approx. 90 employees if the assumed production targets are achieved. The table below provides a preliminary overview of the workforce by category. The decision on tugboat will depend on the result of ongoing analyses of sailing conditions resp. necessary ship types for the chosen business scenario.

Table 3-2: Preliminary evaluation of the necessary work force

		Scenario A	Scenario B
Mine operation	Mine manager	1	1
	Drillers	3	3
	Shift Foreman	1	1
	Miners	1	2
	Excavator operator	2	2
	Truck driver	9	11
	Machine operator	3	6
	Operator	3	5
	Workers	3	4
	Geologist	1	1

[15] GAM intends that the nursing station can also be used to service the citizens of Qeqertarsuatsiaat. That is, citizens with illnesses or injuries can visit the mine if this is more effective than going to Nuuk or waiting a week for the nurse in Qeqertarsuatsiaat to arrive.

Processing plant	Plant manager	1	1
	Shift foreman	2	2
	Processing operator	2	4
	Technical operator, separation circuit	2	2
	Foreman maintenance	2	2
	Technician maintenance	2	4
	Laboratory technicians	1	2
	Workers	1	2
Mine maintenance and technical operation	Technical manager	1	1
	Mechanics	2	5
	Electrician	1	1
	Workers	2	5
	Engineer	1	1
	Storage manager	0	1
	environmental technician	1	1
Daily maintenance	Camp manager	1	1
	Cook and kitchen assistants	5	6
	Cleaning assistants	2	2
	Nurse or paramedic	1	1
Technical maintenance of camp	Janitor	3	3
	IT-technician	1	1
Tug boat		0	3
TOTAL	**TOTAL**	**61**	**87**

To meet the requirements, set by the Government of Greenland, a closure plan for the mine will have to be assessed and adjusted on an ongoing basis in accordance with the activities that take place in the project area. At present, GAM has drawn up an overall plan for the decommissioning of the mine. The decommissioning of the mine is expected to take up to 1 year from the time the mine closes. The decommissioning is expected to be relatively simple and will ensure the removal of all equipment, demolition of building structures and a sound closure of the area around the mine to avoid intrusion by unauthorized persons. A safety zone will thus be established around the open pit, so that the public cannot inadvertently access this and be harmed.

The mine closure is expected to require 10-15 employees. The following competency profiles are expected to be used; machine operators, miners, demolition workers, electricians, carpenters, welders and a chairman.

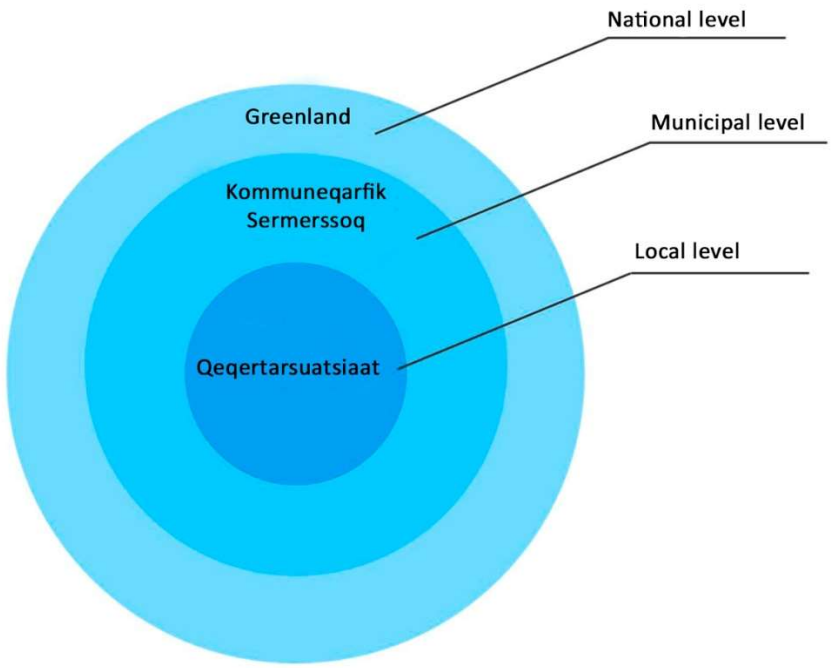
4. POTENTIAL SOCIAL AND SOCIETAL IMPACTS OF THE PROJECT

This chapter presents the potential social impacts that need to be examined in more detail in the assessment of the project's social sustainability. Each section below provides a brief description of the baseline knowledge that has been gathered during the initial scoping phase (for a further description, see section 3.2).

As part of the preparation of the SIA report, all baseline information will be examined in more detail and elucidated with interviews, workshops and dialogues with relevant stakeholders and citizens, so that the SIA is based on the latest data and knowledge. In addition, the SIA will, to the greatest extent possible, collect and use baseline information (e.g., unemployment statement), which covers the part of the year when the project is in full operation (March/April to December).

In addition, for each potential impact, the expected social impacts at the local, municipal and national level, respectively, are described. Local level is here to be understood as the settlement Qeqertarsuatsiaat; municipal level as Kommuneqarfik Sermersooq and in particular the two closest cities Paamiut and Nuuk; and national level as the whole of Greenland. This is illustrated in the figure below.

Figure 4-1: Local, municipal and national level



The potential impacts are described for both scenario A and scenario B (see section 3 for a more detailed description of the two scenarios). Finally, for each impact, it is described what information must be obtained/collected in connection with the preparation of the SIA.

The table below summarizes the impacts described in the following sections.

Table 4-1: Overview of potential impacts

Category	Impact
Employment (section 4.1)	Employment of Greenlandic worker (4.1.1) Indirect and induced employment effects (4.1.2) Cumulative influences and conflict with other sectors (4.1.3) Personal income tax (4.1.4) Working conditions (4.1.5)
Education (section 4.2)	Competence development (4.2.1)
Economic Impact - Not Employment (Section 4.3)	Business opportunities (4.3.1) Company tax/royalties (4.3.2)
The public sector and infrastructure (section 4.4)	Infrastructure (4.4.1) Pressure on the public sector (4.4.2) Public health and emergency preparedness (4.4.3) Vulnerable groups, crime and abuse (4.4.4) Migration (migration and migration patterns) (4.4.5) Cumulative effects (excluding labour market effects) (4.4.6)
Residual impacts (section 4.5)	Cultural heritage, socio-cultural values and entertainment activities (4.5.1) Other economic consequences (4.5.2)

4.1 Employment

As shown in Table 4 1, under the category 'employment' we will deal with five different influences. These effects are described in the following sections 4.1.1-4.1.5.

4.1.1 Employment of Greenlandic workers

There is a potential impact on employment in the three phases of the project:

- The construction phase
- The operational phase
- The decommissioning phase.

As described in section 3.3.2, the construction phase is expected to start in the first half of 2023, depending on how quickly the project is granted the necessary permits. It is expected that 30-40 persons will be involved in the construction phase. The following job functions will be needed: construction manager and foremen, surveyors, construction economists, boiler operators, welders, plumbers, fitters, electricians, carpenters, concrete workers, machine operators, crane operators, painters, plumbers, miners and workers.

Reference is made to Table 3.2 (page 14-15) for the number of employees and job types in connection with the operational phase of the project. The decommissioning of the mine is expected to require 10-15 employees, including the following competency profiles to be used; machine operators, blasting technicians, demolition workers, electricians, carpenters, welders and a chairman.

In 2019 (average of months of the year), there were a total of 26,992 employees in Greenland (of which 14,722 were men and 12,270 women). In addition, in 2019 there were an average of 1,924 jobseekers in Greenland (Grønlands Statistik). For Paamiut and Nuuk, in 2019 there were 594 and 9842 in employment on average over the months of the year, respectively, as well as 93 and 334 jobseekers[16].

Unemployment in Greenland varies across educational levels. For example, the unemployment rate for workers with a higher education is 0.5 pct., while the unemployment rate for workers whose highest completed education is primary school is 9.3 pct. (figures from 2018)[17]. It is described in the Labour Market Report 2018-2019 that the Greenlandic unemployment is largely due to a structural challenge in matching the competence profiles to the existing labour market.

The potential workforce of Qeqertarsuatsiaat counts 118 people (inhabitants between 17 and 64 years). There are no official statistics available on unemployment in Qeqertarsuatsiaat, but previous studies suggest that unemployment is very limited in summer and slightly higher in winter. GAM intends, to the extent that competences are available, employ both men and women for the project.

On September 19 (2020), GAM held an information meeting in Qeqertarsuatsiaat about the project. At the meeting, those present expressed interest in the jobs that the project will create. It was communicated that GAM will initiate a process in which it will be mapped what relevant competencies these potentially available resources possess. This process will be carried out in connection with the preparation of the SIA.

Based on experiences from previous mining projects (e.g., the Ruby mine at Aappaluttoq) and consultations in Nuuk and Qeqertarsuatsiaat, challenges with achieving a high proportion of local employees in the project can be:

- Lack of minimum qualifications / experience to fill the necessary positions, including especially positions with the required specialist or high level of competence.
- Limited interest in seasonal work (9 months a year), especially in the summer, when other production and leisure activities also take place[18]
- Limited retention of local workers due to working conditions (e.g., 12-hour shifts, 7 days a week for 3 weeks of operation, where workers are accommodated in the mine tenant.

Scenario A

Local influence:

In the construction phase of the project, directly through various suppliers or in a combination of these, GAM expects to employ 30-40 persons, and in the operational phase of the project to employ approx. 60 persons in scenario A at full operation. In the decommissioning phase, a need for 10-15 persons is expected.

[16] https://stat.gl/dialog/main.asp?lang=da&version=202017&sc=AR&subthemecode=2.%20BESK%C3%86FTIGELSEN%20I%20HOVEDTR%C3%86K&colcode=2, tables ARDBFB3 og ARDLED1.

[17] https://stat.gl/dialog/main.asp?lang=da&version=202001&sc=AR&subthemecode=o3&colcode=o.

[18] In the "reduced" period, there will also be job functions (however fewer jobs) which may involve locals: truck driving, workers, craftsmen for maintenance, catering, administration, etc.

The project can potentially create local jobs and thus help reduce unemployment. The project will be in full operation approx. 9 months a year. The direct local employment in the project will depend on the match between the competencies, experience level and personal qualities that are in demand, and available profiles in the local community.

Municipal influence:
The project can potentially create jobs in the municipality and thus help to reduce unemployment. The direct municipal employment in the project will depend on the match between the competencies, experience level and personal qualities that are in demand, and available profiles in the municipality.

National impact:
The Greenlandic workforce is very mobile, which is why it is not inconceivable that workers with the right competence profiles from other municipalities choose to look for work at the mine. Cf. the size of the project, the direct employment effect is expected to be relatively small. It is also unclear to what extent part-time work (9 months) is attractive enough to attract labour to the area.

Scenario B
In the mining phase, GAM expects to employ approx. 85-90 employees in scenario B at full operation. In addition, similar impacts are expected as in scenario A. There will not be an immediate difference in the need for labour in the project's construction and decommissioning phase in relation to the choice of scenario A or B.

Required information for the preparation of the SIA
Detailed information from GAM on working hours, rotation schemes and other relevant aspects of how attractive the work is to the local population (and in general to the Greenlandic workforce).

In previous consultations on mining projects' SIAs, information is requested on:

- Choice of project form in the construction phase, and in particular clarification of how the project organization is expected in the establishment phase. This could be, for example, whether the construction of the mine is offered as a turnkey contract or divided into smaller tenders, where local companies will find it easier to bid for the task. Relevant for local companies/sole proprietorships that can contribute to the construction phase.
- Overall certifications within HSE as well as transportation required to work in the mine. Relevant to the potential workforce in the local area, so that necessary upgrading skills can be completed before mining begins.

This information will be obtained from GAM and incorporated into the SIA.

Information about the competence level etc. in the local population will be collected during the baseline study.

Important national strategies / documents:

- Naalakkersuisut's employment strategy 2020-2023: "Innovation, Potential, Competence" (2020)
- Labour Market Report 2018-2019, Ministry of Business and Labour Market (2020).

Other core sources:

- The Greenlandic Labour Force Survey (G-AKU), 2020

- Mobility in Greenland, report 2010[19].

4.1.2 Indirect and induced employment effects

There is an expectation that a project like Majoqqap Qaava has a less derivative and induced effect on employment, both in the construction, operation, and decommissioning phase. Therefore, indirect, and induced employment effects for all three phases must be investigated.

Indirect employment effects are the jobs created by suppliers to the mine as they experience increasing demand for their services/goods. This can be, for example, catering, cleaning, transport (of goods, people) etc. Management of the camp/accommodation as well as craftsman assistance, IT services and delivery of fuel[20].

Induced employment effects are the jobs created as a result of increased economic activity in the area when the employees at the mine and local suppliers use their income in the local area.

To calculate the indirect and induced employment effects, a multiplication factor is used. Experience from other mining projects in Greenland indicates that a multiplication factor of 1.3 is a realistic factor[21]. This factor has been used in SIA reports for other Greenlandic mining projects. We will basically use the same multiplier in this analysis, but will in connection with the preparation of the SIA assess whether there is a need for adjustments in relation to the specific local conditions in Qeqertarsuatsiaat.

Scenario A

Local influence:

The local indirect and induced employment effect will depend on two parameters:

- How many workers the mine employs from Qeqertarsuatsiaat, as well as the extent to which the mine uses local suppliers of goods and services.
- Competence match etc. cf. previously between the available workforce in Qeqertarsuatsiaat and the required competencies as well as the extent to which local suppliers can deliver the requested goods / services.

The above parameters apply to both the construction, operation and decommissioning phase.

Municipal influence:

The municipal indirect and induced employment effect depends in the same way as the local influence on:

- How many workers the mine employs across Kommuneqarfik Sermersooq, and to what extent the mine uses municipal suppliers of goods and services.
- Competence match etc. cf. above between the available workforce in Kommuneqarfik Sermersooq and the required competencies as well as the extent to which municipal suppliers can deliver the requested goods / services.

The above parameters also apply to both the construction, operation and decommissioning phase.

[19] https://naalakkersuisut.gl/~/media/Nanoq/Files/Publications/Departement%20for%20Boliger%20Natur%20og%20Miljoe/Teknik%20og%20Landsplanlaegning/Landsplanlaegning/Mobilitet%20i%20Groenland%20DK.pdf.

[20] It is currently not clear which of these services will be outsourced and which will be provided by the company itself. Given the geographic location of the mine, on-site competencies are expected to be needed.

[21] https://www.copenhageneconomics.com/dyn/resources/Publication/publicationPDF/6/296/1431935119/mining-and-sustainable-economic-growth.pdf, NIRAS (2010) Aluminiumsprojektets økonomiske betydning), Watkinson, (2009) Nalunaq Gold Mine – Social Impact Assessment, http://naalakkersuisut.gl/~/media/Nanoq/Files/Attached%20Files/Raastof/Hoeringer/ISUA%202012/SIA%20London%20Mining%20final%20march%202013.pdf.

National impact:
Due to the size of the project, it is not expected that there will be indirect and induced employment effects at national level.

Scenario B
As GAM expects to have to employ more employees in the operational phase in scenario B, it is expected that the indirect and induced employment effects for this phase are marginally higher than in scenario A. A direct effect requires that the local/municipal jobseekers have the competence profiles mm., which is in demand by the mine, but an indirect effect is expected from the general demand which is created by the slightly larger workforce.

Required information for the preparation of the SIA
For the construction, operation, and decommissioning phase:

- Detailed information from GAM about the expectation of using local / municipal suppliers of services/goods.

Information about the competence level etc. in the local population will be collected during the baseline study.

Interviews in the local community as well as Paamiut and Nuuk shall be used to find out whether local / municipal suppliers can deliver the goods / services that are in demand in the mine on necessary competitive terms, and how any increased turnover affects local suppliers / companies.

Important national strategies / documents:
N/A

Other core sources:

- Report on Social Impact Assessment (TANBREEZ Mining Project, Tanbreez Mining Greenland A/S, 2013)
- Draft Assessment of Social Impact Assessment in the Aappaluttoq Ruby Project (True North Gems Inc., 2014)
- Greenland Social Impact Assessment (White Mountain Anorthosite Project, Hudson, 2015)
- Social Impact Assessment (project Kvanefjeld, Greenland Minerals Limited and Greenland Minerals & Energy A / S, 2018)
- Mining and Sustainable Economic Growth (Copenhagen Economics, 2012)
- The economic significance of the aluminium project (NIRAS, 2010)
- Nalunaq Gold Mine - Social Impact Assessment (Watkinson, 2009)
- Social Impact Assessment for the ISUA Iron Ore Project for London Mining Greenland A/S (Grontmij, 2013).

4.1.3 Cumulative impacts and conflict with other sectors

The potential impacts of the Majoqqap Qaava project must be seen in the context of other mining projects in Greenland. It is referred to here as the cumulative influences. This section focuses on the cumulative effects that may have on employment. A later section describes additional cumulative effects (section 4.4.6).

In addition, it must be investigated whether the project - and especially the workforce that is in demand in the project - conflicts with other sectors.

Aappaluttoq, located near Qeqertarsuatsiaat, is Greenland's first ruby mine. Construction of the mine was started in 2014 and mining began in 2017. The current mining plan is expected to produce high-quality rubies and pink sapphires until 2023. The mine employs approx. 26 people in total, divided into 20 people in the mine and 6 people in Nuuk.

In addition, the anorthosite project (White Mountain) run by Hudson Greenland A/S, is relevant to this project due to the coincidence with the subject field of mining. The White Mountain project currently employs approx. 20 employees[22].

Finally, there may be a potential challenge in obtaining skilled labour for the construction phase of the project, as many workers are already employed at the two new Atlantic airports in Nuuk and Ilulissat, which are planned for operation in 2023. At present, the airport project in Ilulissat is expected delayed by at least one year, as the airport project in Nuuk has been delayed[23].

Scenario A

Local influence:

The project closest to Majoqqap Qaava is the Aappaluttoq mine. There could potentially be operational conflict with regard to competency profiles in relation to the Aappaluttoq mine. However, there may also be local Greenlandic workers who have been part of the construction phase of this other mining project, which will be able to contribute to the construction phase of Majoqqap Qaava.

There may be a potential concern that the project will compete with the fish factory in Qeqertarsuatsiaat in terms of workers, especially in the summer.

Municipal (the nearby cities) impact:

Contractors - especially in Nuuk - are busy with several major construction projects. There may therefore be a risk that they do not have the capacity to contribute to the construction of the mining project. The cumulative effects for the municipality must therefore be investigated in more detail in the project, including the temporal location of the existing major construction projects and the expected construction date for the mine.

National impact:

Due to the size of the project, the large cumulative effects on the Greenlandic mining sector are not expected. Local participation in the project - both in the construction, operation and decommissioning phase - will, however, help to upgrade the population's competencies in mining and make the workforce more attractive in relation to future mining projects. However, this only in the longer term.

Scenario B

In scenario B, the project will employ more employees. Therefore, the cumulative impact and the potential challenge of finding qualified local labour for the mine may be amplified - applicable to all three phases: the construction, operation, and decommissioning phases.

Required information for the preparation of the SIA

Important national documents:

[22] https://www.globenewswire.com/news-release/2020/10/16/2109864/0/en/Hudson-Greenland-Appoints-New-Managing-Director-for-the-White-Mountain-Anorthosite-Mine-in-Greenland.html.

[23] https://sermitsiaq.ag/node/223290.

- Greenland's oil and mineral strategy 2014-2018[24]
- Greenland's mineral strategy 2020-2024.

Other core sources:

- Information on other mining projects in the area (especially the Aappaluttoq mine)
- Mineral activities in Greenland 2019 (Mineral Resources Authority).

4.1.4 Personal income tax

There is a big difference in the salary level between highly educated and low educated/people without education. The average salary in Paamiut in 2019 was DKK 22,615 per month and the average salary in Nuuk in 2019 was DKK 33,936 per month (Grønlands Statistik)[25].

There are no figures for the average income in Qeqertarsuatsiaat, but the income level in settlements is generally lower than in the cities. The biggest difference between town and village is found in Kommuneqarfik Sermersooq. Here the personal income is twice as high in the cities as in the settlements of the municipality. This relationship must be seen in the light of the geographical distribution of the population in the municipality. The vast majority of the urban population lives in Nuuk, where the income level is high, while the majority of the rural population lives in the Tasiilaq district, which is characterized by a relatively low average income[26].

In Kommuneqarfik Sermersooq, the personal income tax is 42 pct. The local population can also make use of a personal deduction of DKK 48,000 and a standard deduction of DKK 10,000[27].

Foreign labour pays 35 pct. in personal tax in Greenland, but on the other hand has no personal deduction[28], in addition to that foreign labour is often imposed "top up" tax from the home country, which i.a. depends on time away from the country in question, total income etc.

Scenario A

Local influence:

There is no direct impact on personal income tax for the locals who may be employed at the mine. The personal income tax is a derivative effect of the employment, which is described in section 4.1.

Municipal influence:

The SIA report will contain an estimate of the size of the expected tax revenue related to the personal income tax (which accrues to the municipality), which the project will generate over its lifetime. Here, the distribution between foreign and Greenlandic labour will be taken into account, as well as how large a share of the Greenlandic labour comes from unemployment/work.

An estimate will be calculated for the size of the expected tax revenue related to the personal income tax for the three phases of the project: the construction, operation, and decommissioning phase.

National impact:

[24] https://naalakkersuisut.gl/~/media/Nanoq/Files/Publications/Raastof/DK/Gr%C3%B8nlands%20olie%20og%20mineralstrategi%202014%202018.pdf.

[25] "Hovedbeskæftigelse blandt fastboende fordelt på tid, branche, distrikt og køn" (Tabellen ARDBFB4).

[26] https://stat.gl/dialog/main.asp?lang=da&version=202001&sc=IN&subthemecode=3.%20PERSONLIG%20INDKOMST&colcode=3.

[27] https://govmin.gl/da/efterforskning-forundersoegelse/opstart-af-efterforskning/skat/ samt https://aka.gl/~/media/Skattestyrelsen/Vejledninger/2018/Vejledning%20for%20august%202018.pdf.

[28] https://govmin.gl/da/efterforskning-forundersoegelse/opstart-af-efterforskning/skat.

The SIA report will contain an estimate of the size of the expected tax revenue related to the personal income tax (which accrues to the Government of Greenland), which the project will generate in its lifetime. Here, the distribution between foreign and Greenlandic labour will be taken into account, as well as how large a share of the Greenlandic labour that comes from unemployment/work.

An estimate will be calculated for the size of the expected tax revenue related to the personal income tax for the three phases of the project: the construction, operation, and decommissioning phase.

Scenario B
Same as in scenario A, but with greater impact due to more employees

Required information for the preparation of the SIA
Information must be established about the proportion of professional foreigners vs. Greenlanders who are expected to be employed in the project. Knowledge is needed to be able to calculate the personal income tax that the project is expected to create. At the same time, GAM must provide detailed information on the required salary level.

Interviews must be conducted in Qeqertarsuatsiaat to gain knowledge about the level of income (average income) in the settlement in relation to uncovering the specific impact of being employed in the mining project.

Important national documents:

- Greenland's tax legislation.

Other core sources:
N/A

4.1.5 Working conditions

The workforce in Greenland is mainly organized and represented by SIK (Sulinermik Inuussutissarsiuteqartut Kattuffiat). Private employers are organized under Grønlands Erhverv "GE"(Sulisitsisut) and NUSUKA (Nunaqavissut Suliffiutillit Kattuffiat).

The ILO conventions describe the required working conditions for all workers[29]. In addition, national occupational health and safety legislation provides for special regulation in relation to the extractive industries[30].

The annual minimum wage in 2019 was DKK 218,464.92 for non-skilled workers (SIK)[31].

Scenario A
Due to the size of the project and GAM´s compliance with international practices and national law, it is not expected to have an impact on working conditions, either locally, municipally, or nationally.

Local influence:
-

[29] https://www.retsinformation.dk/eli/ltc/1997/97.
[30] https://at.gl/da/regler/bekendtgoerelser/302-arbejde-med-udvinding-og-efterforskning-af-mineralske-materialer-i-groenland/.
[31] http://www.sik.gl/Portals/0/Overenskomster/OK%202019%20iluarsisat/362%20SIK%20M%E5nedsl%F8nnede%2C%20fagl%E6rt%2C%20ikke%20fagl%E6rt%20OK%20%202018-2022%20021219.pdf

Municipal influence:
-

National influence:
-

Scenario B
Same as in Scenario A.

Required information for the preparation of SIA
Interviews with SIK about potential issues regarding work policy, working environment and the like in relation to the project's three phases: the construction, operation, and decommissioning phase.

Interviews with contractors in the local community regarding experiences of issues from other mining projects.

Information from GAM in relation to what will be done to minimize potential risks (work policy, working environment and the like).

Important national documents:

- Agreements between the social partners (SIK, GE)
- Labour Market Report 2018-2019, Ministry of Business and Labour Market (2020).

Other core sources:
N/A

4.2 EDUCATION

For the category education, the influence stems from competence development.

4.2.1 Competence development

Vocational education and training are offered by the Greenland Technical School (Grønlands Tekniske Skole - KTI), which offers training places in Sisimiut and Nuuk. The Greenland School of Minerals and Petroleum (Råstofskolen) is part of KTI and located in Sisimiut. KTI Råstofskolen provides opportunities for two vocational educations, which are aimed at Greenland's growing business opportunities within the field of contractors and raw materials: machine contractor and miner. In Sisimiut, DTU Arctic is also located in some of KTI's buildings. Here you can take a diploma in engineering in Arctic Construction and Infrastructure (the first three semesters take place in Sisimiut - in addition, you can take the internship in the 6th semester in a Greenlandic company).

Greenland's Maritime Center (Imarsiornermik Ilinniarfik) offers training in the maritime sector in Paamiut, Nuuk and Uummannaq.

In addition, the exploration of potential mines as well as the construction of the Ruby and Anorthosite projects have led to an increase in available national competencies, although the number of projects and the opportunities to build competencies in the sector are still limited.

Finally, Majoriaq in both Nuuk and Paamiut offers upgrading of the Greenlandic workforce's competencies. The purpose of Majoriaq is to strive to achieve the goal of the labour market by competently and efficiently locking unemployed citizens on into employment. Majoriaq thus deals with three main tasks; job placement, guidance for education and work as well as upskilling for education and work.

Scenario A
Local influence:
The project could potentially offer training and apprenticeships. There is potential for a collaboration with KTI - especially Råstofskolen (Greenland School of Minerals and Petroleum). Thus, the project can help to upgrade the skills of the local Greenlandic workforce.

Municipal influence:
There is also potential for a municipal influence at the competence level. See under national influence.

National impact:
The availability of more jobs in the mining sector can make it more attractive for young people to pursue that educational path, which will make it easier for future mining projects to find skilled labour and thereby ensure a higher local share of employment in future mining projects.

Scenario B
Same as in scenario B, but with greater impact, as the project will employ more employees.

Required information for the preparation of SIA
Clarification from GAM in relation to the possibility of creating apprenticeships, offering courses and similar upgrading of the Greenlandic workforce. As the mine is only in full operation 9 months a year, it must be ascertained whether this is compatible with the creation of apprenticeships.

Interviews with KTI Råstofskolen in relation to obtaining baseline information about competence level and the need for further qualification.

Interviews must be conducted with the local population to uncover the level of competence.

Important national documents:
- Education Strategy 2018.

Other core sources:
- Analysis of challenges in the education sector in Greenland (VIVE, 2020)
- Municipal Plan 2028 for Kommuneqarfik Sermersooq (digital: http://sermersooq2028.gl/)
- Technical education and competence building for raw material development in Greenland (2014).

4.3 Economic impacts (non-employment)
This section presents the potential economic impacts; business opportunities and corporation tax.

4.3.1 Business opportunities
Qeqertarsuatsiaat is a smaller settlement, which is why there are a limited number of local businesses. The village has its own supermarket (Pilersuisoq), a fish factory owned and operated by Royal Greenland, fuel supply (Polaroil), telecom and post centre, a youth hostel and a few small

shops and one-man businesses. The fish factory is the largest workplace in the village with approx. 30 employees in the high season and app. 3 in the low season.

Scenario A

Local influence:

There is a potential impact of the mining project on local business opportunities through the delivery of goods and services. However, there is also a risk that some of the companies will be adversely affected if a larger proportion of the local population is employed at the mine and is therefore accommodated 40 km away from Qeqertarsuatsiaat.

The impact also depends on the extent to which the local companies can provide the goods/services that are in demand by the mining project.

Municipal influence:

There is potentially a municipal impact if the mining project chooses to use suppliers from Nuuk or Paamiut (or from other of the municipality's towns/settlements).

The impact also depends on the extent to which municipal companies can provide the goods/services that are in demand by the mining project.

National impact:

Due to the size of the project, the national impact is expected to be negligible. There may be a small gain for Greenlandic companies specializing in mining if they can provide goods/services that are in demand by the project.

Scenario B

Same as in scenario A. However, it must be clarified whether the further processing of the material requires other/more/larger deliveries from local/municipal/national suppliers.

Required information for the preparation of the SIA

Detailed information about the companies in Qeqertarsuatsiaat will be collected through interviews with the locals. In addition, interviews will be conducted with GAM to uncover opportunities for the mine to use Greenlandic suppliers from either Nuuk or Paamiut.

Detailed information from GAM about expected supplier needs as well as the possibility of breaking up supplier agreements into smaller parts, so that local suppliers have an easier time becoming suppliers.

Interviews must be conducted with Kommuneqarfik Sermersooq about potential suppliers from the municipality. It must also be revealed via interviews whether there are any Greenlandic companies in other municipalities that can supply goods/services to the mine.

Important national documents:

N/A

Other core sources:

N/A

4.3.2 Corporate tax/royalties

The corporate tax that the mine will have to pay depends on the profitability of the mine. The corporate tax will be reduced in 2021 to 25 pct.[32], but since dividends, which are subject to a 36 pct-dividend tax, are deductible, corporation and dividend tax together will amount to 36 pct.[33].

The royalty for the project is determined in accordance with Appendix 3 of the standard terms for exploration permits and Appendices 1-4 to this Appendix. The supplement can be read here: *https://govmin.gl/wp-content/uploads/2019/07/Addendum_No._3_to_Standard_Terms.pdf "*

The mine produces a similar product as the White Mountain Anorthosite Project. However, the anorthosite of Majoqqap Qaava has a chemical composition with lower alkali content than the aforementioned. It must be clarified whether the increased supply of the product has an impact on the profitability of both the current and the ongoing mining project. The material anorthosite has a wide range of application possibilities, and one of the great advantages of the material is that it can be used in the right quality for far more environmentally friendly production of fiberglass and aluminium than the usual production methods. The market for anorthosite is therefore far from being saturated.

Scenario A

Local impact:

No direct local impact.

Municipal influence:

The SIA report will contain an estimate of the size of the expected tax revenue related to the corporation tax (which accrues to the municipality), which the project will generate during its lifetime.

National impact:

The SIA report will include an estimate of the size of the expected tax revenue related to the corporation tax (which accrues to the state), which the project will generate over its lifetime.

Scenario B

Same as in scenario A, but with greater impact due to further production of materials that should generate additional revenue for the company.

Required information for the preparation of the SIA

Detailed information on expected production and expected revenue in the project must be collected so that the company's expected payment of corporation tax can be estimated.

An expected tax payment must be estimated for the entire life of the project for both scenario A and scenario B. It must be taken into account that in scenario A only semi-finished products are produced, which are subsequently processed in Europe, including what it means for taxpayers. .

Important national documents:

- Greenland's tax legislation
- Greenland's mineral strategy 2020-2024.

Other core sources:

[32] https://www.folketingstidende.dk/samling/20191/redegoerelse/R12/20191_R12.pdf

[33] https://govmin.gl/exploitation/start-mining/tax-and-royalties/

- Preliminary Economic Assessment for the Majoqqap Qaava anorthosite deposit, Fiskenæsset, West Greenland (SRK Consulting, 2020).
- Project Description Majoqqap Qaava (GAM, 2021)

4.4 The public sector and infrastructure

The public sector and infrastructure may be affected by the project. This section focuses on infrastructure, public sector pressures, public health and emergency preparedness, vulnerable groups, crime and abuse, migration (migration patterns) and cumulative impacts (excluding labour market effects).

4.4.1 Infrastructure

Passengers and goods are transported in Greenland mainly by ship, boat, plane and helicopter. As there are no roads or railways between the towns and villages in Greenland, the infrastructure is very subjective to weather and climate conditions.

The main Greenlandic airports are Narsarsuaq and Kangerlussuaq. In addition, there are 11 domestic airports near cities with smaller runways, including Nuuk. The nearest airports to the project are the airports in Paamiut and Nuuk. Two new international airports in Nuuk and Ilulissat are also being established, which are planned for operation in 2023. At present, however, the airport project in Ilulissat is expected to be delayed by at least one year, as the airport project in Nuuk is delayed[34].

Qeqertarsuatsiaat receives supplies via ship (community ships) from Royal Arctic Bygdeservice (RAB), a subsidiary of Royal Arctic Lines A/S, every other week. The coastal vessels between Qeqertarsuatsiaat and Nuuk are operated by Royal Arctic Line A/S 'subsidiary, Arctic Umiaq Line A/S, and sail every week all year round.

For 9 months a year, the village is sailed with Sarfaq Ittuk, and for the remaining 3 months, smaller passenger vessels are deployed from and to Nuuk.

The settlement is navigated in accordance with a service contract agreement between Royal Arctic Bygdeservice (RAB) and the Government of Greenland. The agreement covers the whole of Central Greenland between Qeqertarsuatsiaat and Sarfannguit with calls every 14 days. In addition, RAB has had a few extra calls at Qeqertarsuatsiaat to pick up frozen goods at no extra cost to the village.

In vicinity of the mine, approx. 40 km from Qeqertarsuatsiaat, GAM will build a jetty consisting of a permanently floating pontoon, which forms the primary anchorage/quay. The jetty will be located between the promontory / gorge east of the Kuussuatsiaat valley. Today, there is no connection between the mining area and the location of the processing plant and the port facilities. In connection with the project, a 17 km road will therefore be established from the mine to the processing plant at the port.

Scenario A

Local influence:

The project's impact on the public infrastructure will depend on how the mine personnel get to / from the mine. It must be clarified in more detail whether RAL will sail into the mine, whether the voyage to Qeqertarsuatsiaat will handle crew changes in the mine, etc.

Municipal influence:

[34] https://sermitsiaq.ag/node/223290

No significant municipal impact is expected.

National impact:
No significant national impact is expected.

Scenario B
Same as in scenario A.

Required information for the preparation of the SIA
Information must be obtained from GAM on how goods and persons are expected to be transported to the project area, as well as information on how the mining area will be sailed by RAL.

Interviews must be conducted with Kommuneqarfik Sermersooq to find out whether any municipal development plans will be affected by the mining project.

Important national documents:
N/A

Other core sources:
N/A

4.4.2 Pressure on the public sector and services

Today there is a lot of pressure on the public services in Greenland. The pressure is due to a decline in public revenues at the same time as an increase in public expenditure as a result of increased demand[35].

In Qeqertarsuatsiaat there are the following public institutions:

- Kindergarten
- Rural school (teaching up to and including 7th grade)
- Elderly collective
- Church and assembly hall
- Power plant and water supply (Nukissiorfiit).

Health and emergency preparedness are addressed separately in section 4.4.3. However, it should be mentioned here that there is a nursing station in Qeqertarsuatsiaat[36].

Scenario A
Local influence:
The local impact will depend on the extent to which the mine and mining activities will make use of public services located in Qeqertarsuatsiaat. It must be uncovered in connection with the preparation of the SIA. Due to the location of the mine, the major impact on the public sector and public services is not expected immediately.

Municipal influence:
The project will make use of certain public services, e.g., access to police and customs, as well as general services, e.g., approval and monitoring of project activities. Due to the size of the project, its impact on the public sector is expected to be limited. However, this will be examined in more detail in the SIA report.

[35] https://www.ft.dk/ripdf/samling/20191/redegoerelse/R12/20191_R12.pdf
[36] In the further work, the extent to which a nurse is present at the station is documented.

National impact:
Due to the size of the project, no further impacts are expected at national level.

Scenario B
As in scenario A, but with more employees, which may mean less pressure on the public sector.

Required information for preparation of the SIA
Stakeholder interviews with representatives of the municipality regarding public services, including possible impacts in emergencies.

Important national documents:
- The public sector, the Tax and Welfare Commission (2011).

Other core sources:
N/A

4.4.3 Public health and emergency preparedness

The Greenlandic health sector is administered administratively by the Ministry of Health. The health services, including medication, health examinations, hospitalization and/or treatment, are free of charge for persons registered and resident in Greenland.

Naalakkersuisut introduced the first comprehensive public health program, Inuuneritta I, in 2007. The program ran until 2012, and a further program (Inuuneritta II) was launched in 2013. Inuuneritta II focuses on four themes: smoking, exercise, diet and alcohol and cannabis. As part of Inuuneritta II, 38 public health indicators were established in Greenland in 2014[37].

In the population survey in 2018[38], 58 pct. had a non-harmful consumption of alcohol, 32 pct. had a large consumption, while 5.9 pct. had a harmful consumption, and 4.7 pct. were addicted to alcohol.

In 2018, the proportion of daily smokers on a national basis was 52 pct. The proportion of daily smokers has declined in recent decades. In the population survey in 2018, as in previous surveys, there was no difference between men and women in the proportion of daily smokers.

The prevalence of severe obesity in population surveys has been steadily increasing for both men and women. In 2018, 32 pct. of Greenlandic women and 24 pct. of Greenlandic men had a BMI of 30+[39].

The nearest health centre is Dr. Ingrid's Hospital in Nuuk. The health centre has hired a health assistant for the rural consultation in Qeqertarsuatsiaat.

GAM plans to establish a nursing station at the mine that can handle medical challenges and emergency situations. A qualified nurse or other HSE manager will be employed here. In addition, there will be an off-road combined ambulance and fire truck at the mine.

[37] Inuuneritta II, 2013 (https://naalakkersuisut.gl/~/media/Nanoq/Files/Publications/Departement%20for%20Sundhed%20og%20Infrastruktur/Sundhed/Inuuneritta/InuunerittaII_Dk_small.pdf)
[38] Befolkningsundersøgelsen 2018 (https://www.sdu.dk/sif/-/media/images/sif/udgivelser/2019/befolkningsundersoegelsen_i_groenland_2018_dansk.pdf)
[39] BMI mellem 18.5 og 24.9 tolkes som normal vægt, mens en BMI over 25 betragtes som overvægt, og en BMI over 30 indikerer fedme. Kilde: https://www.sundhed.dk/borger/patienthaandbogen/hormoner-og-stofskifte/undersoegelser/bmi-kropsmasseindeks/

Scenario A
Local impact:
For local workers, there may be an impact due to higher income. Higher income can, among other things, lead to better housing conditions and a better diet for both the employee and his or her family.

In addition, accident risks in the workplace include:

- Fatigue (long working days)
- Use of drugs
- Heavy lifts
- Impact of noise
- Impact of dust.

As a workplace, the mine will be a "dry camp" without permission to consume drugs, and ingestion will result in expulsion. GAM will focus on the area, but the expectation is that the workplace will not be exposed to drugs to a greater degree than the rest of society.

In addition, it must be covered to what extent transport to and from the mine (for example by helicopter) creates noise in Qeqertarsuatsiaat, which can, for example, affect the sleep patterns of the local population, especially infants and the elderly. The primary transport to the mine will be by ship/boat, and as soon as a road has been established from the mine to the coast, helicopter visits will immediately be necessary only in connection with SAR (search and rescue) and evacuation.

Municipal influence:
Due to the size and location of the project, no further impacts on public health are expected.

National impact:
Due to the size and location of the project, no further impacts on public health are expected.

Scenario B
Same as in scenario A.

Required information for the preparation of the SIA
Interviews with the residents of Qeqertarsuatsiaat to uncover any impacts on public health and especially quality of life.

Interviews with the Ministry of Health.

Detailed information from GAM on how health and safety is handled in / at the mine, and how it intends to work with the Greenlandic health service. This must be covered for both the construction phase and the operational phase.

Important national documents:

- Inuuneritta II 2013-2019 - Naalakkersuisut's strategies and objectives for public health 2013-2019
- Applicable laws and executive orders on working environment; e.g. https://at.gl/da/regler/bekendtgoerelser/656-anvendelse-af-tekniske-hjaelpemidler/, https://at.gl/da/regler/bekendtgoerelser/655-indretning-af-tekniske-hjaelpemidler/, and https://at.gl/da/regler/bekendtgoerelser/914-obligatoriske-arbejdsmiljoeuddannelser/.

Other core sources:

- Population survey 2018.

4.4.4 Vulnerable groups, crime and abuse

Abroad, it has been found that mining has typically led to increased crime, prostitution, and abuse in the local area[40]. In addition, mining can have an impact on the import and spread of infectious diseases. It is unclear whether this issue has also applied to initiated Greenlandic mining projects.

The Arctic Living Conditions Survey (SLiCA, 2008) shows that drug and alcohol abuse are assessed as major problems for citizens in the local community. Thus, two out of three perceive the two substance abuse problems as significant. As this study is outdated, this needs to be investigated further in connection with the preparation of the SIA.

In 2018, the Naalakkersuisut launched a strategy against sexual assault for 2018-2022 (Killiliisa). The aim of the strategy is to reduce the number of sexual assaults through a number of interdisciplinary efforts. In the population survey in 2018, 24 pct. stated of 15-29-year-olds that they had been "forced or attempted to engage in sexual activity" before the age of 18.

Scenario A

Local impact:

There may be a small risk of importing illegal substances and a spread of these to the local population through foreign workers and the closer contact to Nuuk if suppliers and workers come from here or foreign workers with short stays in Nuuk on their way to the mine. The mine is located 40 km from Qeqertarsuatsiaat, which is why the impact is expected to be limited, unless the employees spend their holidays/vacation on staying in Qeqertarsuatsiaat.

Municipal influence:

There may be a small risk of importing new substances and spreading these to the people of Nuuk.

National impact:

No impact on vulnerable groups, crime and abuse at national level is expected.

Scenario B

Same as in scenario A.

Required information for the preparation of the SIA

Detailed information from GAM on how the mine will handle drugs and how to cooperate with the health authorities.

Detailed information from GAM on how to support that increased income in the local population does not lead to social problems such as abuse (alcohol and drugs), prostitution, gambling and the like, as well as how to cooperate with the Government of Greenland and Kommuneqarfik Sermersooq .

Interviews with police and customs about the risk of increased drug imports to Qeqertarsuatsiaat.

The SLiCA report should be supplemented/updated with new interviews with the local population.

[40] https://www.oxfam.org.au/wp-content/uploads/2011/11/OAus-TunnelVisionWomenMining-1102.pdf, https://asiafoundation.org/resources/pdfs/TraffickingIncidencesatMinesitesreportOct08ENG.pdf as well as comments from earlier mine project hearings in Greenland.

Important national documents:

- Killiliisa, Naalakkersuisut's strategy against sexual assault, 2018-2022[41]
- Costs for abuse in Greenland (Ministry of Health, 2015)
- Inuuneritta II 2013-2019 - Naalakkersuisut's strategies and objectives for public health 2013-2019.

Other core sources:

- The Arctic Living Conditions Survey, SLiCA (2008).
- Annotated table report regarding Qeqertarsuatsiaat based on the Greenlandic part of the Arctic Living Conditions Survey (SLiCA) conducted in connection with SIA for the ruby mine in Qeqertarsuatsiaat (2011).

4.4.5 Migration (migration and migration patterns)

Net, there is a larger migration from settlements to cities in Greenland (Mobility in Greenland, 2010). Education and utilization of educational and professional qualifications are among the very important reasons for relocation.

The experience from the mobility report (Mobility in Greenland, 2010) - primarily based on experiences from mining projects in the circumpolar area - is that it has been shown that the workforce is not so mobile, even though people have initially expressed interest in mobility in form of commuting-based employment.

Scenario A

Local impact:

If the project attracts people to the Qeqertarsuatsiaat, it can have an impact on social conditions and the unity of the local community. However, it is currently unclear whether people will move permanently to Qeqertarsuatsiaat when the mine is located approx. 40 km. from Qeqertarsuatsiaat, and accommodation is being established in connection with the mine.

In contrast to the Ruby project, which feared an influx of people with criminal intentions, anorthosite is not expected to have the same attraction, as it only has market value in large quantities and is not of interest to small collectors.

Municipal influence:

No expectations of significant municipal impact on migration due to the size and location of the project.

National impact:

No expectations of national impact on migration, due to the size and location of the project.

Scenario B

Same as in scenario A, but with greater impact due to more employees.

Required information for the preparation of the SIA

Interviews with the local population about expectations for moving in and out, as well as what it might mean for Qeqertarsuatsiaat that some of the inhabitants get a job in the mine and will be away from the local community for longer periods.

Important national documents:

N/A

[41] https://naalakkersuisut.gl/~/media/Nanoq/Files/Publications/Familie/DK/Killiliisa_dk.pdf

Other core sources:

- Mobility in Greenland, 2010.

4.4.6 Cumulative effects (excluding labour market effects)

Cumulative impacts are defined as "the impacts that result from the gradual and/or combined impact/impact of an activity/project as a result of other existing, planned or reasonably defined events"" [42].

Note that the cumulative effects on direct employment have already been addressed in section 4.1.

This section touches on:

- Rise in consumer price index (inflation - local, municipal and national)
- Investments in the economy (consequential business for mining)
- Better public service / better citizen services
- Maritime traffic.

Finally, in the preparation of the SIA, the significance of the new Atlantic airports in Nuuk and Ilulissat, which are planned for operation in 2023, but which are expected to be delayed, may have an impact on business development, tourism, investment and jobs in relation to Majoqqap Qaava.

Scenario A

Local impact:

If the average income rises in Qeqertarsuatsiaat, it can lead to price increases on goods and services (inflation). It will have a negative impact on particularly vulnerable groups. It must be investigated in the SIA whether this is the case in this project.

The presence of several mining projects in the area can lead to follow-on investments in Qeqertarsuatsiaat, where a business environment is built, whose primary purpose is to supply the mining projects and the employees. The probability of this must be uncovered in the SIA - based on experience from other mining projects in Greenland.

Increased tax payments - both income, corporation tax and royalties - can, especially in conjunction with tax payments from other mining projects, in the long run lead to a strengthened public sector locally, municipally and nationally. It must be revealed in the SIA how the tax from the mining projects will benefit the population.

In the SIA, it must be determined whether increased maritime traffic in connection with the project and other mining projects in the long term can become a problem for fishing locally as well as the general use of bays and waters.

Municipal influence:

There is also a risk of inflation at the municipal level. It needs to be investigated further in the SIA.

The presence of several mining projects in the municipality can lead to consequential investments in the larger cities, for example Nuuk and Paamiut, where a business environment is built, whose primary purpose is to deliver to the mining projects and the employees. The probability of this

[42] https://www.ifc.org/wps/wcm/connect/58fb524c-3f82-462b-918f-0ca1af135334/IFC_GoodPracticeHandbook_CumulativeImpactAssessment.pdf?MOD=AJPERES&CVID=kbnYgI5

must be uncovered in the SIA - based on experiences from other municipalities with similar projects in Greenland.

There is no further municipal impact on the increased tax payment than that described under the local impact.

In the SIA, it must be determined whether increased maritime traffic in connection with the project and other mining projects in the long run can become a problem for the municipal fisheries as well as the use of the sea off the coast.

National impact:
The presence of several mining projects in Greenland can lead to consequential investments through several mining projects and the construction of a business environment whose primary purpose is to deliver to the mining projects and the employees. The probability of this must be covered in the SIA.

In the SIA, it must be determined whether increased maritime traffic in connection with the project and other mining projects in the long term can become a problem for the fisheries in Greenland as well as the general use of Greenlandic waters.

Scenario B
Same as in scenario A, but with expected greater impacts due to greater employment and greater maritime traffic due to larger amounts of material produced.

Required information for the preparation of the SIA
Information must be collected from previous mining projects on the probability that the mining project will lead to increased inflation in the local area.

Information must be obtained, possibly via interviews, about the probability of building up follow-up occupations for mining, and to what extent these are already in connection with previous mining projects.

Information must be obtained via interviews about the significance of an increased tax base for the local population, so that it becomes clear how the mine's presence has a positive impact on Greenlandic society.

Information must be obtained about the maritime traffic in the area as well as expectations for maritime traffic during the life of the project, as well as how it interacts with the other maritime traffic from the area.

Important national documents:
N/A

Other core sources:

- Good Practice Handbook - Cumulative Impact Assessment and Management: Guidance for the Private Sector in Emerging Markets (IFC, 2013).

4.5 Residual impacts

This chapter examines the potential residual impacts of the project; cultural heritage, socio-cultural values and maintenance activities and other derived economic consequences.

4.5.1 Cultural heritage, socio-cultural values and entertainment activities

In relation to cultural heritage, the National Museum of Greenland maintains a register of all protected cultural monuments. The National Museum is the only institution that has both access to the register and professional competence to assess the register's information. All land-based ancient monuments, which can be dated to before the year 1900, are automatically protected. It is called de facto protections. Within a distance of 2 meters from an earthen ancient monument, no activities may be carried out[43]. Archaeologists have searched the area for prehistoric cultural monuments in connection with preparations for the mining project, and the area has been released by the Greenland National Museum & Archives[44].

In relation to entertainment activities and socio-cultural values, previous studies show that 50 pct. of the respondents in Qeqertarsuatsiaat prefer to work for pay, 25 pct. prefers fishing and hunting, while the last 25 pct. prefers a combination of paid work as well as hunting and fishing.

Eating Greenlandic food is considered an important or very important prerequisite for maintaining Greenlandic identity, and hunting, fishing, collecting berries and preserving food are of similar importance. A large part of the population covers a significant part of their consumption of Greenlandic food through their own catching and fishing[45].

According to the Mineral Resources Act (2009), employees are generally not allowed to fish and hunt in the mining concession area. However, fishing and hunting are permitted if separate permits have been granted by the relevant department. In the preparation of the SIA it shall be investigated whether this restriction also applies to persons with longer stays in the area.

Scenario A

Local impact:

The greatest impact of the project is expected on maintenance activities in Qeqertarsuatsiaat, as hunters and fishermen may be limited in where they can hunt/fish. Conversely, accessibility to the mountain can be improved if the local population is given the opportunity to use the mine's access road. At the same time, it can affect the socio-cultural identity in the area if the mine employs many local employees who potentially go from being hunters/fishermen to only having the opportunity for these activities in their spare time.

In addition, seasonal work in the project can lead to fishermen and hunters losing their professional fishing licenses/hunting licenses if more than 50 pct. of their income comes from activities other than fishing and hunting.

Municipal influence:

It is expected that there will be a very small impact on cultural heritage, maintenance activities and socio-cultural values at the municipal level.

National impact:

No impact on cultural heritage, maintenance activities and socio-cultural values at national level is expected.

[43] https://da.nka.gl/kulturarv/fortidsminder/

[44] Material from GAM´s citizen meeting in Qeqertarsuatsiaat (19.09.2020).

[45] True North Gems Inc. (2014). Aappaluttoq Ruby project. Draft for evaluation of Social Impact Assessment.

Scenario B
Same as in scenario A, but with more potential jobs and thus greater impact in the local community.

Required information for the preparation of the SIA
It must be clarified whether the project area has special value for Greenlandic cultural heritage, possibly through an interview with the National Museum of Greenland.

It must be clarified to what extent the locals use the project area for fishing/hunting. This can be sought, for example, through interviews with locals and with Kalaallit Nunaanni Aalisartut Piniartullu Kattuffiat (KNAPK). In addition, a comprehensive overview of a map of the total mining, hunting and fishing areas must be obtained.

Interviews must be conducted with the local population on other aspects concerning the socio-cultural values and the use of the mining area.

It is clarified with GAM whether and to what extent traditional Greenlandic food will be offered in canteen schemes etc.

Finally, it must be clarified to what extent mining activities will disturb animals and fish in the area (noise from blasting, transport, etc.), which in turn will affect the opportunities for hunting / fishing.

Important national documents:
N/A

Other core sources:

- The Arctic Living Conditions Survey, SLiCA (Kruse & Poppel, 2008)
- Annotated table report regarding Qeqertarsuatsiaat based on the Greenlandic part of the Arctic Living Conditions Survey (SLiCA) conducted in connection with SIA for the ruby mine in Qeqertarsuatsiaat (2011).

4.5.2 Other derivative financial consequences

Of other derived economic consequences, housing conditions should at least be examined. It involves an assessment of the project's impact on the housing situation and the rent level.

The housing company INI A/S administers most of the public housing stock in Greenland. However, Boligselskabet Iserit Kommuneqarfik administers Sermersooq's homes (the municipal homes in Nuuk, Paamiut, Ittoqqortoormiit and Tasiilaq.) Finally, a private player, Agerskov Consulting, manages homes in Nuuk in Boligselskabet Illuut. It will be the employer who makes the initial contact to the housing association.

The size of the household determines the size of the home, so a household of 4 people will typically be offered a 4-room apartment. In the larger cities, and especially in Nuuk, there are long waiting lists, so you have to accept the housing you are offered. One can, however, be written up for a move if desired.

In connection with the project, a permanent accommodation for the employees will be established. The accommodation will be located in the immediate vicinity of the port and the process facilities. The accommodation area consists partly of buildings with rooms, partly a number of common areas, including TV and living room, kitchen and dining room.

Scenario A
Local impact:

Previous reports and SIA´s show that there is a waiting list for housing in Qeqertarsuatsiaat. Since workers at the mine will be housed in the mining area (40 km away from Qeqertarsuatsiaat), no significant impact on the housing situation or rent level in the local area is expected.

Municipal influence:
It is assessed with the size and location of the project that there should be an impact on housing conditions at the municipal level.

National impact:
No national impact on this parameter is expected.

Scenario B
Same as in scenario A.

Required information for the preparation of the SIA
It must be investigated where employees at the mine will stay during the three months of the year when the mine operates with limited operation. If they choose to settle permanently or temporarily in Qeqertarsuatsiaat - assuming they did not live here before - it could potentially have an impact on local housing conditions.

Important national documents:
N/A

Other core sources:
N/A

5. STAKEHOLDER INVOLVEMENT

This chapter identifies the main stakeholders in the project and summarizes the most important activities for the involvement of stakeholders that are intended to be carried out as part of the SIA.

5.1 Identification of stakeholders

Stakeholders are defined here as organizations, institutions or individuals who are expected to be influenced by or have an interest in the project. The list of stakeholders is not final and will be updated regularly.

The table below summarizes the main stakeholders in the project, how they are intended to be involved and what conditions they are expected to be able to provide input to.

Stakeholder	**Intended to be involved by…**	**Can give input to…**
Government of Greenland		
Ministry of Health	Interview or focus group interview	Baseline health information Health in the local population and the project in relation to strategy and objectives on public health
Ministry of Social Affairs and Labour	Interview or focus group interview	Baseline information on employment and competency profiles Employment
Ministry of Mineral Resources	Interview or focus group interview	Experience from other mining projects
Mineral Licence and Safety Authority (MLSA)	Interview or focus group interview	Experience from other mining projects
Ministry of Industry, Trade, Foreign Affairs and Climate	Interview or focus group interview	Baseline information on follow-up professions for mining - experiences from other mining projects Business opportunities in connection with the project
Ministry of Fisheries and Hunting	Interview or focus group interview	The use of the mining area as well as the impact of increased maritime traffic in the bay
Department of Children, Youth, Families and the Justice	Public hearing	-
Government of Greenland		
Ministry of Education, Culture, Sports and Church	Interviews or focus group interviews	Education and competence development

Stakeholder	Intended to be involved by…	Can give input to…
Ministry of Finance and Domestic Affairs	Public hearing	Tax conditions and the financial gain for Greenland from the project
Ministry of Housing, Infrastructure and Gender Equality	Public hearing	-
Other national stakeholders		
The Employers' Association NUSUKA (Nunaqavissut Suliffiutillit Kattuffiat)	Interviews or focus group interviews	Local/municipal employment opportunities
Greenland's largest trade union, SIK (Sulinermik Inuussutissarsiuteqartut Kattuffiat), including the local branch in Nuuk, Paamiut and/or Qeqertarsuatsiaat	Interviews or focus group interviews	Local/municipal employment opportunities
Greenland Business Association, GE (Sulisitsisut), including the local branch in Nuuk, Paamiut and/or Qeqertarsuatsiaat	Interviews or focus group interviews	Local/municipal employment opportunities
The Greenlandic Working Environment Authority (Kalaallit Nunaanni Sullivinnik Nakkutilliisoqarfik)	Interview	Working environment and risks
The National Ombudsman in Greenland	Public hearing	-
Greenland Institute of Natural Resources (Pinngortitaleriffik)	Public hearing	Impact on nature (primary focus in the EIA)
WWF Greenland	Public hearing	Social sustainability in general
Transparency International Greenland	Public hearing	Social sustainability in general
Greenland National Museum & Archives (Kalaallit Nunatta Katersugaasivia)	Interview	Archaeological finds and local cultural heritage
The Police	Interview	Crime, abuse and similar risks
KNAPK, association for fishermen in catchers (Kalaallit Nunaanni Aalisartut Piniartullu Kattuffiat)	Interview	Hunters and fishermen use the mining area
From Kommuneqarfik Sermersooq		
The Mayor's Office/Municipal Council	Interviews	The importance for the municipality, especially in relation to employment and business opportunities
The Administration for Construction and the Environment	Interviews or focus group interviews	The importance for the municipality, especially in relation to employment and business opportunities

Stakeholder	Intended to be involved by…	Can give input to…
The Administration for Children and Family	Interviews or focus group interviews	The importance for the municipality, especially in relation to employment and business opportunities
The Administration for Welfare and the Labour Market	Interviews or focus group interviews	The significance for the municipality, especially in relation to employment and business opportunities as well as expectations for impact on the public sector
Other Municipal stakeholders		
KTI Råstofskolen – Greenland School of Minerals and Petrolium (Sisimiut)	Interviews	Education, skills development and possible employment
University of Greenland in Nuuk (Ilisimatusarfik)	Public hearing	Education and competence development
Centre for Arctic Technology (ARTEK), collaboration between DTU and KTI	Public hearing	Education and competence development
From Qeqertarsuatsiaat		
The Settlement Council (joint for Kapisillit & Qeqertarsuatsiaat)	Interviews or focus group interviews	Baseline information on Qeqertarsuatsiaat General information on societal sustainability in the local area, focus on employment and local business opportunities
Hunters and fishermen in the settlement	Citizen meeting or focus group interview	The use of the mining area for hunting/fishing, any other impacts
The population of the settlement in general	Citizen meeting or focus group interview	Baseline information on Qeqertarsuatsiaat General information on societal sustainability in the local area, focus on employment
Local suppliers/Businesses	Interviews or focus group interviews	Baseline information on businesses in Qeqertarsuatsiaat Local business opportunities

5.2 Involvement process

GAM has already held an information meeting in Qeqertarsuatsiaat regarding the company's activities on the MEL 2019-162 Majoqqap Qaava project. The meeting was held on 19-09-2020. Furthermore, the company is in the process of involving premises to inspect weather stations and investigate ice conditions in the winter 2021/Spring 2022.

The next step in the involvement of stakeholders is the pre-hearing of TOR for the VSB, which is sent for public pre-hearing for 35 days. The consultation responses are collected and published on the Government of Greenland's consultation portal, and are included in the White Paper. The White Paper is a document in which all consultation responses and comments made during the pre-hearing are included. The purpose of the White Paper is to respond to relevant consultation responses and comments on the project. The White Paper also refers to where adjustments have been made in the final version.

Before the draft of the SIA is sent to the public 8-week hearing, the aforementioned stakeholders are involved through interviews, focus group interviews/workshops and/or citizen meetings. This ensures that the VSB is based on the latest knowledge and addresses the concerns, challenges or the like that the main stakeholders of the project may have. In connection with the 8-week hearing for the VSB, a White Paper will also be prepared.

If the ongoing COVID-19 pandemic places restrictions on physical meetings, workshops and the like, these activities will instead be conducted virtually or by telephone.

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