



**West Greenland Commission**

**WGC(15)4**

***The Economic and Social Impact of the  
Internal-use Fishery of Salmon in Greenland***





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# **The Economic and Social Impact of the Internal-use Fishery of Salmon in Greenland**

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Socio-Economic Evaluation  
Report

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Ministry of Fisheries, Hunting and  
Agriculture

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## Preface Note



*Greenland has a population of 56,968 (31 Mar 2014), spread across 2,166,086 km<sup>2</sup> - approximately from Bergen in Norway to Malaga in Spain. The population density of 0.026/km<sup>2</sup> is mainly due to the Ice Cap that only make approximately 10% of the landmass habitable and the rough climate.*

*Greenland is a self-ruling part of the Kingdom of Denmark. Greenland attained home-rule in 1979 and in 2009 self-rule was introduced, which entailed more sovereignty and self-rule to the Greenlandic people. For the areas of responsibility that Greenland has assumed from Denmark, Greenland is represented in the constellation; Denmark in behalf of Faroe Island and Greenland internationally. This is because Greenland and the Faroe Island are not sovereign states.*

*The Government of Greenland (Naalakkersuisut) is comprised of three parties forming a coalition with nine ministers. The parliament (Inatsisartut) consists of 31 members representing five parties. Greenland is divided into four municipalities; Qaasuitsup Kommunia, Qeqqata Kommunia, Kommuneqarfik Sermersooq and Kommune Kujalleq*

## 1. Introduction

This report provides information on the current social and economic status of salmon fisheries in Greenland. It is provided to evaluate on the dependency of the internal-use fishery in Greenland and the Government of Greenland's decision to open up for factory landings in the salmon fishery in 2012. This decision has been disputed in the West Greenland Commission in the North Atlantic Salmon Conservation Organization (NASCO). Therefore, it is important for the Government of Greenland to analyze the impacts in order to evaluate on the socio-economic benefits of the decision as well as investigate on the communities in Greenland's dependency on salmon fishery and the importance of the internal-use fishery.

Greenland is a country under development, a new nation that is still finding its place in the modern world – divided between the old ways with hunting and fishing, and the modern life style with cellphones and internet. There are enormous differences between the cities and the settlements. People in Nuuk live a very western modern life with Iphones, several supermarkets and restaurants and the world at their door step – while, the people in the settlements life of nature; hunting and fishing from small dinghies or dog sledges. They have limited goods to choose from in the small settlement shops, they have composite toilets and can only travel by boat or some places by helicopter. They rely on the natural resources that surround them and all the resources are an essential part of their livelihood.

But the common denominator between the settlements and the cities are that in Greenland everybody affected by the weather. In Greenland mother nature decides when and how long people are trapped and cannot travel, hunt or fish.



Greenlandic youth texting in their national suits and Greenlandic hunters taking a break from hunting on dog sledges in North Greenland. The image of the mixture between the old culture and the modern world that lives side by side in Greenland in 2015.

This report will further serve as a background paper on the conditions in the Greenlandic salmon fishery and the impact of the fishery economically and socially on the Greenlandic communities.

### **Our aims for this report have been agreed as:**

- Give an introduction to the salmon fishery in Greenland, including management and control measures
- Background on the Government of Greenland's decision to allow factory landings in the salmon fishery and the socio-economic impacts for the small settlements where the landings take place
- Overview of the internal distribution of salmon within Greenland, including the products that is produced of the landed salmon to the local market
- Conduct a case study of two settlements in order to illustrate the importance of the salmon fishery

- The social benefits for the fishermen, the factories and the small settlement

Salmon fishery contributes to the local economies and also have an associated social value for the small settlements. This is further emphasized by the fact that the Fishermen and Hunters Organisation (KNAPK), works for an annulment of the export ban for salmon to ensure better possibilities for the fishermen.

The Ministry of Fisheries, Hunting and Agriculture aims to ensure the social and economic benefits that emerges from a salmon fishery in Greenland and at the same time improve the sustainable use of this resource in order to ensure the social and economic benefits to the local communities in the future. With this in mind, it is important for the Ministry of Fisheries, Hunting and Agriculture to give as detailed as possible an image of the socio-economic importance, conditions and limitations of the fishermen in Greenland. Therefore, this report have been produced in collaboration with the Institute of Natural Resources, the Fishermen and Hunters organization (KNAPK), Greenland Fisheries License Authority (GFLK), Statistics Greenland, the factories and the supermarkets.

This report provides an overview of the economic and social characteristics associated with salmon fishery in Greenland as well as background information on the life and livelihood in the settlements. It is not intended to provide an assessment but give background information and give basis to a nuanced debate on the salmon fishery in West Greenland and a decision on future management and regulatory measures.

## 2. Sources of Information

The report draws on a variety of resources including previous papers made by the Ministry of Fisheries, Hunting and Agriculture about salmon fishery, scientific reports and data from the municipalities. There is very little published information relating to the social and economic impacts of salmon fishery in Greenland. Where possible, local data has been used. Where appropriate, data derived from previous studies have also been used to provide an outline or indication of the social and economic characteristics of the salmon fishery in Greenland.

Evidence has been drawn from the following sources:

### a) Executive Orders and Laws of the Government of Greenland

References from executive orders and laws of the Government of Greenland such as the Law of the Parliament (Landsting) no. 18 of 31. October 1996 concerning Fishery and the Government of Greenland Executive Order no. 12 of 1. August 2012 on salmon fishery has been consulted.

### b) Research Reports

The research report: The Salmon Fishery in Greenland 2012 – Working Paper 2013/xx by Rasmus Nygaard. The report was presented in the ICES North Atlantic Salmon Working Group in 2013.

The research report: The Salmon Fishery in Greenland 2014 – Working Paper 2015/xx by Rasmus Nygaard. The report was presented in the ICES North Atlantic Salmon Working Group in 2015.

### c) Statistics Greenland

Some of the information about factory landings in the small settlements has been drawn from Statistics Greenland's publication about Fisheries and Hunting in 2013 and income in cities and settlements:

<http://www.stat.gl/publ/da/FI/201402/pdf/Fiskeri%20og%20fangst%202013.pdf>

<http://www.stat.gl/dialog/topmain.asp?lang=en&subject=Indkomster&sc=IN>

Further Statistics Greenland has pulled data and analyzed on income of the fishermen in Arsuk and Atammik for the case study.

#### **d) Greenland Fisheries License Authority (GFLK)**

The information about landings, factories, fishermen and catches has been retrieved from the databases of the Greenland Fisheries License Authority (GFLK).

In addition to data from the GFLK database, the employees has also conducted a phone survey with the licensed fishermen. The data from the survey will also be included in the report.

#### **e) Municipalities**

Information about the small settlements including number of inhabitants etc. has been retrieved from the responsible municipalities: *Kommuneqarfik Sermersooq* and *Qeqqata Kommunia*.

#### **f) The Fishermen and Hunters Organisation (KNAPK)**

The Fishermen and Hunters Organisation in Greenland (KNAPK) has contributed to this report with a letters containing information about the fishermen's point of view concerning the salmon fishery.

#### **g) Distributors / Supermarket Chains**

The report has drawn on the resources of the distributors and supermarket chains in Greenland in order to get an overview of the quantities that is bought from the factories and distributed around Greenland.

*Kalaallit Nunaani Brugseni*, an independent part of the supermarket chain Coop, have shops in seven cities and towns in Greenland.

*Pilersuisoq*, owned by KNI (former Royal Greenlandic Trading Company) have 68 small branches/kiosks that service small settlements or towns that do not have a Brugseni or Pissifik (the large supermarket chains). These small shops or kiosk are often the only shop in the small settlements and they sell everything from milk to raffles.

#### **h) Factories**

Information about the factories, landings, employees etc. has been received from the factories; Arsuk Food, Kitaa Seafood, Lilleholm Aps and Royal Greenland.



### 3. The Greenlandic Salmon Fishery

The commercial fishery for Atlantic salmon in Greenlandic waters started around 1960 and peaked in the early 70s with catches of more than 2.000 tons a year. The fishery was quota regulated from 1972, but due to declining stocks, NASCO in June 1998 agreed that no commercial fishery for salmon should be allowed, but that the catch at West Greenland should be restricted to '*that amount used for internal consumption in Greenland, which in the past has been estimated at 20 tonnes*'. Since then export of salmon from Greenland has been banned by law. Since 1997 it has also been mandatory to report private catches of salmon. From 2002 to 2011, licensed fishermen were only allowed to sell salmon to institutions, local markets and restaurants. Unlicensed fishery for private consumption has been always allowed.

In 2012, the Government of Greenland allowed factory landings in order to ensure that all citizens get the opportunity to consume salmon and at the same time ensure the fishermen sales opportunities. The possibility to land salmon entails employment for both small-scale fishermen and employees at the factories. This opportunity can be the difference between closing the factories for longer periods of the time and ensuring the livelihood of fishermen and factory workers. Furthermore, the reporting has become more accurate as the reporting from the factories is regarded as accurate.

The opening of factory landings in 2012 entailed that the factories also have to report the amounts of salmon that is being landed.

#### 3.1. Setting a quota

When a quota is set in Greenland there are several parties involved in the process; The Greenland Institute of Natural Resources, the Fisheries Council, the Ministry of Fisheries, Hunting and Agriculture and of course the Government of Greenland (Naalakkersuisut) who sets the quotas.

The Greenland Institute of Natural Resources inform the Ministry of Fisheries, Hunting and Agriculture as well as the industry of the biological advice from the institute, ICES and NAFO as the advice becomes available. Then, the Ministry conducts a hearing of the Fisheries Council. The Fisheries Council is comprised of the Fishermen and Hunters Organisation (KNAPK) and Greenland Business Association (GE) along with various officials from ministries and unions such as the workers union (SIK) and the Ministry of Nature and Environment. The Ministry of Fisheries, Hunting and Agriculture serves as secretariat to the Fisheries Council.

When, the hearing of the Fisheries Council has been conducted, the Ministry of Fisheries, Hunting and Agriculture makes a recommendation based on the hearing, the biological advice and often considerations on employment and societal needs to the Government of Greenland. The collective government then approves or disapproves the quota. Only when a quota has been approved by the Government of Greenland can it be allocated to the applicants that fulfill the criteria of the concerned fishery. This is the procedure for all fisheries in Greenland; inshore and offshore alike.

#### 3.2 Salmon Fishery in Greenland

There are two kinds of salmon fishery in Greenland; river fishery and inshore fishery. The river fishery is extremely limited thus, the inshore fishery is the predominant fishery concerning salmon. However, a few people also fish for salmon with rod by the coastline.

### 3.2.1 River Fishery

Greenland only has one known spawning population Atlantic salmon, *Salmo salar*, located in the Kapisillit River in the inner part of the Nuuk fjord, in West Greenland. Potentially, other rivers could hold a salmon population, but in general the rivers in Greenland are short, steep and cold. Although, the contribution of the contribution of the small Kapisillit population to the salmon fishery around Greenland is persistent, it must be regarded as insignificant.

Some rod and reel fishery exists in the Kapisillit River, but the extent, size and catches is currently unknown. Electrofishing in the river in 2012 however revealed several yearclasses of smolts and the stock is persistent (unpublished)<sup>1</sup>. No CLs or other reference points have been established for the Kapisillit River.

However, the Ministry of Environment and Nature is currently working on a strategy for the protection of biodiversity in Greenland. The Kapisillit salmon will in connection with this strategy stand out as especially conservation demanding and thus, it will be one of the highest priorities in the future conservation work. The main goal is to increase the protection of the river itself and endemic salmon stock from anthropogenic effects. The river is still almost undisturbed. The only known permanent disturbance to the river is that it functions as water supply to the local settlement housing around 50 all year citizens. The disturbance involves a wooden structure and a 2.5 km long pipe from one of the lakes to the Kapisillit settlement. As part of the process, the local inhabitants have been heard about their opinion concerning the future of the river, the stock and the surrounding area. The protection plan includes the river, the river mouth, all areas supplying water to the river, the inner part of the fjord from the settlement to the river and surrounding areas. The process for an increased protection plan and biodiversity strategy were started a few years ago, the work has temporarily been on standby due to the election in November, but the expectation is that the work will continue in 2015.

### 3.2.2 Inshore Salmon Fishery

The salmon fishery in Greenland is an inshore fishery. Greenland has no salmon fishery beyond 12 nautical miles. The inshore fishery is a substantial and important fishery in Greenland, which consists of approximately 2.000 fishermen, that predominantly fish from small dinghies and small vessels over six meters. The inshore fishery is extremely important for the small settlements and towns, both for the fishermen and the employees at the factories as well as other service businesses that provide services for the fishermen and the factories. When, there is no fishery or landings an entire community come to a standstill. People get laid off and have to live of social benefits from the municipality.

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<sup>1</sup> Nygaard, Rasmus; *The Salmon Fishery in Greenland 2012 – Working paper 2013/XX*. International Council for The Exploration of the Sea – North Atlantic Salmon Working Group.



This is especially problematic in the wintertime, where the ice often prevents the fishermen from going out to fish in their small dinghies, sometimes months at the time. In North Greenland, the fishermen can take their dog sledge over the frozen sea and conduct ice fishery – but in the south of Greenland, the fishermen does not have the same opportunities and is often trapped by the “great ice” for long periods, which limits their possibilities to earn a living. In the periods, were the fishermen cannot fish due to either limitation by nature or quotas, they are often supported by the municipality and live off what they can catch or hunt such as seabirds, snow hares or caribou.

The inshore salmon fishery in Greenland is a mixed-stock fishery with contributions from stocks in North America and Europe. The components in the salmon fishery are the unlicensed fishermen, private people that want to catch salmon for private consumption and licensed fishermen that are professional fishermen, who often have a license for other species as well and professional hunters. These fishermen are mostly small scale fishermen that fish from a dinghy, but there are also a few vessels over six meters. In 2014, there were 319 licenses for dinghies and vessels over six meters in West Greenland.

The salmon fishery is often a supplement for the fishermen or hunters ensuring a stable income throughout the year or to supplement the household outside of the hunting season. The fishermen that fish for salmon also fish for other species. Unlicensed fishery for private consumption has always been allowed. Everybody living in Greenland is allowed to catch salmon for their own consumption. This is especially important in the settlements were the population have a low income and needs to supplement their earnings with what they can fish, hunt or what the can trade with. Most settlements economy is based on provisions; trading goods or favours. This is how they survive in the small isolated and often primitive settlements that does not have roads, cars or flush toilets.

In the larger towns and cities people mostly fish for their own consumptions because fresh fish is available and it is a good addition to the diet as well as fishing being an enjoyable pastime.

However, in smaller settlements along the coast it is a vital part of people’s survival – not being able to buy expensive food and the shortage in food supply, especially in the wintertime makes the supplement that the fish you can catch gives essential. In North- and East Greenland the supply ship is not able to sail through the ice between October and May, thus the shops begins to become empty by February/March – then fishing and hunting is important to the survival.

### 3.3 Regulation

In accordance with the agreements in NASCO Greenland has no commercial fishery on salmon and an export ban has existed since 1998. In addition to the regulatory measures from NASCO, the Greenlandic

salmon fishery is regulated by the Government of Greenland Executive Order no. 12 of 1 August 2012 on Salmon Fishing.

The executive order applies to all fishing for salmon in the Greenland fishing territory and salmon fishing beyond 40 nautical miles from the baseline is prohibited. The executive order also applies to reporting of the purchase and sale of salmon and reporting of catches from non-commercial salmon fishing.

There are criteria that you need to fulfill, in order to be eligible for a salmon license:

- you need to have permanent association to Greenland<sup>2</sup>
- had a salmon license in the previous year,
- be a professional fisherman or hunter (more than 50 % of your income)
- own salmon nets and a vessel not longer than 42 feet.

If you fulfil these criteria, you are eligible to apply for a salmon license. When you are a professional fisherman and have a license, you can sell your catch to factories, open air markets, institutions etc. The professional Greenlandic fishermen is according to the executive order limited by;

- the fishing season from 1 August – 31 October
- a minimum mesh size in gillnets of 70 mm
- and number of nets. The licensed fishermen can use up to 20 salmon nets. Furthermore, the licensed fishermen are allowed to use driftnets.

The non-professional fishermen is allowed to fish for salmon, if they comply with the following criteria:

- you need to have permanent association to Greenland<sup>3</sup> - if you are a Danish citizen you have to be a permanent resident in Greenland and citizens from other countries have to reside in Greenland in two consecutive years. This applies for all fisheries in Greenland.

The non-professional fishermen is also limited in their fishery after salmon according to Greenlandic law:

- the fishing season from 1 August – 31 October
- a minimum mesh size in gillnets of 70 mm
- and number of nets. Non-professional fishermen can only use 1 gillnet.
- They are also allowed to use a hook and fishing rod

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<sup>2</sup> Executive Order on Fisheries: *Landstingslov nr. 18 af 31. oktober 1996 om fiskeri, §3, stk. 4:* " 'permanent association to Greenland' is understood in this law as persons that by purchase of a household, by renting or buying a home or by other arrangements indicates intention to have Greenland as a place of residence.

<sup>3</sup> Executive Order on Fisheries: *Landstingslov nr. 18 af 31. oktober 1996 om fiskeri, §3, stk. 4:* " 'permanent association to Greenland' is understood in this law as persons that by purchase of a household, by renting or buying a home or by other arrangements indicates intention to have Greenland as a place of residence.

All salmon nets must be labelled with the owner's name or the vessels name. The label must be made in water resistant materials. This applies to all; professional and non-professional alike. If a net is not marked with identification it will be removed by the wild life officers.

Everybody that fish for salmon must report to GFLK in the pre-determined reporting schedule.

### **3.4 Enforcement, Monitoring and Control**

Monitoring, control and surveillance of the fisheries is carried out by the Greenland Fisheries License Control Authority (GFLK). The GFLK employs 16 wild life officers, six fishery inspectors and 14 fisheries observers, the fisheries observers monitor the offshore fishery and the wild life officers control the inshore fishery as well as hunting grounds along the entire coast of Greenland – an area that equals the distance from Bergen in North Norway to the south of Spain.

Further to the reporting of the fishermen and reports from the factories, GFLK's wild life officers and fishery inspectors checks up on the fishery and the fishermen regularly during the fishing season. The wild life officers report any irregularities or infringements to the GFLK and recover any unmarked and illegal fishing gears etc. GFLK and the Ministry of Fishery, Hunting and Agriculture report to the police in order to take legal action on the infringements detected.

All catches must be reported to Greenland Fisheries License Control Authority (GFLK), this entails that both licensed and unlicensed fishermen must report their catches to GFLK. The fishermen, licensed as well as unlicensed must report their catches either when the fishery ceases or closes. The reporting must be in the hands of GFLK at the latest by the fishery's end date i.e. 31 October. The fishermen has to report in a predetermined report schedule that outlines the information that GFLK needs.

The factories report to GFLK every week in line with the reporting of other species and are regarded accurate. GFLK controls the factories and their reporting as well as landings. When the quotas are exhausted GFLK will issue a stop for the fishing and landing of the species in question.

After the fishing season has ended the GFLK and the Ministry runs a series of targeted campaigns in order to ensure that the fishermen remove their nets and other equipment. Furthermore, the wild life officers patrol the normal salmon fishing grounds and occasionally identify and remove nets that are not correctly marked with name and contact information or equipment left by the owner by the end of the season.

## **4. Factory Landings**

When the Government of Greenland decided to set a factory quota it was based on socio-economic considerations – the salmon fishery in Greenland is a small and regulatory very limited fishery but the Government of Greenland has some possibilities within the regulatory framework to ensure the means of subsistence for its population. In 2012, the Government of Greenland decided to set a landing quota for salmon from a socio-economic perspective as some settlements in especially Mid- and South Greenland needed assistance to ensure their livelihood and thus, a factory quota was set in order to provide work all year around in the settlements for both fishermen and factory employees – all within the regulatory framework of NASCO. In 2012 and 2013, a quota for factory landings was set at 35 tons, however, the factory quota ceiling was not met in either 2012 or 2013. In 2014, the factory quota was reduced to 30 tons due to pressure from the West Greenland Commission and the fact that the factory ceiling had not been

met the two previous years – in 2014, the factory quota was fully utilized and factory landings of salmon was closed in the middle of September.

The communication of quotas, opening and closing of landings or quota and reminders of reporting is done through the Ministry of Fisheries, Hunting and Agriculture's website, the organisations (KNAPK and GE) and through campaigns in the media; newspapers, radio and TV.

In 2013, four settlement landed salmon to factories; Atammik, Kangaamiut, Qeqertarsuatsiaat and Arsuk. For these small settlements with a few hundred inhabitants it has been a vital to be able to land salmon. In 2014, Atammik, Kangaamiut, Qeqertarsuatsiaat and Arsuk landed salmon again along with a small company in Maniitsoq that produces different delicacy salmon products and two factories in Nuuk.

The small settlements where the landings of salmon take place are very limited in their fishery and have very few other possibilities. The quota for cod, the most important species in the southern part of Greenland is only 15.000 tons in all of Greenland and therefore it is important that the fishermen as well as the factories has the possibility to fish and land salmon in order to ensure employment all year. The fishermen and factories in the South rely on more mixed fisheries to ensure the means of subsistence. For example, in the South they rely on e.g. cod, lumpfish roe and salmon for their livelihood, none of which is as valuable as Greenland Halibut and none of which can be caught all year around. Therefore, the Government of Greenland prioritized these areas to ensure the existence of settlements, when they decided to set a landing quota for salmon. Further, the south have problems with the ice that limits the fishing and landing periods and thus, limits the period where the fishermen can make a living from their vocation. In addition, the possibilities to land is also limited in the south of Greenland and thus, fishermen often sail great distances in their small dinghies to sell their catch.

The small factories rely on all species in order to ensure employment and profit in the periods where it is possible to land fish.

#### **4.1 Settlements and Factories**

In this chapter, information about the places where landings of salmon have been taking place in 2014 is presented. The chapter outlines general information about the small settlements and cities, where landings has been conducted such as population, factories, infrastructure and landings etc. Firstly, the small settlements will be presented one by one and secondly, the city and town. Except, Arsuk and Atammik which will be the focus of a case study in the following chapter in order to look into the importance of the salmon fishery for the settlements in detail. Lastly, an overview of the landings in the settlements and towns in 2013 and 2014.

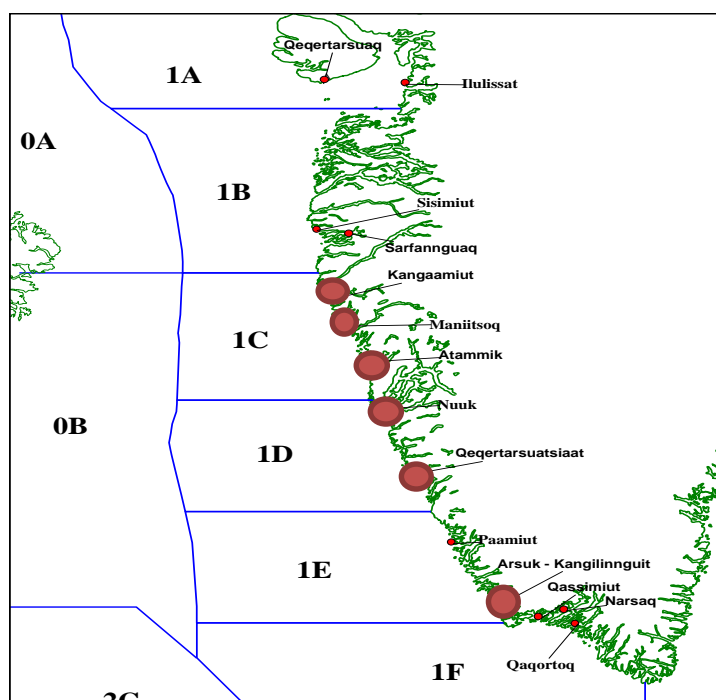


Figure 1. Map over settlements and towns, where salmon was landed in 2014

#### 4.2 Qeqertarsuatsiaat

Qeqertarsuatsiaat is a settlement in the Sermersooq municipality in South-western Greenland. The population of Qeqertarsuatsiaat is 205 inhabitants<sup>4</sup>. The main occupation of the settlement is fishing and hunting. There are 9 fishermen in the settlement licensed to fish salmon the 9 fishermen also have licenses for another species like cod, and lumpfish roe. Royal Greenland (the Government owned company) runs the fish factory in Qeqertarsuatsiaat. In 2014, there have been registered 8.205 kg landed salmon in Qeqertarsuatsiaat. There were also landings of salmon in Qeqertarsuatsiaat in 2013.

The nearest towns in the municipality, Nuuk and Paamiut are located approximately 130 km away. Qeqertarsuatsiaat is placed between Nuuk and Paamiut. Qeqertarsuatsiaat has limitations concerning distance and supplies as most small settlements in Greenland and therefore self-sufficiency by food and provision is vital here. The factory in Qeqertarsuatsiaat land several species as do most factories in the small settlement, where possibilities are few and factories and other business have to adjust to the conditions and therefore, are mixed business. The factory land species like Greenland halibut, and cod from local fishermen. However, as not all settlements have the size or the conditions to run a factory, the fishermen and hunters often travel far in order to land their catch.

Infrastructural opportunities: Royal Arctic Line A/S supplies the settlement every 10-14 days depending on weather conditions. Qeqertarsuatsiaat does not have heliport and therefore it is not possible to supply the settlement by air. People travel by ship or boat to get to and from the settlement. As this is the premise for most settlements in Greenland, Royal Arctic Line A/S further runs a passenger ship in order to provide travel opportunities for the outposts.

<sup>4</sup> Statistics Greenland - updated in 2014.08.12

### 4.3 Kangaamiut

Kangaamiut, located in Qeqqata municipality in Central-western Greenland with a population of 369<sup>5</sup> inhabitants is another settlement that lands salmon. Here the main occupation is also fishing and hunting. There settlement has 16 licensed salmon fishermen and as the case with the other settlements, these fishermen also have additional licenses to species like cod and Greenland halibut. Royal Greenland also runs the fish factory in Kangaamiut and 2.920 kg landed salmon was registered in 2014. The nearest town in the municipality is Maniitsoq, approximately 50-55 km away.

Infrastructural opportunities: Kangaamiut does not have a heliport but Royal Arctic Line A/S supply the settlement by ship every 10-14 days, depending on weather conditions – the weather have enormous impacts on the traffic and infrastructure in Greenland, especially in the small settlements. If the weather is bad due to storms, ice or other, it can delay the supply ship with several days and even some times weeks. The North and East of Greenland, the ice covers the sea for several months each winter and isolates settlements from supplies until Spring – therefore, self-supply and dependence of the natural resources such as fish and marine mammals is vital.

### 4.4 Nuuk

Nuuk is a city in Sermersooq municipality in South-western Greenland. Nuuk is the capital and biggest city in Greenland with a population of 16.786<sup>6</sup> inhabitants. In Nuuk, 25 fishermen have a license to fish for salmon and these fishermen also have licenses to fish for species such as cod, and Greenland halibut. Nuuk has two fish factories that landed salmon in 2014, Royal Greenland and Kitaa Seafood. Kitaa Seafood landed 3.657 kg salmon in their factory. While, Royal Greenland have landed 262 kg in Nuuk, a reason for the small landings at the Royal Greenland factory in Nuuk can maybe be found in the fact that Royal Greenland collected the salmon from other factories (Qeqertarsuatsiaat, Atammik and Kangaamiut) for further processing. The factories in Nuuk also landed other species such as Greenland halibut, snow crabs, lumpfish roe and cod.

Infrastructural opportunities: The cities such as Nuuk have better supply opportunities as it can be supplied both by ship and by air traffic. Royal Arctic Line A/S (a Government owned company) supplies Nuuk and the rest of Greenland by ship as Air Greenland (Government owned company) provides for some supply from/till some towns and settlements at the coast by air.

### 4.5 Maniitsoq

Maniitsoq is a town in the Qeqqata municipality in Central-western Greenland with a population of 2.569<sup>7</sup> inhabitants. In Maniitsoq, 40 fishermen are licensed to fish for salmon and other species. The fish factory that land salmon in Maniitsoq is Lilleholm Aps. Lilleholm Aps has registered 4.415 kg landed salmon in 2014. Lilleholm Aps employees 5 individuals in salmon season and the company have a wide variety of salmon products such as salmon in curry. Lilleholm Aps have plans to reopening a factory in a settlement called Napasoq with approximately 81 inhabitants, so fishermen in mid-western Greenland have better opportunities for landing their fish. Lilleholm Aps also land other species such as Greenland halibut, cod, and land and sea-mammals like caribou and whales etc.

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<sup>5</sup> Statistics Greenland - updated in 2014.08.12

<sup>6</sup> Statistics Greenland - updated in 2014.08.12

<sup>7</sup> Statistics Greenland - updated in 2014.08.12



Infrastructural opportunities: Towns like Maniitsoq have better opportunities concerning supply as it is supplied both by ship and by air traffic. Royal Arctic Line A/S and Air Greenland provides this service respectively by ship and air.

4.6 Landings of Salmon

Figure 2 below shows the landings of salmon in kilograms divided between the settlements and towns were landings has been taking place in 2014.

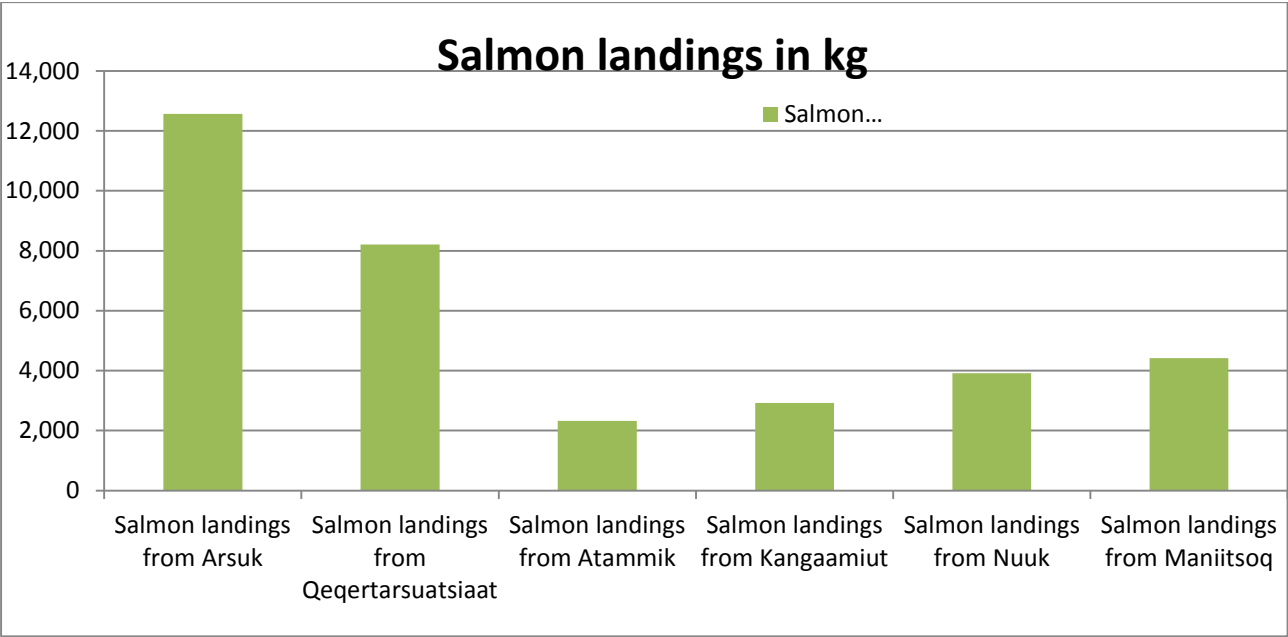


Figure 2: Landings of salmon in 2014 in Kilograms

Arsuk, Qeqertarsuaatsiaat, Atammik and Kangaamiut also bought salmon from the fishermen to the factories in 2013, however, Atlantic salmon is not the only species that the factories landed in 2013. Figures below shows the total landings of fish in the settlements in 2013. These figures gives a clear picture of the mixed fisheries in the settlements were fishermen and factories rely on species such as cod, lumpfish roe and Wolffish.



Figure 3: Landings of fish in Arsuk in 2013 in tons

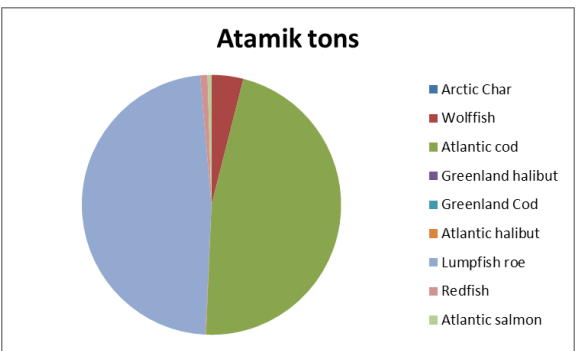


Figure 4: Landings of fish in Atammik in 2013 in tons

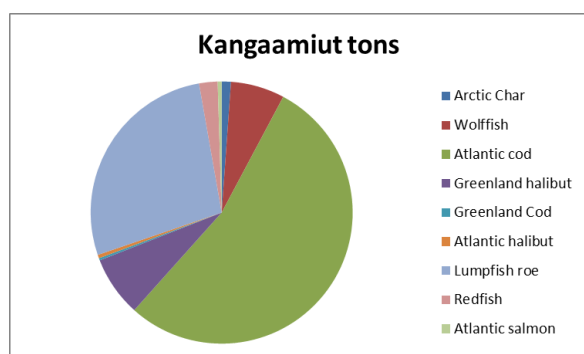


Figure 5: Landings of fish in Kangaamiut in 2013 in tons

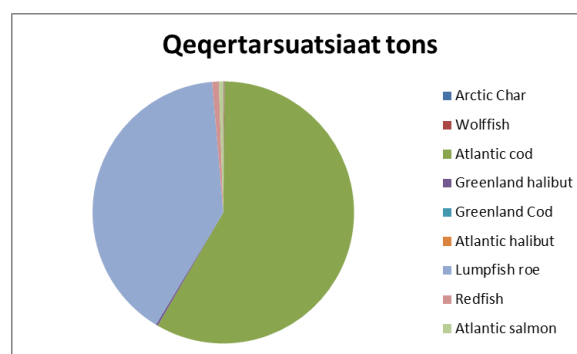


Figure 6: Landings of fish in Qeqertarsuatsiaat in 2013 in tons

The landings of salmon further create value for the factories and the settlements due to the fact that salmon only can be sold and distributed within Greenland and therefore, processing takes place at the factories. Whereas other species is exported and thereby, often frozen in blocks and then exported, therefore salmon creates more value than many of the other species.

Even though, the fishermen make a living off a mixed fishery in the middle- and south of Greenland, salmon is an important part of their livelihood. As explained above, the weather has an enormous impact on the lives of people in Greenland and especially on the lives of the fishermen and hunter that live off the natural resources. The ice shortens the fishing season for the fishermen and the different species are limited by seasons. Thus, the mixed fishery is more a way to survive than a choice. Furthermore, the salmon is more valuable than most of the other species that is caught in the area.

The landing prices for Atlantic salmon in 2014 has been on an average of 21 DKK per kilogram (approximately £1.99) , Arsuk Food has paid the fishermen 18 DKK per kilogram (approximately £1,70) and Royal Greenland 22 DKK per kilogram (approximately £2). Thus, even though it is a small fishery it is quite valuable for the fishermen compared to e.g. cod, which is the species that have been landed the most, with a landing price of around 4 DKK per kilogram (approximately £0,40).

Furthermore, the salmon is an appreciative change from all of the white fish and quite a treat for people in the summertime. It is an important part of the Greenlandic diet and thus, the Government of Greenland's vision to enhance the self-sufficiency in Greenland.

## 5. Case Study of Arsuk and Atammik

This chapter provides a case study of Arsuk and Atammik, two of the settlements that land salmon. The aim of the case study is to go further into the detail with the life in the settlements; their inhabitants, income, livelihood and so forth. In order to provide a picture of the importance of fishery and hunting and the need for internal use fishery after salmon.

### 5.1. Arsuk

Arsuk is a settlement in the Sermersooq municipality in South-western Greenland. The name of the settlement means *the beloved place* in Greenlandic. Arsuk is a one of the settlements that land salmon. The population of the settlement is 104 inhabitants<sup>8</sup>. Most towns and settlements in southern Greenland

<sup>8</sup> Statistics Greenland - updated in 2014.08.12.

exhibit negative growth patterns over the last two decades, with many settlements rapidly depopulating. Arsuk has been losing population for almost every year in the last two decades.



Arsuk with the fish factory at the centre of the settlement emphasising fishery's importance.

The nearest town in the municipality from Arsuk is Paamiut, the distance between them is about 134 km. The distance to the nearest town makes it harder to get food supply, and therefore self-sufficiency by food and provision is essential for small communities such as Arsuk. Greenland Statistic have made an overview of the species landed in Arsuk in 2013, these include Greenland halibut, salmon and cod.

The settlement has a school with 40 pupils, a service house and a wash house as most people cannot afford a washing machine. Most people in the settlement have composting toilets. Pilersuisoq provides provision for Arsuk including essentials such as milk, diapers and rifles. Arsuk also have a small kiosk.

Infrastructural opportunities: Royal Arctic Line A/S is the company that supply the small settlements, the settlements is supplied by ship. Arsuk do not have Heliport and therefore, it is not possible to supply the settlement by air. Royal Arctic Line A/S supply Arsuk every 14 days - most of the year, depending on weather conditions.<sup>9</sup> It is possible for the inhabitants and visitors to travel to and from Arsuk once a week with Arctic Umiaq Line (government-owned company) – you can either go north or south. It takes approximately 24 hours to sail from Arsuk to Nuuk.

The main occupation in the settlement is fishing and hunting. There are nine fishermen in the settlement that have a license to fish salmon. Those 9 licensed fishermen also have licenses for other species like cod, and lumpfish roe. Cod can be fished for the most of the year depending on the weather conditions and the fishery after lumpfish roe is a spring fishery that takes place from May – June.

The fish factory is called Arsuk Food Aps and in 2014 12.569 kg landed salmon has been registered in Arsuk. Arsuk Food Aps also landed Atlantic salmon in 2013. The licensed fishermen in Arsuk have landed salmon to the factory but fishermen from other settlements has also made the travel to Arsuk to land their catches.

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<sup>9</sup> Qeqqata Kommunia

Income: the average income in Arsuk in 2013 was 187.000 DKK per annum<sup>10</sup> (approximately £17.810) before taxes, which places Arsuk in the top 10 income range among the settlements in Greenland. The average income in the Nuuk is 294.000 DKK per annum (£27.838) and in Nuuk the main occupation is working for the municipality, the government or one of the government-owned companies.

The nine fishermen that have a salmon license in Arsuk have an collective average personal income of 155.859 DKK per annum in 2013<sup>11</sup> (approximately £14.844) before taxes, a little lower than the average for the entire settlement. Arsuk Food ApS paid the fishermen 18 DKK per kilogram<sup>12</sup> salmon (£1,70 per kilogram). The quantity landed in Arsuk in 2014 was 12.569 kilograms at 18 DKK kilo, which equals an income off 226.242 DKK (£21.495). In this calculation it is not included that fishermen from other settlements also land in Arsuk.

The entire landed sum of all species for these fishermen in 2013 was 1.873.545 DKK (£178.003) – thus, the salmon landed at factories comprises 12% of their income and this does not included the salmon that they sell to the open air markets or privately. These numbers does not give a full picture of the importance of salmon fishery for the people in Arsuk – but it gives an indication of the value.

## 5.2 Atammik

Atammik is a settlement in the Qeqqata municipality in Central-western Greenland. The population of the 204<sup>13</sup> inhabitants and the main occupation of the settlement is fishing and hunting – this is the main occupation of most settlements in Greenland, depending of the location hunting or fishing is the main occupation. Atammik sets itself apart from other settlements as it is one of the only settlements in Greenland were people move to and the population grows. The population of Atammik has remained relatively stable over the last two decades, decreasing around 2009/2010 and then increasing again in the following years. In 2010, there were 197 inhabitants<sup>14</sup>, thus the settlement has very exceptionally grown in population the last couple of years. Reasons for this is amongst others the factory and a brand new school.

Atammik has a small school, a day care and a wash house, all the people have composting toilets as the settlement does not have sewers. The settlement is supplied by a small Pilersuisoq.

The nearest town in the municipality is Maniitsoq, approximately 80-85 km away. Even though, the distance to the nearest town is shorter than in Arsuk and Qeqertarsuatsiaat, it is still difficult to get supplies.

Infrastructural opportunities: Royal Arctic Line A/S supply Atammik every 10-14 days, depending on weather conditions. Atammik cannot receive supplies by air as it does not have a heliport. Once a week, it is possible to go either north or south with the passage ship from Arctic Umiaq Line (government-owned company).<sup>15</sup>

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<sup>10</sup> Statistics Greenland - <http://bank.stat.gl/Dialog/varval.asp?ma=INDP3&path=../Database/Grønland/Indkomster/Personindkomster/&lang=4>

<sup>11</sup> Statistics Greenland – pulled data analysis on salmon fishermen in Arsuk

<sup>12</sup> Arsuk Food ApS

<sup>13</sup> Statistics Greenland - updated in 2014.08.12

<sup>14</sup> Statistics Greenland

<sup>15</sup> Kommunqarfik Sermersooq



Atammik from the seaside with the factory at the centre just as with Arsuk, the factory is placed at the heart of the settlement.



The new school in Atammik.

In Atammik, 15 persons had a license to fish for salmon in 2014; 14 fishermen and one professional hunter. If you are a professional hunter, you can also apply for a salmon license. The hunters often use the salmon license as a supplement for their summer hunting, a supplement if the caribou is scarce or inland.

The fishermen in Atammik further have licenses to fish other species such as cod and lumpfish roe – mixed fisheries plays an important part in the inshore fishermen's livelihood as it provides an opportunity to fish all year. Royal Greenland also runs the fish factory in Atammik. In 2014, 2.329 kg landed salmon has been registered in Atammik.

Royal Greenland's factory in Atammik has a capacity of 3 tons freezing per day and 4 tons of salting per day. The factory lands cod, catfish, salmon and lumpfish roe. The main production is salted fish and roe in barrels. The factory employs four full time workers and 16 temporary workers in the lumpfish roe season. These numbers exclude the management.



Income: the average income in Atammik in 2013 was 131.000 DKK per annum<sup>16</sup> (approximately £12.446). The 15 people that had a salmon license in Arsuk have an average personal income of 208.496 DKK per annum in 2013<sup>17</sup> (approximately £19.809), higher than the average for the entire settlement. In comparison, the average income in Nuuk is 294.000 DKK (£27.838) and the average income in Sisimiut, the largest town in Qeqqata Kommunia, where Atammik is situated is 219.000 DKK (£20.737).

Royal Greenland paid the fishermen 22 DKK per kilogram<sup>18</sup> salmon (approximately £2 per kilogram).

In 2014, 2.329 kilo salmon was landed in Atammik at a price of 22 DKK, comprising a landing sum of salmon of 51.238 DKK (£4.868). The entire landed sum of all species for these fishermen in 2013 were 5.001.642 DKK (£475.200), this entails that the sum of the landed salmon to the factory comprises 1% of the landed sum. These numbers does of course not included the quantities that the fishermen sold at the open air markets or privately.

### 5.3 Sub Conclusion

The settlements in Greenland is isolated and in many ways primitive compared to the cities. They have internet and telephones but they often do not have roads, toilets or central heating. The settlements is under-developed compared to the cities and western standards. They are isolated and can often only travel by boat. In the wintertime, they are trapped by the ice for long periods of time and they are even more depended on the natural resources than cities.

The population living in the settlements without heliports can only travel by boat or in Northern Greenland by dog sledge, the passage ship sails along the west coast and people can once a week go either north or south. Often the children will have to leave their parents behind at the age of 13 and move to a larger settlement or town in order to continue their primary school as the predominant part of settlements only can provide classes up till age 13 or 14. In the settlements there is a large part of the population needs to fish and hunt in order to provide for their families and survive. They do not earn enough money to provide for their family without being able to supply food from the nature around them – either they fish or hunt themselves or the pay with provisions.

The average income in the settlements in Greenland is 140.000 DKK (£13.256), the settlement with the lowest average income is Qeqertat in North Greenland with an average income per inhabitant of 83.000<sup>19</sup> DKK (£7.859) per annum. Thus, people are dependent on fishing all year around – including salmon. Often the settlements survival is also dependent on whether they have a factory, where the fishermen and/or hunters can land and where people can work. Sometimes, the fishermen have to travel hundreds of kilometres in order to sell their catch, which is time consuming and expensive in petrol.

In many ways Greenland is still a developing country and it faces many challenges – most of them due to lack of infrastructure and the level of education. The settlements are impacted the most by the lack of development. The settlements depend on the resources provide; fish, birds, land and sea wildlife and even plants and berries.

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<sup>16</sup> Statistics Greenland - <http://bank.stat.gl/Dialog/varval.asp?ma=INDP3&path=../Database/Grønland/Indkomster/Personindkomster/&lang=4>

<sup>17</sup> Statistics Greenland – pulled data analysis on salmon fishermen in Arsuk

<sup>18</sup> Arsuk Food ApS

<sup>19</sup> Statistics Greenland

Thus, fishery is extremely important and often vital for the livelihood of the settlements and the people living there. Salmon is a valuable species both for the professional fishermen and hunters that sell their catch either to the factories or the open air market but also for the people fishing to provide food for their families. Many people in Greenland secure reserves for the long winter in short summer months; hunting and fishing salmon, trout and redfish to fill the freezer for the winter. This applies to professionals as well as other people.

## **6. Sales and Distribution of Salmon Internally in Greenland**

Export of salmon has been banned in Greenland since 1998 through Greenland's obligations in NASCO. Today, the fishery is an internal-use fishery and the salmon that is landed to factories or sold to shops can only be distributed and re-sold in Greenland. The salmon fishery in Greenland is a subsistence fishery and sale of salmon and salmon products is allowed to provide the population with the opportunity to eat salmon.

Distribution of salmon in Greenland happens in two ways. The factories sell their products to wholesalers or to the supermarkets like Kalaallit Nunaani Brugseni, Pisiffik and Pilersuisoq. Thereafter, the wholesaler can distribute the salmon to other buyers like restaurants, institutions such as schools, retirement homes and nursing homes etc. The supermarkets can distribute salmon from their base to their supermarket outlets all over Greenland.

Lilleholm Aps is an example of this as the company produces various types of salmon products for instance smoked salmon and salmon in curry at the factory in Maniitsoq. Lilleholm Aps sell their products to wholesalers and supermarkets like Pilersuisoq A/S, and Kalaallit Nunaani Brugseni, in turn the wholesalers and supermarkets distribute the products to other parties. The wholesalers can sell the products to institutions and the supermarkets can distribute the salmon products from Lilleholm Aps to their local branches in the coast. This is also the case with Royal Greenland that produces various types of salmon products. However, the supermarkets also buy fresh salmon that they process into salmon steaks or smoked salmon in their delicacy section.

Pilersuisoq A/S that have 66 shops in settlements and smaller towns along the coast bought 1-1½ tonnes salmon from Royal Greenland and Lilleholm Aps to distribute to their shops all over Greenland. Kalaallit Nunaani Brugseni has bought and distributed 4.300 kg salmon to the seven towns, where they have branches. Brugseni bought the 4.300 kg salmon from Royal Greenland and Lilleholm Aps and distributed the products to their branches in Sisimiut, Maniitsoq, Nuuk, Paamiut, Narsaq, Qaqortoq and Nanortalik.



**Tabel 1: Towns and Settlements in Greenland**

Qaanaaq have 3 settlements
Upernavik have 9 settlements
Uummannaq have 7 settlements
Qeqertarsuaq have 1 settlement
Ilulissat have 4 settlements
Qasigiannuguit have 0 settlement
Aasiaat have 3 settlements
Kangaatsiaq have 4 settlements
Sisimiut have 3 settlements (incl. Kangerlussuaq)
Maniitsoq have 3 settlements
Nuuk have 2 settlements
Paamiut have 1 settlement
Narsaq have 3 settlements (incl. Narsarsuaq)
Qaqortoq have 3 settlements
Nanortalik have 5 settlements
Tasiilaq have 5 settlements
Ittoqqortoormiit have 0 settlement
<b>Total: 73 towns and settlements</b>

Pilersuisoq have stores in small towns like Qaanaaq, Upernavik, Uummannaq, Qeqertarsuaq, Qasigiannuguit, Aasiaat, Paamiut, Narsaq, Nanortalik, Tasiilaq and Ittoqqortoormiit. And in most settlements. Some small settlements do not have stores from Pilersuisoq – all in all Pilersuisoq covers 66 towns and settlements.

Pisiffik has stores in bigger towns and cities like Ilulissat, Aasiaat, Sisimiut, Maniitsoq, Nuuk and Qaqortoq. Brugseni have branches in Sisimiut, Maniitsoq, Nuuk, Paamiut, Narsaq, Qaqortoq and Nanortalik.

## 7. Social and Economic Impact

The salmon fishery is socially and economically important for the fishermen and for the communities. For the fishermen it is a vital part of ensuring work all year as most fishermen or hunters use the salmon fishery as a supplement to make ends meet. The possibilities in the areas where salmon is caught is limited as they rely on cod, Greenland halibut and salmon. Greenland halibut is mainly in the northern part of Greenland and the prize is much lower in the south due to lack of competition and the cod TAC is only 15.000 tons for all of the inshore fishery in Greenland, which entails limitations. It is possible to fish for shrimp in the inshore fishery as well – however, if you fish for shrimp you cannot fish for other species. The biggest and most valuable fishery in the south of Greenland is lumpfish roe, however, this fishery is limited to May-June – if the weather allows it late April.

The salmon fishery in Greenland is a small but well established fishery which gives great social and economic benefits to the fishermen that fish salmon. In terms of employment during the whole year and additional income in the fishing season (1 August – 31 October). The landing prices for Atlantic salmon in 2014 has been on an average of 21 DKK per kilogram (£1,99). Thus, even though it is a small fishery it is quite valuable for the fishermen compared to e.g. cod with a landing price of around 4 DKK per kilogram (£0,38).



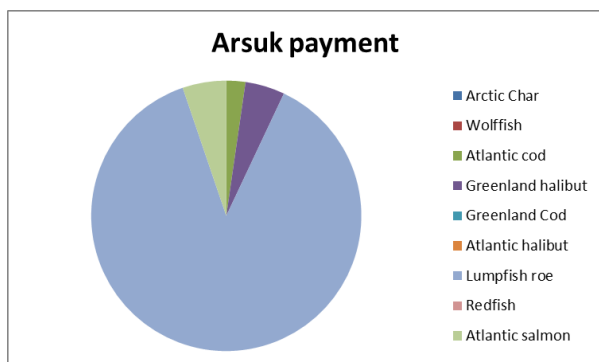


Figure 7: Payments for landings in Arsuk in 2013 in DKK

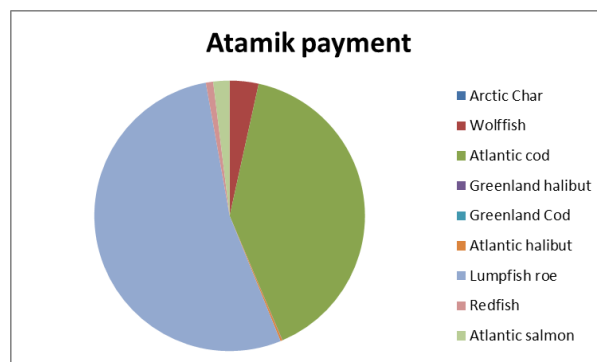


Figure 8: Payments for landings in Atammik in 2013 in DKK

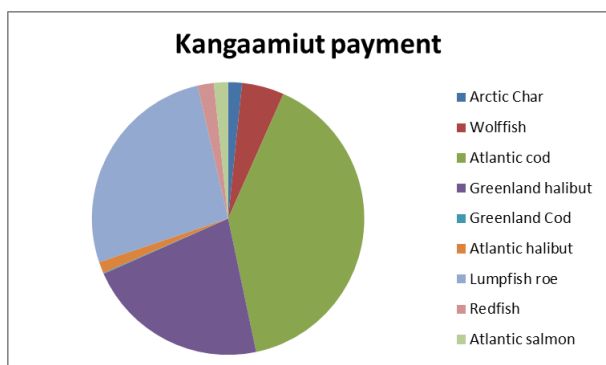


Figure 9: Payments for landings in Kangaamiut in 2013 in DKK

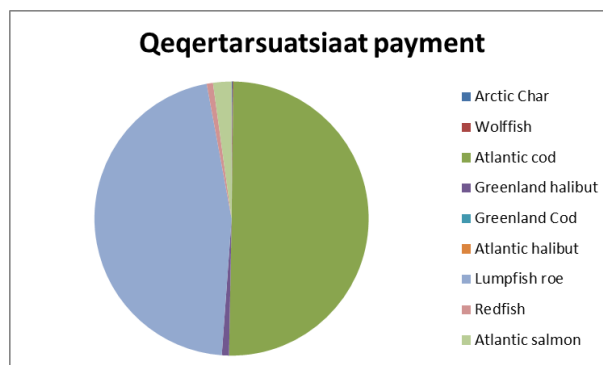


Figure 10: Payment for landings in Qeqertarsuatsiaat in 2013 in DKK

Landing 50 kilo of salmon brought the fishermen in average 1.050 DKK (£99). This might seem as a small revenue, however for small settlements with a few hundred people any addition to the income adds enormous value both socially and economically. It can mean the difference between feeding one's family or not. The living expenses in Greenland are very high, especially in the settlements, where transport is difficult and expensive. In addition, the transport ship are often delayed due to the weather for long periods at the time.

Furthermore, it is important to remember that the added value and the dependency of the salmon in the settlement not only apply to the salmon that is sold to open air markets or factories, but also through payment and winter reserves. What can add more value than taking a big fat salmon out of the freezer in January, when you are trapped by the ice and the shop has run out of everything but the essentials?

The salmon fishery further have a great social and economic benefit for the local communities where the factories land salmon. When the Government of Greenland set a factory quota for salmon in 2012 it was with the aim of supporting the fishermen and fishing communities in the south. This decision has had a positive impact for several communities, where factories now land salmon. The small settlements have increased their landings and thereby ensured employment for the factory workers to the benefit of the community and it has given the fishermen in the area better possibilities of selling their catch. Which again bring economic value to the fishermen and the communities. Lilleholm Aps in Maniitsoq employs five people and Arsuk Food have two employees. Royal Greenland expects that landings of salmon generate 1.000 hours of work for their employees in Nuuk, Qeqertarsuatsiaat, Atammik and Kangaamiut.

Additionally, it has given a better possibility of distributing salmon to all of Greenland and thereby, giving more Greenlanders the opportunity to eat salmon caught in Greenland, which supports the Government of Greenland's strategy to enhance self-sufficiency in Greenland – bringing social and economic benefits for all. The fact that salmon can be landed have spurred Lilleholm Aps, a relatively new company to develop new products and expanded their business both in Maniitsoq but also to buy and re-open the factory in Napasq, a small settlement with 81 inhabitants – social and economic benefits directly derived from the salmon fishery.

The fishermen feel pride in fishing salmon and are very positive towards the possibilities that the salmon fishery bring. In fact, the fishermen and hunters organisation, KNAPK put pressure on the Ministry of Fisheries, Hunting and Agriculture to end the export ban and resign from NASCO as the fishermen experience more and more salmon in Greenlandic waters also during the winter months. It is important for KNAPK that Greenland reduces its import and increases its self-sufficiency to the advantage of the Greenlandic society and the fishermen.



Images of open air markets (Brædtet). The fishermen and hunters can sell their catch here.

However, the salmon fishery does not only bring benefits for the fishermen and the communities in general but also bring social and economic benefits to the “recreational” fishermen. Anyone with a permanent association to Greenland<sup>20</sup> - basically, everybody living in Greenland is allowed to catch salmon for their own consumption. Unlicensed fishery for private consumption has always been allowed and continues to be important for people in the small settlements and people with low income, where self-sufficiency is a vital part of surviving. For people that fish for salmon for more recreational reasons derives pleasure from sailing out to check the nets and the excitement of bringing home freshly caught salmon to the family.

Self-sufficiency is an enormous part of life in Greenland in cities, towns and settlement – people from all strata of society hunt, fish and gather eggs or plants and berries for their own consumption. It is a vital part of the Greenlandic culture and of the way of life to be part of nature and make use of the natural

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<sup>20</sup> Executive Order on Fisheries: *Landstingslov nr. 18 af 31. oktober 1996 om fiskeri, §3, stk. 4:* “ ‘permanent association to Greenland’ is understood in this law as persons that by purchase of a household, by renting or buying a home or by other arrangements indicates intention to have Greenland as a place of residence.

resources from black berries over caribou to salmon – a way of life that many foreigners living in Greenland has taken to heart. It has great social value.

## 7. Summary and Conclusion

The commercial fishery for Atlantic salmon in Greenlandic waters started around 1960 and peaked in the early 70s with catches of more than 2.000 tons. Since 1998, Greenland has committed to have no commercial fishery for salmon and export has been banned – the fishery for salmon in Greenland should be restricted to substance or internal-use fishery. In 2012, the Government of Greenland set a factory quota of 35 tons after it had been banned to land salmon to factories since 2002. In that period, the fishermen could only sell salmon to institutions, local markets and restaurants. The Government of Greenland allowed factory landings in order to ensure that all citizens would get the opportunity to consume salmon and at the same time ensure the fishermen sales opportunities. In 2014, the factory quota was reduced to 30 tons due to pressure from NASCO and the fact that the quota had not been utilized in 2012 and 2013.

Greenland only have one salmon river, the Kapisillit River (adequately meaning salmon river in Greenlandic), other rivers could potentially hold a salmon population, but in general the rivers in Greenland are short, steep and cold. A plan to conserve Kapisillit River and the surrounding area as part of a protection strategy for Greenlandic biodiversity is currently underway.

Greenland does not have any offshore (beyond 12 nautical miles) salmon fishery. The inshore fishery is a mixed-stock fishery with contributions from North America and Europe. There are two different components in the inshore Greenlandic salmon fishery; licensed and professional fishermen and unlicensed fishermen fishing for private consumption. Everybody living in Greenland can fish for salmon for private consumption with the limitation of one salmon net and the fishing season from 1 August – 31 October. The licensed fishermen are limited by the fishing season, a minimum mesh size in gillnets and the limit of 20 salmon nets. In order to get a license to fish salmon, the applicant have to live in Greenland and be a professional fisherman. Both Licensed and unlicensed fishermen have to report catches to GFLK.

All control and monitoring is carried out by GFLK, GFLK employs 11 wild life officers that control the inshore fishery and hunting areas. The wild life officers patrol the fishing grounds and report infringements or remove illegal equipment etc. The factories report to GFLK on a weekly basis and the numbers is considered accurate.

In 2014, factories in seven towns and settlements landed salmon; Arsuk Food Aps landed in Arsuk, Royal Greenland in Qeqertarsuatsiaat, Atammik, Kangaamiut and Nuuk, Lilleholm Aps landed in Maniitsoq and Kitaa Seafood landed in Nuuk as well. The fact that landings to factories has been possible has derived some social and economic benefits for the factories, the fishermen and the communities alike.

The salmon fishery has great social economic value for the Greenlandic society and many benefits derive from the salmon fishery such as self-sufficiency and livelihood of the fishermen. Greenland is a small community of approximately 56.000 people spread over more than 2,000,000 km<sup>2</sup> and therefore, even the smallest fisheries have a great impact – socially and economically. Even though, the Atlantic Salmon fishery is a small fishery the fact that the fishermen can land their catch and get a good prices for the salmon provides great economic benefits to the fishermen and ensures full employment during the year. This entails pride and economic safety for the fishermen and their families. The fishermen can plan the different

fisheries during the year to ensure their livelihood. This brings both social and economic benefits for the fishermen themselves and for the Greenlandic society – families that can provide for themselves do not need to receive social benefits. If fishermen do not have quota to fish for the whole year, they receive social benefits for the months or weeks they cannot fish, thus it benefits the society as a whole as well.

The aims of this report has been to give an introduction to the salmon fishery in Greenland, an introduction to conditions of the salmon fishery in Greenland including river fishery and inshore fishery as well as management and control measures were laid out in the first chapter.

A background on the Government of Greenland's decision to set a landing quota and the socio-economic impacts of this decision in the settlements has been illustrated in various chapters. The evaluation is that the impact has been positive, bringing social and economic benefits to the settlements, the factories and the fishermen – as well as the Greenlandic society as a whole.

An overview of the internal distribution of salmon within Greenland, including the products that is produced and distributed to the local market has further been delineated in the report and a thorough description of the retailers has been given in order to underline the distribution opportunities in Greenland.

The social benefits for the fishermen, the factories and the small settlements has been outlined and analysed through the entire report and the conclusion must be that the social and economic benefits to the fishermen, the factories and the small settlements has been essential.

Greenland is in many ways still a developing country, where people earns their own keep and depends enormously on nature and what it can supply. People in the settlement live of nature's resources; fish, land and sea mammals, birds and berries. People live in small houses often without sewers and central heating, they have composting toilets and wash their clothes at the wash house.

They feed their family with what they can fish, gather, hunt or exchange with others. The settlements survive on payment and exchange of provisions. Salmon adds great value to the settlement both economically and socially – salmon adds value whether it is sold, swooped or saved as a winter reserve.

The settlements in Greenland is dependent on the internal-use fishery after salmon and it will have a great impact om the livelihood and quality of life if internal-use fishery is closed.