NAALAKKERSUISUT
GOVERNMENT OF GREENLAND

Management plan for Atlantic salmon in Greenland

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MINISTRY OF FISHERIES, HUNTING AND AGRICULTURE

Contents

1. Background

1.1 Purpose and strategy

This management plan is intended to ensure access for the Greenlandic population to the utilisation of Atlantic salmon (*Salmo salar*), taking into account the international agreements that Greenland has negotiated.

As the salmon in the vast majority of areas in the North Atlantic are in poor condition, virtually all nations with a historically significant salmon fishery in the area have shut down their fisheries. For the Government of Greenland it is important to maintain the right of all citizens to self-sufficiency. Therefore, it is important that the management of fisheries both ensures this possibility for all citizens, and complies with Greenland's international obligations.

The most important goal of this management plan is therefore to secure a subsistence fishery that will give citizens throughout Greenland the opportunity to supply themselves with Atlantic salmon, while those who do not have the opportunity to participate in the fishery can also have access to salmon, e.g. by buying Atlantic salmon at local booths. It is therefore permissible for commercial fishermen to sell their catches, e.g. via local booths or supermarkets, or directly to private institutions, in order to ensure that all citizens have access to salmon. Recreational fishermen may only fish for their own consumption, and may not sell their catches.

The management plan must also ensure that the fishery is managed in accordance with NASCO guidelines and Greenland's international obligations under the UN Convention on the Law of the Sea in relation to the management of common fish stocks[1] and the NASCO Convention[2].

This management plan takes a holistic approach based on the right of citizens to self-sufficiency, better involvement of stakeholders, and a stronger and more stable management of salmon fishing in Greenland.

The management plan covers the coastal areas of all Greenland, including East Greenland: i.e. the entire part of Greenland's fishing territory located within 3 nautical miles outside the baseline.

The management plan does *not* cover fishing for Kapisillit salmon in the Kapisillit River, as the Kapisillit salmon stock is not part of the Atlantic salmon stock and is therefore managed separately to the Atlantic salmon fishery. Similarly, pink salmon (*Oncorhynchus gorbuscha*), which is a different species of salmon, is not covered by this management plan.

1.2 Period of validity and revision provisions

This management plan shall apply from 1st of June 2021 until 31st of December 2025, after which time it will be assessed on the basis of experience with the plan as well as scientific advice from ICES and consultation with the Fisheries Council. The Government of Greenland will have the option to revise the plan if this is deemed desirable or necessary at any time during the period of validity.

[1] UN Convention on the Law of the Sea: (UNCLOS), section XX - Duty of cooperation ...
[2] The Convention for the Conservation of Salmon in the North Atlantic Ocean

If major changes occur in the fishery, such as a need for change in the management or change in the principles for advice, this can trigger an audit in the validity period that can lead to revision of the management plan. This will ensure that the management plan remains at all times accurate in relation to the fishery in question.

Any alteration in the management plan will require the approval of the Government of Greenland, whereas changes in the accompanying appendices may be made administratively by the Ministry of Fisheries, Hunting and Agriculture.

1.3 Legislation and administrative responsibility

The Parliamentary Act on Fisheries (the Fisheries Act) gives the Government of Greenland the right to regulate the Greenlandic fisheries. The Government of Greenland sets the annual TACs for fish stocks in the territory of Greenland's fisheries and distributes the TAC in quotas, taking into account national legislation and international agreements.

Responsibility for the administration of fishery in Greenland lies with the Government of Greenland and with the Minister for Fisheries, Hunting and Agriculture. The Minister proposes parliamentary bills within the framework of the current fisheries legislation, and these proposals are submitted for adoption (or rejection) at the regular meetings of the Government of Greenland.

Under the current Fisheries Act, the Minister for Fisheries, Hunting and Agriculture is obliged to consult the Fisheries Council in general questions of administration. The Fisheries Act also specifies the composition of the Fisheries Council.

In addition to the Fisheries Act, the fishery for Atlantic salmon is also managed in accordance with the Executive Order on Fishing for Salmon and NASCO's multi-year management regulations in the West Greenland Commission.

1.3.1 NASCO

The North Atlantic Salmon Conservation Organisation (NASCO) was established in 1984, with responsibility for the conservation, restoration, enhancement and rational management of wild salmon in the North Atlantic. Although national states retain their role in regulating fishing for salmon originating in their own rivers, mixed fisheries, such as the fisheries in Greenland and the Faroe Islands, which fish for salmon originating in the rivers of other countries, are regulated by the NASCO Convention.

The following states are members of NASCO: Canada, Denmark on behalf of the Faroe Islands and Greenland (DFG), EU, Norway, Russia, the United Kingdom and the United States of America.

NASCO's purpose is "is to conserve, restore, enhance and rationally manage Atlantic salmon through international co-operation, taking account of the best available scientific information."

NASCO's Action Plan for the Application of the Precautionary Approach (1998) provides an explanation of how this can be achieved:

"Management measures should be aimed at maintaining all stocks above their conservation limits by the use of management targets." "Socio-economic factors could be taken into account in applying the precautionary approach to fisheries management issues." "The precautionary approach is an integrated approach that

requires, inter alia, that stock rebuilding programmes (including, as appropriate, habitat improvements, stock enhancement, and fishery management actions) be developed for stocks that are below conservation limits."

2. Introduction to the species in relation to fishing and the environment

Atlantic salmon (*Salmo salar*) begin their lives in rivers and streams in countries that have coastlines in the northern part of the Atlantic Ocean. The European stocks range from Portugal and Spain in the south to Russia in the north. In the Western Atlantic, Atlantic salmon are found from New England (USA) in the south to subarctic Canada in the north (Labrador and Quebec).

Atlantic salmon is an anadromous species, which means that the salmon spawn in fresh water and migrate to the sea during their growth. Spawning takes place in fresh water in a river or stream, where the fish spend their first years of life. Spawning typically occurs from October to January. The eggs are released and fertilised in hollows in streams with stones of suitable size on the bottom.

The fry live their first years in the river, but after one to six years the salmon fry acquire a more shiny and golden appearance. This is called the smoltification of the salmon. In southern stocks smoltification takes place already after one to two years, while for northern stocks, such as the Kapisillit River population, it occurs only after four to six years. During smoltification, the salmon fry adapt physiologically to living in salt water. The smolt then migrates to the sea, where it spends one or more years.

During their food migration in the sea the salmon grow faster than in fresh water, as feeding conditions in the sea are far better than in the rivers and streams where the salmon have matured. In the sea, the salmon migrate thousands of kilometres to areas where there is a high concentration of food, such as the Barents Sea or the coast of Greenland. In Greenland, its preferred food is capelin, 10-armed squid, krill and a small pelagic crustacean called temisto.

Once the salmon have grown big enough, the vast majority of the now spawning-ready salmon return to the rivers or streams where they were spawned many years earlier (homing). The majority of the salmon caught in Greenland have been in the sea for only one year and have reached a size of 55-65 cm. These catches would have spent at least two years at sea before returning to their river as large salmon. Small salmon that return to their home rivers to spawn after one year at sea, have therefore not reached Greenland during their migration. Consequently, the proportion of one-year-old salmon in the rivers of Europe and North America is not directly impacted by the Greenlandic fishery, but only indirectly, via the effect of recruitment of large spawning salmon.

Some Atlantic salmon become so exhausted from their spawning migration that they die after spawning. Unlike many species of Pacific salmon, a significant proportion of Atlantic salmon can survive spawning and make a new food migration to the sea. Salmon that have spawned several times are very large (more than 100 cm) and are called repeat spawners.

The actual migration routes in the sea can vary greatly from area to area, and are not yet fully known. However, it is certain that not all salmon in the North Atlantic migrate all the way to Greenland to seek food, although many figures showing salmon migrations at sea suggest this. Salmon that complete food migrations

all the way to Greenland will return to Europe or North America as large salmon that have been in the sea for two years or more.

The large degree of homing also means that salmon in the sea consist of salmon from many different stocks, which in turn are divided into separate river stocks when the salmon return to spawn in the river or stream of their origin. Salmon typically return to their river of origin to spawn after one to two years at sea.

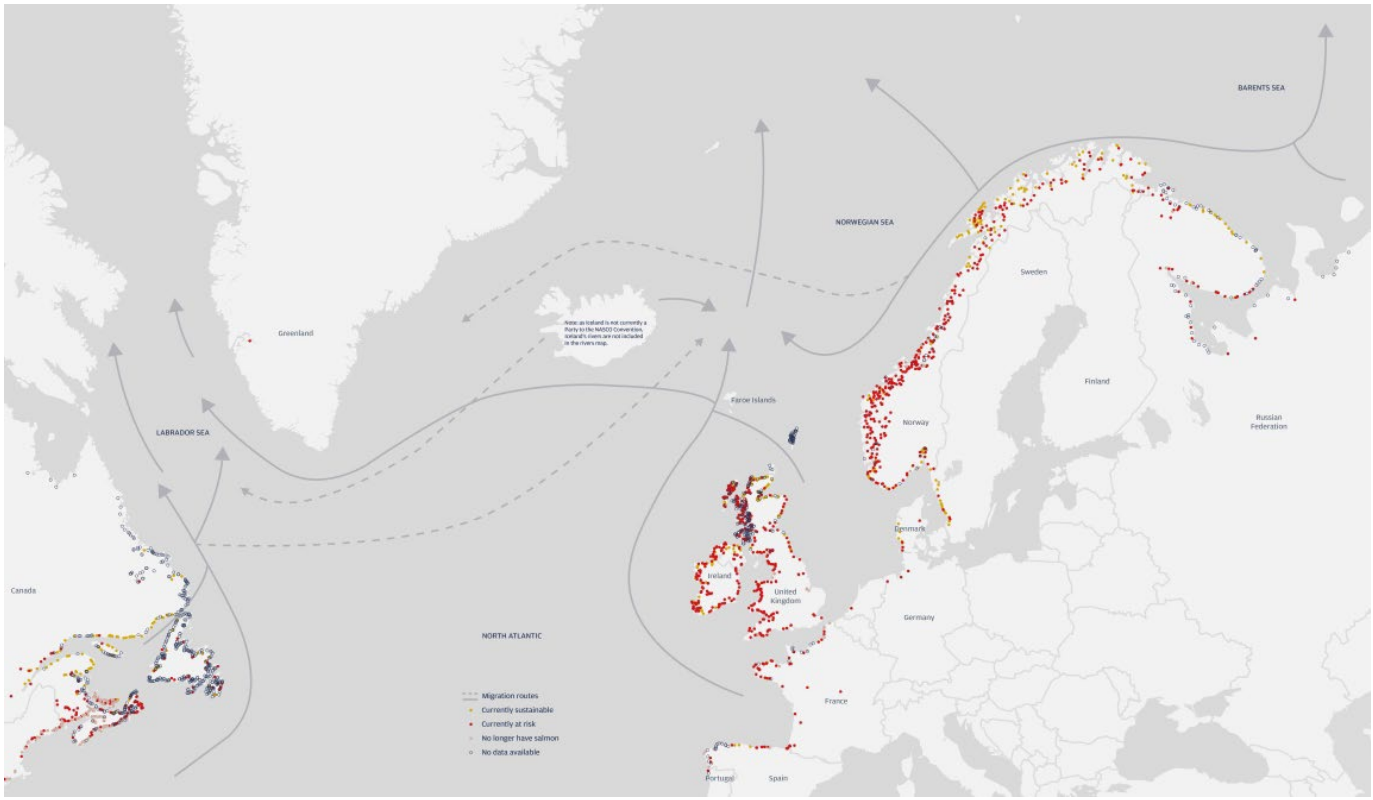

Figure 1 Map of the migration routes of Atlantic salmon
Source: State of North Atlantic Salmon Report, NASCO 2019

Salmon fishing in Greenland is coastal, i.e. it takes place within three nautical miles of the baseline, in dinghies or small coastal vessels (less than 42 feet). The fishing primarily takes place in West Greenland, but fishing for salmon also takes place in East Greenland. Commercial fishers use salmon nets or hooks. Nets are the primary gear, but some recreational anglers also use fishing rods. The nets are regularly emptied and the commercial fishermen may sell their catches, while recreational fishermen may fish only for their own consumption.

Fishing for salmon is a subsistence fishery, and is therefore only fished for internal consumption in Greenland.

3. Scientific advice and management and control principles in the fishery

3.1 Scientific advice

The scientific advice is drawn up by the International Council for Exploration of the Sea (ICES). The advice is given for a three-year period and is evaluated annually at the end of March by the ICES working group WGNAS[3]. The working group collects and evaluates data from salmon stocks throughout the North Atlantic.

ICES divide the advice on Atlantic salmon into three main areas: Northeast Atlantic (NEAC), North America (NAC) and West Greenland (WGC). The advice or evaluation of the latest advice is presented each year to all NASCO contracting parties.

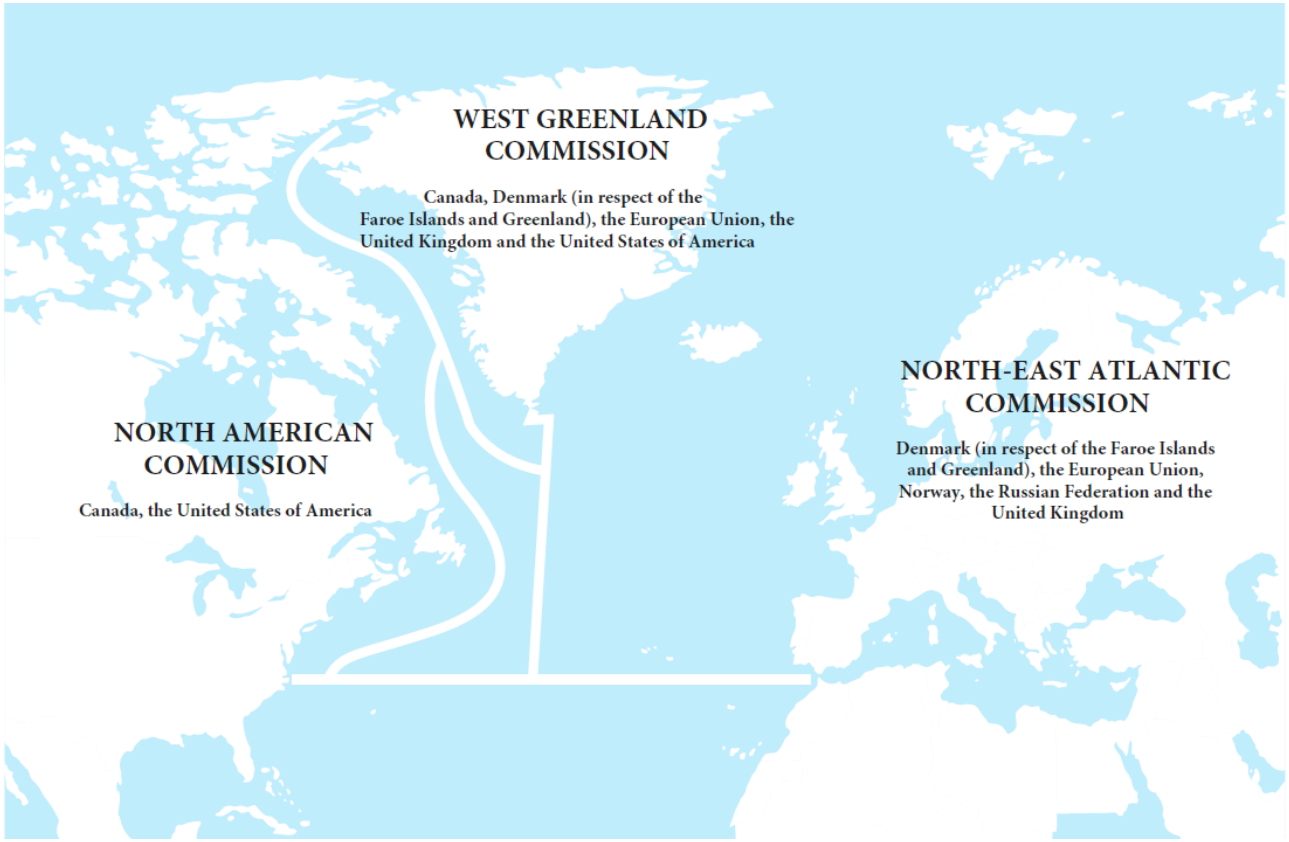

Figure 2 Map of NASCO's Commission Areas
Source: NASCO website

Salmon fished along the west coast of Greenland mainly originate from European and North American stocks. The salmon stock in the Kapisillit River is so small that its contribution to the salmon fishery along the coast of Greenland is insignificant. The fishery on the salmon stock in the Kapisillit River is not included in the management plan or in the quota for the mixed stock fishery off of the coast of Greenland.

[3] ICES Working Group on North Atlantic Salmon – WGNAS.

The fishery in Greenland and the Faroe Islands is a so-called mixed stock fishery, in which a large number of stocks originating from different river and streams from various countries are fished in the ocean. Samples are collected each year from the Greenlandic salmon fishery in order to determine which regions and stocks are impacted by the fishing in Greenland. DNA samples and catch quantities are used to determine the proportion of catches originating from different regions. ICES estimated in 2020, on the basis of the West Greenland sampling programme, that 72% of the salmon migrating to Greenland originated from North American rivers and 28% from European rivers, primarily in Ireland and Great Britain. The catch data, including the identified region, are then combined with counts of returning salmon in the various regions. Data from the fishery and the number of returning salmon (published in an annual "Framework of Indicators" report to NASCO) are collected in a mathematical model in which the number of salmon before the fishery is estimated. The model also accounts for the natural mortality at sea and during the homing migration. The final model result is an estimate of the impact of fishing on salmon stocks on the individual salmon stocks.

Atlantic salmon have the characteristics of short-lived fish stocks. The adult part of the stock is highly sensitive to fluctuations in recruitment, because the adult spawning population consists only of a few cohorts. In the same way, the part of the stock that can be exploited at sea is also dependent on fluctuations in incoming cohorts. For these sensitive species, the ICES Maximum Sustainable Yield (MSY) approach seeks to achieve a sufficient spawning biomass (MSY $B_{escapement}$) to ensure a low risk of adversely impacting recruitment. For salmon, this approach has given rise to management targets for individual rivers (river-specific conservation limits) in the number of returning salmon. Since many salmon rivers do not have set management targets, and as it is not possible to monitor all stocks at the same time, indicator rivers with fixed reference points (conservation limits in the number of returning salmon) are used to monitor the salmon stocks, and the count results are collected in an annual report (see "Framework of indicators").

In relation to the advice for fishing for salmon in Greenland, which consists of mixtures of hundreds of stocks, NASCO has adopted a risk level of 75% probability of simultaneously achieving the management objectives in six NAC areas (Labrador, Quebec, Newfoundland, Gulf of St. Lawrence, Scotia Fundy and the US) as well as the southern part of the European management region (S-NEAC).

The advice from ICES have been "*No direct fishing*" for a long period of time, concerning fishing for Atlantic salmon in Greenland. The advice for fishing along North America and fishing in the Faroe Islands have also been "*No direct fishing*".

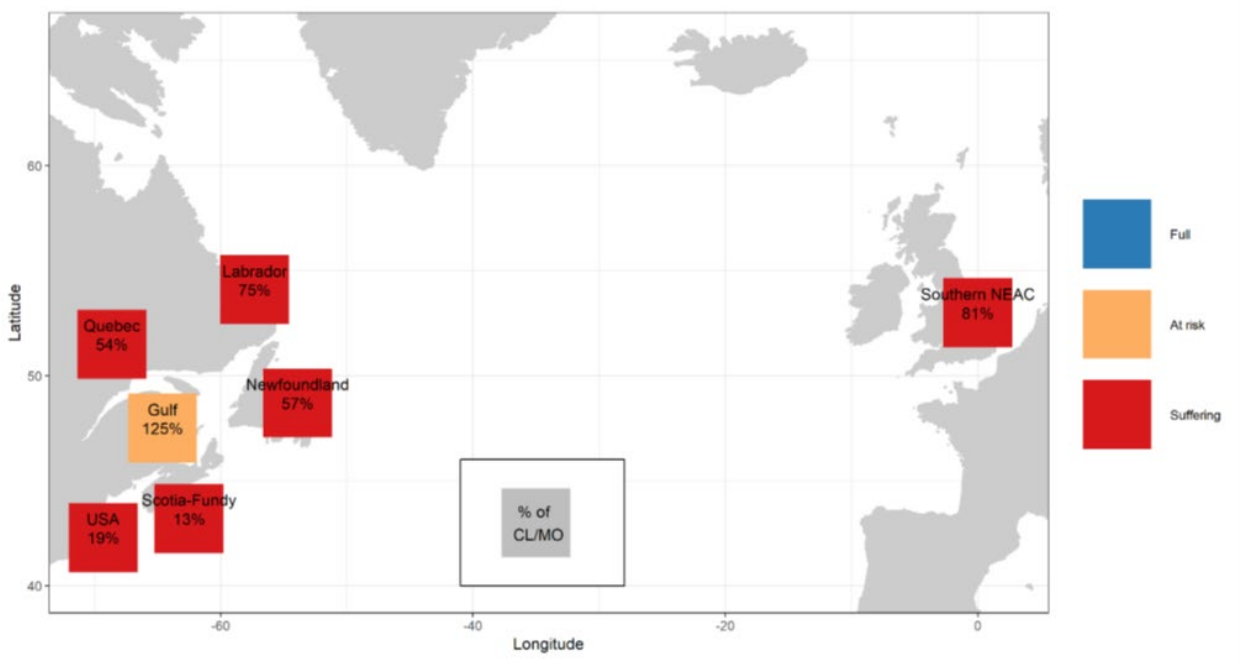

Figure 2 Map of the condition of the salmon stocks in the regions that supply the majority of the salmon in the Greenlandic fishery. Summary of 2SW (NAC region) and MSW (Southern NEAC) 2018 mean (from Monte Carlo posterior distribution). Spawning estimates in relation to conservation limits / above management objectives. (CL/MO).

Salmon tagging

Several countries associated with NASCO, tag their salmon and can thus be collected from the fishery. If a fisher finds a tag on a salmon, this must be sent to the Greenland Institute of Natural Resources. The tag helps to provide data on the salmon's migration patterns. Each year, NASCO draws a winner from the submitted tags, and the fisher that had collected the tag receives a cash prize.

3.2 Determination of TACs and quotas

The total allowable catch (TAC) for Atlantic salmon is fixed each year by the Government of Greenland on the basis of the agreement of the West Greenland Commission in NASCO (Multi-annual Regulatory Measures).

The Government of Greenland distributes the TAC via quotas for each management area, in order to ensure that all parts of Greenland have equal access to the salmon fishery. The distribution of the quota to each management area is based on historical catch data for the period 2015-2019[4].

Management areas:	Distribution key:
Northwest	40%
Southwest	60%
East Greenland	Fixed annual quota of 3 tons

[4] See appendix 2.

When the Government of Greenland has distributed the quota between the Northwest and Southwest Management Areas, the quota is further divided into two segments; commercial fishermen and recreational fishermen[5] as outlined below.

Management areas	Distribution key 1		Distribution key 2
Northwest	40%	Commercial fishermen	28 % [1]
		Recreational fishermen	12 % [1]
Southwest	60%	Commercial fishermen	42 % [1]
		Recreational fishermen	18 % [1]
East Greenland	Annual fixed quota 3 tons	Commercial fishermen	50% [2]
		Recreational fishermen	50% [2]
[1] Distribution of the quota in West Greenland in percentage [2] Distribution of the quota in East Greenland in percentage			

3.3 Regulatory mechanisms

3.3.1 Output regulation: quota volumes

The fishery is managed through time-limited licences without a maximum allowable catch, also known as Olympic fishing. This means that quotas are set for each management area, and all of the licensees in a given management area fish for the common quota in that area.

The fishery in a management area closes when the quota for the area has been fished up. Quotas cannot be transferred between areas or years.

3.3.2 Input regulation: Fishing capacity

The fishery for Atlantic salmon is a fishery for internal supply in Greenland, also called subsistence fishing, which means that both commercial and recreational fishers can fish for salmon. However, the fishing is regulated on the basis of licences. Anyone fishing for salmon must have a licence, even if the fishing is only by rod.

Licences are only issued for vessels up to and including 12.8 metres (42 feet) in overall length.

In order to be eligible for a salmon fishing licence, you must meet the following requirements:

- You must have had a permanent address in Greenland for the past two consecutive years
- You must have paid tax in Greenland for the past two consecutive years
- If you had a licence in the previous year, you must have reported your fishing activity on time the previous year.

To receive a license for fishing Atlantic salmon the fisher have to apply for the license through the online portal sullissivik.gl or through the municipal office.

[5] See appendix 3 for calculations of the distribution between segments

3.3.3 Area regulation

Fishing for Atlantic salmon may only take place coastally, which is defined as within 3 nautical miles from the baseline.

The Atlantic salmon migrate to Greenland in the summer, where they initially arrive in South Greenland, and then move north over the summer and autumn, primarily along the west coast. Due to this displacement in the arrival of salmon along the west coast, the fishery for Atlantic salmon is divided into 3 management areas. This helps to ensure that all of Greenland has access to salmon fishing.

Management area:	**Area definition:**
Northwest	The geographical area within 3 nautical miles outside the baseline from a point on the mainland (83°17'N, 44°00'W), then north along 44°00'W to 3 nautical miles outside the baseline, then southwest 3 nautical miles outside the baseline to 64°15'N, then east along 64°15'N to a point on the mainland (64°15'N, 52°0.7'W), and then along the coast to the starting-point (83°17'N, 44°00'W). The management area excludes fjords that end south of 64°15'N, more specifically the Nuuk fjord.
Southwest	The geographical area within 3 nautical miles outside the baseline from a point on the mainland (64°15'N, 52°0.7'W), then west along 64°15'N to 3 nautical miles outside the baseline, then south 3 nautical miles outside the baseline to 44°00'W, then north to a point on the mainland (60°10.5'N, 44°00W), and then along the coast to the starting-point (64°15'N, 52°0.7'W). The management area includes fjords that end south of 64°15'N, more specifically the Nuuk fjord, and fjords that end west of 44°00'W, more specifically Nup Kangerdlua, and excludes fjords that end east of 44°00'W, more specifically Kangerdlugssuatsiaq (Lindenow Fjord).
East Greenland	The geographical area within 3 nautical miles outside the baseline east of 44°00'W, including fjords that end to the east of 44°00'W, more specifically Kangerdlugssuatsiaq (Lindenow fjord), and excluding fjords that end west of 44°00'W, more specifically Nup Kangerdlua.

3.3.4 Fishing season

Fishing for Atlantic salmon is permitted for limited periods, depending on the management area, in accordance with the Executive Order on Fishing for Salmon. The fishing seasons are determined according to when the salmon arrive in the various management areas:

Management area:	**Fishing season:**
Northwest	1/9 – 31/10
Southwest	1/8 - 30/9
East	15/8 - 15/10

Under the Fisheries Act, the Government of Greenland can give notice of when fishing may begin and when it must end. The Act also states that the Government of Greenland may issue rules on the conservation of resources, including rules on no-fishing periods.

3.3.5 Technical conservation measures

The fishing and management of vulnerable marine areas is regulated according to the Executive Order on Technical Conservation Measures. The Executive Order on Fishing for Salmon also lays down a number of requirements in relation to fishing gear, minimum dimensions and labelling of equipment:

- Commercial fishing for salmon may only be undertaken with:
    1) Hooks, or
    2) Up to 20 nets with a mesh size of at least 140 mm
    3) Up to 5 nets, tied together

- Non-commercial fishing for salmon may only be undertaken with:
    1) Hooks, or
    2) Fishing rod, or
    3) 1 net of 2,000 knots, with a mesh size of at least 140 mm.

- Salmon nets must be labelled with the owner's full name. The label must be in a water-resistant material.

The fishing is always regulated in accordance with the legislation in force at any given time.

3.3.5.1. Vulnerable Marine Areas

The Government of Greenland aims to ensure that hitherto unaffected marine ecosystems are not adversely impacted. Nets, hooks and fishing rods may be used in the salmon fishing, as these are all implements that are gentle on the seabed and vulnerable marine habitats. The strategy for the protection of vulnerable marine areas in the salmon fishery is that fishing is allowed everywhere within the management areas. If a noticeable change in the extent of the fishery is found during reporting, scientific studies or inspections, the Ministry of Fisheries, Hunting and Agriculture, in consultation with the Greenland Institute of Natural Resources (GINR) and the Fisheries Council, will assess whether the fishery should be subject to restrictions to protect any vulnerable areas.

3.4 Bycatch management

Bycatch in fishing must be handled and registered in accordance with the Government of Greenland Executive Order on Bycatch in Fishery. The Executive Order defines bycatch as catch of any living organisms not covered by the fishing licence. All bycatch must be registered and reported. All catches, including bycatch, must be landed. Likewise, bycatch of salmon in other fisheries must be handled and registered in accordance with the Government of Greenland Executive Order on Bycatch in Fishery.

Catches of pink salmon can be reported in the same manner as Atlantic salmon (see section 4 for the reporting protocol). Captured images and information on catch-time and place can be sent to the Greenlandic Institute of Natural Resources.

If, in reports or inspections, a high bycatch of a given species is found in a particular period of time or geographical area, the Ministry of Fisheries, Hunting and Agriculture must assess, in consultation with the GINR and the Fisheries Council, whether special measures need to be taken to ensure that the bycatch is maintained at an acceptable level, taking into account the biological status of the species. Such precautions may include closures of areas or during periods, or other measures to ensure that no species is burdened beyond its biological potential.

4. Reporting and control

4.1 Reporting

According to the executive order on the fishery of Atlantic salmon, there is an obligation to report catches of salmon. The reporting obligation means that fishers must report their fishing activity every time they have emptied a net or fished with a hook or fishing rod, and there has been a catch. If a fisher has not been out fishing, or has fished but has not had a catch, this is referred to as a zero catch, which must also be reported.

If salmon are caught, the reporting must be done as soon as possible. If a zero catch is to be reported, this must be done no later than 14 days after the fishery is closed. If the report is not made on time, the fisher will not be issued with a licence the following year.

Reporting is done via the reporting form "*Laksejournalen"*, which may be found at sullissivik.gl. Here it can be filled out online, or printed and filled out by hand. In the case of an online reporting, the data is automatically sent to GFLK (Greenlands Fishery License Control Authority) via email. In case of a printed reporting form, it must be sent to the Greenland Fishery Licence Control Authority (GFLK):

GFLK
Postbox 501
3900 Nuuk

Or

GFLK@nanoq.gl
Fax: 34 63 60

4.1.1 Communication

The salmon fishery, both commercial and recreational, is managed very differently to other coastal fisheries. In commercial coastal fishing, reporting is for example received via the first sales sites, and the fishermen do not have to report to GFLK themselves. In recreational fishery, it is normally the case that everyone has the

right to fish for themselves, so there is no requirement for a licence, reporting or the like. This means that communication on the fishery and its conditions is very important to ensure good implementation and reporting. Accordingly, the Ministry of Fisheries, Hunting and Agriculture and GFLK work with a number of tools:

- Press releases: There is communication to the public regarding TACs, the start and close of the fishery, and reporting. The press releases are also shared on the Facebook page of the Government of Greenland.
- Radio spots: Every year a campaign on licensing and reporting requirements is launched on national radio and broadcast daily during the fishing season.
- SMS: Every year, GFLK regularly sends text messages to the fishers who have recorded their mobile numbers on the app, reminding them to report and obtain the status of the fishery.
- Facebook ads: Facebook ads for online reporting at Sullissivik.gl
- An appendix to the licence on reporting and rules in the fishery

These tools, and others, are used to ensure good communication on the management of the salmon fishery, as well as continually improved reporting throughout the period of validity.

4.2 Monitoring, Control and Surveillance (MCS)

Control of the fisheries is carried out by GFLK via physical inspections and administrative supervision.

Control of coastal fisheries is carried out in the following ways:

- Inspection of coastal fisheries
- Booth inspections
- Registration and validation of incoming reports from the salmon fishery

The administrative supervision is carried out at the head office of GFLK in Nuuk. The information submitted to GFLK by way of the reporting obligation is verified. The exploited quota is then calculated by GFLK, on the basis of the data from the incoming reports.

Throughout the fishing season, simple projections of the quota drawdowns are made, to calculate an estimation of when the fishery must be closed. These projections are built on data from previous years (catches at the same time) along with the incoming reporting of the current fishing season.

In a few cases, there may be a quota residue left in each area after closure. In these cases GFLK, in collaboration with APNN, will assess whether the quota residue should give rise to a reopening.

The GFLK has a corps of observers, who can carry out physical inspections of coastal fisheries at sea and during landings. During the salmon fishing season, control campaigns are carried out by the observers. By method of random sampling, they control the equipment, the fishers, landings and open marked sales.

GFLK has the authority to close all fisheries. Upon closure a press release is issued, and a text message is sent to the fishers.

4.3 Police reports

GFLK may choose to file a police report for breach of the fishery regulations.

Any violation of the provisions of the applicable legislation may result in a fine. All of the relevant legislation on fishery in Greenland may be accessed at lovgivning.gl.

Appendix 1. Applicable legislation of particular relevance

- Parliamentary Act no. 18 of 31 October 1996 on fisheries (as subsequently amended)
- Government of Greenland Executive Order no. x of x 2021 on fishing for salmon
- Government of Greenland Executive Order no. 47 of 18 July 2020 on licensing and quotas for fishing
- Government of Greenland Executive Order no. 4 of 30 March 2017 on technical conservation methods in fisheries
- Government of Greenland Executive Order no. 14 of 6 December 2011 on fishing bycatch
- Government of Greenland Executive Order no. 7 of 4 April 2016 on the reporting of first sales of fish and fish products
- Greenland Home Rule Executive order no. 3 of 18 March 2004 on the tasks and powers of fishery observers
- Government of Greenland Executive Order no. 48 of 18 March 2020 on calculation methods for reporting certain catches

All legislation, including on fishery in Greenland, may be accessed at: lovgivning.gl.

Appendix 2 Distribution key

The TAC (Total Allowable Catch) for Atlantic salmon in Greenland is fixed by Naalakkersuisut. A fixed quota is set for the East Greenland management area based on the catches from the past 10 years, which will at the same time ensure that the development from hunters to fishermen in East Greenland can be supported. The quota in East Greenland is initially distributed, and after that the remaining quota is distributed between the management areas of West Greenland.

Table 1: Catch per NAFO 1 area and East Greenland (ICES) 2010 – 2019 (tons)

YEAR	Catch per NAFO area							NAFO	ICES	Greenland
	1A	1B	1C	1D	1E	1F	NK	Area 1	XIV	Total
2010	17.3	4.6	2.4	2.7	6.8	4.3	0	37.9	1.7	40
2011	1.8	3.7	5.3	8.0	4.0	4.6	0	27.4	0.1	28
2012	5.4	0.8	15.0	4.6	4.0	3.0	0	32.6	0.5	33
2013	3.1	2.4	17.9	13.4	6.4	3.8	0	47.0	0.0	47
2014	3.6	2.8	13.8	19.1	15.0	3.4	0	57.8	0.1	58
2015	0.8	8.8	10.0	18.0	4.2	14.1	0	55.9	1.0	57
2016	0.8	1.2	7.3	4.6	4.5	7.3	0	25.7	1.5	27
2017	1.1	1.7	9.3	6.9	3.2	5.6	0	27.8	0.3	28
2018	2.4	5.7	13.7	8.2	4.2	4.8	0	39.0	0.8	40
2019	0.8	3.0	4.4	8.0	4.8	7.3	0	28.3	1.4	30

A further distribution key for the two management areas in West Greenland is implemented, and based on the catches in the areas 2015-2019. See Tables 2 and 3 below.

Table 2: Catches per management area 2015 – 2020 (tons), and the distribution between commercial fishermen and recreational fishermen per management are 2018-2020.

Management area:	Catch 2015	Catch 2016	Catch 2017	Catch 2018	Catch 2019	Catch 2020
Northwest (NAFO 1A + 1B + 1C)	19,6	9,2	12,1	21,9	8,3	11,7
Commercial fishermen				19,9	7,5	10,4
Recreational fishermen				2,0	0,8	1,3
Southwest (NAFO 1D + 1E + 1F)	36,4	16,3	15,6	17,3	20,3	18,1
Commercial fishermen				12,3	14,2	12,1
Recreational fishermen				5,0	6,1	6,0
East Greenland	1,0	1,5	0,3	0,8	1,4	0,9
Commercial fishermen				0,4	0,5	0,3
Recreational fishermen				0,4	0,9	0,6

Total quota uptake	57	27	28	40	30	30,7

Table 3: Percentage distribution per management area 2015 – 2020, and percentage distribution between commercial fishermen and recreational fishermen per management area 2018-2020.

Management area:	**2015 (%)**	**2016 (%)**	**2017 (%)**	**2018 (%)**	**2019 (%)**	**2020 (%)**	**Total average**
Northwest (NAFO 1A + 1B + 1C)	34	34	43	55	28	38	39
Commercial fishermen				91	90	89	90
Recreational fishermen				9	10	11	10
Southwest (NAFO 1D + 1E + 1F)	64	60	56	43	67	59	58
Commercial fishermen				71	70	67	69
Recreational fishermen				29	30	33	31
East Greenland	2	6	1	2	5	3	
Commercial fishermen				50	33	33	
Recreational fishermen				50	67	67	

Table 4: Distribution key for management areas Northwest and Southwest, as percentage

Management area:	**Distribution key (%)**
Northwest	**40**
Southwest	**60**

Appendix 3. Distribution key between commercial fishermen and recreational fishermen

Distribution key 1 is the share of the quota for West Greenland, which is allocated to commercial fishermen and recreational fishermen, respectively, in the management areas Northwest and Southwest. Distribution key 2 is calculated as shown below in table 5.

Tabel 5: Distribution key for commercial fishermen and recreational fishermen in the management areas

Management areas	Distribution key 1		Distribution key 2
Northwest	40%	Commercial fishermen (70%)	40% * 70% = 28 % [1]
		Recreational fishermen (30%)	40% * 30% = 12 % [1]
Southwest	60%	Commercial fishermen (70%)	60% * 70% = 42 % [1]
		Recreational fishermen (30%)	60% * 30% = 18 % [1]
East Greenland	Fixed annual quota of 3 tons	Commercial fishermen (50%)	50% [2]
		Recreational fishermen (50%)	50% [2]

[1] Distribution of quota for West Greenland in percentage
[2] Distribution of quota for East Greenland in percentage