IP(19)05rev

NASCO Implementation Plan for the period 2019-2024

Russian Federation
(Revised version received 5 November 2019)

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The main purpose of this Implementation Plan is to demonstrate what actions are being taken by the Parties / jurisdictions to implement NASCO's Resolutions, Agreements and Guidelines.

In completing this Implementation Plan please refer to the ***Guidelines for the Preparation and Evaluation of NASCO Implementation Plans and for Reporting on Progress****, CNL(18)49.*

Questions in the Implementation Plan are drawn from the following documents:

- *NASCO Guidelines for Management of Salmon Fisheries, CNL(09)43 (referred to as the 'Fisheries Guidelines');*
- *Report of the Working Group on Stock Classification, CNL(16)11;*
- *Minimum Standard for Catch Statistics, CNL(93)51 (referred to as the 'Minimum Standard');*
- *Revised matrix for the application of the six tenets for effective management of an Atlantic salmon fishery, WGCST(16)16*[1]*;*
- *NASCO Plan of Action for the Application of the Precautionary Approach to the Protection and Restoration of Atlantic Salmon Habitat, CNL(01)51;*
- *NASCO Guidelines for Protection, Restoration and Enhancement of Atlantic Salmon Habitat, CNL(10)51 (referred to as the 'Habitat Guidelines');*
- *Williamsburg Resolution, CNL(06)48;*
- *Guidance on Best Management Practices to address impacts of sea lice and escaped farmed salmon on wild salmon stocks (SLG(09)5) (referred to as the 'BMP Guidance');*
- *Guidelines for Incorporating Social and Economic Factors in Decisions under the Precautionary Approach (CNL(04)57); and*
- *Road Map' to enhance information exchange and co-operation on monitoring, research and measures to prevent the spread of G. salaris and eradicate it if introduced', NEA(18)08.*

Party:	**RUSSIAN FEDERATION**
Jurisdiction / Region:	**Russian Federation**

[1] This document can be obtained from the NASCO Secretariat; email hq@nasco.int

1. Introduction

1.1 What are the objectives for the management of wild salmon? *(Max 200 words)*

The Atlantic salmon occurs in the rivers of five regions of the Russian Federation – the Murmansk region, the Arkhangelsk region, Republic of Komi, Republic of Karelia and Nenets Autonomous Okrug (hereinafter NAO).

In the light of the overall goals of Resolutions and Agreements adopted by NASCO under the Precautionary Approach aiming to promote the diversity and abundance of salmon stocks and to maintain all stocks above their conservation limits; to maintain and, where possible, to increase the current productive capacity of Atlantic salmon habitat; to minimise the possible adverse impacts of aquaculture, introductions and transfers and transgenics on the wild stocks of Atlantic salmon, the objectives of the management of wild Atlantic salmon in the Russian Federation are as follows:

- to preserve biodiversity and enhance the number of Atlantic salmon;
- to minimize the risk from management actions taken;
- to rationally utilize natural biological resource to ensure continuity of its reproduction;
- to preserve Atlantic salmon habitat;
- to resolve socio-economic issues by improving economic returns to local communities through salmon fishing.

The objectives for the management of wild salmon are defined by the Federal Law No. 7-FZ, 2002 "On the Protection of Environment"; the Federal Law No. 52-FZ, 1995 "On Animal World", the Federal Law No. 166-FZ, 2004 "On Fisheries and Conservation of Aquatic Biological Resources" (hereinafter "the Fisheries Law"), which prioritise the conservation of aquatic biological resources and their environment to their utilization as an object of the right of property or other rights.

1.2 What reference points (e.g. conservation limits, management targets or other measures of abundance) are used to assess the status of stocks? *(Max 200 words) (Reference: Sections 2.4 and 2.5 of the Fisheries Guidelines)*

Conservation limits have been set for all salmon rivers in Murmansk region. Estimates of abundance of adult salmon in rivers derived by direct counts at barrier fences (3 stocks), fish ladder (1 river) and by mark-recapture method (4 stocks) are used to assess the status of stocks. Juvenile salmon densities in index rivers (19 rivers) are also used to assess the status of stocks.

Conservation limits have been established for big rivers in the Arkhangelsk region exploited by commercial fisheries. Data on smolt counts in index river (1 river) and catch statistics in research fishery (1 river) are used to assess the status of stocks.

A conservation limit is established for the Pechora River. No reference points have been established for small rivers in NAO. No conservation limits have been established for the tributaries of Pechora in the Republic of Komi. The abundance of Pechora salmon is estimated on the basis of data from commercial fishery.

Adult counts at a barrier fence of the River Keret and parr surveys are used to assess the status of salmon stocks in the Republic of Karelia. No reference points have been established. All salmon fisheries except for research and enhancement purposes are banned in salmon rivers in the Republic of Karelia.

1.3 What is the current status of stocks under the new classification system outlined in CNL(16)11?

Stock Classification Score	Salmon Classification Category	No. rivers
0	Not at Risk	6
1	Low Risk	10
2	Moderate Risk	18
3	High Risk	15

N/A	Artificially Sustained	2
N/A	Lost	5
N/A	Unknown	60

Additional comments:

1.4 How is stock diversity (e.g. genetics, age composition, run-timing, etc.) taken into account in the management of salmon stocks? *(Max 200 words)*

The primary differentiator that sets salmon rivers of the Russian Federation and all other salmon rivers east of Varanger Fjord is the concurrence of two distinct spawning habits in close succession, namely the Summer run and the Fall (Autumn) run. The summer run salmon ascend rivers in spring-summer time and spawn in the autumn of the same year. Autumn run fish behave differently. They start entering rivers in early August and continue until late autumn, however migration in the White Sea rivers occurs even under the ice until late December. Fall salmon do not spawn in the year they arrive. Those fish that enter rivers in the autumn overwinter under the ice, spend the entirety of the following summer in the river systems, then spawn the next autumn, a full year after their initial ascent.

Salmon rivers host vastly different proportions of Summer to Fall run fish dependent on the location of the watershed. Those rivers of the Murmansk region that enter the Barents Sea exhibit a 5-10% population of autumn runners. In contrast a group of summer runners is less numerous in the White Sea rivers and in rivers draining into the Barents Sea east of the White Sea Throat with Fall run fish making up the vast majority.

Fisheries authorities determine the start and the end of official fishing season, passage days and passage hours for specific areas taking into account the run-timing and status of different biological groups of salmon.

1.5 To provide a baseline for future comparison, what is the current and potential quantity of salmon habitat? *(Max 200 words)*
(Reference: Section 3.1 of the Habitat Guidelines)

There is natural and unchanged salmon habitat in the majority of salmon rivers of the Murmansk region. A number of rivers have lost their salmon populations and salmon stocks reduced in others due to hydropower development (Niva, Teriberka, Voronya, Bolshaya Lavna and Tuloma). In the Teriberka River and in the Voronya River natural salmon reproduction occurs only in the lowest tributaries below the dams. In the Tuloma river system salmon inhabit the tributaries of the Lower Tuloma reservoir. The total area of salmon spawning and nursery grounds in the Barents Sea rivers of the Murmansk region is 20.1 sq km, in the White Sea rivers is around 52.2 sq km.

Data on current and potential quantity of salmon habitat in Murmansk region to provide a baseline for future comparison are summarized in two inventories [1, 2]. Geographical, hydrological and hydrochemical conditions were identified and a river infrastructure was described. The inventories provide information on salmon diet and parasites as well as on historical and current status of salmon stocks, their distribution, spawning and nursery grounds, adult salmon and smolt carrying capacity of rivers and biological features of salmon (run timing, age, length and weight composition, etc.). The focus was made on salmon habitat description and discussion of different types of impacts to salmon (physical, chemical, biological).

In the Republic of Karelia salmon habitat of most rivers were destroyed due to logging and related dam constructions. Two rivers (Kem and Vyg) have lost salmon spawning and nursery grounds due to hydropower development but small salmon stocks are artificially sustained below the dams. No data on current and potential quantity of salmon habitat is available for Karelia.

The main threats for salmon habitat in the Arkhangelsk region are pollution caused by industrial and domestic waste water discharges, deforestation, mining operations and consequences of logging conducted in most rivers of the region. Roads development, bridges building, oil and gas pipelining also lead to adverse changes in salmon habitat. It’s been noted recently that areas of salmon spawning

and nursery grounds are decreasing in all big rivers within the Arkhangelsk Region due to an intensive deforestation. The total area of salmon spawning and nursery grounds in the Onega River accounted for 7.7 sq km, in the Severnaya Dvina River system is 17.9 sq km, in the Mezen River system is 9.0 sq km.

The majority salmon spawning tributaries of the Pechora river in the Republic of Komi are in natural parks and reserves. No data on current and potential quantity of salmon spawning and nursery grounds is available for the Republic of Komi.

References:

1. Inventory of salmon rivers of Murmansk region. Barents Sea basin. 2011. Ed. by B.F. Prischepa. PINRO Press, Murmansk. 344 pp. (In Russian).
2. Inventory of salmon rivers of Murmansk region. White Sea basin. 2018. Ed. by A.V. Zubchenko. PINRO Press, Murmansk. 308 pp. (In Russian).

1.6 What is the current extent of freshwater and marine salmonid aquaculture?	
Number of marine farms	The number of marine farms in coastal waters of the Barents Sea in the Murmansk region has increased over last 5 years. Marine farms are mainly in operation west of the Kola Bay: in the Varanger Fjord, in the Titovka Bay and in the Ura Bay. New sites for salmon aquaculture have recently been designated east of the Kola Bay and in the Kola Bay itself (Figure 2 of the Annex). Norwegian technologies to produce farmed Atlantic salmon and rainbow trout are commonly in use. There are only rainbow trout farms in the Kandalaksha Gulf of the White Sea (Figure 2 of the Annex). The number of established aquaculture sites in the Barents Sea is 43, and in the White Sea – 13. The inventory of the aquaculture sites is available at http://rvu.tsuren.ru/watersites
Marine production (tonnes)	The total production of Atlantic salmon and rainbow trout in the Barents Sea in the Murmansk region was 4 000 t in 2011 and 8 000 t in 2012. In 2017 the total production of farmed salmonids in the Barents Sea was 13 000 t.
Number of freshwater facilities	A number of freshwater facilities for rainbow trout farming are located in the Lower Tuloma reservoir in the Murmansk region. The reservoir is a transit watercourse for wild Atlantic salmon spawning in the rivers of the reservoir. The number of established freshwater aquaculture sites in the Lower Tuloma reservoir is 9. The inventory of the aquaculture sites is available at http://rvu.tsuren.ru/watersites All other freshwater facilities in the Murmansk and Archangelsk regions and in the Republic of Karelia are located in reservoirs and lakes that have no connections to Atlantic salmon rivers.
Freshwater production (tonnes)	Less than 100 tonnes in Murmansk region. The production of rainbow trout in Karelia was 16 600 t in 2012 and 16 200 t in 2017.
Append one or more maps showing the location of aquaculture facilities and aquaculture free zones in rivers and the sea.	

1.7 Please describe the process used to consult NGOs and other stakeholders and industries in the development of this Implementation Plan. *(Max 200 words)*

There is a number of non-governmental organizations in the Russian Federation aiming at salmon

conservation. The main objectives of the non-commercial fund “Murmansk Salmon” is to organize and coordinate interagency cooperation in anti-poaching programmes in rivers and in coastal areas of the Murmansk region. The “Murmansk Salmon” acts in cooperation with the Barents branch of WWF-Russia. The non-commercial Partnership “Russian Salmon” is a conservation organization, which supports projects aimed at conservation of salmon populations throughout Russia. The Partnership specifically promotes the protection of aquatic ecosystems by encouraging eco-friendly tourism and recreational sport fishing that employs a catch & release ethic. The founders of the Partnership are owners of commercial companies for recreational Atlantic salmon fisheries in the Kola Peninsula.

The IP was prepared in consultation with the following NGOs: “Murmansk Salmon”, “Russian Salmon”, WWF-Russia.

PJSC "Russian Aquaculture" is the leader in the Russian market of commercial aquaculture, which focuses on farming of Atlantic salmon and rainbow trout. "Russian Aquaculture" deals with two segments: commercial rainbow trout farming in the Republic of Karelia and commercial Atlantic salmon farming in the Murmansk region. "Russian Aquaculture"’s portfolio includes 29 sites for aquaculture of salmon and trout in the lakes in Karelia and in the Barents and White seas.

A representative of "Russian Aquaculture" took part in consultations on sea-lice monitoring program.

2. Management of Salmon Fisheries:

In this section please review the management approach to each of the fisheries in your jurisdiction (i.e. commercial, recreational and other fisheries) in line with the relevant NASCO Resolutions, Agreements and Guidelines. For Parties / jurisdictions that prosecute mixed-stock fisheries, there should at least one action related to their management.

2.1 What are the objectives for the management of the fisheries for wild salmon? *(Max. 200 words)*

The approach to the management of salmon fisheries in Russia is based on applying the Precautionary Approach, NASCO’s agreements and enforcing the adopted regulations. The objectives for the management of the fisheries for wild salmon in the Russian Federation are as follows:

- to preserve biodiversity and enhance the number of Atlantic salmon;
- to minimize the risk from management actions taken;
- to rationally utilize natural biological resource to ensure continuity of its reproduction;
- to preserve Atlantic salmon habitat;
- to resolve socio-economic issues by improving economic returns to local communities through salmon fishing.

2.2 What is the decision-making process for the management of salmon fisheries, including predetermined decisions taken under different stock conditions (e.g. the stock levels at which regulations are triggered)? *(Max. 200 words)*

(This can be answered by providing a flow diagram if this is available.)
(Reference: Sections 2.1 and 2.7 of the Fisheries Guidelines)

The Fisheries Law is the main legislative document, which defines the basic terms and principles for management of aquatic biological resources in the Russian Federation. It defines ownership and access to resources, regulates quotas and catch-permits and the use of fishing sites, restrictions on fishing to ensure conservation of resources.

The Fisheries Law regulates access to fishing through a contract on assignment of shares of catch quotas, a decision on granting of aquatic biological resources for use, a contract for the provision of a fishing site. The use of fishing sites is subject to contracts with the users. These include duration of use, payment procedures and environmental restrictions. Fishing permits set out the obligations concerning quota share, fishing gear, methods and timeframes. The fishing rules is the basis for the implementation of fisheries and the conservation of aquatic biological resources.

Atlantic salmon fisheries are regulated under Article 29.1 of the Fisheries Law which defines requirements to establishing a Regional Commission on Regulation of Harvesting the Anadromous Fish (hereinafter "the Anadromous Commission"). The procedure for the activity of the Anadromous Commission was set by the Order of the Ministry of Agriculture of Russia No. 170, 2013. The Anadromous Commission main functions are as follows:

- Setting catch limits for specific water bodies and their parts for commercial in-river and coastal fisheries, artisanal and sport fisheries, traditional fisheries;
- Allocating catch limits between legal entities and entrepreneurs who have signed contracts for the use of fishing sites for commercial in-river and coastal fisheries, artisanal and sport fisheries, traditional fisheries;
- Changes catch limits for specific water bodies and their parts, for legal entities and entrepreneurs, for specific fishing sites and for different anadromous fish species;
- Determines fishing areas (number of fishing sites) and specific areas for fishing gears;
- Determines the start and the end of official fishing season for specific water bodies and their parts, and passage days or passage hours for anadromous fish spawning migration.

The Anadromous Commission is established in the constituent entities of the Russian Federation. The Anadromous Commission shall meet annually in advance of the fishing season and during the fishing season if needed. All decisions of the Anadromous Commission are taken on the basis of scientific recommendations provided by research institutions subordinated to the Federal Agency for Fisheries.

2.3 (a) Are any fisheries permitted to operate on salmon stocks that are below their reference point (e.g. Conservation Limits)? If so, (b) how many such fisheries are there and (c) what approach is taken to managing them that still promotes stock rebuilding? *(Max 200 words)*
(Reference: Section 2.7 of the Fisheries Guidelines)

(a) Fisheries might be permitted to operate on salmon stocks that are below their Conservation Limits. The socio-economic factors are taken into account. The decisions are taken by the Anadromous Commission and by the Federal Agency for Fisheries.

(b) There are 2 fisheries in Murmansk region: the Atlantic salmon adult returns and spawning stocks to the Umba river have been below Conservation Limit over the last three decades. Recreational fishery and fishery for enhancement purposes are allowed in the river. All other fisheries (except for scientific purposes) are prohibited.
There is 1 fishery in the Republic of Karelia: the salmon population of the Keret river suffered from *Gyrodactylus salaris*. Parr densities and adult returns have been extremely low in the river since the introduction of parasite in the beginning of 1990th. Only fishery for enhancement purposes is in operation in the Keret river. All other fisheries (except for scientific purposes) are prohibited.

(c) Catch limits for recreational fisheries in the Umba river are set at a low level and these fisheries are predominantly based on catch-and-release principle. There are stock-rebuilding programmes in force both in the Umba river and in the Keret river.

2.4 (a) Are there any mixed-stock salmon fisheries? If so (b) how are these defined, (c) what was the mean catch in these fisheries in the last five years and (d) how are they managed to ensure that all the contributing stocks are meeting their conservation objectives? *(Max. 300 words in total)*
(Reference: Section 2.8 of the Fisheries Guidelines)

(a) Nowadays Atlantic salmon mixed-stock fisheries at sea in the Russian Federation are conducted in Murmansk and Arkhangelsk regions in the coastal areas of the White Sea only. Salmon fisheries in the Barents Sea have not been in operation since 1950th and was banned by the Fishing Rules for the Northern Fisheries basin.

Commercial salmon in-river fisheries in the Arkhangelsk region and in NAO conducted in lower stretches of the Severnaya Dvina River (144 spawning tributaries) and the Pechora River (82 spawning tributaries) are supposed to be in-river mixed-stock fisheries.

(b) The fisheries were defined as mixed-stock fisheries on the basis of tagging experiments conducted in the past and on the basis of genetic stock identification conducted in the Kolarctic salmon project 2011-2013.

(c) The coastal catches in the Murmansk region in the White Sea decreased from over 100 t in1980s to around 50 tonnes in 1990s and to around 30 t since 2008. In 2017 the total declared coastal catch of Atlantic salmon was 2 t, the lowest ever recorded.

In 2017 in the Arkhangelsk region commercial salmon catch at coastal fishing sites in the White Sea was 10 t. Commercial salmon catch in the Severnaya Dvina River was 4 t.
Commercial salmon catch in the Pechora river in 2017 was 13 t, including 10 t in NAO and 3 t in the Komi Republic.

(d) The findings of the Kolarctic salmon project 2011-2013 were used for developing recommendations for the Murmansk Regional Commission on Regulation of Harvesting the Anadromous Fish. The catch limits for fishing sites were made on the basis of data on salmon stocks contributed to the fisheries. "No fishing" periods for coastal fisheries in the White sea were established.

Salmon fisheries in the White Sea Throat, in the Kandalaksha Gulf and along the Karelian coast were banned to protect Atlantic salmon migrating to native rivers for spawning. Any fisheries in river estuaries, 0.5 km from outlet on each side of the river, were also banned. Other restrictions were implemented for coastal fisheries.

No approach was used in the Arkhangelsk region and in NAO for the management of in-river mixed-stock salmon fisheries in the Severnaya Dvina River and in the Pechora River. However, due to lack of data on contributing stocks the catch limits for both commercial and recreational fisheries have been set at a low level.

2.5 How are socio-economic factors taken into account in making decisions on management of salmon fisheries? *(Max. 200 words)*
(Reference: Section 2.9 of the Fisheries Guidelines)

In overall catch limits for commercial fisheries have been gradually reduced with the aim to enhance recreational fisheries. However, socio-economic factors were taken into account in making decisions on the management of remaining coastal mixed-stock fisheries in the White sea. The quotas for these fisheries are set annually by the Regional Commissions on Regulation of Harvesting the Anadromous Fish to ensure economic returns to local communities of Murmansk and Arkhangelsk regions through salmon fishing. Nowadays coastal salmon fishery in the White Sea is viewed more as a social measure, a traditional way of fishing by local people from Pomor villages along the White Sea coast.

Catch limits were also set recently for coastal salmon fisheries to support traditional way of living of indigenous small nations of the North in the Murmansk region.

2.6 What is the current level of unreported catch and what measures are being taken to reduce this? *(Max. 200 words)*
(Reference: Section 2.2 of the Fisheries Guidelines and the Minimum Standard)

The current level of unreported salmon catches varies between fisheries and regions of the Russian Federation. The estimates for some in-river fisheries and available information in coastal fisheries show high level of unreported catches in some areas. No overall estimate is available. The Federal Agency for Fisheries is the control and enforcement authority in the inland waters whereas the Border Guard Department of the Russian Federal Security Service is the control and enforcement authority in the coastal waters. The authorities have recently increased their inspection activity in the salmon migration and fishing areas both in fresh and salt water. Protection patrols are carried out using different methods on lakes and rivers by fish inspectors of the Territorial Directorates of the Federal Agency for Fisheries. Protection patrols in coastal areas of Barents and White seas are carried out using different methods by fish inspectors of the Border Guard Department of the Russian Federal Security Service. Police takes part in the inspections as well. Users of the fishing sites are responsible to preserve the resources and therefore recreational and commercial fishing sites are protected by fish guards hired by the fishing sites managers.

2.7	**Has an assessment under the Six Tenets for Effective Management of an Atlantic Salmon Fishery been conducted? If so, (a) has the assessment been made available to the Secretariat and (b) what actions are planned to improve the monitoring and control of the fishery? (c) If the six tenets have not been applied, what is the timescale for doing so?** *(Max. 200 words)* *(Reference: Six Tenets for Effective Management of an Atlantic Salmon Fishery, WGCST(16)16)*
(a)	No assessment under the Six Tenets for Effective Management of an Atlantic Salmon Fishery has been conducted yet.
(b)	No actions have been planned to improve the monitoring and control of the fishery.
(c)	The assessment under the Six Tenets for Effective Management of an Atlantic Salmon Fishery will be conducted for commercial and recreational fisheries and made available to the Secretariat before the NASCO Annual meeting 2020.

2.8	**Identify the threats to wild salmon and challenges for management associated with their exploitation in fisheries, including bycatch of salmon in fisheries targeting other species.**
Threat / challenge F1	Unreported catches / High level of unreported catches in some areas. Enforcement to reduce unreported catches in the problem areas needs to be improved. Data is required to estimate the level of unreported catches.
Threat / challenge F2	Stocks below conservation limits/ The lack of data to set CL's for all salmon stocks. Development of conservation limits for all regions should be continued.
Threat / challenge F3	Interceptory coastal salmon fishery/ Data on salmon stock status in the Murmansk region is required for assessment of the effectiveness of new management measures introduced for coastal salmon fisheries. The monitoring program on salmon rivers in the Murmansk region should be continued.

Copy and paste lines to add further challenges which should be labelled F5, F6, etc.

2.9	**What SMART actions are planned during the period covered by this Implementation Plan (2019 – 2024) to address each of the threats and challenges identified in section 2.8 to implement NASCO's Resolutions, Agreements and Guidelines and demonstrate progress towards achievement of its goals and objectives for the management of salmon fisheries?**	
Action F1:	Description of action:	Determine problem areas. Estimate the level of unreported catches. Take further measures to reduce unreported catches.
	Planned timescale (include milestones where appropriate):	2019 – 2024
	Expected outcome:	Reduced level of unreported catches in problem areas.
	Approach for monitoring effectiveness & enforcement:	Estimate unreported catches.
	Funding secured for both action and monitoring programme?	Expected
Action F2:	Description of action:	Continue developing the conservation limits for salmon stocks.
	Planned timescale (include milestones where appropriate):	2019 – 2024
	Expected outcome:	Data on the status of salmon stocks. Conservation limits for all

		salmon stocks.
	Approach for monitoring effectiveness & enforcement:	Monitoring of status of salmon stocks relative to the reference points.
	Funding secured for both action and monitoring programme?	Expected
Action F3:	Description of action:	Continue monitoring salmon stocks in the Murmansk region. Assess the effectiveness of new management measures introduced for interceptory coastal salmon fisheries in the Barents Sea.
	Planned timescale (include milestones where appropriate):	2019 – 2024
	Expected outcome:	Data on status of salmon stocks in the Murmansk region and assessment of the effectiveness of management measures introduced for coastal interceptory salmon fisheries in the Barents Sea.
	Approach for monitoring effectiveness & enforcement:	The Working Group on Atlantic Salmon in Finnmark County and the Murmansk Region under MoU between the Federal agency for Fisheries (Russian Federation) and the Ministry of Climate and Environment (Norway). Data on parr densities, run timing, total number and age composition of adult returns to the Barents Sea rivers will be analysed.
	Funding secured for both action and monitoring programme?	Expected
Action F4:	Description of action:	
	Planned timescale (include milestones where appropriate):	
	Expected outcome:	
	Approach for monitoring effectiveness & enforcement:	
	Funding secured for both action and monitoring programme?	Choose an item.

Copy and paste lines to add further actions which should be labelled F5, F6, etc.

3. Protection and Restoration of Salmon Habitat:

In this section please review the management approach to the protection and restoration of habitat in your jurisdiction in line with the relevant NASCO Resolutions, Agreements and Guidelines.

3.1 How are risks to productive capacity identified and options for restoring degraded or lost salmon habitat prioritised, taking into account the principle of 'no net loss' and the need for inventories to provide baseline data? *(Max. 200 words)*

(*Reference: Section 3 of the Habitat Guidelines)*

All watercourses including those with anadromous fish are in the federal ownership. Salmon habitat protection is regulated by Federal laws and by-laws. Among them are Federal laws: the Fisheries Low, the Federal Law No. 7-FZ, 2002 "On the Protection of Environment"; the Federal Law No. 52-FZ, 1995 "On Animal World"; the Federal Law No. 74-FZ, 2006 "Water Code"; the Federal Law No. 174-FZ, 1995 "On Environmental Impact Assessment", different environmental by-laws developed by the Federal environmental and fisheries authorities and by the constituent entities of the Russian Federation.

The Federal Law No. 74-FZ, 2006 "Water Code" is the main piece of legislation that regulates relations in the use of waters. It defines procedures of allocating the water bodies for use and specifies main requirements to prevent their deterioration when conducting economic activities. The Water Code covers all water bodies and adjacent land within the water protection zone.

Legislation requirements are based on the need to preserve natural conditions in the habitat of aquatic biological resources establishing the allowed impact levels. In case when impact exceeds the established norms, the burden of responsibility is with the water user, who is to propose conservation measures to reduce the adverse impact and eliminate its effects. In case of impact exceeding the allowable level, specific measures of compensation are applied, such as charge for environment pollution. In case of non-compliance with existing regulations, the water user is penalized and must compensate the damage to environment, voluntarily or forcibly. These requirements are defined by the Federal Law No. 7-FZ, 2002 "On the Protection of Environment".

With the aim of protecting the spawning habitat and providing access of adult salmon to spawning grounds, the Federal Law No. 52-FZ, 1995 "On Animal World" introduces restrictions to avoid blocking of spawning migrations.

Any economic activity planned on salmon rivers or close to them, must be approved by relevant authorities and conducted in such way as not to damage salmon habitat. Assessment of project proposals should be done for determining the conditions under which the economic activity can be conducted, taking into account fisheries value of the water body and the need to protect salmon habitat. Then on the basis of the project assessment the Territorial Directorate of the Federal Agency for Fisheries approves the economic activity and specifies requirements to be fulfilled to minimize any adverse impact on aquatic biological resources and their habitat. The Territorial Directorate shall further control the activity and apply disciplinary actions in case of violations.

If the proposed activity will anyway cause the habitat degradation (development works on salmon migration routes, reduction in food availability due to construction of bridges across salmon rivers, accidental discharges of pollutants), the damage shall be assessed and compensation payments are directed for enhancement activities and restoration of habitat. Compensation is paid by the organization, whose activities led to unavoidable damage to the Atlantic salmon habitat.

3.2 How are socio-economic factors taken into account in making decisions on salmon habitat management? *(Max. 200 words)*

(Reference: Section 3.9 of the Habitat Guidelines)

Salmon habitat management is conducted on the basis of assessment of proposals for economic activities that could have impacts on habitat. Approval of economic activities takes place only provided that all requirements of environmental legislation are met, potential damages to aquatic

biota are compensated.

The socio-economic factors are taken into account by the Federal Low No. 174-FZ, 1995 "On Environmental Impact Assessment". This Federal Law regulates relations in the field of environmental impact assessment, aimed at implementing the constitutional right of citizens of the Russian Federation to a favorable environment by preventing the negative impacts of economic and other activities on the environment.

3.3 What management measures are planned to protect wild Atlantic salmon and its habitats from (a) climate change and (b) invasive aquatic species? *(Max. 200 words each)*
(Reference: Section 3.2 of the Habitat Guidelines)

(a) No climate change effects on wild Atlantic salmon and its habitat have been detected in the Northeast of the species range. No management measures to protect wild Atlantic salmon and its habitats from climate change have recently been planned.

(b) Pink salmon naturalized in the Russia's North-West is not now treated as a non-indigenous anadromous salmonid. No new invasive aquatic species have recently been identified to the salmon rivers. Therefore, no management measures have recently been planned. Regulations on acclimatization and introduction are provided in section 4.6.

3.4 Identify the main threats to wild salmon and challenges for management in relation to estuarine and freshwater habitat.

Threat / challenge H1	Economic activity planned on salmon rivers / The lack of data in Archangelsk region and in the Republic of Karelia to provide baseline data on salmon habitat and productive capacity for management in relation to estuarine and freshwater habitat. Inventories of salmon rivers need to be developed for all regions.
Threat / challenge H2	Economic activity conducted on salmon rivers / Lost and degraded salmon habitat due to economic activity in the past. Detailed habitat protection and restoration plans for specific rivers should be developed.

Copy and paste lines to add further threats/challenges which should be labelled H5, H6, etc.

3.5 What SMART actions are planned during the period covered by this Implementation Plan (2019 – 2024) to address each of the threats and challenges identified in section 3.4 to implement NASCO's Resolutions, Agreements and Guidelines and demonstrate progress towards achievement of its goals and objectives for the Protection, Restoration and Enhancement of Atlantic Salmon Habitat?

Action H1:	Description of action:	Continue developing the inventories of salmon rivers. Estimate salmon habitat and productive capacity of salmon rivers. Fieldwork and analysis of available data on current quantity of salmon habitat to provide a baseline for future comparison will be conducted in Archangelsk region and in the Republic of Karelia.
	Planned timescale (include milestones where appropriate):	2019 – 2024
	Expected outcome:	Inventories of salmon rivers to provide baseline data on salmon habitat and productive capacity for management in relation to estuarine and freshwater habitat.
	Approach for monitoring effectiveness & enforcement:	The number of rivers with available data on salmon habitat, historical and current status of salmon stocks, their distribution, spawning and nursery grounds, salmon carrying capacity of rivers and biological features of salmon (run timing, age, length and weight composition, etc.).
	Funding secured for both action and	Expected

	monitoring programme?	
Action H2:	Description of action:	Development of habitat protection and restoration plans for specific rivers.
	Planned timescale (include milestones where appropriate):	2019 – 2024
	Expected outcome:	Detailed habitat protection and restoration plans for specific rivers.
	Approach for monitoring effectiveness & enforcement:	Evaluate habitat protection and restoration plans for specific rivers. Evaluate effectiveness of their implementation. Estimate a change in quantity and quality of salmon spawning and nursery grounds. Estimate a change in salmon carrying capacity.
	Funding secured for both action and monitoring programme?	No
Action H3:	Description of action:	
	Planned timescale (include milestones where appropriate):	
	Expected outcome:	
	Approach for monitoring effectiveness & enforcement:	
	Funding secured for both action and monitoring programme?	Choose an item.
Action H4:	Description of action:	
	Planned timescale (include milestones where appropriate):	
	Expected outcome:	
	Approach for monitoring effectiveness & enforcement:	
	Funding secured for both action and monitoring programme?	Choose an item.

Copy and paste lines to add further actions which should be labelled H5, H6, etc

4. Management of Aquaculture, Introductions and Transfers, and Transgenics:

Council has requested that for Parties / jurisdictions with salmon farms, there should be a greater focus on actions to minimise impacts of salmon farming on wild salmonid stocks. Each Party / jurisdiction with salmon farming should therefore include at least one action relating to sea lice management and at least one action relating to containment, providing quantitative data in Annual Progress Reports to demonstrate progress towards the international goals agreed by NASCO and the International Salmon Farmers Association (ISFA):

- *100% of farms to have effective sea lice management such that there is no increase in sea lice loads or lice-induced mortality of wild salmonids attributable to the farms;*
- *100% farmed fish to be retained in all production facilities.*

In this section please provide information on all types of aquaculture, introductions and transfers, and transgenics (including freshwater hatcheries, smolt-rearing etc.

4.1 (a) Is the current policy concerning the protection of wild salmonids consistent with the international goals on sea lice and containment agreed by NASCO and ISFA? (b) If the current policy is not consistent with these international goals, when will current policy be adapted to ensure consistency with the international goals and what management measures are planned to ensure achievement of these goals and in what timescale? *(Max. 200 words for each)*
(Reference: BMP Guidance)

(a) Aquaculture (fish farming) is regulated by the Federal Law No. 148-FZ, 2013 "On Aquaculture" (hereinafter "the Aquaculture Law") and by the Fisheries Law. One of the principles of the Aquaculture Law is the implementation of aquaculture (fish farming) in ways that prevent damage to the environment and aquatic biological resources (Article 3). However, no specific legislation regarding management of sea lice and containment in aquaculture has been adopted. Yet, in accordance with the current policy concerning veterinary control, the regional veterinary authorities inspect salmon farms and fish rearing facilities for diseases and parasites under the veterinary regulations for transfers of live fish, eggs, crayfish and other aquatic organisms which came in force by the order of the Ministry of Agriculture of USSR in 1971.

(b) The action to bring the current policy in line with the international goals is noted in A1.

4.2 (a) What quantifiable progress can be demonstrated towards the achievement of the international goals for 100% of farms to have effective sea lice management such that there is no increase in sea lice loads, or lice-induced mortality of wild salmonids attributable to sea lice? (b) How is this progress monitored, including monitoring of wild fish? (c) If progress cannot be demonstrated, what additional measures are proposed and in what timescale? *(Max. 200 words each)*
(Reference: BMP Guidance)
The measures by which these goals may be achieved, and against which the Review Group will be measuring the effectiveness of the Implementation Plan, are set out in the BMP Guidance SLG(09)5 (Best management practice; reporting and tracking; factors facilitating implementation) as agreed by NASCO and ISFA.

(a) No quantifiable progress can be demonstrated towards the achievement of the international goals for 100% of farms to have effective sea lice management.

(b) Monitoring of wild salmon adult returns to rivers and monitoring of parr densities show no downward trends attributable to lice-induced mortality. Sea-lice monitoring at marine farms in the Barents Sea is carried out by aquaculture commercial companies on a regular basis. No information on monitoring is publicly available.

(c) The measures are proposed in A1.

4.3 (a) What quantifiable progress can be demonstrated towards the achievement of

the international goals for achieving 100% containment in all (i) freshwater and (ii) marine aquaculture production facilities? (b) How is this progress monitored, including monitoring of wild fish (genetic introgression) and proportion of escaped farmed salmon in the spawning populations? (c) If progress cannot be demonstrated, what additional measures (e.g. use of sterile salmon in fish farming) are proposed and in what timescale? *(Max. 200 words each)*
(Reference: BMP Guidance)
The measures by which these goals may be achieved, and against which the Review Group will be measuring the effectiveness of the Implementation Plan, are set out in the BMP Guidance SLG(09)5 (Best management practice; reporting and tracking; factors facilitating implementation) as agreed by NASCO and ISFA.

(a) (i) No quantifiable progress can be demonstrated towards the achievement of the international goals for achieving 100% containment in all freshwater aquaculture production facilities.

(a) (ii) No quantifiable progress can be demonstrated towards the achievement of the international goals for achieving 100% containment in all marine aquaculture production facilities.

(b) Monitoring of wild fish and proportion of escaped farmed salmon in the spawning populations is conducted at fish counting facilities (fish ladder, counting fences), and in research and in recreational fisheries. No genetic introgression was supposed to take place so far, as there were only sporadic reports on single catches of farmed salmon in the Barents Sea rivers of the Murmansk region. No reports on salmon escapees in catches from other regions.

(c) No additional measures (e.g. use of sterile salmon in fish farming) have been proposed.

4.4 What adaptive management and / or scientific research is underway that could facilitate better achievement of NASCO's international goals for sea lice and containment such that the environmental impact on wild salmonids can be minimised? *(Max 200 words)*
(Reference: BMP Guidance and Article 11 of the Williamsburg Resolution)

No adaptive management and / or scientific research is underway that could facilitate better achievement of NASCO's international goals for sea lice and containment such that the environmental impact on wild salmonids can be minimised.

4.5 What is the approach for determining the location of aquaculture facilities in (a) freshwater and (b) marine environments to minimise the risks to wild salmonid stocks? *(Max. 200 words for each)*

(a) In accordance with the Aquaculture Low an aquaculture site should be designated for aquaculture (fish farming) activities. The procedure for determining the boundaries of aquaculture sites is set by the Order of the Government of the Russian Federation No. 1183, 2014. In order to determine the boundaries of aquaculture sites, the Federal Agency for Fisheries (in relation to the continental shelf and EEZ of the Russian Federation), the Territorial Directorate of the Federal Agency for Fisheries (in relation to the internal sea waters), the executive authority of the constituent entity of the Russian Federation (in relation to inland waters) creates a commission for determining the boundaries of aquaculture sites. When considering proposals on the boundaries of aquaculture sites the commission should take into account conclusions of scientific organizations engaged in the field of fisheries and conservation of aquatic biological resources, as well as in the field of aquaculture (fish farming).

The Ministry for Fisheries and Agriculture of Murmansk region has developed guidelines for determining the location of aquaculture facilities. It is prohibited to establish aquaculture sites in close proximity to outlets of salmon rivers and prohibited to designate boundaries in the area of 500 m from an outlet of salmon river. The boundaries of aquaculture sites should not completely overlap the water area of the bay and river channel, which are migration routes and (or) area of Atlantic salmon spawning.

(b) The information provided in section (a).

4.6 What progress has been made to implement NASCO's guidance on introductions, transfers and stocking? *(Max. 200 words)*

(Reference: Articles 5 and 6 and Annex 4 of the Williamsburg Resolution)

The artificial reproduction of aquatic biological resources including stocking is carried out in accordance with "Rules for organizing the artificial reproduction of aquatic biological resources" approved by the Government of the Russian Federation, Order No. 99, 2014. Stocking is conducted in accordance with plans for the artificial reproduction of aquatic biological resources. The procedure for the preparation and approval of the Plans set by the order of the Ministry for Agriculture No. 395, 2014. The Plans include the scope and composition of work on the artificial reproduction of aquatic biological resources developed on the basis of recommendations of research organizations subordinated to the Federal Agency for Fisheries. In accordance with Article 6 of the Williamsburg Resolution the recommendations state that the introductions into Atlantic salmon rivers of reproductively viable non-indigenous anadromous salmonids or their gametes should not be permitted. No such introductions and transfers have been implemented since 1998. Pink salmon naturalized in the Russia's North-West is not now treated as a non-indigenous anadromous salmonid. Therefore stocking of pink salmon, native to Barents and White sea salmon rivers, is possible and not violate the Williamsburg Resolution.

Regulations on acclimatization and introduction are set out in "Procedure for implementation of measures to acclimatize aquatic biological resources" approved by the Ministry of Agriculture of the Russian Federation No.4, 2007. The Procedure establishes the rules applied to acclimatization and introduction of aquatic biological resources into fishery valuable waters by legal entities. Prior to acclimatization, a biological substantiation should be developed and approved. No proposals for acclimatization and introduction of aquatic biological resources into Atlantic salmon rivers have been made.

4.7 Is there (a) a requirement to evaluate thoroughly risks and benefits before undertaking any stocking programme and (b) a presumption against stocking for purely socio-political / economic reasons? *(Max. 200 words each)*
(Reference: Guidelines for incorporating social and economic factors in decisions under the Precautionary Approach and Annex 4 of the Williamsburg Resolution)

a) The Federal Agency for Fisheries approved the Plans for the artificial reproduction of aquatic biological resources including stocking annually for three years period on the basis of scientific recommendations provided by research institutions subordinated to the Federal Agency for Fisheries. Risks and benefits before undertaking any stocking programme should be evaluated. Only stocking into rivers of origin is recommended. No new stocking programmes is recommended.

b) There is no legislation for a presumption against stocking for purely socio-political / economic reasons.

4.8 What is the policy / strategy on use of transgenic salmon? *(Max. 200 words)*
(Reference: Article 7 and Annex 5 of the Williamsburg Resolution)

Use of transgenic organisms is regulated by the Federal Law No. 86-FZ, 1996 "On State Regulation in the Field of Genetic Engineering Activity". Federal Law No. 358-FZ, 2016 "On Amendments to Certain Legislative Acts of the Russian Federation in Regarding the Improvement of State Regulation in the Field of Genetic Engineering Activities" added the Article 50 of the Federal Law No. 7-FZ, 2002 "On Environmental Protection" with the following paragraph:
"The rearing and cultivation of plants and animals whose genetic program is modified using genetic engineering methods and which contain genetically engineered material, the introduction of which cannot be the result of natural processes is prohibited, except for the rearing and cultivation of such plants and animals during examinations and research".

Therefore, the use of transgenic salmon in aquaculture is prohibited in the Russian Federation.

4.9 *For Members of the North-East Atlantic Commission only:* What measures are in place, or are planned, to implement the eleven recommendations contained in the 'Road Map' to enhance information exchange and co-operation on monitoring, research and measures to prevent the spread of *Gyrodactylus salaris* and eradicate it if introduced, including the development and testing of contingency plans?

(Max. 200 words) *(Reference 'Road Map' to enhance information exchange and co-operation on monitoring, research and measures to prevent the spread of G. salaris and eradicate it if introduced, NEA(18)08)*
Parasite *Gyrodactylus salaris* was found in the Keret River (the Republic of Karelia, the White Sea basin) in 1992, where it caused considerable damage to salmon stocks. Parasite was introduced into the river through aquaculture activities. There's a risk of further spread of parasite in rivers of the Republic of Karelia and a risk of its introduction to the Murmansk region through recreational fisheries and through freshwater aquaculture activities. The parasitological surveys to monitor *Gyrodactylus salaris* have been conducted since 1993 in index rivers of the Murmansk region and in the Keret River of the Republic of Karelia. In 2017 the introduction of the parasite to the salmon rivers Pak and Shovna in the basin of the Lower Tuloma Reservoir (Murmansk region) was confirmed. It's believed that the introduction of parasite was caused by transfers of rainbow trout to the cage-aquaculture farms in the reservoir. Measures to prevent the spread of *Gyrodactylus salaris* were undertaken under the veterinary regulations for transfers of live fish, eggs, crayfish and other aquatic organisms which came in force by the order of the Ministry of Agriculture of USSR in 1971. Any live fish, eggs and crayfish transfers require permission from the Chief State Veterinary Inspector. In 2017 the Anti-Epizootic Commission of the Murmansk region restricted live fish transfers from the region of Leningrad and from Republic of Karelia into the Murmansk region. The Commission made recommendations to ban the development of new aquaculture sites in the Lower Tuloma Reservoir. Recreational fisheries companies in the Murmansk region implement voluntary programmes to prevent the spread of parasite on fishing equipment, tackle, etc. by use of approved disinfection methods. The Barents-Belomorskiy Directorate of the Federal Agency for Fisheries has developed recommendations for users of salmon fishing sites. The development of a plan in line with the 11 recommendations contained in the Road Map will be considered.

4.10 Identify the main threats to wild salmon and challenges for management in relation to aquaculture, introductions and transfers, and transgenics.	
Threat / Challenge A1	Environmental impact on wild salmonids due to development of salmon aquaculture / Development of policy consistent with the international goals on sea lice and containment agreed by NASCO and ISFA concerning the protection of wild salmonids.
Threat / challenge A2	Introduction and further spread of *Gyrodactylus salaris* / Minimise the risk of further spread of parasite.

Copy and paste lines to add further threats/challenges which should be labelled A5, A6, etc.

4.11 What SMART actions are planned during the period covered by this Implementation Plan (2019 – 2024) to address each of the threats and challenges identified in section 4.10 to implement NASCO's Resolutions, Agreements and Guidelines and demonstrate progress towards achievement of its goals and objectives for aquaculture, introductions and transfers, and transgenics?		
Action A1:	Description of action:	Developing a policy consistent with the international goals on sea lice and containment agreed by NASCO and ISFA concerning the protection of wild salmonids.
	Planned timescale (include milestones where appropriate):	2019 – 2024
	Expected outcome:	Achievement of the international goals for 100% of farms to

		have effective sea lice management and achieving 100% containment.
	Approach for monitoring effectiveness & enforcement:	Monitoring program on sea-lice and containment.
	Funding secured for both action and monitoring programme?	Expected
Action A2:	Description of action:	Minimise the risk of further spread of *Gyrodactylus salaris*. Implement the eleven recommendations contained in the 'Road Map' to enhance information exchange and co-operation on monitoring, research and measures to prevent the spread of *Gyrodactylus salaris*.
	Planned timescale (include milestones where appropriate):	2019 – 2024
	Expected outcome:	Further measures to prevent the introduction or further spread of parasite due to aquaculture and recreational fisheries. The development of a plan in line with the 11 recommendations contained in the Road Map
	Approach for monitoring effectiveness & enforcement:	Parasitological monitoring programmes on salmon rivers. The number of recreational fisheries with implemented programmes to prevent the spread of parasite on fishing equipment, tackle, etc. The development of a plan in line with the 11 recommendations contained in the Road Map.
	Funding secured for both action and monitoring programme?	Expected
Action A3:	Description of action:	
	Planned timescale (include milestones where appropriate):	
	Expected outcome:	
	Approach for monitoring effectiveness & enforcement:	
	Funding secured for both action and monitoring programme?	Choose an item.
Action A4:	Description of action:	
	Planned timescale (include milestones where appropriate):	
	Expected outcome:	
	Approach for	

	monitoring effectiveness & enforcement:	
	Funding secured for both action and monitoring programme?	Choose an item.

Copy and paste lines to add further actions which should be labelled A5, A6, etc

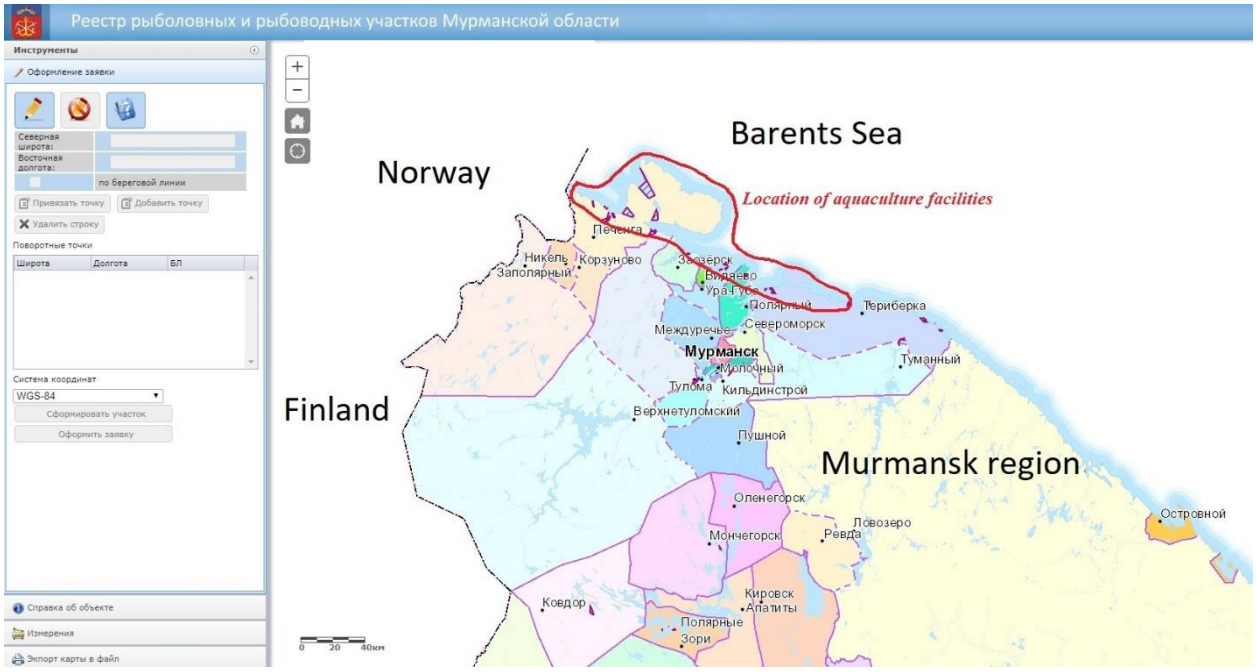

Figure 1 – A map showing the location of aquaculture facilities in the Barents Sea used for Atlantic salmon and rainbow trout farming (http://portal.kgilc.ru/private/fish1/)

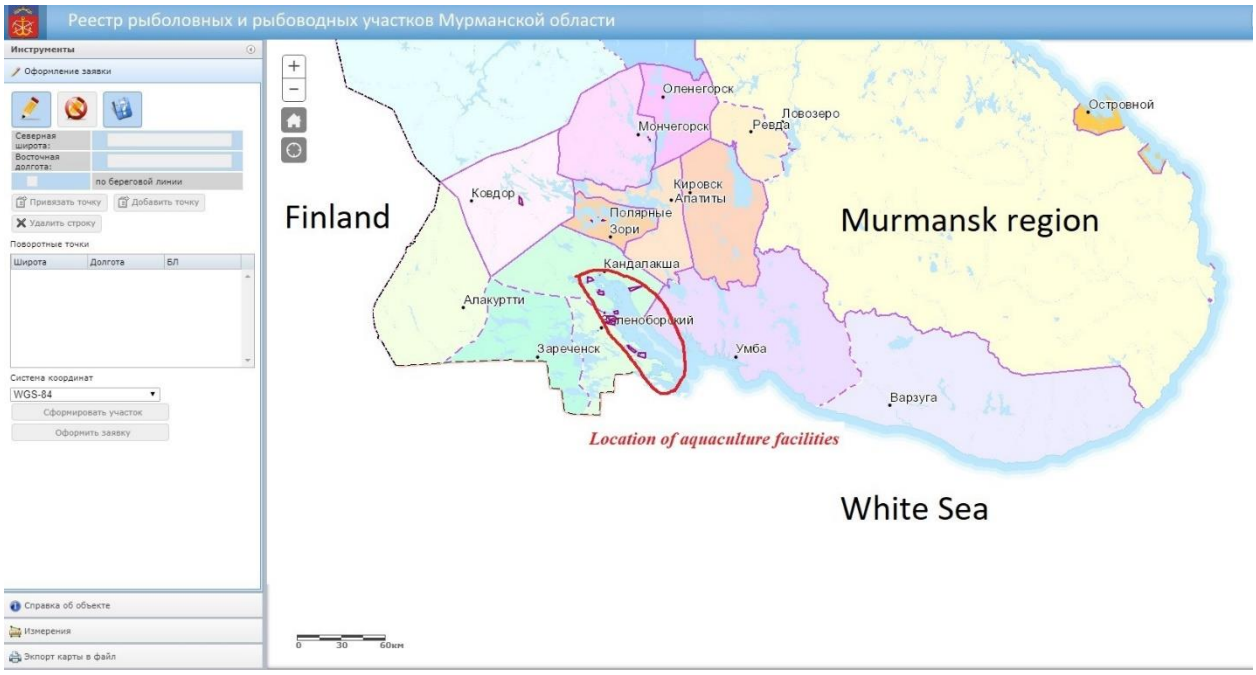

Figure 2 – A map showing the location of aquaculture facilities in the White Sea used for rainbow trout farming (http://portal.kgilc.ru/private/fish1/)