IP(19)16rev2

NASCO Implementation Plan for the period 2019-2024

EU – France
(Revised version submitted 14 October 2020)

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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:	**EU**
Jurisdiction / Region:	**France**

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

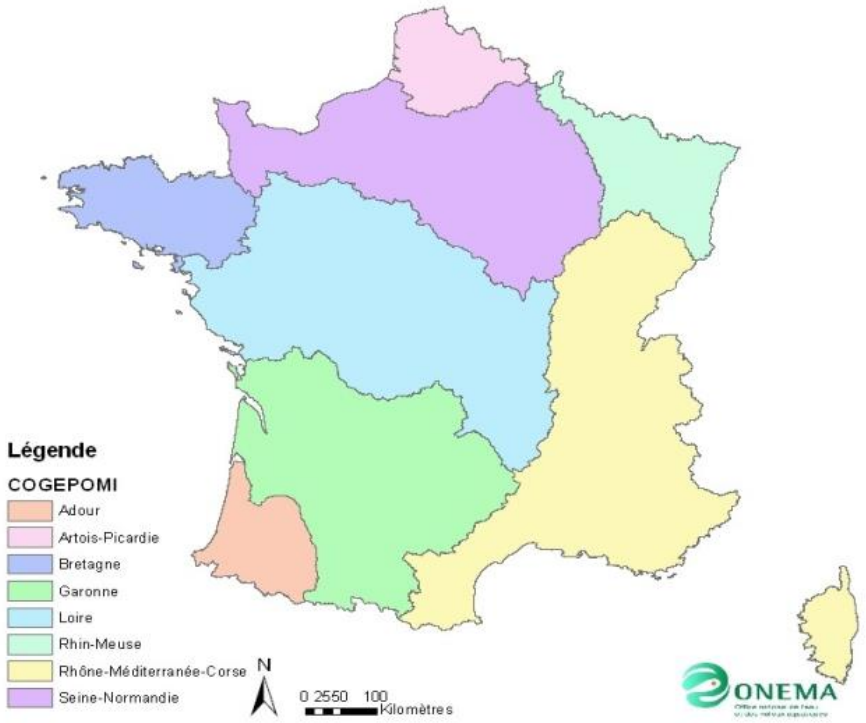
1. Introduction

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

Give the core national objectives guiding the legislation for your jurisdiction

Aim: to maintain and strengthen stocks, taking into account the potential habitat available in the various basins and rivers.

Migratory fish management currently operates on a regional basis, under the remit of 'Migratory Fish Management Committees' (COGEPOMI). These Committees were established under Articles R.436 – 47 (and subsequent articles) of the French Environment Code. Each COGEPOMI corresponds to one of the major river basins covered by River Basin Management Plans (RBMPs)[2], with the exception of Brittany and the Adour, as shown in the map below:



Each COGEPOMI implements 'Migratory Fish Management Plans' (PLAGEPOMIs). These six-year plans set out the measures to be taken to aid the spawning, development, conservation and movement of diadromous fish species, including Atlantic salmon. They also include any plans to support stock numbers and any fishing regulations in their respective basins.

The aim of the 2022 – 2027 PLAGEPOMIs will be as stated above. The actions contained in this document will enable this aim to be achieved in each river basin.

The main basins currently populated by Atlantic salmon in France are:

- the Rhine
- the Canche and the Authie (Hauts de France region)
- the Seine
- the Bresle, Arques, Orne, Touques, Vire, Sienne, Thar, Sée and the Sélune (Normandy region)
- the basins in Brittany (27 basins)
- the Loire (Loire-Allier and Creuse-Gartempe sub-basins)
- the Dordogne

[2] These plans set the guidelines for achieving the objectives contained in the Water Framework Directive over a six-year period

- the Garonne
- the Adour (comprising the Nive, Gave d'Oloron and Gave de Pau sub-basins)
- the Nivelle
- the Bidassoa

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)*

Stock assessments are carried out in all French river basins using a variety of methods (although not all methods are implemented on each watercourse):

- catch monitoring in the professional sea, estuarine and in-river fisheries (NB only the Adour basin has estuarine and in-river fisheries). The National Institute for Agricultural and Marine Products (France Agrimer) monitors catch taken at sea and in estuaries, while in-river catch is monitored by the French Agency for Biodiversity (AFB) through the National Gear Fishing Monitoring system (SNPE) and the National Centre for Interpreting Migratory Salmonid Catches (CNICS);
- monitoring rod-catch declarations in each river in basins where fishing is permitted;
- CNICs and AFB monitor catch-declarations made by authorised beach-fishers in Mont Saint Michel Bay (the Sée, Sélune and Couesnon rivers);
- counting migrating adults at counting stations (through trapping and video-monitoring);
- monitoring natural spawning through redd counts;
- estimating juvenile production through electro-fishing.

Migratory Fish Associations and Fishing Federations participate in monitoring through the last three activities.

Reference points have not been established in basins where stocks are currently being restored or reintroduced. With the exception of the Seine, these basins are subject to stocking activities (stocking juveniles raised on fish farms).

Conservation limits have been established for the Brittany basin.

In those basins where conservation limits have not been established, Action F2 (see 2.9) plans for the establishment of reference points in each management basin by 2024.

There is an international scientific committee, specifically for diadromous fish, in the Loire basin. The committee provides guidance for implementing studies to enhance salmon management in the basin.

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 (see annexed Excel spreadshseet)
0	Not at Risk	0
1	Low Risk	3
2	Moderate Risk	10+1*
3	High Risk	22
N/A	Artificially Sustained	6
N/A	Lost	8
N/A	Unknown	10

Additional comments:

In France, a 'river' is defined as a drainage basin except in in very large watercourses where the main sub-basins are classified as individual rivers. Watercourses, including smaller watercourses, are considered individual rivers if they flow into a common estuary.

The French stock status classification sent previously has been amended as further results have been

achieved.

It should also be noted that details for the Adour (*) are currently being finalised, and consideration is being given to possibly changing the boundaries. While awaiting this new evaluation, the table continues to use the previous classification, i.e. the Adour is shown as being at 'moderate risk'.

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)*

A number of methods are used to determine the composition (sea-age, genetic etc.) of French salmon stocks including:

- the National Centre for Interpreting Migratory Salmonid Catches (CNICS), part of the AFB, analyses scales sent in by anglers to determine the life strategies of the fish in each river (grilses, small or large spring salmon);
- video-counting and trapping stations (particularly in index rivers) occur in all river basins (see Map 1.1) and are used to determine the number of 1SW and MSW salmon depending on the total length of the fish. The number of video-counting stations in each basin is as follows:
    - Adour – 5
    - Garonne-Dordogne – 3
    - Charente – 1
    - Loire – 9
    - Brittany – 4
    - Rhine-Meuse – 2
    - Seine-Normandie – 4
- juvenile (parr) abundance, estimated through electro-fishing, is used to understand density-dependent effects and the proportion of 0+, 1+ and, more rarely, 2+ age groups;
- recent studies on the genetic structure of French salmon stocks (Perrier, 2010);
- the genetic maps of farmed fish used as broodstock for stocking purposes (see 1.6) can be used to determine the origin of fish taken from rivers (wild, or with one or two farmed parents).

The Migratory Fish Management Committees (COGEPOMIs) manage the stocks (see 1.1).

For example, in the rivers in Brittany, Normandy and Artois-Picardy, the Total Allowable Catch (TAC) by rod of 1SW and MSW salmon is set each year using the first two methods above (scale analysis and counting stations). Once the TAC is reached, the fishery is closed.

In those basins where management targets have not been set, decisions concerning the upcoming fishing season are taken pragmatically, using the different methods listed above, the status of spawning stocks and parr production in the preceding years.

The aim of Action F4 in this document is to increase the scientific understanding of the genetic diversity of stocks by 2024. This can then be better taken into account when making management decisions for the stocks in each basin.

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)

The areas of potential juvenile salmon habitat (either currently accessible or potentially accessible), in the main basins are as follows:

- Rhine basin: 112 ha
- Artois-Picardy basins: unknown

- Normandy basins (not including the Seine which is unknown): >100 ha
- Brittany basins: 342 ha
- Loire basin: >358 ha (including 228 ha in the Allier and 99 ha in Creuse-Gartempe)
- Garonne-Dordogne basin: 386 ha (including 184 ha in the Garonne and 202 ha in the Dordogne)
- Adour basin: >430 ha (including 74 ha in the Nive, 230 ha in the Gave d'Oloron and 126 ha in the Gave de Pau)
- Nivelle basin: 5.6 ha
- Bidassoa basin: all functional habitat is located in Spain

1.6 What is the current extent of freshwater salmonid aquaculture?

Number of marine farms	2 (Veys Bay Farm and 'Saumon de France' Farm)
Marine production (tonnes)	400 tonnes
Number of freshwater facilities	8 farms for the purpose of maintaining stocks (Cauterets, Bergerac, Castels, Pont-Crouzet, Chanteuges, Favot, Obenheim, Huningue)
Freshwater production (tonnes)	See below

Append one or more maps showing the location of aquaculture facilities and aquaculture free zones in rivers and the sea.

Basin	Production Site	Annual Production Capacity (approximate)	Co-ordinates	Operated by
Rhine	Obenheim + secondary site (67)	400,000 YOY (Young Of the Year)	**48.355995, 7.688366**	FDPPMA 67
	Huningue + secondary site (68)	300,000 YOY	**47.622456, 7.535134**	Association Petite Camargue Alsacienne
Loire	Chanteuges (43)	250,000 eggs, 800,000 YOY, 12,000 smolts	**45.079206, 3.531842**	Conservatoire National du Saumon Atlantique
Brittany	Favot fish farm (29)	10,000 smolts	**48.319986, - 4.00685**	AAPPMA Elorn
Garonne-Dordogne	Castel (24)	400,000 to 500,000 YOY 50,000 smolts and parrs	**44.883573, 1.067151**	Migado
	Bergerac (24)	450,000 to 700,000 eggs	**44.847197, 0.45522**	Migado

	Pont-Crouzet (81)	300,000 to 400,000 YOY 5,000 to 10,000 smolts and parrs	**43.450925 2.047663**	Migado
Adour	Cauterets (65)	300,000 to 700,000 eggs	**42.874954 -0.108991**	FDPPMA 65

Both marine salmon farms are located in the English Channel (49.67293, - 1.628832 / 49.358527, - 1.117078).

The map below shows the locations of salmon farms in France.

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)*

Management actions are identified for each region in the 'Migratory Fish Management Plans' (PLAGEPOMIs). The 'Migratory Fish Management Committees' (COGEPOMIs) hold discussions through *ad hoc* Working Groups and plenary sessions (usually organised once or twice each year). The COGEPOMIs are appointed under a decree dated 29 July 2016 and include various stakeholders, such as environmental protection groups, Migratory Fish Associations, public territorial agencies, professional and recreational fishers, hydro-electric companies and local elected officials etc.

In accordance with French Law, in application of the Aarhus Convention, the central administrations of the Ministry for Ecological and Inclusive Transition and the Ministry for Agriculture and Food must submit the draft national plan to a 21-day public consultation period.

The current plan was submitted for public consultation on the Ministry for Ecological and Inclusive Transition's website from 9 – 30 January 2019 inclusive. Eighty-seven comments were received on the Salmon Plan (95 including repeated comments and those split into several sections). The varied comments came from individuals, environmental groups and professional and recreational fishers. Following the public consultation period, the comments received are combined and may result in modifications being made to the plan as presented to the public. The final decision is taken by the central administrations.

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)*

Aim: To ensure a sustainable fishery which allows stocks to be maintained or strengthened, taking into account the maximum potential habitat available in the various basins.

Knowledge of bycatch of salmon at sea will be improved through catch-assessments of high commercial-value species and undertaking scientific studies.

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)

Nationally, salmon fisheries fall under the remit of the Ministers responsible for inland and marine fisheries. Under the Environment Code (Articles R.436-44 and subsequent articles), the Rural and Maritime Fisheries Code and Ministerial and Inter-Ministerial Decrees[3] the following provisions are made:

- a six-month close season for fishing. During the open season, nets must be removed from the water for a set period during each 10-day period, and further closures can be implemented if necessary;
- a fixed number of professional fishing licenses are issued;
- ring-tagging is obligatory for all salmon caught;
- restrictions on fishing gear, including the prohibition of placing nets or other fishing gear across more than two-thirds of the width of the water-course;
- retained fish must be at least 50 cm long.

In addition to national legislation, further management measures can be taken at a local level by the regional Prefects in conjunction with the 'Migratory Fish Management Committees' (COGEPOMIs) (see 1.1).

The six-year 'Migratory Fish Management Plans' can be adapted on an annual basis depending on stock status and trends.

Professional Fishing

At Sea: A license from the Estuarine and Diadromous Fish Commission (CMEA) specifying that the holder is entitled to fish for migratory salmonids is required for salmon fishing at sea.

At sea and in estuaries, fishing rights are granted by the 'National Committee for Marine Fisheries and Sea Farming' (CNPMEM). A limited number of licenses are issued as a means of restricting fishing effort. Thirty-eight migratory salmonid licenses were issued in 2017 / 2018, including 17 for the Adour, 7 for Normandy and 14 for Brittany (including 11 for the Vilaine).

In-river: fishing rights are granted by the 'Departmental Territorial and Maritime Directorate' (DDTM). This is a state-run service which acts on advice on license quotas from the basin's

[3] In particular the following decrees:

- Inter-Ministerial Decree dated 16 October 1996 setting specific conditions for salmon fishing;
- Inter-Ministerial Decree dated15 September 1993 establishing a generic licensing system for fishing in estuaries and fishing for migratory species along the North Sea, English Channel and Atlantic coasts.

commission for professional freshwater fisheries.

Targeted professional in-river and estuarine salmon fisheries only operate in the Adour basin.

Recreational Fishing

In-river: to fish on unrestricted waters, recreational fishers must be members of an 'Accredited Fishing and Protection of the Aquatic Environment Association' (AAPPMA). These, in turn, are members of departmental federations (FDAAPPMA) which come together to form the 'National Fishing Federation of France' (FNPF).

Recreational fishers must pay a 'Fishing and Aquatic Environment' fee (CPMA). Those wishing to fish for salmon must pay a supplementary fee for large migratory fish.

There are various regulatory means to control fishing pressure, including the timing of the fishing season, the authorised beats, catch methods, maximum bag limits etc. TACs are applied on the rivers in Brittany and Normandy.

Catch reporting has been obligatory since 1987. The reports are sent to the National Centre for Interpreting Migratory Salmonid Catches (CNICS – a part of the French Agency for Biodiversity). The date and location of the catch are noted, along with details of the fishing method used and the characteristics of the fish (such as length and / or weight and scale samples). All retained fish must be tagged with a numbered ring-tag as soon as they are taken from the water. CNICS compiles and analyses the catch data, determines the river- and sea-age of the fish and provides managers with the results.

At sea: catch reporting is not obligatory for recreational sea fishing, except in the Mont Saint Michel Bay.

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) Apart from in Brittany, conservation limits (CLs) have not been established for any rivers that are fished in France. Exploited stocks in rivers in Brittany are above their CLs.

In response to this question for the other rivers, France is implementing Action F2 (see 2.9). An assessment has led to rivers temporarily being classified as of 'High Risk' (see 1.3). At this stage, some of the rivers potentially affected are:

- Normandy: the Arques and the Touque
- Artois-Picardy: the Authie and the Canche

(b) No such fisheries have been identified. However, this may be affected by the results of Action F2 when available.

(c) management proposals will depend on the results of Action F2

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) Until data becomes available to suggest that a fishery is operating on mixed stocks, France believes that no such fisheries are permitted. However, salmon from mixed stocks may be caught as bycatch in sea fisheries. These should be discarded and reported.

(b) Please refer to the definition of mixed-stock fisheries given in 2.8 of the NASCO Guidelines for Management of Salmon Fisheries, CNL(09)43.

(c) Bycatch at sea: unknown.

(d) In response to this question, France will implement the Actions contained in 2.9 of this document.

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)

A number of socio-economic stakeholders are members of the Migratory Fish Management Committees (COGEPOMIs) (see 1.7). However, management measures are mainly determined by stock status. Current fisheries management is in-line with the objectives set by the COGEPOMIs. Action F2 (see 2.9) will enable all socio-economic stakeholders to participate, through the COGEPOMIs, in the development of management objectives.

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)

In fresh water, professional and recreational salmon fishers must hold a specific license, are obliged to report their catches and must tag all catch with a fixed identification tag (Ministerial Decree dated 16/10/1996, NOR: ENVE9650377A). Fisheries in Brittany, Seine-Normandy and Artois-Picardy are also subject to TACs. Monitoring of freshwater fisheries is co-ordinated by the French Office for Biodiversity (OFB) to ensure correct implementation of the regulations, thereby limiting under-reporting and non-reporting.

In salt water, only those professional fishers with a specific CMEA license are authorised to catch salmon (Decision No. B37/2019). In general, a specific license is not required for recreational fishing at sea, and catch declarations are not obligatory. However, there are exceptions to this, such as the use of fixed nets on the foreshore or 'raquettes à salmonidé' (a net type traditionally used in the Mont Saint Michel Bay area) which must be authorised. Monitoring of sea fisheries is co-ordinated by the Inter-regional Maritime Directorates (DIRM).

Finally, the implementation of indicators under the Marine Strategy Framework Directive (MSFD) (Action F1) aims to improve monitoring of declared salmon catch each year through annual assessments, which will provide further insight into bycatch of salmon in other fisheries.

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) Yes (2017)

(b) See 2.9 below

(c)

2.8 Identify the threats to wild salmon and challenges for management associated with their exploitation in fisheries, including by catch of salmon in fisheries targeting other species.

Threat / challenge F1	Threat: Little knowledge of the volume of salmon caught in the recreational sea fishery or as bycatch in other fisheries. Challenge: Improve knowledge of the volume of salmon caught in the recreational sea fishery and as bycatch
Threat / challenge F2	Threat: Conservation limits have not been established for all rivers in France where fishing occurs Challenge: Establish conservation limits on those rivers where fishing occurs / Create management objectives and assessment tools

F3	Action Cancelled
Threat / challenge F4	Threat: A lack of knowledge of the origin of fish caught, especially in rivers and estuaries Challenge: Improve knowledge of the origin of fish.

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:	Under the Marine Strategy Framework Directive (MSFD) 2008/56/EC dated 17 June 2008 each Member State should develop a strategy to achieve or maintain Good Environmental Status (GES) in the marine environment. The first cycle covered the period 2012 – 2018 and the second cycle (2019 – 2025) is now in progress. Relevant objectives and indicators are set for each cycle and these are revised every 6 years. Reaching these objectives and indicators is achieved through monitoring programmes and a suite of measures set out in the strategy papers for maritime zones. One of the environmental objective indicators in the second cycle relates to marine catches of diadromous species, including salmon, and is given below. Implementation of the indicators for the second cycle of the MSFD (2019 – 2025) will enable: a) an assessment to be carried out on reaching the indicators in the first cycle; b) new monitoring measures and actions to be established for the second cycle.
	Planned timescale (include milestones where appropriate):	2020: assessment of the monitoring programme and the measures implemented under the first cycle of the MSFD 2020 – 2024: progress reports in the annual reports 2021 – 2023: announcement of the new suite of measures and monitoring programme for the second cycle of the MSFD.
	Expected outcome:	Management of the resource will be adapted and the MSFD objectives will be achieved.
	Approach for monitoring effectiveness & enforcement:	Indicators to be reported on in the annual reports: • D01-PC-OE03 ind 1: annual monitoring of marine salmon catches in estuaries and at sea by professional fishers.
	Funding secured for both action and monitoring programme?	Yes *A file is being prepared for the European Maritime and Fisheries Fund (EMFF)*
Action F2:	Description of action:	Establish conservation limits for French rivers on which fishing occurs / Create management objectives and assessment tools
	Planned timescale (include milestones where appropriate):	2020: Create an inventory of the number of rivers with established conservation limits 2021: revise the Migratory Fish Management Plans

		(PLAGEPOMIs) for each basin (see 1.1) and develop new plans (covering the period 2022 – 2027), including an action to establish and apply conservation limits for exploited rivers 2021 – 2024: progress reports in the annual reports 2024: conservation limits will be established for all exploited rivers
	Expected outcome:	Conservation limits or management targets will be established
	Approach for monitoring effectiveness & enforcement:	Indicators to be reported on in the annual reports: • Number of rivers on which work is underway • Number of rivers with established conservation limits
	Funding secured for both action and monitoring programme?	Yes
Action F4:	Description of action:	Determine the origin of salmon caught in estuaries and rivers through scientific studies
	Planned timescale (include milestones where appropriate):	2020: Arrange funding and initiate studies 2020 – 2024: progress reports in the annual reports 2024: delivery of the final report
	Expected outcome:	Improved knowledge of stock exploitation
	Approach for monitoring effectiveness & enforcement:	Indicators to be reported on in the annual reports: • Number of projects undertaken in each basin • Compliance with deadlines for each study (Y / N)
	Funding secured for both action and monitoring programme?	Expected An application is being considered by the requested partners (regions, OFB, NASCO)

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)*

The Water Framework Directive (WFD), and its application in river basins through measures contained in River Basin Management Plans (RBMPs), requires EU Member States to prevent further deterioration of water bodies and for water bodies to achieve 'Good Water Status'. As part of 'Good Status', an evaluation of the pressures and risks associated with not reaching 'Good Status' should be undertaken, in which the deterioration of habitats and ecological discontinuity should be considered.

The main threats to salmon that have been identified are:

- reduced access to the best spawning and nursery habitats due to weirs and dams;
- deterioration of spawning and juvenile growth habitats: insufficient reserved flow levels in some stretches of water, a lack of appropriate gravel due to dams blocking the river, an increase in fine particles linked to dam management and changing farming practices;
- deteriorating conditions for migration in the lower stretches of large river systems (the Loire and Garonne-Dordogne), notably linked to reduced low-water levels (abstractions and climate change);
- loss of habitats (dam and weir impoundments)
- downstream mortalities around hydro-electric developments

The Water and Aquatic Environment Law (2006) defined two lists of watercourses: one on which construction of any new obstacle is prohibited; and another on which obstacles should adapted to allow fish passage and sedimentary transport within strict timescales.

The objectives are complementary, in particular on routes used by large migratory species where new obstacles cannot be constructed and ecological continuity around existing obstacles should be improved. This will enable fish to reach the habitat and complete their life cycle.

The priorities for watercourse restoration are guided by two environmental goals: fish migration and the restoration of certain ecological processes and natural structures to facilitate the movement of species and solid materials. The prioritisation process is subject to an Action Plan which has been developed to ensure that the policy for restoring the ecological continuity of watercourses is socially accepted. Priority is given to obstacles blocking access to spawning grounds or access from tributaries to numerous and diverse habitats because of their importance to salmon production.

A list of priority obstacles will be created for each basin, and the work will be undertaken over the end of the current RBMP (2019 – 2021) and the following RBMP (2022 – 2027) (Action H1, see 3.5).

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)

The Migratory Fish Management Committees (COGEPOMIs, see 1.1) do not represent all stakeholders. Other planning bodies, such as the Basin Committees or Local Water Commissions, also consider the constraints and uses.

The policy of restoring ecological continuity around obstacles on watercourses has led to some socio-economic issues. Meeting the requirement for ecological continuity needs agreement from many important stakeholders (e.g. hydro-electric stakeholders, cultural stakeholders, those involved in water sports) and meets with strong local opposition. This has led to the development in June 2018 of an Action Plan to ensure that the policy for restoring ecological continuity in watercourses is socially accepted. The Plan consists of seven actions, including one to ensure that actions to restore ecological

continuity, to the benefit of Good Water Status and the recovery of biodiversity, are consistently prioritised throughout the basins. In 2018, there were around 10,000 obstacles remaining that required work, and it is estimated that work can be carried out on around 600 obstacles each year. In addition, the Government's Biodiversity Plan (July 2018) aims to restore aquatic continuity on 50,000 km of watercourse by 2030 (Strategic Area 3, Action 39).

There are also tight constraints concerning the quantitative management of watercourses.

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) The Migratory Fish Management Committees (COGEPOMIs) seek to better understand the effects of climate change on stocks by monitoring populations (returning spawners, juvenile production, return rates etc.). Assistance from public bodies such as the EU, water agencies and regional authorities help support studies of migratory fish and biodiversity in general.

Current focus is on restoring ecological continuity to limit fish being held up in the downstream and mid sections of their migration routes. Work to improve hydromorphological function in watercourses, and their renaturisation, are both underway and planned in many areas. It is hoped that this work will improve the resilience of the environments.

(b) The impact of invasive aquatic species in France has not yet been quantified. However, the impact of wels catfish (*siluris glanis*) predation on migratory fish, including salmon, is being studied. Wels catfish are not, however, classed as a species likely to cause biological imbalance in France.

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

Threat / challenge H1	Threat: there are many obstacles blocking watercourses, leading to delays to migration and both upstream and downstream mortalities. Challenge: Restore fish passage (upstream and downstream) to improve access to the best habitats, reduce migration delays and downstream mortalities
Threat / challenge H2	Threat: risk of deterioration of current functional habitat Challenge: Identify strategic spawning and nursery habitats and match these with appropriate regulatory protection instruments
Threat / challenge H3	Threat: deterioration of weakened habitats Challenge: Improving the function of weakened habitats (morphology, reserved flows, locks etc.)
Threat / challenge H4	Threat: poor co-ordination of various public policies for habitat conservation Challenge: synergise planning tools and co-ordinate the various public policies (urbanisation, energy, agriculture, biodiversity 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:	Improve upstream and downstream movement by reducing the impacts of obstacles on the main watercourses populated by salmon (removing, levelling or modifying obstacles).

	Planned timescale (include milestones where appropriate):	2020 – 2021: Assessment of the situation in France: a) how many obstacles are on watercourses populated by salmon? What are they used for? b) how many actions have been undertaken on watercourses populated by salmon? 2020 – 2024: progress reports in the annual reports 2024: evaluation of this period of the Action Plan: a) number of obstacles removed, levelled or modified; b) number of kilometres opened to migration and / or quantity of habitat made accessible
	Expected outcome:	Assessment of the improvements made to upstream and downstream movement of salmon in the main watercourses.
	Approach for monitoring effectiveness & enforcement:	Indicators to be reported on in the annual reports: • Number of obstacles removed from salmon rivers; • Number of modified obstacles on salmon rivers; • Number of obstacles constructed on salmon rivers.
	Funding secured for both action and monitoring programme?	Yes
Action H2:	Description of action:	Identify strategic salmon spawning and nursery habitats and match these with appropriate regulatory instruments for their protection
	Planned timescale (include milestones where appropriate):	2020: Create an inventory of existing regulatory instruments for salmon protection 2020 – 2024: progress reports in the annual reports 2024: Creation of a draft map showing the various instruments
	Expected outcome:	Creation of a map of regulatory protection instruments; if possible this will be superimposed on a map of strategic habitats for salmon
	Approach for monitoring effectiveness & enforcement:	Indicators to be reported on in the annual reports: • percentage of salmon habitat under regulatory protection • percentage of salmon rivers that have been mapped
	Funding secured for both action and monitoring programme?	Yes
Action H3:	Description of action:	Improving the function of 'weakened' habitats: a) Improve sedimentary conditions in some strategic areas for salmon, especially below some large dams b) Improve flow management below some large dams for the various stages of the salmon's life cycle (e.g. migration,

		spawning, growth) c) ensure appropriate flow levels on certain routes, or strategic stretches, for salmon (particularly on side channels)
	Planned timescale (include milestones where appropriate):	2020: Identify the relevant areas in France 2020 – 2024: progress reports in the annual reports 2024: Appraisal of the work undertaken: progress in the number of affected kilometres over the period of the plan (it is hoped that the number of kilometres will have reduced)
	Expected outcome:	a) identification of the relevant areas in France and implementation of actions (dam management, mechanical sedimentary transport) which will improve the survival rates of eggs and juveniles b) identification of the relevant areas across France, definition and implementation of adapted management methods (minimum and maximum flow levels, water level variation gradients etc.) c) identification of the relevant routes or stretches (side channels) across France, definition and implementation of appropriate flow levels for salmon to live, spawn and move around the river
	Approach for monitoring effectiveness & enforcement:	Indicator to be reported on in the annual reports: • Number of kilometres of watercourse affected by the actions taken This information will be provided on a per basin basis, equivalent to the Migratory Fish Management Committees (COGEPOMIs)
	Funding secured for both action and monitoring programme?	Yes
Action H4:	Description of action:	Co-ordinate planning tools, linking actions related to salmon to the various existing planning and management documents.
	Planned timescale (include milestones where appropriate):	For completion by 2024 2020: develop a national plan to aid the movement of diadromous migratory fish 2021: propose a schedule for this multi-species plan. This should link in with the revisions to the Migratory Fish Management Plans (PLAGEPOMIs) which are also synchronised with the River Basin Management Plans. By the end of 2021: production of new River Basin Management Plans covering the period from 2022 – 2027. These should be compatible with the strategy papers for maritime zones and Flood Risk Management Plans
	Expected outcome:	Salmon issues should be taken into account in developing these documents
	Approach for monitoring effectiveness & enforcement:	Establishing a national *ad hoc* group and involving the Migratory Fish Management Committees (COGEPOMIs) Indicators to be reported on in the annual reports: • Whether the schedule is being followed (Y / N)

		• Providing a progress report (qualitative action)
	Funding secured for both action and monitoring programme?	Yes

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) Current policy in France is consistent with the international goals. There are only two commercial salt-water salmon farms in France, one of which is a closed-containment system that uses pumped water. These fish farms hold production licenses which incorporate production practices based on article L511.1 of the Environment Code. The licenses are issued by the environmental services following an analysis of the risks the activity poses to the environment. Specific conditions are set for each development to reduce its impact on the environment. License applications must be accompanied by an assessment of the activity's impact on the local environment. A public consultation on the application is then held. For both farms the license terms state:

- farmed fish must not be released into the natural environment, either living or dead;
- nets and pen anchorage points must be regularly inspected;
- If escapes occur, the producer must take all possible measures, as quickly as possible, to recover the animals, living or dead.

Health monitoring of fish farms is obligatory under EU Council Directive 2006/88/EC dated 24 October 2006. An analysis of the health risks specific to each fish farm must be carried out. In addition, each fish farm is monitored by a vet. Production and health incidents are reported in a farming log-book which must be made available to inspectors responsible for health and environmental regulations at any time. These inspectors should also be notified of any event at the site which could impact fish health or the environment.

(b) Not applicable

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) monitoring fish for external parasites is obligatory at fish farms under EU Council Directive 2006/88EC. Any incidents should be recorded in the farming log-book which is available to inspectors. Further, local environmental protection and animal health services should be notified of any incidents which significantly impact the environment and / or fish health. To-date, no incidents have been reported or observed by monitoring services at either salmon farm (one of which is a closed-containment system).

(b) A specific report for the commercial salmon farms will be made to the appropriate national administrative service. This report will be produced annually, under the Salmon Plan Annual Report and will be made available next year.

c) If progress cannot be demonstrated through regular reporting of sea lice loads at the commercial salmon farms, the relevant farm will be monitored and, if necessary, modifications made to their external parasite management plan.

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.

French legislation under which marine and freshwater fish farms are authorised prohibits the movement of farmed fish into the natural environment and vice versa. Authorisation is based on a risk analysis and the implementation of recommendations. Legislation requires that freshwater fish farms place fine grids at the entrance to, and exit from, the farms, preventing any animal movement between the farm and the natural environment.

a) (i) **Freshwater**: there is no nationally agreed quantitative monitoring as this is not deemed necessary due to the type of salmon farming undertaken (for stocking purposes), the various preventative measures implemented and the regular inspections carried out at each facility.

a) (ii) **Marine Fish Farms**: production licenses are granted based on a risk analysis, so few recommendations are made for closed-containment sites as these do not pose any risks: water is pumped into the sites and waste is mechanically filtered and then biologically filtered in purification tanks before being disposed of back into the natural environment. The location of the sea-cage farm is protected by a seawall (in Cherbourg Harbour). However the license conditions oblige the producer to regularly check their nets, anchorage points and the build-up of waste in the pens. In the event of an escape, the producer must take all possible measures, in the shortest time-frame possible, to recover the animals whether they are living or dead. To-date there have been no local reports of individual escape events.

See also the measures described under (c)

(b) escapes are reported through the farming log-book, a mandatory document required at every fish farm. This log-book is made available to environmental and health inspectors during their inspections. In future, escapes from marine fish farms will be reported to the relevant national central administration and the information will be included in the annual Salmon Plan reporting.

c) There are no supplementary measures in place at marine fish farms at present. If the number of escapes from sea cages were to worsen, the relevant producer would be asked to implement monitoring measures at the main facilities.

In freshwater salmon farms for stocking purposes, the farmed salmon are as genetically similar as possible to the wild stocks. Further, progress has been made by ending the stocking of F2 generation fish and standardising crossing practices (see Action A1).

Each fish farm (whether in fresh water or salt water, or for stocking or commercial purposes) must have a farming log-book, a vet to manage health matters and quarantine processes between sites, with quarantine mandatory.

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)

The European Maritime and Fisheries Fund (EMFF) provides funding for research and innovation activities on matters of interest to aquaculture industries. To-date there have been no problems related to sea lice at either of the two commercial salmon farms in France. Therefore, scientists and industry professionals in France have no interest in engaging in sea lice research programmes.

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) and b): The regulations under which aquaculture licenses are granted in France require an evaluation of the environmental impact of the farms on their local environment (including in protected areas such as Natura 2000 sites). In addition, fish farms are subject to health certification under EU Council Directive 2006/88 EC.

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)

Salmon introductions are regulated by both European and national fish health legislation.

With some exceptions, stocking is carried out on rivers where the stocks are fragile and are unlikely to be self-sustaining. In 2010 the decision was taken to cease stocking activities in the Nive and Gave d'Oloron sub-basins.

Returning adults taken from the river to be stocked (or a maximum of first-generation (F1) hatchery-reared fish) are used as broodstock. In some cases, however, broodstock are taken from neighbouring basins (such as in the Gave de Pau sub-basin, where broodstock are taken from the Gave d'Oloron sub-basin) or another basin with similar characteristics (such as on the Rhine, where stocked fish are partially derived from the Allier strain). Particular attention is given to the number of spawners used as broodstock and the crossing regimes.

Most stocking, in the majority of basins, uses the egg and young-of-the-year stages. Smolts are not often stocked, except in the Loire basin where smolt stocking is still significant.

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) stocking activities are carried out on rivers which have lost their salmon stocks and in the Loire basin where there are such low numbers the population is not self-sustaining. The first significant stocking activities in France for stock restoration purposes began in the early 1980s. No analyses were carried out before the stocking programmes began, as they were mostly carried out on rivers which had lost their native stocks.

Over the course of the stocking programmes to-date, knowledge has improved of:

- the genetic quality of the broodstock used in fish farms and their offspring, especially through the 2006 – 2008 Génésalm Programme

- the origin of returning adults (wild or stocked) and the life stage at which they were stocked

b) When stocking activities began, there was no socio-political or economic opposition. However, on some rivers today stakeholders are questioning the cost of these activities which have been carried out for decades, yet the number of returning adults remains low.

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)

The rearing or farming of transgenic organisms is not permitted in France.

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)

Gyrodactlyus salaris has not been reported on salmon in France in recent years. There have been no notifications of *G. salaris* being present on rainbow trout farms.

The recommendations in Part 1 relating to aquaculture which are contained in the 'Road Map' (NEA(18)08) are carried out as part of the good health practices that producers must implement as part of their health certification, required under EU Council Directive 2006/88 EC. For example, the movement of live fish between fish farms, removing dead fish and disposing of them at the slaughterhouse.

Consideration is being given to holding discussions with national representatives of recreational freshwater fishers, to see whether they are aware of the potential risks associated with fishing abroad.

A study on *Gyrodactylus salaris* will be initiated in the next few years, which will hopefully expand on the data previously obtained.

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	Threat: poor genetic diversity of returning stocked fish could threaten the stock Challenge: improve understanding of the effects of stocking practices on genetic quality
Threat/challenge A2	Threat: the lack of national administrative reporting specifically on the presence of sea lice on commercial salmon farms Challenge: implement a monitoring programme with administrative reporting on the presence of sea lice on commercial salmon farms
Threat/challenge A3	Threat: the lack of national administrative reporting on escapes from commercial marine salmon farms Challenge: implement a monitoring programme with administrative reporting on salmon escapes in the marine environment

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:	Assessment of stocking practices (genetic, the impact of the life stage at which stocking occurs etc.) in the various river basins in France
	Planned timescale (include milestones where appropriate):	2021: compile a national inventory of all stocking practices and propose an action schedule 2020 – 2024: progress reports in the annual reports 2024: final report
	Expected outcome:	Compilation of a national overview, with proposed management measures
	Approach for monitoring effectiveness & enforcement:	Indicators to be reported on in the annual reports: • whether the schedule is being followed (Y /N) • provision of a progress report (qualitative action)
	Funding secured for both action and monitoring programme?	Yes
Action A2:	Description of action:	Implementing reporting specifically on sea lice
	Planned timescale (include milestones where appropriate):	2021 – 2024: progress reports in the annual reports 2024: final report
	Expected outcome:	Close monitoring for the presence / absence of sea lice in commercial salmon farms in France
	Approach for monitoring effectiveness & enforcement:	Indicators to be reported on in the annual reports: • Presence / absence of sea lice (Y / N). If sea lice levels on farmed salmon are increasing, the relevant farm will be asked to revise their health management plan
	Funding secured for both action and monitoring programme?	Yes
Action A3:	Description of action:	Monitoring escapes from commercial marine salmon farms
	Planned timescale (include milestones where appropriate):	2021 – 2024: progress reports in the annual reports 2024: Final report
	Expected outcome:	Monitoring the number of escapes each year
	Approach for monitoring effectiveness & enforcement:	Indicators to be reported on in the annual reports: • Number of escape incidents from commercial marine salmon farms
	Funding secured for both action and monitoring programme?	Yes