



IP(19)16rev

NASCO Implementation Plan for the period 2019-2024

EU – France

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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)16¹;*
- *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	European Union
Jurisdiction / Region	France

¹

This document can be obtained from the NASCO Secretariat, write to hq@nasco.int.

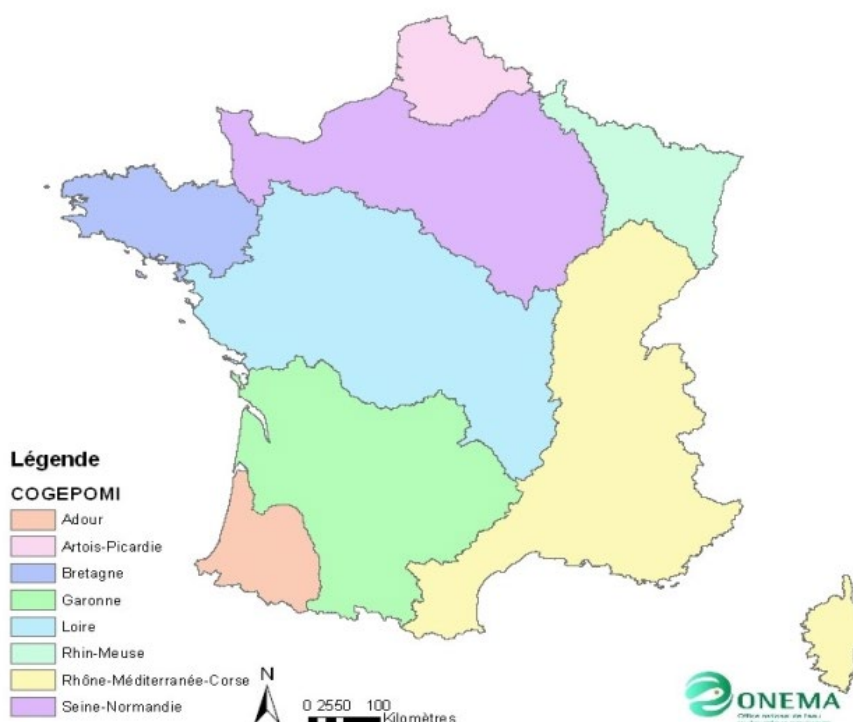
1. Introduction

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.

Objective: Maintain and increase existing stocks taking into account the potential of habitats in the various rivers and river basins.

Management of migratory fish is currently organised on a regional basis, in the framework of the *Migratory-fish Management Committees* (COGEPOMI), provided for in articles R.436-47 and following in the French Environmental code. Each COGEPOMI corresponds to one of the major river basins covered by a River-Basin Management Plan² (RBMP), with the exception of the Bretagne (Brittany) and Adour basins, as illustrated in the map below.



Each COGEPOMI sets up a *Migratory-fish Management Plan* (PLAGEPOMI) that lays out for a six-year period suitable measures to encourage the reproduction, development, conservation and circulation of diadromous fish species, including the Atlantic salmon, as well as plans to support the development of stocks. It also sets the conditions governing fishing activities in the respective river basin.

The objective indicated above will be the objective for the future PLAGEPOMIs for the period 2022-2027 and the measures contained in this document were designed to achieve that objective in each river basin.

The main basins currently colonised by Atlantic salmon in France are the following:

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

- Garonne,
- Adour (sub-basin comprising the Nive, Gave d'Oloron and Gave de Pau Rivers),
- Nivelle,
- 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 basins, using an array of methods (some of which may or may not be used on any given river):

- monitoring of the quantities caught by commercial fisheries in the ocean, estuaries and rivers (only the Adour basin has in fact fisheries in estuaries and rivers). Monitoring is carried out by the *National Agency for Ocean and Agricultural Products* (France Agrimer) for fish caught in the ocean and estuaries, and by the *French Biodiversity Agency* (AFB) for fish caught in rivers using 1) the national monitoring system for mechanised fisheries (SNPE) and 2) the *National Centre for the Interpretation of Catch Data for Migratory Salmonids* (CNICS),
- monitoring of declared angling captures for each river in the basins where fishing is authorised,
- monitoring of declared captures by fishermen on foot authorised in Mont Saint-Michel Bay (Sée, Sélune and Couesnon Rivers), by the CNICS (a part of AFB),
- counting of migrating adults at monitoring stations (trapping and video),
- monitoring of natural reproduction by counting spawning redds,
- electrofishing to estimate numbers of juveniles.

The non-profits addressing “migratory” issues and the fishing federations participate in the last three methods of work.

There are no reference points in the basins where populations are currently being restocked or where reintroductions are taking place. With the exception of the Seine, these basins are being restocked (release of juveniles raised in fish farms).

Conservation limits have been established for the Brittany and Normandy basins. In those basins without conservation limits, action F2 (see section 2.9) will launch the establishment of reference points for each management basin by the year 2024.

In the Loire basin, an international scientific council exists for all the diadromous fish in the basin. The council establishes guidelines for studies on how to optimise salmon management in the Loire 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	Number of rivers (see the appended Excel file)
0	Not at Risk	0
1	Low Risk	3
2	Moderate Risk	13
3	High Risk	23
N/A	Artificially Sustained	6
N/A	Lost	8
N/A	Unknown	10

Additional comments:

In France, the term “river” is used to mean a river basin, except in the cases of very large rivers for which the main sub-basins are distinguished. Even smaller rivers are distinguished if they flow into a common estuary (the case of the “Gave” rivers and the Adour estuary).

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 techniques are used to determine the composition (sea ages, genetics, etc.) of the different salmon stocks in France, namely:

- fish scales sent to the *National Centre for the Interpretation of Capture Data for Migratory Salmonids* (CNICS, a part of AFB) by anglers are analysed to determine the life-history strategies of the fish in each river (grilse (one sea winter), large and small spring salmon (multiple sea winters)),
- video-counting and trapping stations (notably in index rivers) exist in all river basins (see the map in section 1.1) and are used to distinguish and count the number of salmon having spent one or more winters at sea, depending on the total length of the fish:
 - number of video-counting stations in the Adour basin: 5
 - number of video-counting stations in the Garonne-Dordogne basin: 3
 - number of video-counting stations in the Charente basin: 1
 - number of video-counting stations in the Loire basin: 9
 - number of video-counting stations in the Brittany basin: 4
 - number of video-counting stations in the Rhine-Meuse basin: 2
 - number of video-counting stations in the Seine-Normandy basin: 4
- electrofishing used to determine the abundance of juveniles (parr) is a mean to gain information on density-dependent effects and on proportions (0+, 1+ and more rarely 2+),
- recent studies on the genetic structure of salmon populations in France (Perrier, 2010),
- the genetic map of each fish-farm reproducer used for restocking (see section 1.6) can be used to determine the origin of salmon caught in rivers (wild or born of one or two parents from a farm).

Stock management is carried out by the COGEPOMIs (*Migratory-fish Management Committees*) (see section 1.1).

For example, in rivers in the Brittany, Normandy and Artois-Picardie basins, Total Authorised Catches (TAC) for grilse (one sea winter) and spring salmon (multiple sea winters) are set each year using the two first methods (analysis of fish scales and video-counting stations). If the TAC is reached, fishing in the river in question is prohibited.

In river basins for which management targets have not been set, decisions concerning the upcoming fishing season are made pragmatically, using the various methods listed above, based on the stock of reproducers and on the number of parr in previous years.

One notable objective of action F4 (see section 2.9), described below, is to enhance scientific knowledge on the genetic diversity of stocks by 2024 in order to better use that knowledge for the management of salmon stocks in each river 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*)

Surface areas are indicated for the major basins and correspond to the potential habitat for salmon juveniles, i.e. habitat that is accessible or that may be made accessible once again.

- Rhine basin: 112 hectares (ha)
- Artois-Picardie basins: not known
- Normandy basins (except the Seine which is not known): > 100 ha
- Brittany basins: 342 ha
- Loire basin: > 358 ha (including Allier 228 ha and Creuse-Gartempe 99 ha)
- Garonne-Dordogne basin: 386 ha (including Garonne 184 ha and Dordogne 202 ha)
- Adour basin: > 430 ha (including Nive 74 ha, Gave d’Oloron 230 ha and Gave de Pau 126 ha)
- Nivelle basin: 5.6 ha
- Bidassoa basin: all functional habitats are located in Spain

1.6 What is the current extent of freshwater salmonid aquaculture?

Number of marine farms	Two (a farm in the Veys Bay and the “Saumon de France” farm)
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Marine production (tonnes)	400 tonnes
Number of freshwater facilities	Eight fish farms to support population numbers (Cauterets, Bergerac, Castels, Pont-Crouzet, Chanteuges, Favot, Obenheim, Huingue)
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)	Coordinates	Manager
Rhine	Obenheim + secondary site (67)	400 000 YOY (Young Of the Year)	48.355995, 7.688366	FDPPMA 67
	Huingue + secondary site (68)	300 000 YOY	47.622456, 7.535134	Petite Camargue Alsacienne non-profit
Loire	Chanteuges (43)	250 000 eggs, 800 000 YOY, 12 000 smolts	45.079206, 3.531842	Atlantic Salmon National Conservatory
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

The two marine salmon farms are located in the Manche department (49.67293, - 1.628832 / 49.358527, -1.117078).

The map below indicates the 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 set up in the regions in the *Migratory-fish Management Plans* (PLAGEPOMI). Preliminary discussions are held in the *Migratory-fish Management Committees* (COGEPOMI) in both *ad hoc* work groups and in plenary sessions that are generally organised once or twice per year. The members of the management committees for migratory fish are appointed in compliance with the ministerial decree dated 29 July 2016. They include the various categories of stakeholders (environmental-protection groups, non-profits addressing “migratory” issues, public river-basin territorial agencies, commercial and recreational fisheries, power companies, local elected officials, etc.).

According to French law, in application of the Aarhus convention, the central administrative services of the Ecology Ministry and the Agriculture Ministry must present the proposed national plan for a public consultation for a period of 21 days.

The current plan was presented for the public consultation, via the internet site of the Ecology Ministry, from 9 to 30 January 2019. A total of 87 comments were made concerning the Salmon Plan (95 counting identical comments and those made in several parts). The diverse comments were posted by individuals, environmental-protection groups, commercial and recreational fisheries. Following a public consultation, an abstract of the comments is drawn up and may result, depending on the final decision of the central administrative services, in a modification of the plan presented to the public.

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)

Objective: Ensure sustainable fisheries capable of maintaining or increasing stocks taking into account the maximum habitat potential in the various basins.

A study has been launched to learn more on accidental salmon catches in the ocean via an assessment of catches of high-value commercial species and new scientific research.

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)

On the national level, salmon fisheries fall under the oversight of the ministry in charge of river fisheries and the ministry in charge of marine fisheries. The Environmental code (articles R.436-44 and following), the Rural and marine fisheries code and a number of ministerial and interministerial decrees³ stipulate the following, among other measures:

- a six-month closed season with monitoring every ten days and additional monitoring for salmon,
- a limited number of commercial fishing licences,
- mandatory marking (tags) of the salmon caught,
- limitations on fishing devices where it is notably prohibited to use nets or other devices spanning more than two-thirds of the width of a river (bank to bank),
- a minimum catch length of 50 cm.

In addition to the national regulations, other management requirements may be made on the local level by the regional Prefects (see section 1.1), in conjunction with the *Migratory-fish Management Committees* (COGEPOMI).

Management plans for migratory fish are established for six years, however annual adaptations may be made to take into account the status of stocks and current trends.

- Commercial fishing

Marine fishing: A fishing licence issued by the *Estuarine and Diadromous Commission* (CMEA) specifically for migratory salmonids is required for fishing salmon in marine environments.

For both marine and estuarine environments, fishing licences are delivered by the *National Committee for Marine Fishing and Marine Farms* (CNPMM). In order to limit fishing efforts, the number of licences delivered is limited, for example to 38 fishing licences for migratory salmonids in 2017/2018, including 17 for Adour, 7 for Normandy and 14 for Brittany (including 11 for the Vilaine River).

River fishing: Fishing licences are delivered by the *Departmental Territorial and Maritime Directorates* (DDTM), which are local State services, after consulting the basin commissions for commercial freshwater fisheries and according to a system limiting the number of licences.

The Adour is the only basin in which the species is specifically targeted by commercial fisheries in the estuary and in rivers.

- Recreational fishing

River fishing: Recreational fishers fishing in open waters must be members of a *Certified Association for Fishing and Protection of Aquatic Environments* (AAPPMA), that are themselves members of the *Departmental Fishing Federations* (FDAAPPMA) that are in turn members on the national level of the *National Fishing Federation of France* (FNPF).

Recreational fishers must pay a *fishing and aquatic environments fee* (CPMA). If they wish to fish salmon, an additional fee is required specifically for large migratory fish.

Fishing efforts are adjusted by various regulatory measures dealing in particular with the dates of fishing seasons, authorised areas, fishing techniques, the maximum number of fish per person, etc. TAC levels are used on rivers in Brittany and Normandy.

Catch declarations have been mandatory since 1987. They are sent to the *National Centre for the Interpretation of Catch Data for Migratory Salmonids* (CNICS, a part of AFB). Declarations must indicate the catch date and location, the fishing technique used and the characteristics of the fish (size and/or weight, scales removed for analysis). All fish not returned to the water must be marked with a numbered tag immediately on exiting the water. The CNICS compiles and analyses the catch data, determines the age of the river and marine fish and makes the analysis results available to the concerned managers.

Marine fishing: No declarations are required for recreational fishing in marine environments, 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) With the exception of Brittany, no conservation limits exist for French rivers that are fished. The levels of stocks in rivers in Brittany are above the conservation limits. In order to provide answers to this question for the rivers in other regions, France will implement action F2 (see section 2.9). According to the analysis that identified the “High risk” rivers (see section 1.3), the rivers potentially in question are the following:

- Normandy: Arques and Touque
- Artois-Picardie: Authie and Canche
- Adour basin: Gave de Pau

(b) No fisheries have yet been identified. This information will become available following implementation of action F2.

(c) Management proposals will be made based 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 supporting the hypothesis concerning the existence of mixed-stock fisheries becomes available, the French authorities are of the opinion that no mixed-stock salmon fisheries have been authorised. However, accidental catches in marine environments of salmon from mixed stocks may occur. In this case, the fish must be returned to the water and declared.

(b) We refer here to the definition of mixed-stock fisheries found in section 2.8 of the NASCO Guidelines for Management of Salmon Fisheries, CNL(09)43 (referred to as the “Fisheries Guidelines”).

(c) No data is available for accidental catches in marine environments.

(d) In order to provide answers to this question, France will implement the action presented in section 2.9.

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 in the *Migratory-fish Management Committees* (COGEPOMI) (see section 1.7). That being said, management plans and techniques are determined primarily by the status of stocks. Currently, the management of fisheries complies with the objectives set by the COGEPOMIs. France will implement action F2 (see section 2.9), i.e. all socio-economic stakeholders may participate in the work of the COGEPOMIs in setting 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)

Concerning marine fisheries, checks on declaration requirements by commercial marine fisheries are carried out by the *Departmental Territorial and Maritime Agencies* (DDTM). They ensure that declarations are made and are complete, and they detect any anomalies. The catch declarations are

³ Notably the following decrees:

- the interministerial decree dated 16 October 1996 setting special conditions for salmon fishing,
- the ministerial decree dated 15 September 1993 establishing a common system of licences for fishing in estuaries and fishing of migratory fish off French shores in the North Sea, the English Channel and the Atlantic Ocean.

then sent to *National Agency for Ocean and Agricultural Products* (FranceAgrimer), where they are fed into the fishing and aquaculture information system. In addition, further checks on these fisheries, from the catch to the marketing of the fish, are carried out by a number of administrations (*Maritime Affairs* (part of the Ecology Ministry), *Maritime Gendarmerie*, *National Gendarmerie*, *Customs Directorate*, *National Agency for Hunting and Wildlife* (ONCFS) and, for checks on both river and marine environments, the *French Biodiversity Agency* (AFB)).

The *Interregional Maritime Directorates* (DIRM) coordinate the activities of the State entities. Inspections cover the entire fisheries sector from catches to the final sale to consumers.

Other measures are taken on the local level. For example, the declaration rate for angling in the Adour basin has been estimated at 90% on the basis of monitoring by AFB and the *Pyrénées-Atlantiques Departmental Fishing Federation* (FDAAPMA 64). The *Regional Committee for Marine Fisheries and Farms* (CRPMEM) in the Aquitaine region, in a partnership with the *Institute for Aquatic Environments*, monitors the catch data of ships measuring less than ten metres and 100% of the monitoring data has been validated each year. According to the *National Centre for the Interpretation of Catch Data for Migratory Salmonids* (CNICS, a part of AFB), 50% of catches are declared in the Seine-Normandy basin.

Declarations are not mandatory for marine recreational fishing.

Finally, the objective of indicators, created in the framework of the Marine Strategy Framework Directive (MSFD) (action F1) is to ensure better annual monitoring of declared salmon catches via annual assessments to obtain more information on by-catches 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: The lack of data on salmon catches by recreational marine fisheries and on accidental catches of salmon. Challenge: Improve knowledge on salmon catches by recreational marine fisheries and on accidental catches of salmon.
Threat / challenge F2	Threat: Conservation limits have not been set for all French rivers that are fished. Challenge: Set conservation limits for all French rivers that are fished, establish management objectives and create an assessment tool.
Threat / challenge F3	Threat: Certain administrative limits for transitional waters (straight baselines, limits between fresh and sea water based on salt content) have not been correctly defined. This may cause problems for inspections. Challenge: Identify the most important administrative limits requiring redefinition for salmon management and update regulations to take into account the new definitions.
Threat / challenge F4	Threat: The lack of data on the origin of fish caught, particularly in estuaries and rivers. Challenge: Improve knowledge on 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	<p>The Marine Strategy Framework Directive (MSFD) 2008/56/EC of 17 June 2008 obliges each Member State to set up a strategy to achieve or maintain Good Ecological Status (GES) of marine environments. The first management cycle ran from 2012 to 2018 and the second cycle (2019-2025) is now in progress. Each cycle consists of objectives and the relevant indicators that are revised every six years. Success is ensured by a monitoring programme and a programmes of measures that are built into the strategic plans for maritime zones. Two “diadromous GES” indicators in the second management cycle concern marine catches of diadromous fish, including salmon, and are presented below.</p> <p>The objectives of the indicators used for the second management cycle (2019-2025) of the MSFD are to:</p> <p>a) report on data collection for the indicators during the first cycle,</p> <p>b) set up new monitoring measures and new actions for the second cycle.</p>
	Planned timescale (include milestones where appropriate)	<p>2020: Report on the monitoring programme and the programmes of measures during the first MSFD cycle.</p> <p>2020-2024: Progress reports in the annual reports.</p> <p>2021-2023: Presentation of the programme of measures and the monitoring programme for the second MSFD cycle.</p>
	Expected outcome	Management adapted to the resource and MSFD objectives achieved.
	Approach for monitoring effectiveness & enforcement	<p>Indicators presented in the annual reports:</p> <ul style="list-style-type: none"> - D01-PC-OE03 ind 1: annual monitoring of marine salmon catches in estuaries and at sea by commercial fisheries, - D01-PC-OE03 ind 2: annual monitoring of marine salmon catches in estuaries and at sea by recreational fisheries.
	Funding secured for both action and monitoring programme?	<p>Yes</p> <p>The application to the European Maritime and Fisheries Fund (EMFF) is now being drafted.</p>
Action F2	Description of action	Set conservation limits for all French rivers that are fished, establish management objectives and create an assessment tool.
	Planned timescale (include milestones where appropriate)	<p>2020: Determine the number of rivers where conservation limits have been set.</p> <p>2021: Revise the <i>Migratory-fish Management Plans</i> (PLAGEPOMI) for each basin (see section 1.1) and draft the new plans (2022-2027) in which one action will be the “definition and implementation of conservation limits” for fished rivers.</p> <p>2021-2024: Progress reports in the annual reports.</p> <p>2024: A conservation limit will be set for each fished river.</p>
	Expected outcome	Conservation limits and management targets set.
	Approach for monitoring effectiveness & enforcement	<p>Indicators presented in the annual reports:</p> <ul style="list-style-type: none"> - number of rivers for which the work has been started, - number of rivers for which conservation limits have been set.

	Funding secured for both action and monitoring programme?	Yes
Action F3	Description of action	- Updating of regulations concerning straight baselines and limits between fresh and sea water based on salt content, where the limits do not exist, are imprecise or poorly suited to salmon, and are of particular importance for salmon management. - Mapping of the various limits and implementation of the corresponding regulations.
	Planned timescale (include milestones where appropriate)	2020: Identification of the administrative limits that must be clarified in order to achieve the objectives of salmon management. 2020-2024: Progress reports in the annual reports. 2024: Report on the action.
	Expected outcome	2020-2021: Necessary decrees published and maps updated. 2024: Improvement of 50% of the identified limits.
	Approach for monitoring effectiveness & enforcement	Indicators presented in the annual reports: - number of administrative limits for which the work has been started, - number of administrative limits set.
	Funding secured for both action and monitoring programme?	Yes
Action F4	Description of action	Launch scientific studies to determine the origin of salmon caught in estuaries and rivers.
	Planned timescale (include milestones where appropriate)	2020: Implement the financial agreement, launch studies. 2020-2024: Progress reports in the annual reports. 2024: Submit the final report.
	Expected outcome	Enhanced knowledge on the use of stocks.
	Approach for monitoring effectiveness & enforcement	Indicators presented in the annual reports: - number of operations launched in each basin, - compliance with study deadlines for the action (Y/N).
	Funding secured for both action and monitoring programme?	Expected The request is now being studied by the selected partners (regions, AFB, NASCO).
3. Protection and Restoration of Salmon Habitat <i>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.</i>		
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) <i>(Reference: Section 3 of the Habitat Guidelines)</i>		
The Water Framework Directive (WFD) and the programmes of measures in the River-Basin Management Plans (RBMP) for the various river basins require that Member States ensure that the quality of water bodies is not further degraded and that good water status is achieved. The concept of good status implies an assessment of pressures and of the risks of not achieving good status, as well as study of habitat degradation and ecological discontinuities.		

The main threats that have been identified for salmon are the following:

- reduced access to the best habitats for reproduction and growth, due to weirs and dams,
- degradation of habitats for reproduction and growth of juveniles, due to insufficient minimum discharges in certain river reaches, inadequate substrate grain sizes due to dams blocking sediment transport, increased levels of fine particles due to dam-management techniques and changes in farming practices,
- degradation of migratory conditions in the lower sections of the large river basins (Loire, Garonne-Dordogne), due notably to reductions in summer low-flow levels (abstractions, climate change),
- habitat loss due to high water levels behind weirs and dams,
- mortalities at hydroelectric plants during downstream migration.

The Law on water and aquatic environments (2006) created two lists for rivers, List 1 for rivers in which the construction of new obstacles is prohibited and List 2 for rivers in which obstacles must be made to comply, over a fixed time span, with regulations concerning the movement of fish and sediment transport. The two objectives are complementary, particularly in rivers for large migratory fish where it is necessary to both avoid creating obstacles and improve the ecological continuity of existing obstacles so that the fish can reach the habitats required for their life cycle.

Priorities for the restoration of rivers are set on the basis of two ecological objectives, namely migration of fish and recovery of certain ecological and physical processes in order to facilitate the movement of species and of sediment. An action plan has been set up to ensure that the policy to restore the ecological continuity of rivers is accepted socially. Obstacles blocking access to spawning grounds or to tributaries offering numerous and diversified habitats are priority targets given their effects on salmon populations. In each river basin, a list of priority obstacles among the obstacles requiring work will be drawn up and the work will begin over the end (2019-2021) of the current RBMP and continue over the next RBMP (2022-2027) (see action H1 in section 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* (COGEPOMI, see section 1.1) do not represent all stakeholders. Other planning entities, such as the *Basin Committees* or the *Local Water Commissions*, also analyse the constraints weighing on rivers and the uses made of them.

Socio-economic difficulties often hinder application of the policy to restore ecological continuity at obstacles in rivers. The obligation to restore ecological continuity makes it necessary to reconcile a number of important uses (hydroelectricity, patrimonial aspects, water sports) and often arouses strong opposition locally. This situation resulted in June 2018 in the creation of an action plan to ensure that the policy to restore the ecological continuity of rivers is socially acceptable. The plan comprises seven actions including one to establish consistent criteria in the different basins for setting priorities for projects to restore ecological continuity in view of achieving good status and enhancing biodiversity. Currently, it is estimated that 600 obstacles are treated each year, out of the 10 000 still requiring work in 2018. In addition, in the Biodiversity Plan established in July 2018, the French government intends to restore the ecological continuity of 50 000 km of river by the year 2030 (see section 3 in action 39). Major constraints also weigh on policies concerning the quantitative management of rivers.

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 different *Migratory-fish Management Committees* (COGEPOMI) are making efforts to better understand the effects of climate change on stocks by monitoring populations (upstream migration of reproducers, numbers of juveniles, return rates, etc.). Public funding (EU, Water Agencies, regions, etc.) is available for studies on migratory fish and on biodiversity in general.

To date, most of the work concerns the restoration of ecological continuity in order to avoid limiting

the movement of migratory fish to the lower and mid sections of rivers. Work to improve the hydromorphological functioning of rivers and renaturalise them is under way (and will continue) in numerous parts of France in order to enhance the resilience of territories.

(b) To date, the impact of invasive aquatic species in France has not been quantified. However, the impact of predation on migratory fish, including salmon, by Wels catfish (*Silurus glanis*) is now undergoing study. But Wels catfish has not been classified in France as a species likely to provoke biological imbalances.

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

Threat / challenge H1	Threat: Numerous obstacles fragment rivers, provoking delays in migration and deaths during both upstream and downstream migration. Challenge: Restore the movement of fish (upstream and downstream migration) to facilitate access to the best habitats, reduce delays in migration and deaths during downstream migration.
Threat / challenge H2	Threat: Risks to functional habitats that are still in good condition. Challenge: Ensure the protection of habitats via special regulations.
Threat / challenge H3	Threat: Degradation of “fragile” habitats. Challenge: Improve the functioning of “degraded” habitats (morphology, minimum discharges, hydropeaking, etc.).
Threat / challenge H4	Threat: Poor coordination of public policies concerning the issues involved in habitat conservation. Challenge: Create synergy between planning tools and coordinate 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 movement (upstream and downstream migration) by reducing the impacts of obstacles along the main rivers colonised by salmon (removal or lowering of obstacles, modifications).
	Planned timescale (include milestones where appropriate)	Deadline 2024.
	Expected outcome	2020: Report on the situation in France indicating a) the number of obstacles in each river where salmon are present and b) the number of projects undertaken in rivers where salmon are present. 2020-2024: Progress reports in the annual reports. 2024: Report on the period covered by the action plan indicating a) the number of obstacles removed, lowered or modified and b) the number of kilometres opened to migration and/or the surface area of habitats made accessible.
	Approach for monitoring effectiveness & enforcement	Indicators presented in the annual reports: <ul style="list-style-type: none"> - number of obstacles removed/lowered from rivers where salmon are present, - number of obstacles modified in rivers where salmon are present, - number of obstacles constructed in rivers where salmon are present.
	Funding secured for both action and monitoring	Yes

	programme?	
Action H2	Description of action	Identify and protect functional habitats.
	Planned timescale (include milestones where appropriate)	2020: Report on existing tools and instruments. 2020-2024: Progress reports in the annual reports. 2024: Propose maps showing the application zones of the available tools.
	Expected outcome	A national map of the regulatory tools for habitat protection, if possible in conjunction with the national map of strategic habitats for the species.
	Approach for monitoring effectiveness & enforcement	Indicators presented in the annual reports: - number of biotope decrees for rivers where salmon are present, - number of decrees on spawning grounds for rivers where salmon are present, - number of Natura 2000 management plans (DOCOB) for salmon.
	Funding secured for both action and monitoring programme?	Yes
Action H3	Description of action	Improve functioning of “fragile” habitats. a) Improve sediment conditions in strategic sectors for the species, particularly downstream of certain large dams. b) Improve discharge management downstream of certain large dams during different phases of the biological cycle (migration, reproduction, growth) of salmon. c) Ensure the supply of sufficient discharges in certain river sections and/or strategic reaches (in particular side channels) for the species.
	Planned timescale (include milestones where appropriate)	2020: Identify territories with “fragile” habitats in France. 2020-2024: Progress reports in the annual reports. 2024: Report on the interventions undertaken indicating the number of kilometres of river still considered to have “fragile” habitats following the action (where a drop in the number of kilometres is desired).
	Expected outcome	a) Identify the concerned territories on the national level and set up action plans (dam management, mechanical injection of sediment) targeting an improvement in the survival rate of eggs and juveniles. b) Identify the concerned territories on the national level and set up the necessary management criteria (minimum and maximum discharges, gradients for changes in water levels, etc.). c) Identify the concerned territories on the national level, particularly for side channels, then calculate and implement the discharge levels required for reproduction, movement and general living conditions of the species.
	Approach for monitoring effectiveness & enforcement	Indicator presented in the annual reports: - number of kilometres of river affected by the action plan. The data for this indicator will be compiled by the basins corresponding to the <i>Migratory-fish Management Committees</i> (COGEPOMI).
	Funding secured for both action and	Yes

	monitoring programme?	
Action H4	Description of action	Create synergy between planning tools by coordinating salmon action plans with the various existing planning and management documents.
	Planned timescale (include milestones where appropriate)	Deadline 2024. 2020: Draft a plan to mobilise synergies for diadromous fish. 2021: Propose a time plan for the multi-species plan, coordinated with the revision process for the <i>Migratory-fish Management Plans</i> (PLAGEPOMI), that are themselves synchronised with the River-Basin Management Plans (RBMP). End of 2021: Draft the new RBMPs for the 2022-2027 management cycle, ensuring that they are compatible with the <i>Action Plans for the Marine Environment</i> (PAMM) and the European flood directive.
	Expected outcome	Integration of salmon issues in the new versions of plans.
	Approach for monitoring effectiveness & enforcement	Creation of an <i>ad hoc</i> national group and efforts to mobilise the <i>Migratory-fish Management Committees</i> (COGEPOMI). Indicators presented in the annual reports: - compliance with deadlines for the action plan (Y/N), - presentation of a progress report (qualitative issues).
	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.	<p>Management of Aquaculture, Introductions and Transfers, and Transgenics</p> <p><i>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):</i></p> <ul style="list-style-type: none"> • 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. <p><i>In this section please provide information on all types of aquaculture, introductions and transfers, and transgenics (including freshwater hatcheries, smolt-rearing etc.</i></p>
4.1	<p>(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) <i>(Reference: BMP Guidance)</i></p> <p>(a) Only two seawater salmon farming companies exist in France, of which one operates as a closed circuit using pumped water. No cases of sea lice have been reported in the farms given that the necessary conditions for their proliferation do not exist (closed circuit farming system in one case, low densities and strong tidal currents in the other). No massive escapes of salmon have</p>

	<p>been reported. Currently, health inspections in these two companies are carried out in the framework of European Council directive 2006/88/EC of 24 October 2006</p>
	<p>(b) Special monitoring and reporting requirements concerning sea lice on fish produced by the farms will be included in the monitoring programme for the companies. Reports on escapes will also be submitted to the cognizant authorities.</p>
4.2	<p>(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) <i>(Reference: BMP Guidance)</i> <i>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.</i></p>
	<p>(a) A special monitoring programme to detect the presence of sea lice in commercial salmon farms will be set up.</p>
	<p>(b) A special report on commercial salmon farms will be submitted to the cognizant authorities.</p>
	<p>(c)</p>
4.3	<p>(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) <i>(Reference: BMP Guidance)</i> <i>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.</i></p>
	<p>(a)(i) French regulations require that aquaculture farms limit the number of fish escaping to the natural environment and entering the farm from the natural environment. A number of hatcheries are used to ensure artificial propagation of Atlantic salmon in view of preserving the species. Operators must install fine screens at the entry and exit points of the farms to ensure that salmon do not escape from the farm. In addition, an authorisation is required for salmonid hatcheries and they are subjected to health inspections on a regular basis.</p>
	<p>(a)(ii) French regulations require that aquaculture farms limit the number of fish escaping to the natural environment and entering the farm from the natural environment. Cages must be checked regularly to avoid excessive biofouling. Various checks are also run on the conformity of nets and anchoring systems. A special report on escapes will be submitted to the cognizant authorities.</p>
	<p>(b)</p>
	<p>(c)</p>
4.4	<p>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) <i>(Reference: BMP Guidance and Article 11 of the Williamsburg Resolution)</i></p>
	<p>Not applicable.</p>
4.5	<p>What is the approach for determining the location of aquaculture facilities in (a)</p>

<p>freshwater and (b) marine environments to minimise the risks to wild salmonid stocks? <i>(Max. 200 words for each)</i></p>
<p>(a) and (b) French regulations for aquaculture farms require an assessment of the environmental impact of the farms on the surrounding environment (including protected zones such as Natura 2000 zones, etc.). Fish farms are also subject to health certifications in compliance with European directive 2006/88/EC.</p>
<p>4.6 What progress has been made to implement NASCO's guidance on introductions, transfers and stocking? <i>(Max. 200 words)</i> <i>(Reference: Articles 5 and 6 and Annex 4 of the Williamsburg Resolution)</i></p>
<p>Introductions of salmonids are subject to European and national legislation concerning the health of the fish.</p> <p>Except in exceptional cases, restocking takes place in rivers where population levels are low and cannot guarantee the continued existence of the population. In 2010, it was decided to halt restocking in the Nive and the Gave d'Oloron sub-basins.</p> <p>The released fish are the direct descendants (or those following at most one farm generation - F1) of adults swimming up the restocked river. In certain cases, the reproducers may be drawn from nearby basins (the case of the Gave de Pau sub-basin where the reproducers are drawn from the Gave d'Oloron sub-basin) or may have highly comparable characteristics (the case of the Rhine basin where they are drawn in part from the Allier strain).</p> <p>Particular attention is paid to the number of reproducers used and to the cross-breeding conditions. In most basins, a large majority of restocking projects employ fish in the egg and YOY (young of the year) stages. Smolts are rarely used, except in the Loire basin where they continue to represent a significant percentage.</p>
<p>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? <i>(Max. 200 words each)</i> <i>(Reference: Guidelines for incorporating social and economic factors in decisions under the Precautionary Approach and Annex 4 of the Williamsburg Resolution)</i></p>
<p>a) Restocking takes place in rivers where the species had disappeared and in the Loire basin where population numbers are insufficient to ensure the continued existence of the population. At the start of the 1980s, the first restocking efforts were undertaken in France in view of enhancing population numbers. No significant analysis work was done prior to the restocking programmes, given that a majority of the restocking took place in rivers where the species had disappeared.</p> <p>As the restocking programmes progressed, the available knowledge increased concerning:</p> <ul style="list-style-type: none"> - the genetic quality of reproducers from fish farms and of their descendants, notably thanks to the Génésalm programme (2006-2008), - the origin of returning fish (wild or stocked) and the growth stage at which they were released. <p>b) In the beginning, there was no social or political opposition, or any resistance for economic reasons. Today on some rivers, the various partners question the high costs of efforts that have been continued for decades, given the small numbers of returning fish.</p>
<p>4.8 What is the policy / strategy on use of transgenic salmon? <i>(Max. 200 words)</i> <i>(Reference: Article 7 and Annex 5 of the Williamsburg Resolution)</i></p>
<p>France has not authorised the breeding and farming of transgenic organisms.</p>
<p>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 <i>Gyrodactylus salaris</i> and eradicate it if introduced, including the development and testing of contingency plans? <i>(Max. 200 words)</i></p>

<i>(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)</i>	
No cases of <i>Gyrodactylus salaris</i> have been reported for salmon in France for a number of years. The recommendations for aquaculture contained in the Road Map are implemented in the framework of the good health practices that companies must respect to maintain their health certification, itself based on the European 2006/88 directive. A study on <i>Gyrodactylus salaris</i> will be launched in the coming years in order to fill out the information already available.	
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: The low level of genetic diversity in the returning fish that were previously released in the framework of restocking efforts may threaten the stocks in question. Challenge: Pay close attention to the genetic quality of stocked fish and improve it if necessary.
Threat / Challenge A2	Threat: A special public monitoring programme to detect the presence of sea lice in commercial salmon farms does not exist. Challenge: Set up a special public monitoring programme to detect the presence of sea lice in commercial salmon farms and report the results to the cognizant authorities.
Threat / Challenge A3	Threat: A public monitoring programme for salmon escaping from commercial marine farms does not exist. Challenge: Set up a monitoring programme for salmon escaping from commercial marine farms and report the results to the cognizant authorities.

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?		
A1	Description of action	A study on restocking practices (genetics, influence of different ages when released, etc.) in the various French river basins.
	Planned timescale (include milestones where appropriate)	2020: A national survey of all restocking practices and a proposal for a time line concerning the plan of action. 2020-2024: Progress reports in the annual reports. 2024: Final report.
	Expected outcome	A national report with proposals for management measures.
	Approach for monitoring effectiveness & enforcement	Indicators presented in the annual reports: - compliance with deadlines for the action plan (Y/N), - presentation of a progress report (qualitative issues).
	Funding secured for both action and monitoring programme?	Yes
A2	Description of action	Set up special monitoring and reporting requirements concerning sea lice.
	Planned timescale (include milestones where appropriate)	2020-2024: Progress reports in the annual reports. 2024: Final report.
	Expected outcome	Monitoring of the end-of-presence/absence of sea lice in French commercial farms.
	Approach for monitoring	Indicator presented in the annual reports: - presence/absence of sea lice (Y/N),

	effectiveness & enforcement	
	Funding secured for both action and monitoring programme?	Yes
A3	Description of action	Monitoring of escapes from commercial marine salmon farms.
	Planned timescale (include milestones where appropriate)	2020-2024: Progress reports in the annual reports. 2024: Final report.
	Expected outcome	System to monitor the number of escapes per year.
	Approach for monitoring effectiveness & enforcement	Indicator presented in the annual reports: - number of escapes from commercial marine salmon farms.
	Funding secured for both action and monitoring programme?	Yes

Traduction pour le schéma dans section 1.1.

Français	Anglais
Légende	Key
Kilomètres	kilometres