	Council ***Annual Progress Report on Actions taken under the Implementation Plan for the Calendar Year 2022 EU – Sweden***	**CNL(23)40**

Annual Progress Report on Actions taken under the Implementation Plan for the Calendar Year 2022

The Annual Progress Reports allow NASCO to evaluate progress on actions taken by Parties / jurisdictions to implement its internationally agreed Resolutions, Agreements and Guidelines and, consequently, the achievement of their objectives and actions taken in accordance with the Convention. The following information should be provided through the Annual Progress Reports:

- any changes to the management regime for salmon and consequent changes to the Implementation Plan;
- actions that have been taken under the Implementation Plan in the previous year;
- significant changes to the status of stocks, and a report on catches; and
- actions taken in accordance with the provisions of the Convention.

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

These reports will be reviewed by the Council. Please complete this form and return it to the Secretariat **no later than 1 April 2023**.

Party:	**European Union**
Jurisdiction / Region:	**Sweden**

1: Changes to the Implementation Plan

1.1 Describe any proposed revisions to the Implementation Plan ***(Where changes are proposed, the revised Implementation Plans should be submitted to the Secretariat by 1 November).***

No changes have been submitted as of 1st November 2022. Changes are being planned for reporting by 1st November 2023.

1.2 Describe any major new initiatives or achievements for salmon conservation and management that you wish to highlight.

Due to a new legislation requiring modern environmental conditions for hydropower plants a national plan was decided on for the revision of hydropower plant licenses in environmental courts. The national plan includes revision of 2 100 hydropower plant licenses and revisions will be performed during the period 2022-2042. Planning and preparing have taken place during 2019-2021 and the process in the environmental courts started in 2022 including eight Atlantic salmon rivers. This process can provide improved environmental goals for each catchment area. The plan for improved environmental conditions for hydropower will be a significant boost in restoration of river habitats. The plan was however paused in late 2022 by

the Government for the next year to evaluate the coming year's energy supplies due to the situation in Sweden and Europe.

2: Stock status and catches.

2.1 Provide a description of any new factors that may affect the abundance of salmon stocks significantly and, if there has been any significant change in stock status since the development of the Implementation Plan, provide a brief (200 word max) summary of these changes.

Stock status reduced compared to 2019 (3 out of 23 stocks assessed in 2021 was in good productive capacity and 4 out of 22 stocks assessed in 2022 was in good productive capacity).
No catch was recorded from commercial fishing on the coast in 2022 (8th year in a row), i.e. mixed-stock fishing on the coast has ceased.
Catch and release of wild salmon in rivers has increased from 9% in 2011 to 37% in 2021 and 2022. Out of 24 rivers with salmon 7 rivers reported no harvest of salmon in 2021 and 10 rivers reported no harvest of salmon in 2022.

2.2 Provide the following information on catches: ***(nominal catch equals reported quantity of salmon caught and retained in tonnes 'round fresh weight' (i.e. weight of whole, ungutted, unfrozen fish) or 'round fresh weight equivalent').***

	In-river	Estuarine	Coastal	Total
(a) provisional nominal catch (which may be subject to revision) for 2022 (tonnes)	8	0	0	8
(b) confirmed nominal catch of salmon for 2021 (tonnes)	11	0	0	11
(c) estimated unreported catch for 2022 (tonnes)	0,8	0	0	0,8
(d) number and percentage of salmon caught and released in recreational fisheries in 2022	616 salmon (26%) were caught and released in 2022 for the total fishery (wild and reared (enhancement & ranching)), whereof 577 salmon (37%) were wild (with adipose fin).			

3: Implementation Plan Actions.

3.1 Provide an update on progress on actions relating to the Management of Salmon Fisheries *(section 2.9 of the Implementation Plan).*

Note: *the reports under 'Progress on action to date' should provide a* ***brief overview*** *of each action. Please report in relation to the reporting year only or the most relevant recent year. For all actions, provide* ***clear and concise quantitative*** *information to demonstrate progress. In circumstances where quantitative information cannot be provided for a particular action because of its nature, a clear rationale must be given for not providing quantitative information and other information should be provided to enable progress with that action to be evaluated. While referring to additional material*

(e.g. via links to websites) may assist those seeking more detailed information, this will not be evaluated by the Review Group.		
Action F1:	Description of action (*as submitted in the IP)*	New fishing rules: Implementing fishing rules that decrease exploitation of weak stocks by introducing maximum length for landed fish (prohibiting catch of large salmon) or if needed more restrictive fishing rules.
	Expected outcome (*as submitted in the IP*)	Less stocks with reduced reproductive capacity and increased smolt production.
	Approach for monitoring effectiveness & enforcement (*as submitted in the IP*)	Existing monitoring with fishery statistics (number of wild salmon landed), electrofishing data and migration data from fish counters.
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. If sub-actions are completed during the reporting year, this should be made clear. Other material (e.g. website links) will not be evaluated)*	National regulations were planned for 2021-2022. The planned action have been delayed, but the fishing rights owners have, due to national scientific assessment and management recommendations, forbidden salmon fishing or enforced stricter fishing regulations in rivers with weak salmon populations.
	Current status of action *(Please note: 'Completed' means that the overall action is complete for the lifetime of the third reporting cycle. If it is an ongoing action that is reported on annually, it should be marked as 'Ongoing')*	Ongoing
	If 'Completed', has the action achieved its objective?	
Action F2:	Description of action (*as submitted in the IP)*	Fin-clipping smolts: Continued fin-clipping (adipose fin) of <u>all</u> reared and stocked salmon and brown trout smolt.
	Expected outcome (*as submitted in the IP*)	Enabling anglers to distinguish between wild and reared salmon in field, which facilitates action F4.
	Approach for monitoring effectiveness & enforcement (*as submitted in the IP*)	Catch statistics, where presence of adipose fin is registered. Also, the County Board's regionally responsible fisheries officer checks smolt quality and fin-clipping before release of reared smolt.
	Progress on action to date	Fin-clipping of the adipose fin is carried out on all reared smolts that are released. The fin-clipping, and the status

	(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. If sub-actions are completed during the reporting year, this should be made clear. Other material (e.g. website links) will not be evaluated)	of smolts, are checked by fisheries officers at the County Boards.
	Current status of action *(Please note: 'Completed' means that the overall action is complete for the lifetime of the third reporting cycle. If it is an ongoing action that is reported on annually, it should be marked as 'Ongoing')*	Completed
	If 'Completed', has the action achieved its objective?	yes
Action F3:	Description of action (*as submitted in the IP)*	Coastal MSF: Avoiding mixed-stock fisheries on the coast.
	Expected outcome (*as submitted in the IP*)	Ongoing – today no licenced trap net remain on the coast. <u>Quantitative goal</u> -No new mixed stock fisheries operating on the coast.
	Approach for monitoring effectiveness & enforcement (*as submitted in the IP*)	Information to people responsible for river fisheries of what is required for sufficient data catch statistics. Legal actions are not permitted according to Swedish fishery legislation, but if stock status/or the presence of mixed-stock fisheries cannot be assessed the river stock as a whole could be considered as of weak status. Field survey to quantify coastal fishery. Comparisons can be made with previous questionnaires by SCB (Statistics Sweden) and the former field survey in 2000 (Thörnqvist 2000).
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. If sub-actions are completed during the reporting year, this should be made clear. Other material (e.g.*	Since 2015 there have been no reported harvested of salmon in the commercial coastal fishery. Thus, the former mixed-stock fishing on the coast is gone. But a few salmon are caught by non-commercial gillnetting, especially in mixed-stock fishery outside River Lagan (ranched salmon) where there also can be wild salmon in the catches. The extent of this gillnetting was investigated by the County Board of Halland in 2021 and the reported catches was very low.

	website links) will not be evaluated)	No commercial licenses for salmon trap nets were issued in 2022.
	Current status of action *(Please note: 'Completed' means that the overall action is complete for the lifetime of the third reporting cycle. If it is an ongoing action that is reported on annually, it should be marked as 'Ongoing')*	Completed
	If 'Completed', has the action achieved its objective?	yes
Action F4:	Description of action (*as submitted in the IP)*	Riverine MSF: Avoiding mixed-stock fisheries in rivers with stocking of reared salmon in the main river stem and production of wild salmon in tributaries.
	Expected outcome (*as submitted in the IP*)	Recovery of wild salmon stocks in tributaries to the rivers Göta älv, Nissan and Lagan.
	Approach for monitoring effectiveness & enforcement (*as submitted in the IP*)	Electrofishing. Catch statistics.
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. If sub-actions are completed during the reporting year, this should be made clear. Other material (e.g. website links) will not be evaluated)*	There were still catches of reared and wild salmon in river Göta älv, Nissan and Lagan in 2022.
	Current status of action *(Please note: 'Completed' means that the overall action is complete for the lifetime of the third reporting cycle. If it is an ongoing action that is reported on annually, it should be marked as 'Ongoing')*	Ongoing
	If 'Completed', has the action achieved its objective?	

Action F5:	Description of action (*as submitted in the IP)*	Genetic diversity: Successively, improve knowledge of genetic diversity and status of all stocks in the main rivers, and larger tributaries.
	Expected outcome (*as submitted in the IP*)	Improved genetic baseline and genetic diversity data will give a new tool for management, where genetic diversity can be included in management (see section 1.1).
	Approach for monitoring effectiveness & enforcement (*as submitted in the IP*)	Genetic samples collected with electrofishing. Increased data (analysed individual) in baseline.
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. If sub-actions are completed during the reporting year, this should be made clear. Other material (e.g. website links) will not be evaluated)*	Genetic samples from Surtan, Smedjeån, Lagan, Viskan, and Rolfsån was collected in 2022 to improve the genetic baseline and knowledge of genetic diversity.
	Current status of action *(Please note: 'Completed' means that the overall action is complete for the lifetime of the third reporting cycle. If it is an ongoing action that is reported on annually, it should be marked as 'Ongoing')*	Completed
	If 'Completed', has the action achieved its objective?	yes
Action F6:	Description of action (*as submitted in the IP)*	Designated (index) river:Continued monitoring in the designated (index) river.
	Expected outcome (*as submitted in the IP*)	Quality assured monitoring of stock development. Also, the diversity of the whole fish fauna is monitored.
	Approach for monitoring effectiveness & enforcement (*as submitted in the IP*)	Data collection by means of electrofishing, PIT-tags, fish counters, smolt & spawner traps combined with fishery statistics. The fish counter is situated at a hydropower plant. Environmental court will 2024 take decision on permit for the hydropower plant at that decision can affect the possibility for ongoing fish counting in the river.
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. If*	Electrofishing, PIT-tagging, smolt & spawner counting were conducted in the designated (index) river together with fishery statistics collection in 2022.

	sub-actions are completed during the reporting year, this should be made clear. Other material (e.g. website links) will not be evaluated)	
	Current status of action *(Please note: 'Completed' means that the overall action is complete for the lifetime of the third reporting cycle. If it is an ongoing action that is reported on annually, it should be marked as 'Ongoing')*	Completed
	If 'Completed', has the action achieved its objective?	yes
Action F7:	Description of action (*as submitted in the IP)*	Stock status: Annually asses each river stock's reproductive capacity. Stocks with a salmon habitat less than 2 hectares will be assessed only if data (electrofishing, automatic fish counters) is available from other programmes (outside salmon monitoring).
	Expected outcome (*as submitted in the IP*)	Attainment of essential data for better local and national management.
	Approach for monitoring effectiveness & enforcement (*as submitted in the IP*)	Salmon smolt traps, fish counters and electrofishing.
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. If sub-actions are completed during the reporting year, this should be made clear. Other material (e.g. website links) will not be evaluated)*	The salmon smolt and spawner traps were run in Högvadsån (Ätran) in 2022 and the total spawner and smolt runs could be calculated for Högvadsån. Stock status (based on electrofishing data) could be calculated for 22 out of 24 salmon rivers in 2022.
	Current status of action *(Please note: 'Completed' means that the overall action is complete for the lifetime of the third reporting cycle. If it is an ongoing action that is reported on annually, it*	Completed

	should be marked as 'Ongoing')	
	If 'Completed', has the action achieved its objective?	yes
Action F8:	Description of action (*as submitted in the IP)*	Exploitation in rivers: Monitor exploitation in two rivers
	Expected outcome (*as submitted in the IP*)	Attainment of data used for the ICES WGNAS salmon stock complex assessment.
	Approach for monitoring effectiveness & enforcement (*as submitted in the IP*)	Data collection by means of PIT-tags, fish counters and salmon traps combined with fishery statistics (see also Action F9).
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. If sub-actions are completed during the reporting year, this should be made clear. Other material (e.g. website links) will not be evaluated)*	Data collection by means of PIT-tags, fish counters and salmon traps combined with fishery statistics was conducted in 2022. Results will be presented to ICES WGNAS in 2023. No fishing occurs on the coast since 2015. All exploitation is in rivers and from sport fishing or brood stock harvesting. Both with good reporting. However, we have only two rivers with wild salmon where a fish trap with PIT-tag scanning (Högvadsån) and a fish counter (Ätran), respectively, enable a precise estimate of exploitation. Exploitation Högvadsån: 1%, exploitation Ätran: 18%.
	Current status of action *(Please note: 'Completed' means that the overall action is complete for the lifetime of the third reporting cycle. If it is an ongoing action that is reported on annually, it should be marked as 'Ongoing')*	Completed
	If 'Completed', has the action achieved its objective?	yes
Action F9:	Description of action (*as submitted in the IP)*	Improve catch statistics; -in rivers, with regard to catch and release and fin-clipping. -on the coast, through a survey estimate of salmon and brown trout catch in the recreational fishery.
	Expected outcome (*as submitted in the IP*)	Improved catch statistics and better knowledge of what today is reported as "unreported catches". Resulting in better catch advice.

	Approach for monitoring effectiveness & enforcement (*as submitted in the IP*)	Information to people responsible for river fisheries of what is required for sufficient data catch statistics. Legal actions are not permitted according to Swedish fishery legislation, but if stock status/or the presence of mixed-stock fisheries cannot be assessed the river stock as a whole could be considered as of weak status. Field survey to quantify coastal fishery. Comparisons can be made with previous questionnaires by SCB (Statistics Sweden) and the former field survey in 2000 (Thörnqvist 2000).
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. If sub-actions are completed during the reporting year, this should be made clear. Other material (e.g. website links) will not be evaluated)*	During 2018 and 2019 catch statistics improved. During 2020-2021 recreational fishing associations had articles in their magazines informing about the need for improved catch statistics and the reporting of fin-clipped fish improved in 2021 and 2022. For 2022 all three rivers with both wild and reared salmon now report catches separated on wild and reared salmon. Catch and release is now reported in most, but not all rivers. The county board of Halland conducted a survey to estimate catches of salmon and brown trout in the coastal recreational fishery in 2022. These catches were previously unknown.
	Current status of action *(Please note: 'Completed' means that the overall action is complete for the lifetime of the third reporting cycle. If it is an ongoing action that is reported on annually, it should be marked as 'Ongoing')*	Completed
	If 'Completed', has the action achieved its objective?	Partly. C& R is still not reported in all rivers.
Action F10	Description of action (*as submitted in the IP)*	Initiate and support formation of fish management units (FMU) in salmon rivers.
	Expected outcome (*as submitted in the IP*)	A special project aimed to facilitate the forming of new units and facilitating local management has been initiated in 2018 by the Swedish Federation of Fishing Rights Owners and funded by the Swedish Agency for Marine and Water Management. This will give basis for future actions.
	Approach for monitoring effectiveness & enforcement (*as submitted in the IP*)	Project reporting in 2019.
	Progress on action to date	Since 30 years a lot of fish management units have been formed in Atlantic salmon rivers. There is still a few part

	(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. If sub-actions are completed during the reporting year, this should be made clear. Other material (e.g. website links) will not be evaluated)	of salmon rivers were fish management units not have been formed. Due to the legislation it is the fishing rights owner themselves who take the decision to start a process to start the work to form a fish manage unit. The state responsibility is to initiate and support the work and take decision on grants for the formation. So far more than forty fish manage units have been formed in Atlantic salmon rivers. Twenty eight management units in Atlantic salmon rivers in County Administration Board of Västra Götaland. In rivers emptying in Skagerrak  Fifteen manage units in Atlantic salmon rivers in County Administration Board of Halland. In rivers emptying in Kattegatt.  Four fish manage units in Atlantic salmon rivers in County Administration Board of Skåne. In rivers

		emptying in Kattegatt and the Sound (between Sweden and Denmark) 
	Current status of action *(Please note: 'Completed' means that the overall action is complete for the lifetime of the third reporting cycle. If it is an ongoing action that is reported on annually, it should be marked as 'Ongoing')*	Ongoing
	If 'Completed', has the action achieved its objective?	

3.2 Provide an update on progress on actions relating to Habitat Protection and Restoration *(section 3.5 of the Implementation Plan).* ***Note:*** *the reports under 'Progress on action to date' should provide a* ***brief overview*** *of each action. Please report in relation to the reporting year only or the most relevant recent year. For all actions, provide* ***clear and concise*** *quantitative information to demonstrate progress. In circumstances where quantitative information cannot be provided for a particular action because of its nature, a clear rationale must be given for not providing quantitative information and other information should be provided to enable progress with that action to be evaluated. While referring to additional material (e.g. via links to websites) may assist those seeking more detailed information, this will not be evaluated by the Review Group.*		
Action H1:	Description of action (*as submitted in the IP)*	Continued liming of acidified salmon rivers and tributaries
	Expected outcome (*as submitted in the IP*)	Keeping pH-levels above 6.0 and inorganic aluminium at non-toxic levels, thereby minimizing mortality of eggs and fry. General high biodiversity (especially invertebrates, amphibians and fish) in salmon rivers.
	Approach for monitoring effectiveness & enforcement (*as submitted in the IP*)	Electrofishing & chemical monitoring carried out by the County Administrative Boards.

	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. If sub-actions are completed during the reporting year, this should be made clear. Other material (e.g. website links) will not be evaluated)*	The Swedish liming programme was revised during 2021 by the Swedish Agency for Marine and Water Management. Nineteen of a total of twenty-three Atlantic salmon rivers are included in the liming program. There is no need for liming in the remaining four rivers. It is expected that liming in Atlantic salmon rivers will continue for many years to avoid loss of salmon production. Acid deposition is the major cause, but large-scale land-use and vegetation changes over the past 100 years have also contributed to surface-water acidification. Acid deposition have been reduced since the 1980s and because of that the amount of lime per year has been lowered but the need of liming acidified lakes and streams will continue for many years.
	Current status of action *(Please note: 'Completed' means that the overall action is complete for the lifetime of the third reporting cycle. If it is an ongoing action that is reported on annually, it should be marked as 'Ongoing')*	Completed
	If 'Completed', has the action achieved its objective?	Yes
Action H2:	Description of action (*as submitted in the IP)*	Measures to create better knowledge and understanding of the impact of hydropower production and other exploitation of watercourse, on salmon migration and loss of salmon habitat and develop methods to recreate salmon migration routes and restore habitats. 1. Develop a plan for environmentally friendly hydropower production including salmon rivers. 2. Document the distribution of Atlantic salmon in Swedish rivers before hydropower exploitation (1880). 3. Compiling habitat surveys, adding quality assured and new data when required. 4. Development of best available methods to restore salmon habitat. 5. Publish national guidelines for best available technology (BAT) of fish passages. 6. Develop national guidelines for water regulation.
	Expected outcome (*as submitted in the IP*)	1. Several Atlantic salmon rivers negatively affected by hydropower production could have improved salmon stock status by applying environmental friendly hydropower production. Probably no significant effect on stocks during the IP period 2019-2024, but in the long run. 2. Attain a good basis for planning of restoration efforts, such as connectivity measures, and possibility for environmental

		consideration in competing river exploitation interests as for example court decision on modern environmentally friendly operational conditions for hydropower plants. 3. The data compilation will form the basis for further actions to improve quality and extent of salmon habitats. 4. Web-based guidelines on a planned "Restoration website" of the Swedish Agency for Marine and Water Management. 5. Handbook on BAT for fish passages electronically available. Will facilitate decision-making in planning new fish passages. 6. Recommendations for water regulation successively implemented in water systems with hydropower production, and possibly also in water systems where other water withdrawal occurs.
	Approach for monitoring effectiveness & enforcement (*as submitted in the IP*)	The result of these measures will be monitored and evaluated as part of the national assessment of salmon production and status of salmon stocks.
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. If sub-actions are completed during the reporting year, this should be made clear. Other material (e.g. website links) will not be evaluated)*	1. New legislation requiring modern environmental conditions: A proposed National Plan was submitted to the government 1st of January 2019 and a new legislation was completed. The Government along with the new legislation gave the Swedish Agency for Marine and Water Management, The Swedish Energy Agency and the Svenska Kraftnät (the grid operator), the assignment to provide a national plan for the revision of the hydropower plant licenses. It will be an extensive work as there are 2100 hydropower plants in Sweden. Planning, preparation and coordination have taken place during 2019 - 2021. The national plan is to be carried out over an operational period of 20 years starting in 2022. A new aspect of the legislation is time-limited environmental requirements with a maximum period of 40 years. The plant owner is responsible to update the license when a requirement is outdated and apply for revision to the Environmental Court. This process can provide goals for each catchment. The environmental plan for hydropower will be a significant game-changer and a major boost in river restoration in Sweden. In the state budget for 2022 at least SEK 95,000,000 was dedicated to intensify work with guidelines, supervision, testing and re-evaluation of water activities, including the authorities implementation of the legislation which means that hydropower plants must be provided with modern environmental conditions in a coordinated manner with the greatest possible benefit for the aquatic environment and for efficient national access to hydropower electricity, as well as for river restoration and biological re-establishment. Of the stated amount, at

		least SEK 70,000,000 will be distributed to the County administrative boards for this work. The decision process in environmental courts started in 2022 regarding the Atlantic salmon rivers Bäveån, Enningdalsälven, Fylleån, Genevadsån, Göta älv, Rolfsån, Rönneå, Stensån, Suseån, Tvåkersån and Örekilsälven. 2. Document the distribution of Atlantic salmon in Swedish rivers before hydropower exploitation (1880). 3. A compilation of available habitat was made in 1999 and again in 2016. During 2022 a new compilation will be carried out with the assistance of the County Boards. During 2018 a salmon habitat index was developed (score from 0 to 8 depending on habitat quality). The index will enable both habitat size and quality to be assessed in the future. 4. Development of best available methods to restore salmon habitat. In 2021 a manual on aquatic restoration was published in Swedish (replacing the previous manual from 2008). Work on the website will continue until 2024. 5. Publish national guidelines for best available technology (BAT) of fish passages. A new handbook was produced by the Swedish University of Agricultural Sciences (February 2020) and submitted to the Swedish Agency for Marine and Water Management for approval and publication on the Internet. The handbook is now available online at the SWaM home page. 6. A report with recommendations on a number of basic practises regarding appropriate ecological considerations that should always be taken into account when regulating water is available online at the SWaM home page.
	Current status of action *(Please note: 'Completed' means that the overall action is complete for the lifetime of the third reporting cycle. If it is an ongoing action that is reported on annually, it should be marked as 'Ongoing')*	Completed
	If 'Completed', has the action achieved its objective?	yes
	Description of action (*as submitted in the IP)*	Continued improvement of habitat in salmon rivers.

Action H3:	Expected outcome (*as submitted in the IP*)	Improved conditions facilitating increased smolt production, salmon genetic diversity and general aquatic and riparian biodiversity.
	Approach for monitoring effectiveness & enforcement (*as submitted in the IP*)	Habitat surveys and electrofishing.
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. If sub-actions are completed during the reporting year, this should be made clear. Other material (e.g. website links) will not be evaluated)*	Improvement of several habitat sites in Atlantic salmon rivers during 2022. A large scale habitat restoration in River Rönneån has been projected during 2021 and permission sought in environmental court in February 2022. The project includes demolition of three hydroelectric dams, fish migration routes past migration barriers and habitat restoration. The work is ongoing as planned and an information day for the public was held in December 2022.
	Current status of action *(Please note: 'Completed' means that the overall action is complete for the lifetime of the third reporting cycle. If it is an ongoing action that is reported on annually, it should be marked as 'Ongoing')*	Ongoing
	If 'Completed', has the action achieved its objective?	yes
Action H4:	Description of action (*as submitted in the IP)*	Systematically evaluate risk of introduction of alien species and measures to prevent introduction and dispersal of alien species.
	Expected outcome (*as submitted in the IP*)	Improved ability to prevent introduction of alien species, detect and identify alien species and take measures against alien species. Such as *Oncorhynchus* species.
	Approach for monitoring effectiveness & enforcement (*as submitted in the IP*)	Good detection ability and awareness of the risks of introduction of alien species. Monitoring as well as prevention measures for dispersal of invasive species or if possible their removal. Good detection ability and awareness for the monitoring of *Oncorhynchus* species.
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. If sub-actions are completed during the reporting year,*	A national website was published in 2019 were the public can identify and report alien species as for example Oncorhynchus species (Reporting (artfakta.se)). The website was updated in 2021. Responsible authorities' websites regarding alien species has been improved to enable the public to recognize invasive species and awareness of the importance of removing alien species such as pink salmon when fishing has been improved.

	this should be made clear. Other material (e.g. website links) will not be evaluated)	In October 2022, The Swedish University of Agricultural Sciences, in collaboration with Norway, was granted a two year research project aiming to map the spread of pink salmon in Swedish Atlantic rivers and increase awareness and reporting of pink salmon. Sweden is also partaking in a NASCO EU project regarding pink salmon monitoring.
	Current status of action *(Please note: 'Completed' means that the overall action is complete for the lifetime of the third reporting cycle. If it is an ongoing action that is reported on annually, it should be marked as 'Ongoing')*	Ongoing
	If 'Completed', has the action achieved its objective?	The research project mapping pink salmon will run from 2023-2024.

3.3 Provide an update on progress on actions relating to Aquaculture, Introductions and Transfers and Transgenics *(section 4.11 of the Implementation Plan).* ***Note****: the reports under 'Progress on action to date' should provide a* ***brief overview*** *of each action. Please report in relation to the reporting year only or the most relevant recent year. For all actions, provide* ***clear and concise*** *quantitative information to demonstrate progress. In circumstances where quantitative information cannot be provided for a particular action because of its nature, a clear rationale must be given for not providing quantitative information and other information should be provided to enable progress with that action to be evaluated. While referring to additional material (e.g. via links to websites) may assist those seeking more detailed information, this will not be evaluated by the Review Group.*		
Action A1:	Description of action (*as submitted in the IP)*	Continued monitoring of *Gyrodactylus salaris,* and develop a road map and contingency plan to prevent spread of *Gyrodactylus salaris* to not infected rivers.
	Expected outcome (*as submitted in the IP*)	Quality assured data on presence and prevalence of the parasite. Decided actions to be undertaken if the parasite spreads to new water systems close to Norway or Finland. Relevant authorities and stakeholders identified. The parasite is considered endemic to the Baltic sea area.
	Approach for monitoring effectiveness & enforcement (*as submitted in the IP*)	In the present program, salmon fry and parr are collected with electrofishing and then screened for Gyrodactylus. Cooperation with Norway to determine species and haplotype. eDNA may be introduced in the monitoring from 2020. Existing monitoring program (Action A1).
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. If*	The monitoring programme has continued as planned. The Gyrodactylus Contingency plan and Roadmap is under development.

	sub-actions are completed during the reporting year, this should be made clear. Other material (e.g. website links) will not be evaluated)	
	Current status of action *(Please note: 'Completed' means that the overall action is complete for the lifetime of the third reporting cycle. If it is an ongoing action that is reported on annually, it should be marked as 'Ongoing')*	Ongoing
	If 'Completed', has the action achieved its objective?	
Action A2:	Description of action (*as submitted in the IP)*	Develop the national ability to genetically identify alien Atlantic salmon (*Salmo salar*).
	Expected outcome (*as submitted in the IP*)	Ability to identify alien species and stocks. According to the impending new legislation only fin-clipped salmon can be landed in stocked salmon rivers. If escapees from salmon farms occur, they will have intact adipose fins (and cannot be harvested in the river fishery). It is important to rapidly be able to identify these fish genetically so that they may be removed when they pass fish ladders or are caught in brood stock fishery.
	Approach for monitoring effectiveness & enforcement (*as submitted in the IP*)	Comparing genetic analyses with other countries will secure for good detection ability.
	Progress on action to date *(Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. If sub-actions are completed during the reporting year, this should be made clear. Other material (e.g. website links) will not be evaluated)*	A compilation of the genetic status of stocks was published in 2020 (Söderberg et al 2020, in Swedish) and the microsatellites used by the Swedish University of Agricultural Sciences to identify salmon species has been calibrated against the SalSea baseline in 2020 (Palm & Söderberg 2020). A genetic study published in 2021 (Palm et al 2021) also indicate the extent of genetic introgression of farmed salmon on wild populations. The genetic baseline has been further improved in 2022 by adding data from 5 rives.
	Current status of action *(Please note: 'Completed' means that the overall action is complete for the lifetime of the third reporting cycle. If it is an ongoing action that is*	Completed

	reported on annually, it should be marked as 'Ongoing')	
	If 'Completed', has the action achieved its objective?	yes

4: Additional information required under the Convention
4.1 Details of any laws, regulations and programmes that have been adopted or repealed since the last notification.
No
4.2 Details of any new commitments concerning the adoption or maintenance in force for specified periods of time of conservation, restoration, and other management measures.
No
4.3 Details of any new actions to prohibit fishing for salmon beyond 12 nautical miles.
No
4.4 Details of any new actions to invite the attention of States not party to the Convention to matters relating to the activities of its vessels which could adversely affect salmon stocks subject to the Convention.
No
4.5 Details of any actions taken to implement regulatory measures under Article 13 of the Convention including imposition of adequate penalties for violations.
No
North American Commission Members only:
4.6 Details of any new measures to minimise bycatches of salmon originating in the rivers of the other member.
4.7 Details of any alteration to fishing patterns that result in the initiation of fishing or increase in catches of salmon originating in the rivers of another Party except with the consent of the latter.