



Agenda item 7.1  
For information

**Council**

**CNL(18)25**

***Annual Progress Report  
on Actions Taken Under the Implementation Plan for the Calendar Year 2017***

***EU - Sweden***



## CNL(18)25

### *Annual Progress Report on Actions taken under the Implementation Plan for the Calendar Year 2017*

The primary purposes of the Annual Progress Reports are to provide details of:

- 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

These reports will be reviewed by the Council. Please complete this form and return it to the Secretariat **no later than 29 March 2018**.

<b>Party:</b>	<b>European Union</b>
<b>Jurisdiction/Region:</b>	<b>Sweden</b>

<b>1: Changes to the Implementation Plan</b>	
<b>1.1 Describe any proposed revisions to the Implementation Plan</b> <i>(Where changes are proposed, the revised Implementation Plans should be submitted to the Secretariat by 1 December).</i>	
No changes as the plan will later be revised for the period 2019-2023.	
<b>1.2 Describe any major new initiatives or achievements for salmon conservation and management that you wish to highlight.</b>	
Coastal catch of salmon has been insignificant 2015-2017 due to fishing rules and a restricted licensing system. Mixed-stock fishery on the coast is not a problem anymore.	

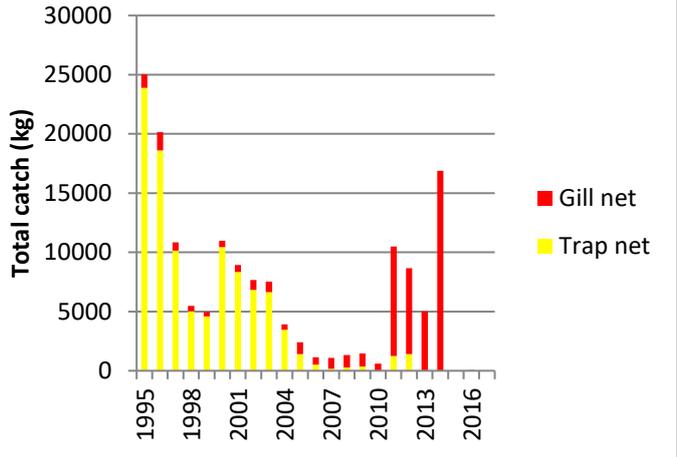
<b>2: Stock status and catches.</b>	
<b>2.1 Provide a description of any new factors which may significantly affect the abundance of salmon stocks and, if there has been any significant change in stock status since the development of the Implementation Plan, provide a brief (200 word max) summary of these changes.</b>	
The commercial coastal fishery for salmon is since 2015 insignificant with only two traps operating, with no reported catches of salmon as they are focussed on other species (garfish, brown trout). In 2017 the reported commercial catch was no salmon. The development is due to ban on gill-net fishing in deeper coastal waters and licenses to operate traps are seldom issued. Also, there is a bag-limit for non-commercial fishermen using rod and line.	

<b>2.2 Provide the following information on catches:</b> <i>(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')</i> .				
	In-river	Estuarine	Coastal	Total
(a) provisional nominal catch (which may be subject to revision) for 2017 (tonnes)	18.1*	0	0	18.1
(b) confirmed nominal catch of salmon for 2016 (tonnes)	9.03*	0	0	9.03
(c) estimated unreported catch for 2017 (tonnes)				1.8
(d) number and percentage of salmon caught and released in recreational fisheries in 2017.	<p>587 salmon, 15.8%.</p> <p>Catch and release (C&amp;R) is generally only carried out when angling in rivers with wild salmon (with adipose fin), whereas people fishing in rivers with reared salmon generally do not release caught fish back. C&amp;R is voluntary and there is no total statistics of the magnitude. Although a thorough statistics is lacking, the C&amp;R proportion evidently increases over time in wild rivers.</p> <p>*Catches in rivers 2015 was 17.688 tonnes and has varied between 9 – 18 tonnes in the last five years period.</p>			

### 3: Implementation Plan Actions.

**3.1 Provide an update on progress against actions relating to the Management of Salmon Fisheries** (Section 2.8 of the Implementation Plan).  
*Note: The reports under 'Progress on Action to Date' should provide a brief overview with a quantitative measure of progress made. 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.*

<b>Action F1:</b>	Description of Action <i>(as submitted in the IP)</i>	Implementing new fishing rules to lessen exploitation of wild salmon in rivers with low status.
	Expected Outcome <i>(as submitted in the IP)</i>	Increased stocks through lessened exploitation.
	Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i>	Commercial fishing for salmon on the coast was insignificant in 2015-2017 due to ban on gill nets and restrictive handling of licenses for traps. The figure below show coastal catches (harvest) 1995-2017 for the Swedish west coast. Gillnet (red) and trap net (yellow) were former commercial mixed-stock fisheries on the coast.

		 <p data-bbox="715 683 1423 824">In the different rivers fishing pressure has decreased due to voluntary restrictions on the fishing implemented by rivers association, e.g. restricted fishing period, bag limits,</p>
	Current Status of Action	Ongoing
	If 'Completed', has the Action achieved its objective?	
<b>Action F2:</b>	Description of Action <i>(as submitted in the IP)</i>	Phasing out mixed-stock fisheries on wild salmon in reared rivers, and mixed-stock fisheries on the coast.
	Expected Outcome <i>(as submitted in the IP)</i>	Increased stocks through lessened exploitation.
	Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i>	<p data-bbox="715 1102 1423 1429">See above, commercial mixed-stock fisheries does not exist on the coast. A few salmon may be caught in gill nets and with rod and line by non-commercial anglers, but the magnitude is insignificant. Due to large fishing protected areas at river mouths by-catch of salmon is negligible. Further, due to the poor stock status of the eel, all fishing on the coast with fyke-net aimed at eel is prohibited. There were low by-catches of brown trout and potentially salmon in this fishery.</p> <p data-bbox="715 1467 1423 1899">However, there is still a mixed-stock fishery in the two major rivers (River Lagan and Göta älv) due to releases of reared salmon in the main watercourse and natural smolt production in tributaries. The proportion of wild salmon caught as by-catch is circa 2% in River Lagan and 25% in River Göta älv. But, as stocked salmon are fin-clipped and thus easily identified, river managers or national authorities have a possibility to ban landing of wild salmon in these rivers (in the main channel). The need for altered fishing rules on a national level is annually analysed regarding need for actions.</p>
	Current Status of Action	Ongoing
	If 'Completed', has the Action achieved its objective?	

<b>Action F3:</b>	Description of Action <i>(as submitted in the IP)</i>	Fin-clipping of reared salmon and trout, annually ca 180,000.
	Expected Outcome <i>(as submitted in the IP)</i>	Allows for reared and wild salmon to be distinguished.
	Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i>	Successfully implemented since 2005. During the period 2005-2017 the average number of released reared salmon smolt annually has been approximately 170,000.
	Current Status of Action	Completed
	If 'Completed', has the Action achieved its objective?	Yes, The fin-clipping allows for diversified fishing rules on reared and wild salmon in rivers with stocked salmon (n=3). In rivers where wild salmon is not harvested, i.e. with C&R only, occasional reared salmon may be landed, minimizing the effect of genetic disturbance on the natural wild population.
<b>Action F4:</b>	Description of Action <i>(as submitted in the IP)</i>	Genetic base line of salmon stocks.
	Expected Outcome <i>(as submitted in the IP)</i>	Stocks in mixed-stock fisheries identified. International exchange of data possible.
	Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i>	A base-line genetic screening has been carried out 2015-2017 and was reported December 2017. The results showed that the 18 studied salmon rivers could be divided into two larger stock complexes, a northern and a southern. The genetic variation of stocks from individual rivers was significantly correlated to available rearing areas in rivers, stressing the need to restore habitat and increase connectivity.
	Current Status of Action	Completed
	If 'Completed', has the Action achieved its objective?	Yes, we now have good opportunities to identify salmon in mixed-stock fisheries (which in now however phased out on the coast; see action F1 & F2), have a good example to show river managers the need to increase/restore habitat and have identified a few rivers with low genetic variation. The cause of the latter seem to be poor fishways and population bottlenecks during acidification. The results will be internationally published during 2018/19.
<b>Action F5:</b>	Description of Action <i>(as submitted in the IP)</i>	Running monitoring in index river (smolt & spawner census, tagging of smolt, electrofishing).
	Expected Outcome <i>(as submitted in the IP)</i>	Stock-recruitment data, sea survival, run-timing, diversity of stock, age at smolting, age in the sea.
	Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i>	The salmon traps at the old mill (Nydala) in index River Högvadsån has been in operation since 1954. The efficiency of the traps have been evaluated and the results have been used to establish Biological reference points as requested by NASCO.

		<p>Pittags will be used for the first time for tagging of smolts in 2018. Previously Carlin tags was used.</p> <p>Improvement of the passage for fish at the mill will be planned during 2018 to modernize both the traps and the fish handling.</p>
	Current Status of Action	Ongoing
	If 'Completed', has the Action achieved its objective?	
<b>Action F6:</b>	Description of Action <i>(as submitted in the IP)</i>	Establishing Conservation Limits & Management Targets from index river data and habitat surveys.
	Expected Outcome <i>(as submitted in the IP)</i>	Individual river assessment facilitates management and advice.
	Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i>	At the WGNAS 2017 we presented the Conservation Limit and Management Target suggested for the index river and how these values is transported to other rivers. The CL is 4.2 eggs per m <sup>2</sup> of suitable habitat and the spawning target 9.6 eggs.
	Current Status of Action	Completed
	If 'Completed', has the Action achieved its objective?	Yes, but the results will be re-evaluated annually to successively achieve better statistical precision in estimates. A Bayesian approach will be tested during 2018.
<b>Action F7:</b>	Description of Action <i>(as submitted in the IP)</i>	Establishing in-river exploitation levels, through tagging/returns & catch and effort statistics in two rivers.
	Expected Outcome <i>(as submitted in the IP)</i>	Aiding MTs, and also required for International assessment through ICES
	Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i>	To date, this has only been carried out in the index river (River Högvadsån and the main River Ätran) by tagging fish (Carlin tags). The few catches of tagged fish were not sufficient for conclusions. Also sport fishing catch has been compared to data from a video counter at Herting downstream. The preliminary results indicates an exploitation level of 30 %, however, data from the video counter need quality control. This will be carried out in 2018. In 2018 also River Sävån (two fish counters) will be included in the study.  As for fishing effort, it is difficult to obtain high quality data. Such reporting from anglers is not required according to Swedish legislation.
	Current Status of Action	Ongoing
	If 'Completed', has the Action achieved its objective?	
<b>Action F8:</b>	Description of Action <i>(as submitted in the IP)</i>	Improving catch statistics (C&R, effort)
	Expected Outcome <i>(as submitted in the IP)</i>	Aiding MTs, and also required for International assessment through ICES.

	<p>Progress on Action to Date (Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</p>	<p>According to Swedish law the national authority cannot force non-commercial fishermen to report catches. Meanwhile, there is a successive work with information to persuade non-commercial anglers to provide catch statistics of good quality. For commercial fishermen this is compulsory.</p> <p>The Swedish Government ordered 2015 from the responsible national authority an investigation for a national plan for the future conservation and management of salmon and sea-running brown trout for both stocks in the Baltic sea and the Atlantic. The plan was delivered in late 2015 and focussed among other things on obtaining high quality data from non-commercial fishery, which would require a change of the existing fishing law. It was also suggested to start with salmon-tags as has been successfully implemented in Ireland. The Swedish government has not yet decided on this.</p>
	Current Status of Action	Ongoing
	If 'Completed', has the Action achieved its objective?	
<b>Action F9:</b>	Description of Action (as submitted in the IP)	Reducing over-exploitation of MSW in rivers through restrictions on landing large fish. (Compare F1.)
	Expected Outcome (as submitted in the IP)	Increased egg deposition. <u>Action aimed at weak stocks or where catches are unreported/uncertain.</u>
	Progress on Action to Date (Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)	<p>The responsible authority (The Swedish Agency for Marine and Water Management) has decided not to impose new general fishing rules addressing this, as the problem is focussed to a few rivers. Through the annual stock status update, river managers are aware of the problem and voluntary actions are taken when needed.</p> <p>Seven rivers were classified as having reduced reproductive capacity in 2017. In Rivers Bäveån, Enningdalsälven and Vegeå no fishing is carried out. In Rivers Rolfsån, Suseån and Fylleån fishing is very restricted. In River Nissan enhancement stocking is carried out, but fishing pressure has remained as before. The fishing pressure in River Nissan will be addressed during 2018.</p>
	Current Status of Action	Ongoing
	If 'Completed', has the Action achieved its objective?	
<b>Action F10:</b>	Description of Action (as submitted in the IP)	Coordinating and securing monitoring of recruitment (parr) in rivers.
	Expected Outcome (as submitted in the IP)	Securing monitoring in at least 17 of 23 rivers, preferably all rivers if feasible.

	Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i>	Successively some monitoring sites are abandoned by local and regional authorities. These sites were usually included in follow-up studies of liming. In 2017 the national monitoring of salmon stocks was increased with 20 sites to compensate for this, and in 2018 another 20 sites will be added. These extra sites will be surveyed at least the coming five years.
	Current Status of Action	Completed
	If 'Completed', has the Action achieved its objective?	Yes, this is a prerequisite for assessing stock status in several rivers where fish counter data is lacking.
<b>Action F11:</b>	Description of Action <i>(as submitted in the IP)</i>	Initiate and support formation of fish management units in salmon rivers
	Expected Outcome <i>(as submitted in the IP)</i>	A more effective decision process involving fishing rights owner regarding decision on CL, regulation of fisheries, data collection, habitat restoration.
	Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i>	Fish management units are already formed in many of the rivers. An inventory was made in 2015 on the need to form additional fish management units. The inventory showed that there was a need for management units in a few smaller rivers and in some parts of the larger rivers (Ätran, Rolfsån), in the county of Halland.  Information exchange and discussions with the different river managers and land owners are ongoing through the County fisheries officers. In rivers where the fishing right owners are not united in river management units it is more laborious to take and keep contact and decide on voluntary regulation of the fisheries. However, the catch of salmon is generally very low in rivers where management units are missing.
	Current Status of Action	Ongoing
	If 'Completed', has the Action achieved its objective?	

<b>3.2 Provide an update on progress against actions relating to Habitat Protection and Restoration</b> (Section 3.4 of the Implementation Plan). <i>Note: The reports under 'Progress on Action to Date' should provide a brief overview with a quantitative measure of progress made. 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.</i>		
<b>Action H1:</b>	Description of Action <i>(as submitted in the IP)</i>	Continued liming of acidified salmon rivers and tributaries
	Expected Outcome <i>(as submitted in the IP)</i>	Increased pH, lowered toxic aluminium. Increased juvenile survival, increased biodiversity.
	Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g.</i>	All salmon rivers and their tributaries with salmon that require liming are present included in a liming program. Of the 23 rivers 20 (91%) are limed, some only in tributaries above the salmon habitat. The effect

	<i>website links) will not be evaluated.)</i>	<p>is monitored with samples of water chemistry, benthic invertebrates and electrofishing. The results are evaluated annually by the County boards and reported to the Swedish Agency for Marine and Water Management. Generally the goal of keeping pH above 6 and the levels of labile aluminium at non-toxic levels is reached.</p> <p>A recent (2016) internationally published evaluation showed that the frequency of acid episodes has declined exponentially in limed rivers, due to successive adjusted of lime doses and strategies. As a consequence, the ecological status of the fish fauna has reached that of fish in neutral reference rivers. (Holmgren, K., E. Degerman, E. Petersson &amp; B. Bergquist. 2016. Long term trends of fish after liming of Swedish streams and lakes. Atmospheric Environment 146: 245-251)</p>
	Current Status of Action	Ongoing
	If Completed, has the Action achieved its objective?	
<b>Action H2:</b>	Description of Action (as submitted in the IP)	Habitat surveys compiled, quality assured and new data added if required.
	Expected Outcome (as submitted in the IP)	Quality controlled data on salmon habitat and quality compiled in a database.
	Progress on Action to Date (Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)	<p>A report was compiled in 2016. It shows that there is 311 hectares of spawning and rearing habitat of salmon in rivers on the Swedish west coast today. This means that the available habitat has increased with 16% since 1999. This is mainly due to new fishways, liming operations and habitat improvement.</p> <p>From these data and the results from the index river the present total smolt production has been predicted to be 110 000 smolt annually</p>
	Current Status of Action	Completed
	If Completed, has the Action achieved its objective?	The habitat mapping was needed for setting the reference values (CL and spawning target) as we focus on only salmon habitat, not the whole wetted area of rivers. This gives more precise estimates.
<b>Action H3:</b>	Description of Action (as submitted in the IP)	Plan for continued habitat restoration in salmon rivers. (Also including H2 & H4)
	Expected Outcome (as submitted in the IP)	Plan in 2015, with the cooperation of the County Administrative Boards. Different plans exist.

	Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i>	In 2015 a joint work started of the three regional counties and the Swedish University of Agricultural Sciences to coordinate restoration plans (habitat and connectivity issues). This work will result in an EU Life application aimed at further restoration and a common tool-box for future work and prioritization of efforts.
	Current Status of Action	Ongoing
	If Completed, has the Action achieved its objective?	
<b>Action H4:</b>	Description of Action <i>(as submitted in the IP)</i>	Establishing criteria for BAT (best available technology) for hydropower generation.
	Expected Outcome <i>(as submitted in the IP)</i>	Plan in 2015. Implemented in all Counties.
	Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i>	The main results have been presented at NASCO annual meeting 2015 by: Carlstrand, H. & E. Degerman, 2015. Progress in developing best available technology for hydropower generation. NASCO. CNL(15)4, 12 s.  Establishing BAT is a joint project of the Swedish Agency for Marine and Water Management (SWAM), the hydropower industry, County boards and Universities. The final report has not yet been published due to the recently presented different opinions by the hydropower companies. SWAM has not yet decided how to proceed, usually large consideration is taken to the opinion of the hydropower industry.
	Current Status of Action	Ongoing
	If Completed, has the Action achieved its objective?	
<b>Action H5:</b>	Description of Action <i>(as submitted in the IP)</i>	Establishing criteria and workflow for surveillance of hydropower plants according to Environmental Law & BAT.
	Expected Outcome <i>(as submitted in the IP)</i>	Plan in 2015. Implemented in all Counties.
	Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i>	See above, also this action is delayed due to the problems with action H4. Awaits decision from the Swedish Agency for Marine and water management.
	Current Status of Action	Ongoing
	If Completed, has the Action achieved its objective?	

**3.3 Provide an update on progress against actions relating to Aquaculture, Introductions and Transfers and Transgenics (Section 4.8 of the Implementation Plan).**

<p><b>Note:</b> The reports under 'Progress on Action to Date' should provide a brief overview with a quantitative measure of progress made. 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.</p>		
<b>Action A1:</b>	Description of Action (as submitted in the IP)	Monitoring of <i>Gyrodactylus salaris</i>
	Expected Outcome (as submitted in the IP)	Updated information on G. salaris distribution and infection.
	Progress on Action to Date (Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)	<p>The monitoring programme continues as planned, and the distribution of <i>Gyrodactylus salaris</i> is annually reported to WGNAS and authorities in Norway. New infections in rivers are reported according to regulation to EU.</p> <p>The Swedish authorities consider G. salaris to be a threat to remaining uninfected stocks. Protective measures have been undertaken to avoid spreading the parasite, e.g. ban on stocking salmonid fish in the whole catchment of non-infected rivers.</p> <p>A report on the situation was compiled in February 2017 and submitted to the NASCO secretariat (Degerman, E. &amp; H. Carlstrand, 2017. <i>Gyrodactylus salaris</i> in Sweden; management and monitoring).</p> <p>In April 2018 Sweden will participate in NASCO's working group on <i>Gyrodactylus</i>.</p>
	Current Status of Action	Ongoing
	If Completed, has the Action achieved its objective?	
<b>Action A2:</b>	Description of Action (as submitted in the IP)	Genetic screening of alien (escaped) salmon. (Compare action F4).
	Expected Outcome (as submitted in the IP)	Determination of origin of alien salmon. Based on established base line (action F4).
	Progress on Action to Date (Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)	<p>Since the completion of the genetic baseline (action F4) the work has been intensified with identifying alien salmon. Alien salmon normally enters the larger rivers, and to a lesser extent smaller rivers. Focus has been put on the largest river – R. Göta älv – where studies have shown different proportion of alien salmon different years. Although the results are not finalized, it has been shown that alien salmon are not from the Swedish west coast or the Baltic sea. Comparisons with farmed salmon is needed. However, this is not scheduled for 2018.</p>
	Current Status of Action	Ongoing
	If Completed, has the Action	

	achieved its objective?	
--	-------------------------	--

<b>4: Additional information required under the Convention</b>		
4.1	Details of any laws, regulations and programmes that have been adopted or repealed since the last notification.	
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.	
4.3	Details of any new actions to prohibit fishing for salmon beyond 12 nautical miles.	
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.	
4.5	Details of any actions taken to implement regulatory measures under Article 13 of the Convention including imposition of adequate penalties for violations.	