



Agenda item 7.1  
For information

**Council**

**CNL(18)22**

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

***Norway***



**CNL(18)22**

***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>	Norway
<b>Jurisdiction/Region:</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>																																															
<b>No revision to the IP</b>																																															
<b>1.2 Describe any major new initiatives or achievements for salmon conservation and management that you wish to highlight.</b>																																															
148 salmon populations were classified according to the National Quality Norm for Wild Salmon. The classification includes nearly all of the most important Norwegian salmon rivers representing 83 % of the total combined Norwegian spawning target (reported in CNL(16)19) and 86% of annual reported catches in the river fisheries.																																															
<table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2" style="writing-mode: vertical-rl; transform: rotate(180deg);">Genetic integrity</th> <th colspan="5">Conservation limit attainment and harvest potential</th> <th rowspan="2">Sum</th> </tr> <tr> <th>Very poor</th> <th>Poor</th> <th>Moderate</th> <th>Good</th> <th>Very good</th> </tr> </thead> <tbody> <tr> <td>Very poor</td> <td style="background-color: red;">14</td> <td style="background-color: orange;">4</td> <td style="background-color: yellow;">3</td> <td style="background-color: lightgreen;">8</td> <td style="background-color: green;">9</td> <td>38</td> </tr> <tr> <td>Poor</td> <td style="background-color: red;">1</td> <td style="background-color: orange;">1</td> <td style="background-color: yellow;">5</td> <td style="background-color: lightgreen;">0</td> <td style="background-color: green;">3</td> <td>10</td> </tr> <tr> <td>Moderate</td> <td style="background-color: red;">9</td> <td style="background-color: orange;">2</td> <td style="background-color: yellow;">6</td> <td style="background-color: lightgreen;">9</td> <td style="background-color: green;">23</td> <td>49</td> </tr> <tr> <td>Very good /good</td> <td style="background-color: red;">15</td> <td style="background-color: orange;">3</td> <td style="background-color: yellow;">4</td> <td style="background-color: lightgreen;">6</td> <td style="background-color: green;">23</td> <td>51</td> </tr> <tr> <td>Sum</td> <td>39</td> <td>10</td> <td>18</td> <td>23</td> <td>58</td> <td>148</td> </tr> </tbody> </table>	Genetic integrity	Conservation limit attainment and harvest potential					Sum	Very poor	Poor	Moderate	Good	Very good	Very poor	14	4	3	8	9	38	Poor	1	1	5	0	3	10	Moderate	9	2	6	9	23	49	Very good /good	15	3	4	6	23	51	Sum	39	10	18	23	58	148
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<i>The Norwegian Quality norm classification system used to classify 148 rivers. Note that the worst classification in any of the dimensions determines the final classification of the stock.</i>																																															
Management targets, based on spawning target attainment alone, were achieved for 120 of the 148 classified stocks in the period 2010 - 2014. However, only 29 of the 148 stocks reached the goal																																															

good or very good quality according to the norm, 42 stocks had moderate quality, and 77 stocks (52 % of those assessed) were classified as poor or very poor.

67 stocks did not reach the goal for the **Conservation limit attainment and harvest potential dimension**. 97 stocks did not reach the goal according to the **Genetic integrity dimension**. For 45 of the stocks the status was worse than good for both dimensions.

With the goal of improving the status of the stocks, an action plan where impacts on the stocks are assessed and relevant measures identified is in preparation.

## 2: Stock status and catches.

**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.**

**No changes**

**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')*.

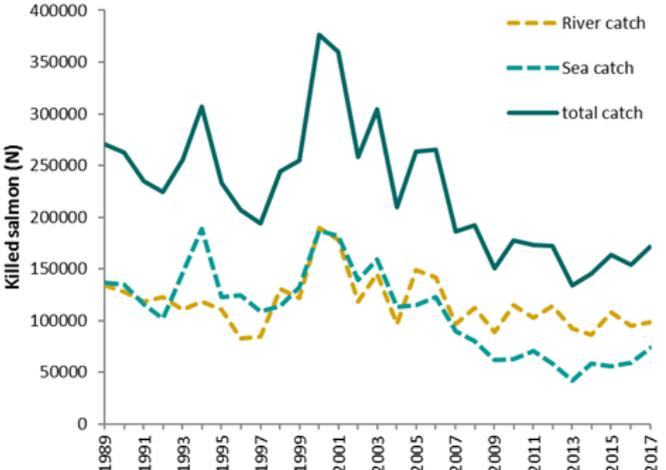
	In-river	Estuarine	Coastal	Total
(a) provisional nominal catch (which may be subject to revision) for 2017 (tonnes)	374		290	664
(b) confirmed nominal catch of salmon for 2016 (tonnes)	343		269	612
(c) estimated unreported catch for 2017 (tonnes)	71		214	285
(d) number and percentage of salmon caught and released in recreational fisheries in 2017	25876, 13%			

## 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.*

Action F1:	Description of Action (as submitted in the IP)	Annual assessments of the management target achievement for the previous 4-5 year period are made by The Norwegian Scientific Committee for Atlantic Salmon Management (SACAS). In response to advice from the committee regulatory measures will be introduced normally every four or five years or if

		<p>necessary annually or within season, as described in section 2.2. Special caution is exercised when regulating the fishery in areas with the risk of impacts from aquaculture. Fishing season, in sea and river fisheries will be used as a primary means to reach the management targets. Pre-agreed regulatory measures are implemented in rivers if there is a risk that spawning targets are not met.</p>
	<p>Expected Outcome <i>(as submitted in the IP)</i></p>	<p>Increase in number of stocks reaching management targets.</p>
	<p>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>	<p>New regulatory measures in sea and river fisheries were introduced in 2016. In 2017, SACAS assessed that out of 190 salmon stocks with sufficient information, managing targets were achieved in more than 80% of them. Due to delay in reporting procedures, SACAS's reports assessments for 2016 fishing season. In the 2016 regulations, a decision was made to further restrict MSFs in the Tanafjord and coastal region of Finnmark in order to offer additional protection to Tana River stocks. These additional restrictions would come into force when the new agreement for the Tana River was reached. Given the delay in reaching such an agreement, it was decided not to bring the regulations into force in 2017, but to do so in 2018.</p> <p>The 2017 fishing season resulted in an increase in killed salmon (N) compared to 2016 in both river and sea fisheries (figure 1). The mean size of the caught salmon in 2017 increased in river fisheries compared to 2016. In the sea fisheries the mean size decreased compared to 2016. No regulatory adjustments within fishing season were necessary in 2017.</p>  <p>Figure 1. Annual killed salmon in sea- and river fisheries.</p>
	<p>Current Status of Action</p>	<p>Ongoing</p>

	If 'Completed', has the Action achieved its objective?	
<b>Action F2:</b>	Description of Action <i>(as submitted in the IP)</i>	Introduction of mandatory mid-season assessment of the fishery and salmon run and pre-agreed measures in more rivers. Consider the introduction of similar requirements for sea-fisheries. Further develop the specific toolkit, consisting of a procedural memo and specially adapted spread sheets for each individual river.
	Expected Outcome <i>(as submitted in the IP)</i>	Increase in number of stocks reaching management targets.
	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>	Regional authorities keep closer contact to local managers to make sure pre-agreed measures are set into force in accordance with the outcome of mid-season assessments.  In 2017 digital catch reporting for sea-fisheries was introduced as a "soft launch" of a new system to collect user experience. (Around 35% of the 200 invited users completed this type of reporting.) Along with digital reporting, legislation is now in place to implement mid-season reporting for sea-fisheries. However it has not been considered necessary.
	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>	Introduction of "second" generation spawning targets.
	Expected Outcome <i>(as submitted in the IP)</i>	More precise spawning targets and better stock management.
	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 report describing progress on - and process of - an adjusted method for calculation of spawning targets is in preparation.
	Current Status of Action	Ongoing
	If 'Completed', has the Action achieved its objective?	
<b>Action F4:</b>	Description of Action <i>(as submitted in the IP)</i>	Negotiate a new regulatory regime for the river Tana with Finland, and introduce a stock rebuilding program in collaboration with Finland.
	Expected Outcome <i>(as submitted in the IP)</i>	A new agreement in 2016, followed by stock-rebuilding up to spawning target achievement in the river Tana.
	Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of</i>	A new bi-lateral agreement was signed in 2016 and accepted by the parliaments in Norway and Finland in March 2017. The revised regulatory regime aiming to

	<i>progress. Other material (e.g. website links) will not be evaluated.)</i>	reduce exploitation by c. 30% was implemented in 2017. In addition, a system with monitoring, annual evaluation of target attainment and bilateral contact to discuss stock status and possible revision of fishing regulations, has been implemented.
	Current Status of Action	Completed
	If 'Completed', has the Action achieved its objective?	The negotiations are completed. However, it is a little early to conclude on the effect of the agreement and the stock rebuilding programme.

### 3.2 Provide an update on progress against actions relating to Habitat Protection and Restoration (Section 3.4 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 H1:</b>	Description of Action (as submitted in the IP)	Liming of 22 acidified salmon rivers and if feasible include five additional rivers in the long-term liming program.
	Expected Outcome (as submitted in the IP)	Restored salmon stocks and fishing possibilities.
	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.)	At present, 22 Norwegian salmon rivers are included in the national program for river liming. In rivers where stocks have been lost due to acid rain, stocks are re-established. Salmon catches in limed rivers have increased from about 10 tons in the 1980s to 40 - 60 tons today, and at present this makes up for 10-14 % of total salmon catches in Norwegian rivers. The funding comes from by the Norwegian Government, and in 2017, the cost was about 60 mill NOK (≈ 5.5 mill GBP).
	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)	All rules of operations for the largest and oldest hydropower plants are subject to revision within 2022. A major challenge is how the water needed for reintroduction of Atlantic salmon and other environmental improvements shall be weighed in relation to the goals for producing renewable energy (the RES Directive). Measures in National Salmon Rivers will be given high priority. Positive and negative effects will be evaluated. If the positive values turns up to exceed the negative values new conditions will be set.  Other actions are habitat improvements, fish-ladders, adjustment in the manoeuvring regimes etc.
	Expected Outcome (as submitted in the IP)	In general, an increase in water discharge in dewatered areas, no ramping, less fluctuations in water levels,

		and more environmentally friendly allocation of water and habitat improvements in critical periods of the salmon life cycle will be evaluated in each specific river.
	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>	Revision of licence conditions and rules of operations has been addressed in 8 river systems by January 31. 2018. Of these, Atlantic salmon have been of great interest in the river Årdalselva in Rogaland county.  The process to revise licence conditions and rules of operation is time consuming due to the fact that several considerations are addressed and involvement of stakeholders with different agenda. However, 41 different revisions are now ongoing, both anadromous and non-anadromous water courses
	Current Status of Action	Ongoing
	If Completed, has the Action achieved its objective?	
<b>Action H3:</b>	Description of Action <i>(as submitted in the IP)</i>	Removal or reconstruction of artificial migration obstacles such as pipes and culverts through roads.
	Expected Outcome <i>(as submitted in the IP)</i>	Effective fish passages increase available nursery habitats in upper reaches of salmon rivers - removal of migration obstacles increases available habitat in tributaries of larger salmon rivers and in smaller coastal streams.
	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 road authorities have removed 14 migration obstacles for salmon and sea trout in 2017. Regional plans, with environmental objectives and prioritizing of habitat improvements in all river basin, were finished in 2015 as part of the implementation of EUs Water Framework Directive. Measures to reduce or remove barriers caused by roads in prioritized rivers are taken by the road authorities. A new program of measures will be in operation within 2018
	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>	a) Increased focus on enforcing the current legislation against habitat deterioration, to avoid further negative impact on salmon nursery habitat. Special focus will be on National Salmon Rivers, in which there are particular restrictions against most types of habitat encroachment. An important part of this initiative is to bring updated information on the new regime to important stakeholders such as landowners and road constructors.  b) Habitat restoration and biotope adjustments. A lot of weirs have been constructed throughout the country. In later years several of these have been reconstructed to improve the passage of migrating

		anadromous salmonids. In Northern Norway in particular several actions have taken place to improve the salmon habitat. Several rivers that were channelized in the 1990'ies have achieved improvements by opening of river reaches to be active during floods, placement of large stones to increase habitat heterogeneity, rebuilding of flood protection works, including jacks and other constructions to increase hydraulic heterogeneity.
	Expected Outcome (as submitted in the IP)	Increased productivity in nursery habitats for Atlantic salmon due to decreased habitat degradation and increased connectivity in salmon river systems.
	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.)	Due to delay in reporting procedures, the present status report actions carried out in 2016. Measurements to improve the ecological conditions for anadromous salmonids have been carried out in the rivers Alta (relocation of embankments due to a flood in 2013) in northern Norway, Bævra (reconstruction of weirs to enhance conditions for upstream migrating salmonids) in Central Norway and Aagaardselva in Southern Norway (improvement of spawning areas).
	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).

*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 A1:</b>	Description of Action (as submitted in the IP)	A regional carrying capacity model for sea lice is now being developed.
	Expected Outcome (as submitted in the IP)	Based on farmed salmon biomass and other parameters in a region, the numbers of sea lice copepodites in the area can be estimated. Taking into account the dispersion patterns for selected times the copepodite transmission within the region can be determined.  Adaptive management in response to monitoring results will then be possible.
	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.)	Production capacity adjustments in salmonid sea based farms are regulated in accordance with the effects of sea lice on Wild Salmon Stocks. Based on effects in 2016 and 2017 production areas in the North and Central Norway are given a possibility to a 6% growth in production. Research on and modelling of how sea lice copepodites from salmon farms affect wild salmonids will be continuously refined.
	Current Status of Action	Ongoing

	If Completed, has the Action achieved its objective?	
<b>Action A2:</b>	Description of Action <i>(as submitted in the IP)</i>	<p>1. Further improvement of precautionary measures e.g :</p> <ul style="list-style-type: none"> <li>- Site based technical certificate for every fish farm in sea.</li> <li>- Stricter requirements concerning mesh size and number of fish held in one cage.</li> <li>- A public consultation on amendments of the The Norwegian Aquaculture Act to improve legal base for environmental measures has been undertaken.</li> </ul> <p>2. Research on sterile farmed salmon to reduce genetic and ecological threats to wild salmon populations.</p> <p>3. Additional long-term monitoring programs and studies of ecological processes and the environmental impacts of fish farming.</p> <p>4. Test of resistance board weirs etc. to monitor and remove escaped salmon from Norwegian rivers.</p> <p>5. Search for better methods and technical solutions tracing the origin of farmed Atlantic salmon escapees. (This can be done by using DNA Parentage Assignment (industry based project) or other suitable methods.</p>
	Expected Outcome <i>(as submitted in the IP)</i>	<p>1. Reduced genetic interaction between farmed and wild Atlantic salmon.</p> <p>2. Reduced spawning activity of farmed salmon in rivers.</p> <p>3. -4. Get better knowledge and measures to cope with escaped Atlantic salmon.</p> <p>5. Methods for immediate identification of escaped Atlantic salmon and basis for action against leaking sites. Secure identification of the guilty polluter.</p>
	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>Research are still ongoing to evaluate animal welfare considerations as well as performance in relation to various environmental factors. Consequently research licences are currently using triploid fish. Also several commercial salmon-farmers have started up using triploid fish as in “green” salmon farm licenses.</p> <p>The national program for monitoring escaped salmon will finish its fourth year report in April 2018. This will be continued on a yearly basis, with addition of new river-systems as high quality assessments are available.</p>

		<p>To ensure reliable results from the monitoring program, there has been developed a Field “handbook”, attempting to standardize the various method used in the programme. As a part of this standardizing, there has been conducted several field experiments to compare different methods, thus aiming to optimize the choice of method(s) in the individual river systems. The Field “Hand-book” will be updated continuously when new knowledge are available. In 2016, The Directorate of Fisheries did a pilot-project with funding available for immediate removal of escaped fish in the monitoring period. This project was evaluated last year, and are now organised as a permanent action.</p> <p>Based on a «polluter pay» perspective, the Directorate of Fisheries has implemented a practice were salmon farmers have been given an extended responsibility concerning funding and organizing monitoring and recapture in salt- and freshwater after escape incidents.</p> <p>At the present time, the institute of Marine Research are continuing, and funding the works on two traps in Hardanger for research purposes as well as testing traps as a method for removal of escaped salmon entering the rivers.</p> <p>Several projects are working on identifying escaped salmon back to escape site. There is one project testing use of rare earth elements in tracing salmon back to its origin. This project is now presented in combination with tracking by use of DNA methods.</p>
	Current Status of Action	Ongoing
	If Completed, has the Action achieved its objective?	
<b>Action A3:</b>	Description of Action (as submitted in the IP)	Proposal for a new action plan for the control of <i>Gyrodactylus salaris</i> is being developed.
	Expected Outcome (as submitted in the IP)	To combat the parasite in two regions, Rauma region consisting of 5 infected rivers, and Skibotn region consisting of two infected rivers. In addition, there are plans to build a long-term fish barrier in the River Driva.
	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.)	5 years of monitoring after completion of chemical treatment is required before rivers can be declared free of <i>Gyrodactylus salaris</i> . The infected rivers in the Rauma region were treated chemically in 2013 and 2014 to eradicate <i>G. salaris</i> . After three years of surveillance, the parasite is still not found in this

		<p>region. Regarding the infected rivers in the Skibotn region, these were completed in 2015 and 2016. No parasites were detected in this region in 2017.</p> <p>A long-term fish barrier in the River Driva was completed in winter/spring 2017. This fish barrier must be in operation for 6 years before chemical treatment downstream the barrier can be carried out. In 2017, 10 rivers were declared free of parasites in Norway.</p>
	Current Status of Action	Ongoing
	If Completed, has the Action achieved its objective?	
<b>Action A4:</b>	Description of Action <i>(as submitted in the IP)</i>	<p>It is prepared an action plan to reduce the impact of pink salmon in the rivers in the county of Finnmark, the northernmost county in Norway. The plan includes monitoring and removal of pink salmon in rivers. There is also a plan to reduce minnow impact on native fish populations in the river Namsen in the middle part of Norway. Currently, minnow are not spread to the Atlantic salmon distribution area. Monitoring is therefore the most important action so far.</p>
	Expected Outcome <i>(as submitted in the IP)</i>	The aim is to reduce the breeding population of pink salmon to a minimum.
	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>In 2017, there has been a large increase of pink salmon in rivers along the entire Norwegian coast. Therefore, a register to show the extent of pink salmon in Norwegian rivers was established. In total, 6170 pink salmon are recorded in catches. In addition, 5285 pink salmon are observed by counts and camera surveillance. The largest number of pink salmon was observed in the northernmost county. In several rivers, measures were taken to remove pink salmon. Investigations will now be carried out to see whether it establishes self-reproducing stocks in several Norwegian rivers. A risk assessment will also be conducted.</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.
<b>The Norwegian Food Safety Authority has partly redrawn permission to produce on 5 production sites for salmon in 2016 due to long lasting problems with sea lice on the fish in the farms.</b>

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.