Agenda Item 6.1
For Information

Council

CNL(14)28

Annual Progress Report
on Actions Taken Under Implementation Plans for the Calendar Year 2013

Norway

CNL(14)28

Annual Progress Report on Actions taken under Implementation Plans for the Calendar Year 2013

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 **by 1 April 2014**.

Party:	**Norway**
Jurisdiction/Region:	

1: Changes to the Implementation Plan
1.1 Describe any proposed revisions to the Implementation Plan and, where appropriate, provide a revised plan.
1.2 Describe any major new initiatives or achievements for salmon conservation and management that you wish to highlight.
2013 was the first year in a pilot-project testing out floating board weirs as a mean for monitoring and sorting out farmed salmon in river Etne. The experience from this first year has given a valuable insight in the use of fish traps in management and research. .

2: Stock status and catches.
2.1 Provide a description of any significant changes in the status of stocks relative to the reference points described in the Implementation Plan and of any new factors which may significantly affect the abundance of salmon stocks.
No new assessment on stock status categories.

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').*				
(a) provisional nominal catch (which may be subject to revision) for 2013 (tonnes)	In-river	Estuarine	Coastal	Total
	283	-	192	475
(b) confirmed nominal catch of salmon for 2012 (tonnes)	440	-	255	695
(c) estimated unreported catch for 2013 (tonnes)	51	-	153	204
(d) number and percentage of salmon caught and released in recreational fisheries in 2013.	Number of salmon caught and released: 15912 Number of salmon caught killed: 91789 Total number of salmon caught: 107701 Percentage caught and release (of total): 15 %			

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)*

Action F1:	Description of Action:	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 necessary annually or within season, as described in section 2.2. 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.
	Expected Outcome:	Increase in number of stocks reaching management targets.
	Monitoring/Enforcement Results:	Attainment of management targets has improved substantially from the first assessment based on the period 2006-2009 to the last assessment made in 2012 (based on the period 2009-2011). Attainment of management targets in the period 2009-2011 was achieved for 53 % (n=92) of the assessed populations, while it was a risk that management target was not attained in 25 % (n=44) of the populations, most likely not attained in 8 % (n=14) of the populations, and far from attained in the 13 % (n=23) of the assessed populations.
	Ongoing/completed:	Ongoing

	Achieved objective?	Not yet, but the increase in number of stocks reaching management target is positive, and has improved substantially from the first assessed period to the second assessed period. This has occurred in spite of poor survival at sea and thus the total number of returning adults to the coast of Norway remaining at historically low levels. The improvement could largely be attributed to reduced exploitation rates, due to new restrictions in both the marine and river fisheries, and the exploitation rate is assessed to be low or very low for populations still not attaining the spawning targets.
Action F2:	Description of Action:	1) Introduction of mandatory mid-season assessment of the fishery and salmon run and pre-agreed measures in more rivers. 2) Consider the introduction of similar requirements for sea-fisheries. 3) Further develop the specific toolkit, consisting of a procedural memo and specially adapted spread sheets for each individual river.
	Expected Outcome:	Increase in number of stocks reaching management targets.
	Monitoring/Enforcement Results:	
	Ongoing/completed:	Ongoing
	Achieved objective?	1) A mandatory mid-season assessment of the fishery and salmon run and pre-agreed measures has been introduced in a few more rivers in 2013. 2) Norwegian Environment Agency has assigned the task to assess the introduction of mid-season assessment for sea-fisheries to a research institute. The results of this assignment will be provided in May. Implementation of mid-season assessment for sea fishery will be assessed after this. 3) There has been conducted a preliminary assessment of the mandatory mid-season assessment and pre-agreed measures. The preliminary assessment reveals that the mandatory mid-season assessment and pre agreed measures may have some weaknesses. Further evaluation of the mid-season assessment will be conducted of research institute in the up-coming years.
Action F3:	Description of Action:	Introduction of “second” generation spawning targets.
	Expected Outcome:	More precise spawning targets and better stock management.
	Monitoring/Enforcement Results:	The evaluation of a habitat classification system as a proxy for carrying capacity (K) revealed that further data

		(more rivers) combining habitat classification and K were needed. Therefore the number of rivers with spawning/recruitment data and habitat classification has been increased, and analysis of to which extent simple habitat measures can predict carrying capacity has been conducted. Correlation between different habitat data and carrying capacity has been tested. This is considered as urgent in the development of method for "second" generation spawning targets. In addition local participation in habitat classification has been tried out in two large rivers (Gaula and Surna).
	Ongoing/completed:	Ongoing
	Achieved objective?	Revised spawning targets based on established method and new information, were published summer 2013. Implementation of "second" generation spawning target will not be accomplished before the method has sufficient scientific basis, hopefully from 2016 and onwards.
Action F4:	Description of Action:	Negotiate a new regulatory regime for the river Tana with Finland, based on a stock rebuilding program in collaboration with Finland.
	Expected Outcome:	A new agreement in 2016, followed by stock-rebuilding up to spawning target achievement in the river Tana.
	Monitoring/Enforcement Results:	
	Ongoing/completed:	Ongoing
	Achieved objective?	

3.2 Provide an update on progress against actions relating to Habitat Protection and Restoration *(section 3.4 of the Implementation Plan)*		
Action H1:	Description of Action:	Liming of 22 acidified salmon rivers and if feasible include five additional rivers in the long-term liming program
	Expected Outcome:	Restored salmon stocks and fishing possibilities
	Monitoring/Enforcement Results:	Annual monitoring of salmon stocks
	Ongoing/completed:	Ongoing
	Achieved objective?	Activity in accordance with current action plan for liming; 21 salmon rivers limed in 2013
Action H2:	Description of Action:	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). A current project will make a prioritizing of

		all these hydropower licences. Measures in National Salmon Rivers will be given high priority. Other actions are habitat improvements, fish-ladders andadjustment in the manoeuvring regimes etc.
	Expected Outcome:	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.
	Monitoring/Enforcement Results:	Next steps are to set environmental objectives in regulated rivers and to work with the specific conditions in the watercourses.. This will be undertaken case-by-case for each river based on a cost-benefit analysis. . The River Basin Management Plans according to the EU Water Framework Directive will report on progress.
	Ongoing/completed:	Ongoing
	Achieved objective?	Long-term process on schedule
Action H3:	Description of Action:	Removal or reconstruction of artificial migration obstacles such as pipes and culverts through roads.
	Expected Outcome:	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.
	Monitoring/Enforcement Results:	Restoration of 11 fish passages in 2013
	Ongoing/completed:	
	Achieved objective?	
Action H4:	Description of Action:	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:	Increased productivity in nursery habitats for Atlantic salmon due to decreased habitat degradation and increased connectivity in salmon river systems
	Monitoring/Enforcement Results:	Development and implementation of River Basin Management Plans for all water bodies according to the EU Water Framework Directive in 2015. All possible biotope adjustments will be assessed based on a cost-benefit analysis.
	Ongoing/completed:	Ongoing
	Achieved objective?	Process on schedule

3.3 Provide an update on progress against actions relating to Aquaculture, Introductions and Transfers and Transgenics *(section 4.8 of the Implementation Plan)*		
Action A1:	Description of Action:	A regional carrying capacity model for sea lice is under development.
	Expected Outcome:	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.
	Monitoring/Enforcement Results:	Not applicable
	Ongoing/completed:	New model for monitoring, risk assessment and management will gradually be implemented from 2015 with priority to geographical areas with highest risk for negative impact and biggest potential for further growth.
	Achieved objective?	
Action A2:	Description of Action:	1. Further improvement of precautionary measures e.g.: - Site based technical certificate for every fish farm in sea. - Stricter requirements concerning mesh size and number of fish held in one cage. - A public consultation on amendments of the Norwegian Aquaculture Act to improve legal base for environmental measures has been undertaken. 2. Research on sterile farmed salmon to reduce genetic and ecological threats to wild salmon populations.

		3. Additional long-term monitoring programs and studies of ecological processes and the environmental impacts of fish farming. 4. Test of resistance board weirs etc. to monitor and remove escaped salmon from Norwegian rivers 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. 6. The development of a national program for monitoring escaped salmon in wild populations: The program includes selected rivers/populations from all Norwegian salmon regions, and will include development of improved methods for estimating proportion of escapees in the populations. The program will also include genetic assessments of the populations involved in the program, to quantify potential genetic introgression between farmed and wild salmon, and consequently estimate the wild populations' genetic integrity. In addition to monitoring the populations in the river phase, selected marine stations will be included, aiming to give an early warning in regions with high priority.
	Expected Outcome:	1. Reduced genetic interaction between farmed and wild Atlantic salmon. 2. Reduced spawning activity of farmed salmon in rivers. 3.-4. Get better knowledge and measures to cope with escaped Atlantic salmon. 5. Methods for immediate identification of escaped Atlantic salmon and basis for action against leaking sites. Secure identification of the guilty polluter. 6. Higher accuracy in the estimates of proportion of farmed salmon in the wild populations. This knowledge is important in the way we meet the challenge of reducing the impact of genetic introgression, and will help in maximising the effects of actions taken to reduce the negative effects of escapees.
	Monitoring/Enforcement Results:	The number of reported escape incidents has for the past three years been relatively stable between 10 and 20 incidents. The number of reported escapees for the years 2011-2013 was 368000, 38000 and 198000 respectively. The incidence of farmed fish in a selected number of rivers (appr 40) has during the period 2010-2012 been reduced from 11 to 4 % (median value). The new requirements regarding mesh-size cannot be expected to

<table>
<tr><td></td><td></td><td>show reduction in farmed fish in the rivers until it reach maturity. 2 The work on sterile salmon is in progress. 3-4 Resistance board weirs have been tested in River Etne, and a report produced and published. The weir was found to be an effective, but costly way to remove escapees from the river. It has also proven to be a relevant approach for basic research regarding seasonal changes in the upward migration of farmed fish as compared to wild migration.
5 New technologies using trace element analysis to track escaped farmed salmon is developed, and a new two years evaluation program is initiated.
6 The program is in the process of being initialised, and has no effect to show yet.</td></tr>
<tr><td></td><td>Ongoing/completed:</td><td>1-3 Ongoing
4 Have been running for one year, but still ongoing
5-6 Ongoing</td></tr>
<tr><td></td><td>Achieved objective?</td><td>Except 4, all points are in various degrees of development or implementation, and it is too early for a relevant evaluation of the full effects.</td></tr>
<tr><td>Action A3:</td><td>Description of Action:</td><td>Proposal for a new action plan for the control of Gyrodactylus salaris is under development.</td></tr>
<tr><td></td><td>Expected Outcome:</td><td>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.</td></tr>
<tr><td></td><td>Monitoring/Enforcement Results:</td><td>Development and implementation of the new action plan for combatting G. salaris, which implies rotenone treatment of 7 rivers in the next 3-years period. If we succeed in all action taken, there will only be two regions with a total of 7 rivers infected in Norway.</td></tr>
<tr><td></td><td>Ongoing/completed:</td><td>
<table>
<tr><td>G. salaris – the Steinkjer region</td><td>Surveillance program launched and implemented from the Autumn of 2011.</td><td>Ongoing</td></tr>
<tr><td>G.salaris – the Romsdal region</td><td>Decision about rotenone-treatment of rivers 2013 and 2014</td><td>Decided</td></tr>
<tr><td>G.salaris – regional regulation of the Lyngen region</td><td>Preparation, hearing and implementation of regional regulation for the Lyngen region</td><td>Completed 10.07.2013</td></tr>
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		G. salaris – the Vefsn region	Surveillance program launched and implemented from the Summer of 2013.	Ongoing
		G. salaris – the Lærdal region	Surveillance program launched and implemented from the Summer of 2013.	Ongoing
		Chemical treatments of infected rivers are being used to eradicate the salmon parasite *Gyrodactylus salaris*. Out of 48 infected rivers, 20 rivers are free from the parasite after successful treatments. Additional 14 rivers are treated with rotenone and included in a monitoring program to investigate whether the parasite is gone or not.		
	Achieved objective?	Process on schedule		
Action A4:	Description of Action:	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.		
	Expected Outcome:	The aim is to reduce the breeding population of pink salmon to a minimum.		
	Monitoring/Enforcement Results:	Removal of pink salmon according to the plan of action		
	Ongoing/completed:	Must be conducted annually		
	Achieved objective?	Methodical difficult to achieve good effect		

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.

In 2013 there was made comprehensive changes to the salmon act. The most important were:

- Local organization and management plans were made compulsory. This implies that the relationship between public and private management becomes clearer. This facilitates transfer of more responsibility and management tasks to the owners of fishing rights.
- National Salmon Rivers and –Fiords are now implemented in the salmon act, authorizing the making of detailed directives.

In a new directive local organization and collective management was made compulsory for all

rivers with a spawning target above 100 kg of female salmon. The collective management shall involve; fishery regulations, stock monitoring, stocking, wardening, fish disease protection and an operational plan. It shall not include private utilization of fishing rights like the sale of fishing licenses and the hiring out of fishing locations.

There was also made changes to the Nature Diversity Act for the purpose of coordinating this law with the Salmon Act.

A quality norm for wild stocks of Atlantic salmon was adopted by Royal Decree on 20 September 2013, under the authority of the Nature Diversity Act.
The quality norm is a measuring tool indicating the condition of each individual salmon stock. The norm also guides the management authorities when making decisions which concern the wild salmon. The norm is based on a system with five categories from very good to very poor. The quality of each stock is assessed based on whether the stocks make use of the river's spawning potential, on whether the stocks have a good genetic quality, and on their potential harvestable surplus. The management target is, with some exceptions, for each individual salmon stock to hold the standard "good" or “very good”.
The quality norm will provide us with more precise knowledge about the status of and impacts on each individual salmon stock, which will, in turn, enable us to better prioritize our resources and our activities. The quality norm will provide direction for sectors that make decisions impacting the wild salmon. If a wild salmon stock is classified as poor, a plan should be made in which the causes for this condition are mapped out and measures are considered.

Regulations regarding new licenses for salmon production aim to stimulate development of new, more innovative methods to meet problems related to salmon escapes and sea lice problems.

The Aquaculture act was amended in June 2013. Amongst the amendments were the introduction of a legal base for compulsory tagging of farmed fish, and use of sterile fish. None of these measures have yet been implemented, since development of techniques has not yet reached a stage where such techniques can be made compulsory. The amendment also introduced the principle of polluter-pays in particular applicable to escapees.

New regulations on sea lice in fish farms, central measures put into action January the 1st 2013 :
- Introduction of an absolute, maximum limit of average sea lice levels all year around.
- Mandatory, coordinated spring treatments to ensure low levels of copepodites during salmon smolt migration.
- Requirement on regional plans for coordinated measures against sea lice.

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.
No new actions

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 new actions
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 actions