

Council

CNL(09)25

***Annual Report
on Actions Taken Under Implementation Plans***

Norway

Annual Report on actions taken under Implementation Plans for the Calendar Year 2008

The Guidelines for the preparation of 'Implementation Plans and for Reporting on Progress', NSTF(06)10 (copy attached) indicate that the primary purpose of the annual reports is to provide a summary of all the actions that have been taken under the Implementation Plan in the previous year. In addition, details of any significant changes to the status of stocks, new factors affecting stocks, any changes to the management regime in place, and any changes to the Implementation Plan should be included in the report. Details of actions taken in accordance with Articles 14 and 15 of the Convention are also needed by the Council. **Please provide the following information to the Secretariat by 22 April 2009**

Section 1: Details of any significant changes to the management outlined in the introduction to the Implementation Plan.

NONE

Section 2: A description of any significant changes in the status of stocks and information on catches. The Council has asked that the following information on catches be provided:

- (a) the provisional catch of salmon in tonnes for 2008;**
- (b) the confirmed catch of salmon in tonnes for 2007;**
- (c) an estimate of unreported catch in tonnes for 2008;**
- (d) the number of salmon caught and released in recreational fisheries in 2008.**

(a) the provisional catch of salmon in tonnes for 2008

Catch in 2008 according to sea-age is:

Total catch of Atlantic salmon in 2008 is 806,5 tonnes.

<i>Sea age:</i>	<i>Number of fish:</i>	<i>Weight in tonnes:</i>
Grilse	89,228	170,2
Salmon	103,151	636,3

(b) the confirmed catch of salmon in tonnes for 2007

Confirmed catch in 2007 according to sea-age is:

Total confirmed catch of Atlantic salmon in 2007 is 767,1 tonnes.

<i>Sea age:</i>	<i>Number of fish:</i>	<i>Weight in tonnes:</i>
Grilse	78,165	139,9
Salmon	108,042	627,2

(c) an estimate of unreported catch in tonnes for 2008

Total catch:	1153 tonnes *)
Reported catch:	807 tonnes
Unreported catch:	346 tonnes *)

*) uncertainty \pm 86 tonnes

Estimated distribution of the unreported catches (total 346 tonnes):

Illegales takes in the sea:	86 tonnes
By-catch by commercial sea fishing:	18 tonnes
Legal takes in sea by bag-net and bend net:	86 tonnes
Legal takes in sea by angling:	66 tonnes

Illegal takes in rivers:	16 tonnes
Legal takes in rivers, mainly by angling:	66 tonnes

(d) the number of salmon caught and released in recreational fisheries in 2008

The number of Atlantic salmon caught and released in recreational fisheries in 2008 is 5512*

<i>Sea age:</i>	<i>Number of fish caught and released:</i>
Grilse	1,916
Salmon	2,680
Unknown sea age	916

* Routines for reporting released salmon were introduced for the first time for the 2008 season, therefore reported numbers are still uncertain. Improvements of the reporting system and better compliance with these new requirements will result in more reliable reports and numbers in coming years.

Section 3: A description of any new factors which may significantly affect the abundance of salmon stocks.

Viral haemorrhagic septicaemia (VHS).

In November 2007 VHS outbreak was confirmed in a fjord in central parts of Norway (Møre og Romsdal). Stamping out procedures followed by cleaning, disinfection and fallowing was carried out. This virus is now again in 2008 diagnosed in rainbow trout in western Norway (same fjord as in 2007).

Infectious salmon anaemia (ISA).

The frequency of infectious salmon anaemia (ISA) outbreaks remains at a fairly stable, low level. All outbreaks during 2007 and most

outbreaks during 2008 were located within a relatively small area in Troms. However escaped farmed salmon infected with ISA interacted with wild salmon in nearby rivers.

PD (pancreas disease) and HSMI (heart and skeletal muscle inflammation).

The development for the two viral diseases PD (pancreas disease) and HSMI (heart and skeletal muscle inflammation) is still of considerable concern.

Sea lice

The sea lice surveillance program shows that the salmon lice infection pressure is relatively high all along the Norwegian coast, but that the situation is somewhat better for some fjords compared to 2007. In spite of the overall results the Hardangerfjord showed an infection pressure on salmonids well above sustainable level in 2008.

The situation in 2008 is considered more worrying than ever regarding salmon louse infection in farmed fish, because resistance against present delousing agents has been observed at fish farms in Norway. Reduced sensibility/resistance against both emamectin benzoate and pyretroides at the same seat has also been observed. These findings of multi resistance bring to the light a deep concern – both in the industry and of course among wild fish managers.

Sea lice (both *Lepheotheirus* and *Caligus*) may also be a serious carrier and vector of several diseases.

Other awareness

Lately the importance of a microsporidium using sealice as a carrier, has been discussed in Norway. New research have now confirmed our suspicions that sea lice (both *Lepheotheirus* and *Caligus*), not only may be, but is a serious carrier and vector of several diseases, including pathogens which so far is new even for the science – this microsporidium (intracellular parasite) has not earlier been described. The significance of these findings has still to be answered but address considerable concern.

There have been some incidences of mass mortality of young salmons in the rivers due to proliferative kidney disease (PKD). This may be an increasing problem if the water temperature increases.

Heavily infections of *Anisacis simplex* affecting the anal and gonadal pore area have been observed on wild broodstock salmon.

Global warming and increasing water temperatures will require increased awareness on new diseases and warm water diseases. A significant higher production of marine species like cod may induce changes in the health situation of salmonids. Previous exotic

diseases may become established in farmed cod and could represent an increased threat for salmon and rainbow trout.

Section 4: An account of all actions taken under the Implementation Plan with regard to the management of salmon fisheries; measures to minimise impacts of aquaculture and related factors; other influences affecting salmon abundance or diversity (including the marine environment).

Management Action	Reporting Update	Achieved Management Action (Yes, No, Ongoing, Completed)
Fisheries Management		
Establish spawning targets for 80 rivers		Completed
Establish critical levels of escaped farmed salmon in spawning stocks, which necessitate special measures		Completed – further research in order to refine assessments ongoing
Revise the "marine regulatory regions" with the aim to reduce mixed stock fisheries		Completed
Establish a joint working group on stock monitoring and research in the river Tana		Ongoing
Complete establishment of spawning targets for all significant river fisheries		Completed
Conduct a comprehensive review of the status of stocks		Completed
Introduce a new 5-year regulatory regime taking into concern ICES advice on fisheries and employing the <i>Decision structure on management of fisheries</i>		New 5-year regulatory regime introduced for river fisheries. New regime introduced for the sea fishery for the 2008 season. Revision for the 2009 season ongoing.
Establish spawning targets for remaining salmon rivers		Ongoing – will be completed in 2009
Make adjustments in regulatory regime in the case of unforeseen changes in status of stocks or other crucial new information	The Ministry of Environment has given DN the task to develop a proposal for a concession system for	Revision of the regulations of the sea fishery for the 2009 season ongoing.

	<p>the sea fisheries with stationary gear as an additional regulatory tool. A concession system would make it possible to regulate the number of fishermen in any given region, in addition to restricting the fishing season.</p> <p>The mandate points out that a concession system should provide for a fishery for commercial and cultural reasons.</p> <p>It is assumed that the final decision on the introduction and the design of a concession system will be made in 2009 – and that the system should be in place by the 2010 season.</p>	
Measures to minimize the impact of Aquaculture and other related factors		
Sea lice		
Develop a revised Action plan against sea lice		Ongoing – revision under consideration. Will be finished in 2009.
Initiate necessary long term monitoring and research on sea lice v.s. wild fish populations		Completed
Develop levels for tolerable infection rates on wild fish		Ongoing
Develop the legal basis for mandatory regional and synchronized sea lice treatments in fish farms		Completed – new revision at public hearing.
Adjust current action levels for sea lice treatments in fish farms		Completed – new revision reg. multi resistance.

Development of new treatments/vaccines	<p>Deep concern about lack of necessary variation of delousing agents in the fish farming industry. Several outbreaks of multi resistance. Time needed to develop possible vaccine lays 10 years ahead.</p> <p>New legislations to defeat and delay development of resistant sealice. Development of new therapy adviser. Development of a monitoring program for resistant sealice populations.</p>	Ongoing
Escaped farmed salmon		

<p>Motivate (01) Urge for desirable conduct through positive means</p>		Ongoing processes
<p>Demand (02) Development of regulations</p>		<p>In 2008</p> <ul style="list-style-type: none"> • The Directorate of Fisheries sent a proposal for a revised NYTEK – regulation to the Ministry. . The regulation will mean an extensive regime for the fish farmers • The Ministry of Fisheries and Coastal Affairs completed a stricter regulation regarding National Salmon Fjords/National Salmon Rivers (NLV/NLF). Most of the new rules have also been imposed on the entire salmon industry. • The Ministry of Fisheries and Coastal Affairs approved a regulation that demands better markings lights on fish farms. • The Ministry has introduced rules that can give a tenfold fine, if the violation is regarded as an environmental crime. <p>Further improvement of regulations continues.</p>
<p>Measure (03) Monitor escaped fish and their harmful effects</p>	<p>A new design was established in 2008 to make an annual surveillance of 21 determined rivers. The relative amount of farmed salmon and the DNA of wild salmon will be measured to detect change over time</p>	<p>Analyses of 1702 scale samples from 32 rivers in 2008 gives an unweighted average of 14.7 % escaped farmed salmon in the spawning stocks. For 21 of these rivers there is data from both 2007 and 2008. The average of escaped farmed salmon from these 21 rivers was 12.6 % in 2007 and 16.8 % in 2008. For 26 of these 32 rivers there is data from both 2006 and 2008, and the average of escaped farmed salmon in the spawning stocks was 16.5 and 13.7%</p>

		<p>respectively.</p> <p>In 2008 it was an important decrease in the number of reported escapees. See diagram below.</p>
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<p><u>Investigate (04)</u> Investigation of scenes. Assist the</p>		<p>In 2008 the Escape Commission analyzed 51 incidents that caused or could cause escapes. The Commission gives advice both to the industry and to government.(how to improve inspections and regulations)</p>
<p><u>Follow up (05)</u> Follow up the demands for technical standards in the aquaculture industry</p>		<p>In 2008 the inspectors from The Directorate of Fisheries made 170 audits and carried out 47 investigations of scenes in response to escapes from salmon-and trout installations.</p>
<p><u>Amend (06)</u> Better implements for the administration</p>		<p>Ongoing processes</p>
<p><u>Standardize (07)</u> Standardizing with regards to systemizing good actions</p>		<p>Norway has initiated an international standardization work ISO/TC.234 i.a. to make a safer technical platform for fish farming in seawater. Unfortunately UK, USA and Canada seem to be a little reluctant to the idea.</p> <p>In 2008 a recommendation was sent to The Ministry of Fisheries and Coastal Affairs to make a technical standard for smolt facilities.(To prevent discharge of farmed juveniles/ smolt.s)</p>
<p><u>Communicate (08)</u> Information and communication actions concerning escapes</p>		<p>Ongoing processes</p>
<p><u>Share (09)</u> Describe good assessments and practice with regards to risk operations that illustrate the regulations functional demands</p>		<p>Ongoing processes</p>
<p><u>Learning (10)</u> Competence requirements for own</p>		<p>Ongoing processes</p>

employees, employees in the aquaculture industry		
Evaluate (11) Implement evaluation of Vision NO ESCAPEES and report to the Ministry of Fisheries and Coastal Affairs		Ongoing processes
Gyrodactylus salaris		
Chemical treatments in the Lærdal region	The river is still infected, and this river will be used to develop the new method for eradicate the parasite by using aluminum sulfate (AIS).	Ongoing process. Uncertain when eradication treatment can be accomplished.
Chemical treatments in the Steinkjer region	The eradication of <i>G. salaris</i> started with one rotenone treatment in 2008 and will be followed up with a new treatment in the summer of 2009.	Ongoing process. Will be finished in 2009.
Develop a plan for eradication in the Vefsn region	A basic plan for rotenone treatment was worked out in 2008. Detail preparations are in progress.	Ongoing process.
Revision of the national monitoring programme of <i>G. salaris</i>		Complete
Develop a programme for epidemic surveillance of <i>G. salaris</i>		Complete
Finalize the National Contingency Plan		Ongoing process
Develop a new Action Plan		Complete The new Action Plan was completed in 2008
Chemical treatments in the Vefsn region		According to the new Action Plan the rotenone treatment are planed in 2010 and 2011
Chemical treatments in the Romsdal region	A basic plan for rotenone treatment was worked out in 2008. Detail preparations	According to the new Action Plan the rotenone treatment are planed in 2012 and

	will start in 2009	2013
Other influences affecting salmon abundance or diversity (including marine environment)		
See section 3 of this report		

Section 5: Details of any proposed revisions to the Implementation Plan.

Proposed revisions regarding sea lice:

- 1) New legislations to defeat and delay development of resistant sealice.
- 2) Development of new therapy adviser.
- 3) Development of a monitoring program for resistant sealice populations.

We are still working on an update of some sections in chapter four.

Notes on completing the Annual Report on actions taken under Implementation Plans

Section 2:

The weight of catch should be in tonnes “round fresh weight” (i.e. weight of whole, ungutted, unfrozen fish) or round fresh weight equivalent. If available the numbers and weight of salmon caught according to sea-age may also be presented.

“Provisional” means the latest available data (which may be subject to revisions) for 2008. “Confirmed” includes any revision to the provisional figure previously given for 2007.

The estimate of unreported catch may be broken down into categories e.g. by gear type; location of the fisheries (coastal fisheries, in-river fisheries, etc.); and by-catch of salmon in fisheries for other species. It should indicate if the unreported catch arises from legal or illegal activities

Section 4:

The primary purpose of the information provided under item 4 is to provide an account of all the actions that have been taken under the Implementation Plans with regard to:

- Management of salmon fisheries
- *Habitat protection and restoration (see note below)*
- Aquaculture and related activities
- Other influences affecting salmon abundance and diversity.

Note: The 2009 focus area is habitat protection, restoration and enhancement. No information is required in this annual report, unless a jurisdiction wishes to supplement its FAR or has not submitted a FAR.

Please include as part of the annual report under item 4 the following information which is a requirement under the Convention:

- Details of any laws, regulations and programmes that have been adopted or repealed since the last notification;
- Details of any new commitments concerning the adoption or maintenance in force for specified periods of time of conservation, restoration and other management measures;
- Details of any new actions to prohibit fishing for salmon beyond 12 nautical miles;
- 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;
- Details of any new measures to minimise by-catches of salmon originating in the rivers of the other member [**North American Commission Members only**];
- 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 [**North American Commission Members only**];
- Details of any actions taken to implement regulatory measures under Article 13 including imposition of adequate penalties for violations.