# Council

CNL(07)27

Main Features of the Norwegian Policy for the Preservation of Wild Salmon

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#### 1. Introduction and background

In February 2003 the Storting (parliament) designated 37 national salmon watercourses and 21 national salmon fjords, while establishing ground rules for this management scheme and guidelines for follow-up, on the basis that additional river systems and fjord areas would be included in due course.

In its proposal St.prp. nr. 32 (2006-2007), the Ministry of Environment has set out the Government's policy for the preservation and strengthening of Norway's salmon stocks and recommendations for the establishment of 15 new national salmon watercourses (river systems) and 8 new salmon fjords. The proposal is based on established criteria for selecting salmon stocks for the management scheme, a comprehensive technical report, comments on the report following consultations, recommendations from the Directorate for Nature Management, and a balanced assessment of other relevant sectors.

The Storting endorsed this proposal on 15 May, and the scheme now comprises 52 national salmon river systems and 29 national salmon fjords.

### 2. Summary of St.prp. nr. 32 (2006-2007)

#### 2.1 Preservation and strengthening of the wild salmon stocks

The Government aims to protect and regenerate salmon stocks to a level and composition that will maintain diversity within the species while exploiting its productive potential. As the responsibility for achieving this objective is divided between several sectors, cooperation in salmon management will be improved.

National salmon rivers and salmon fjords comprises an essential measure aimed at protecting wild salmon. However, action is equally necessary in other areas involving, for example, fish farming, salmon river management, combating *Gyrodactylus salaris*, liming, operation of gene banks, research and development, monitoring, and salmon fishery management.

### Measures involving aquaculture

Escapees from salmon aquaculture (farmed salmon which have escaped or been released into the natural environment) are one of the most serious threats to wild salmon. Efforts to limit escapes will be intensified on the basis of the fisheries authorities' action plan "Visjon nullflukt" ("Vision No Escapees"). Work on potentially useful new technologies and production methods, the use of sterile fish and the development of systems for tracing fish will also be intensified.

Infestations with salmon lice is also a serious threat to wild salmon. Efforts to reduce the infection pressure on outgoing smolts will therefore be intensified through a national

action plan to combat this parasite. Regulations will be strengthened, as will efforts to develop vaccines and schemes for coordinated delousing.

#### Gyrodactylus salaris

Next to aquaculture escapees, the greatest threat to wild salmon is the parasite *Gyrodactylus salaris*. Combating this parasite will be a high priority, with the aim to eradicate the parasite where possible and minimize the risk of transmission to new areas. Measures will be based on the best available technology and systematic follow-up.

#### Watercourses

Protection of salmon habitats in the rivers will be strengthened. Habitats in good condition will be safeguarded, and those which are not optimal for production of wild salmon will be restored. The interests of the wild salmon itself, other stakeholders in the watercourses and cost-efficiency combined, calls for scrupulous and systematic implementation. Restoration work will, therefore, be based on a comprehensive national plan for the preservation and renewal of salmon habitats.

New encroachments in connection with the production of hydroelectric power shall not cause significant damage to salmon production. In new hydropower projects affecting salmon river systems, emphasis will be put on avoiding harmful effects to wild salmon through adaptation and/or compensation measures.

In relation to hydroelectric power, the situation for wild salmon can be improved mainly through revision and renewal processes for hydropower licences. These instruments will therefore be used to improve conditions for wild salmon in affected river systems.

#### Regulations in salmon fisheries

Substantial restrictions in salmon fisheries will be necessary in the up-coming regulations for the period 2008-2012. The regulations will be based on international scientific advice and criteria which presuppose mainly that mixed stocks fisheries must be curtailed. In practice, this can only be achieved by reducing fishing pressure in the sea water fisheries and probably also phasing out this type of fishing in certain areas. In addition, regulations will be introduced with the aim of meeting spawning stock targets and reducing the relative abundance of escapees from aquaculture.

The new regulations in salmon fisheries will be developed with contributions from the various interest groups, in particular the owners of fishing rights in rivers and fjords, the Sami (Laplanders), recreational fishers, and local enterprises that may be indirectly affected. The aim is a new regulatory regime well adjusted to the situation of the wild salmon, where the overall consequences for the interested parties are acceptable.

#### Liming, releasing fish and gene banks

Liming is currently carried out in 22 salmon rivers; these liming projects will continue. Over time, liming projects may be extended to additional salmon rivers.

Release of salmon is currently carried out as a compensatory measure in hydroelectric power projects. In many cases such releases are not particularly effective, and quality control and assessment will therefore be strengthened.

Material from 169 salmon stocks are maintained in frozen gene banks, and 22 stocks are preserved in living gene banks. To date, the salmon stocks included in the gene banks are at risk from either *Gyrodactylus salaris* or acid rain. As a result of the additional need to protect stocks that are threatened by escaped salmon from aquaculture, an expansion of the gene bank programme is in preparation.

#### Research and monitoring

Salmon management requires a good basis in scientific information, *inter alia* on stock development and biological and environmental conditions for salmon production. Research and monitoring will therefore be priorities in the future.

#### 2.2 National salmon river systems and salmon fjords

The aim of national salmon river systems and salmon fjords is to offer special protection to 52 of the most important salmon stocks in Norway. These salmon stocks will be protected from encroachment and activities in the watercourses and in the nearby fjords and coastal areas.

In the national salmon rivers no permission will be given to new enterprises or activities that might harm the wild salmon. In the salmon fjords no additional salmon aquaculture plants will be established. Existing installations will be subject to more stringent standards for preventing escapes and controlling sea lice and other diseases. The stocks included will also be prioritized for other measures aimed at strengthening the wild salmon.

The national salmon rivers and salmon fjords will encompass about three-quarters of the Norwegian wild salmon resource. The scheme will include large and abundant stocks with high productivity or with a potential for high productivity as well as stocks of "storlaks" ("big salmon", weighing 7 kg or more) and stocks with special genetic characteristics. The selection of stocks will have a good geographic distribution.

The management system involving national salmon rivers and salmon fjords has been designated by the Storting in plenary session. This system will later be legally based in the Act relating to salmonids and freshwater fish and in regulations under other relevant legislation. Necessary legislative changes are to be proposed to the Storting once the scheme has been adopted.

The regulations concerning national salmon rivers and salmon fjords are administered according to the prevailing division of responsibility in central government. Local authorities and owners of fishing rights will also be involved in the administration of this scheme.

The national salmon rivers and salmon fjords will be a permanent scheme. However, new information, new technologies and new general framework conditions might require regulatory changes in the management of watercourses and fjord areas over time. The scheme will therefore be evaluated ten years after implementation at the latest.

The stocks involved in the scheme will have priority in general activities aimed at strengthening wild salmon stocks. This will involve *inter alia* measures to combat *Gyrodactylus salaris*, habitat restoration, revision of licences and compensatory measures in regulated watercourses, liming, and monitoring of stocks. In addition, other measures for protection of wild salmon will include reduction of escapees from aquaculture, minimizing sea lice and improved regulations in salmon fisheries.

#### Changes in the protection regime for salmon fjords

As a consequence of changes in aquaculture regulations since the salmon fjords were established, the Storting endorsed an updating of the existing protection regime for national salmon fjords. In addition, all salmon aquaculture will be terminated in the established salmon fjord Tanafjorden outside the Tana river, which is one of the World's most productive Atlantic salmon rivers. Apart from that, the new scheme does not include any relocation of aquaculture plants. However, voluntary agreements to move aquaculture installations out of national salmon fjords is a relevant option.

The protection regime sets out guidelines for aquaculture operations in the salmon fjords and also allows for flexibility in the event of future developments.