

**(NORWEGIAN MINISTRY OF TRADE, INDUSTRY AND FISHERIES)**

**Memo**

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From:	Department of Fisheries and Aquaculture	Date:	2 July 2014
To:	Minister Elisabeth Aspaker	Case no.:	14/14
Copy:		Executive Officer	Elisabeth Sjørdahl Hall

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**Memo – Management of snow crab**

**1. Introduction**

On 21 May 2013, the Ministry of Fisheries and Coastal Affairs (FKD) sent an order to the Norwegian Institute of Marine Research concerning the knowledge status of snow crab in the Barents Sea. An order was also sent to the Norwegian Directorate of Fisheries on 1 October 2013 requesting a report on what regime would be appropriate for managing snow crab in the Norwegian part of the Barents Sea.

It was requested that the report concerning the management of snow crab include an assessment of whether snow crab should be treated as a foreign and introduced species with the objective of restricting its distribution and total biomass as much as possible, or whether the species should be accepted as a natural part of the ecosystem and be managed in accordance with the normal principle of sustainable harvesting.

The Directorate was asked to prepare a proposal for a management plan and regulations if snow crab can be considered a natural part of the ecosystem.

On 12 June 2013, we received a memo from the Norwegian Institute of Marine Research regarding the knowledge status of snow crab in the Barents Sea and on 17 February 2014 received recommendations from the Norwegian Directorate of Fisheries regarding the management of snow crab.

**2. Background**

Snow crabs were first observed in the Barents Sea by Russian researchers in 1996 and since then have established a large population in the Russian zone. At present, the density of snow crab in the Norwegian part of the Barents Sea is relatively low. Snow crab adapt to colder water and it is thus expected that the species will spread to the north and west in the Svalbard zone. It is therefore expected that the range of snow crab distribution will be further north than that of the red king crab.

It has thus far not been established as to how snow crab entered the Barents Sea or where the species comes from. However, we do know from researching old literature that Norwegian researchers observed snow crab in Norwegian waters as far back as the 1800s. Therefore, the theory is that changes in sea water temperature could be the reason that snow crab have returned to Norwegian waters. The snow crab's conditions for existence have returned and the species is therefore migrating here.

Snow crab fishing takes place in both Greenland and Canada. Genetic tests have been conducted which show few similarities between the different areas and it is unlikely that the crab was introduced from the west. The most common hypothesis among Norwegian and Russian researchers is that snow crab have spread through migration from the Chukchi Sea, which is located north of the Bering Strait.

### **3. The present management situation**

Snow crab are an unregulated species in Norwegian waters. At present, only a discard ban is laid down in the Performance Regulations (Regulations of 22 December 2004 relating to sea water fisheries). Until further notice, Norwegian vessels are permitted to harvest snow crab, including for research purposes, without a special licence. Research licences for foreign vessels are regulated in the Regulations relating to foreign marine scientific research (Regulations of 30 March 2001 relating to foreign marine scientific research in Norway's internal waters, territorial sea, exclusive economic zone and on the continental shelf). Pursuant to the Regulations, notification/application to conduct an expedition is required from the researcher state as well as subsequent approval from the Norwegian side.

Since fishing for snow crab is currently unregulated, Norwegian vessels that are registered in the register of vessels (merkeregisteret) can presently fish for snow crab in the Norwegian Economic Zone, the Svalbard Zone and international waters (the Loop Hole) without quantity restrictions. Norwegian vessels do not have the right to harvest snow crab in the Russian zone.

In 2013, three Norwegian vessels caught snow crab in the Loop Hole. A Spanish vessel with Russian interests also caught a considerable quantity of snow crab in Norway (506 tonnes).

### **4. Cooperation with Russia**

There is already a large population of snow crab in the Russian zone (particularly on Gåsbanken) and it is probable that Russia will consider this important and manage it as an economic resource. If it should transpire that snow crab have serious, unforeseen negative effects on the ecosystem in the Barents Sea and that decimating the population may be a desired strategy, it will be of major importance that there is consensus about any such decision and that this is based on shared knowledge between Norway and Russia.

The Norwegian Directorate of Fisheries has recommended cooperating with Russian fisheries authorities in connection with both research and management of snow crab in the same manner as the two countries cooperated on red king crab from 1994 to 2006. This entails a management model involving research collaboration, joint technical regulations and agreement on the quantities that are fished. The Norwegian Directorate of Fisheries has noted that cooperation with Russia will be beneficial in terms of having a regulatory system in place for the Loop Hole, possibly under the auspices of the North East Atlantic Fisheries Commission (NEAFC).

An arrangement for research and management collaboration was the topic of a workshop hosted in March 2014 by the Joint Norwegian-Russian Fisheries Commission. It emerged at this workshop that the Russians are now ready to declare snow crab to be a commercial species after having built up stocks of the species over time.

## **5. Future management**

The Norwegian Directorate of Fisheries noted that the most important factor in the assessment of whether snow crab shall be managed as an economic resource by the Norwegian authorities is that snow crab have already become established. According to the research, the growth in the snow crab population is much more rapid than what was the case for red king crab. The biomass of snow crab in the Barents Sea has already been calculated at ten times the biomass of red king crab.

Based on the information available about its development and population size, the Directorate does not consider it to be practically possible for eradication to be a management objective. The Directorate's conclusion is that it should be the economic potential, when viewed in relation to possible, serious ecological consequences, that is decisive to how Norwegian authorities approach the question of management.

The potential economic value of snow crab to Norway will depend on its distribution, particularly in the Norwegian Economic Zone and the Svalbard Zone. Based on our knowledge about snow crab existing in cold waters, it is considered less probable that it will spread to the southwest in the Norwegian Economic Zone in large numbers. A growing population in the Svalbard Zone is considered highly probable. When viewed in relation to the considerations of sustainable resource management in the Barents Sea, neither Norway nor Russia will benefit from widespread, unregulated harvesting in either the Svalbard Zone or the Loop Hole. Snow crab could become a significant economic resource in the Barents Sea, and the Directorate of Fisheries has advised that stocks be managed according to the principle of sustainable harvesting.

Based on the information available about the size, distribution and biology of snow crab stocks, and the fact that there is presently a small number of vessels that engage in catching activities, the basis for creating a regulatory system is currently limited. The Directorate of Fisheries has therefore recommended introducing a general prohibition against catching snow crab and potentially granting exemptions from this prohibition on certain conditions.

## **6. The Department's assessment and recommendation**

When concerning the issue of joint regulation of snow crab with Russia, we presently have no clear indication that snow crab are migrating back and forth between Norwegian and Russian waters.

The Department disagrees with the Directorate of Fisheries that the experience we have acquired from the management of red king crab (which for several years was harvested as a joint population with the Russians) would indicate that the same model should be used for snow crab. The Department considers the most important experience from the joint management to have been that we, to a large extent, lacked flexibility in relation to the concerns that manifested themselves on the Norwegian side and that there were few corresponding benefits from a joint management regime.

Based on the fact that there is nothing to indicate that snow crab migrate between Norway and Russia and based on previous experiences with the joint management of red king crab, the Department considers it to be most expedient to establish a management regime in which we unilaterally manage snow crab from the Norwegian side.

Despite not having a joint management regime, when concerning research we can arrange a dialogue and possibly cooperate with Russia. This is something that can be discussed between the parties at the forthcoming Commission meeting in autumn, and the Department recommends that the matter is also discussed at the chairpersons meeting prior to the Commission meeting.

Until there is a more comprehensive management plan for snow crab, the Department advises that a general prohibition is set against catching snow crab in the entire Norwegian jurisdiction. A proposal for a prohibition in the entire Norwegian jurisdiction must be subject to consultation with the Ministry of Foreign Affairs because it also includes the Svalbard Zone.

It is further recommended that exemptions from the prohibition be granted based on specific conditions to be determined by the Directorate of Fisheries. An exemption scheme would ensure that parties who already engage in the harvesting of snow crab can continue these activities for the time being, which will enable the necessary data to be collected for the continued work on a management plan. It is recommended that exemptions are only granted until the work on a management plan has been completed such that we can prepare a regime that is adapted to the plan, without these types of exemptions acting as a guide for future management.

Regulations relating to prohibition and exemptions can also include possible regulations of area and time, gear restrictions etc. We will return to this when preparing the consultation letter. Such restrictions may be applicable in order to, for example, avoid challenges relating to controls of red king crab fishing and to avoid gear conflicts in relation to ongoing fisheries activities.

Provided that the Ministry of Foreign Affairs agrees with the Ministry of Trade, Industry and Fisheries, a general prohibition against catching snow crab will also entail that the foreign operators can no longer engage in fishing activities in areas under Norwegian fisheries jurisdiction, unless we actively permit this.

When introducing a general prohibition, the Department also recommends that the discard ban is lifted.

The proposal for a general prohibition against catching snow crab must be sent for an ordinary consultation process following consultation with the Ministry of Foreign Affairs. The Department will also contact the Ministry of Climate and Environment to clarify their position on these proposals.