

Norwegian management plan for harvesting *Calanus finmarchicus*

Since 2003 the copepod *Calanus finmarchicus* has been harvested in Norwegian waters in a small-scale fishery, where a quota of 1000 tons has been given. A potential expansion of the current harvesting of *C. finmarchicus* to a larger commercial fishery mainly at the open sea, has to be managed according to a sustainable and ecosystem based management practice. The Institute of Marine Research and the Directorate of Fisheries are jointly developing a *C. finmarchicus* management plan which, among others, will help decision makers establish viable quotas in future fisheries. Quantitative estimates of the effects of a fishery on the *C. finmarchicus* population regarding biomass and production will be given using fully coupled biophysical models. The management plan will also take into account that such a fishery may additionally have negative effects on fish populations due to reduced food availability and bycatch of fish eggs and –larvae, and regulatory measures to avoid or reduce such bycatch to the lowest level possible, will be an integral part of the plan. The effects of reduced food availability on the large pelagic fish stock of Norwegian spring-spawning herring, mackerel, and blue whiting will be modeled. The management model will also include advice concerning quotas and regulatory measures in order to avoid harvesting on spawning grounds of commercially important fish stocks.

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