

**Terms of reference for the Working Group
for evaluation of the effect of closed areas for protection of cod in Kattegat**

The Working Group shall:

- a) Evaluate the effect of the closure on the cod stock
 - Quantify changes in stock distribution, stock abundance, size distribution and fishing mortality of cod in Kattegat, and by relevant stock components;
 - Quantify the effect of the area closures on the changes of the cod stock.
- b) Evaluate the effect of the closure on the fishery
 - Describe the changes in the fishery with respect to target species and application of gears with low cod selectivity;
 - Quantify the effect of the application of selective gears on cod catches;
 - Quantify the effect of the closed areas on species composition, total catch weight and value.
- c) Evaluate the effect of the closure on fisheries communities
 - Describe socioeconomic effects for selected fisheries communities.
- d) Describe potential effect of the closure for obtaining good environmental status (GES)
- e) Evaluate the enforcement scheme for the closed areas
 - Describe the enforcement scheme, the extent of illegal fishing and quantify related cod catches.
- f) Recommend potential changes in objectives, area design, access criteria and monitoring and enforcement considering potential contribution to GES from the closure

The Working Group shall consist of both Danish and Swedish scientist and control experts and other relevant experts.

Stakeholders can participate in WG meeting in the capacity as observers.

The Working Group will report by the 1 June 2012 to the Swedish Ministry for Rural Affairs and the Danish Ministry of Food, Agriculture and Fisheries.

If any new information concerning the evaluation of the effect of the closures would be gained during the shared fisherman survey in autumn 2012, this should be incorporated as a part of the evaluation.

Background information

Closed areas for protecting cod in Kattegat were implemented the 1st January 2009. One area was closed year round; the southern part is closed for all fisheries including recreational fishery, while fishery with a minimum catch of cod is allowed in the northern part. An additional area surrounding the permanent closed area is closed in the spawning period, (1st January to 31th March) except for fishery with a minimum catches of cod. This closed area extends southerly into the Sound (Western Baltic management area) in an area called “Kilen” with very large cod catches in previous years. It was agreed that the closures should be evaluated after three years.

The Marine Strategy Framework Directive and other initiatives like designation of Nature 2000 areas formalise the need for marine areas with good environmental status (GES), including both habitat, community and species diversity. GES was not explicitly stated as objective for the closures, but the evaluation should consider potential contribution to GES from the closure, and should consider how area design and monitoring can be improved with respect to both cod protection and GES in general.