

Fishery

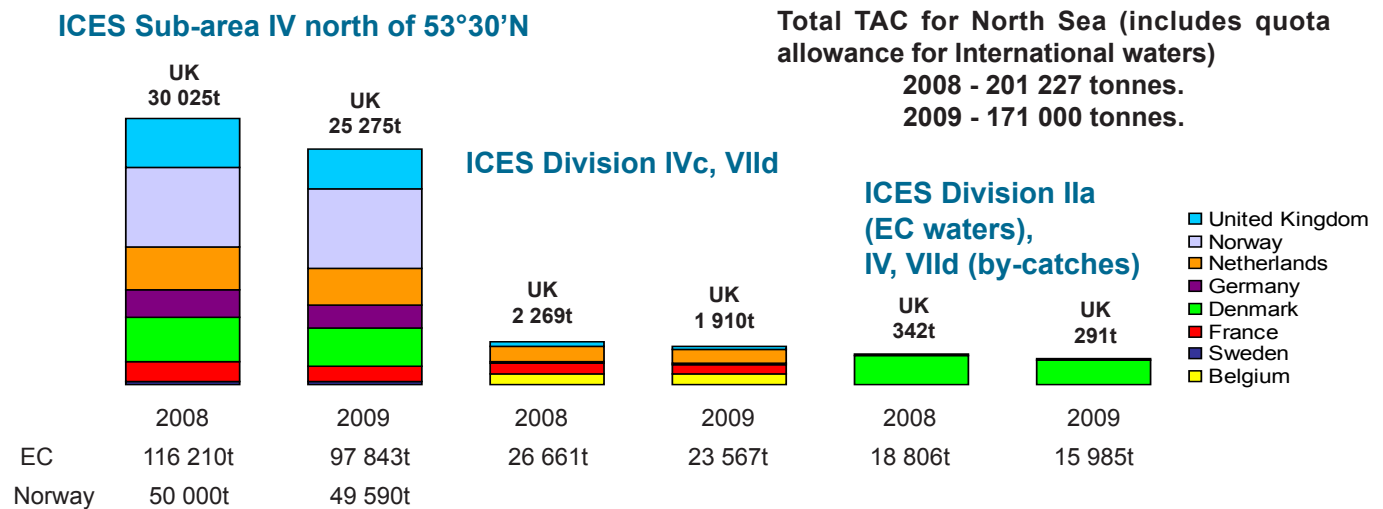
North Sea herring stocks have shown enormous fluctuation in the past. There was a rapid stock decline in the late 1970's due to the over fishing and recruitment failure. This was followed by a four year closure of the fishery and then another decline in the mid 1990's mainly due to high by catch of juveniles in the industrial fishery. This led to the implementation of a recovery plan in 1997, which was successful.



Clupea harengus

Two fisheries exploit the autumn spawning herring: the directed herring fisheries with purse seiners and trawlers in the North Sea and Division IIIa (Skagerrak and Kattegat) and the one where herring is taken as a by-catch in the industrial small-mesh fisheries which operate in the same areas.

UK quota and other member states' share of the TAC as decided by the EU Council.



Biology

The North Sea stock is dominated by autumn spawners but there are also some small discrete groups of coastal spring spawners in areas such as The Wash and the Thames Estuary. The autumn spawners comprise a complex of three separate spawning stocks which mix during their migrations and are managed as a single unit. These are the Buchan group which spawn in the Orkney and Shetland area and off the Scottish east coast (July to September); the Banks or central North Sea group which spawn off the north east coast of England (August to October); and the Downs group which spawn in the Southern Bight and eastern English Channel (November to February).

Some herring are mature at age two but most are three or four years old before they spawn for the first time. Herring are demersal spawners and need a coarse gravel seabed on which to deposit their sticky eggs. The eggs take about three weeks to hatch dependant on the sea temperature. The larvae drift in the plankton and eventually arrive as juveniles on the nursery grounds in the eastern North Sea. From there they eventually migrate offshore to join the adults on their feeding and spawning migrations.

Spawning biomass in relation to precautionary limits	Fishing mortality in relation to precautionary limits	Fishing mortality in relation to highest yield	Comment
Increased risk	Increased risk	Overfished	Above target

State of stock/exploitation:

Based on the most recent estimates of SSB and fishing mortality, ICES classifies the stock as being at risk of having reduced reproductive capacity and at risk of being harvested unsustainably.

SSB in autumn 2007 was estimated at 0.98 million t, and is expected to remain below B_{pa} (1.3 million t) in 2008. F_{2-6} was estimated at 0.33, well above the target.

All year classes since 2002 are estimated to be among the weakest since the late 1970s.

Precautionary Approach reference points (unchanged since 1999):

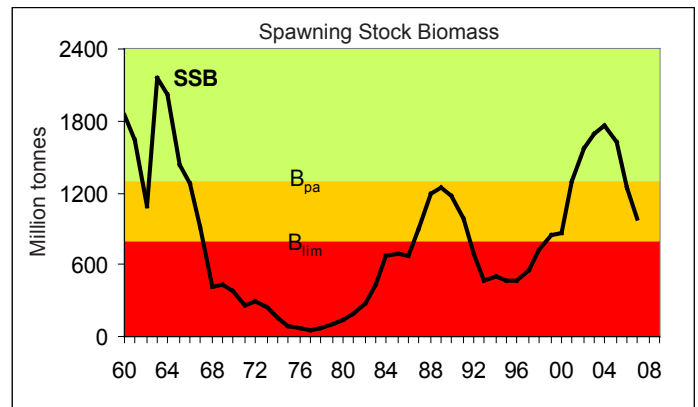
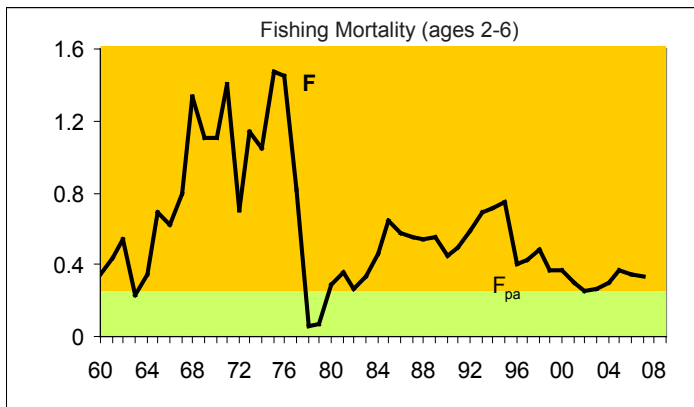
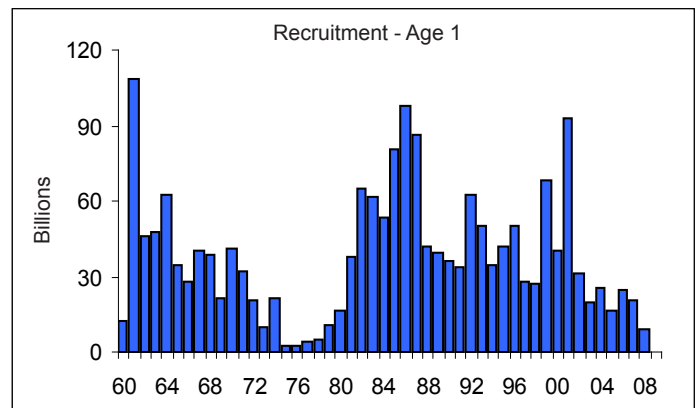
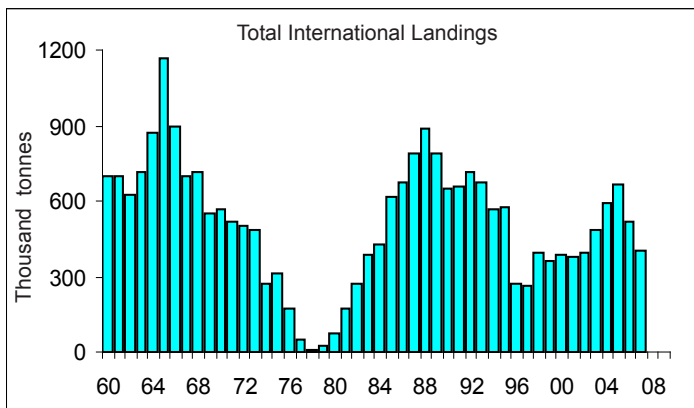
B_{lim} is 800 000 t. Below this value poor recruitment has been experienced.

B_{pa} is 1.3 million t. Part of a harvest control rule based on simulations.

F_{lim} is not defined

F_{pa} be set at: Fages 0-1 = 0.12 Fages 2-6 = 0.25.

HERRING in North Sea (ICES Division IV, VIId and IIIa)



Exploitation boundaries

ICES recommends the implementation of a proposed new harvest control rule which leads to directed catches in the North Sea of less than 170 000 tonnes or less than 180 000 in 2009.

The TAC agreed for 2009 for the North Sea is 171 000 tonnes..