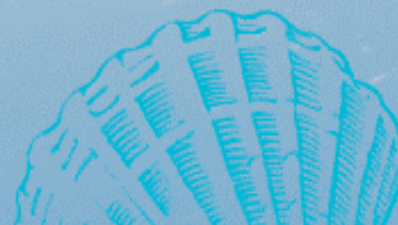
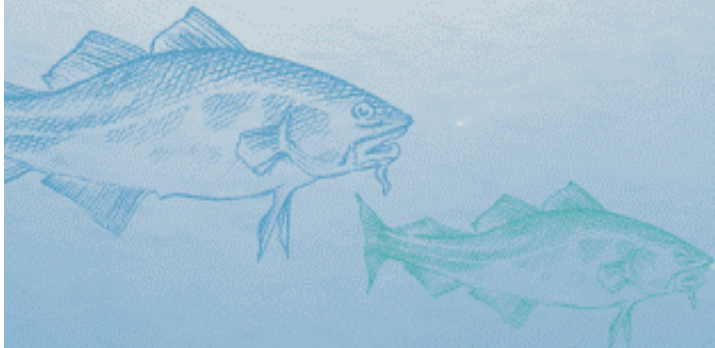


SCA Seafood Summit
Paris, 30-31 January 2010



INSTITUTE OF MARINE RESEARCH
HAVFORSKNINGSINSTITUTTET



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Sustainable fisheries

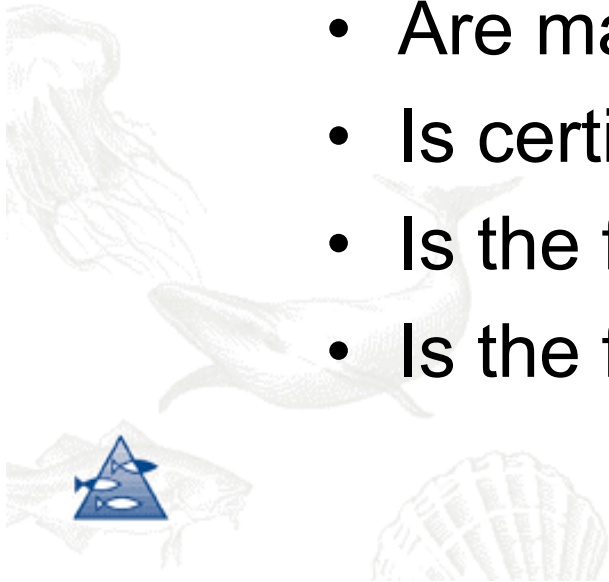
Dr. Reidar Toresen

Institute of Marine Research

Bergen, Norway

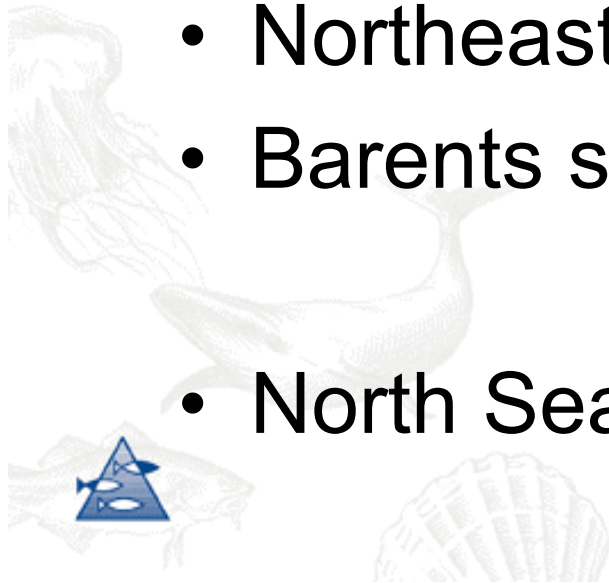
Integral questions

- Is the stock harvested at a sustainable level?
- Are fishing methods sustainable?
- What about bycatch rates?
- Are marine reserves a tool?
- Is certification part of the fishery?
- Is the fishery equitable?
- Is the fishery truly sustainable?

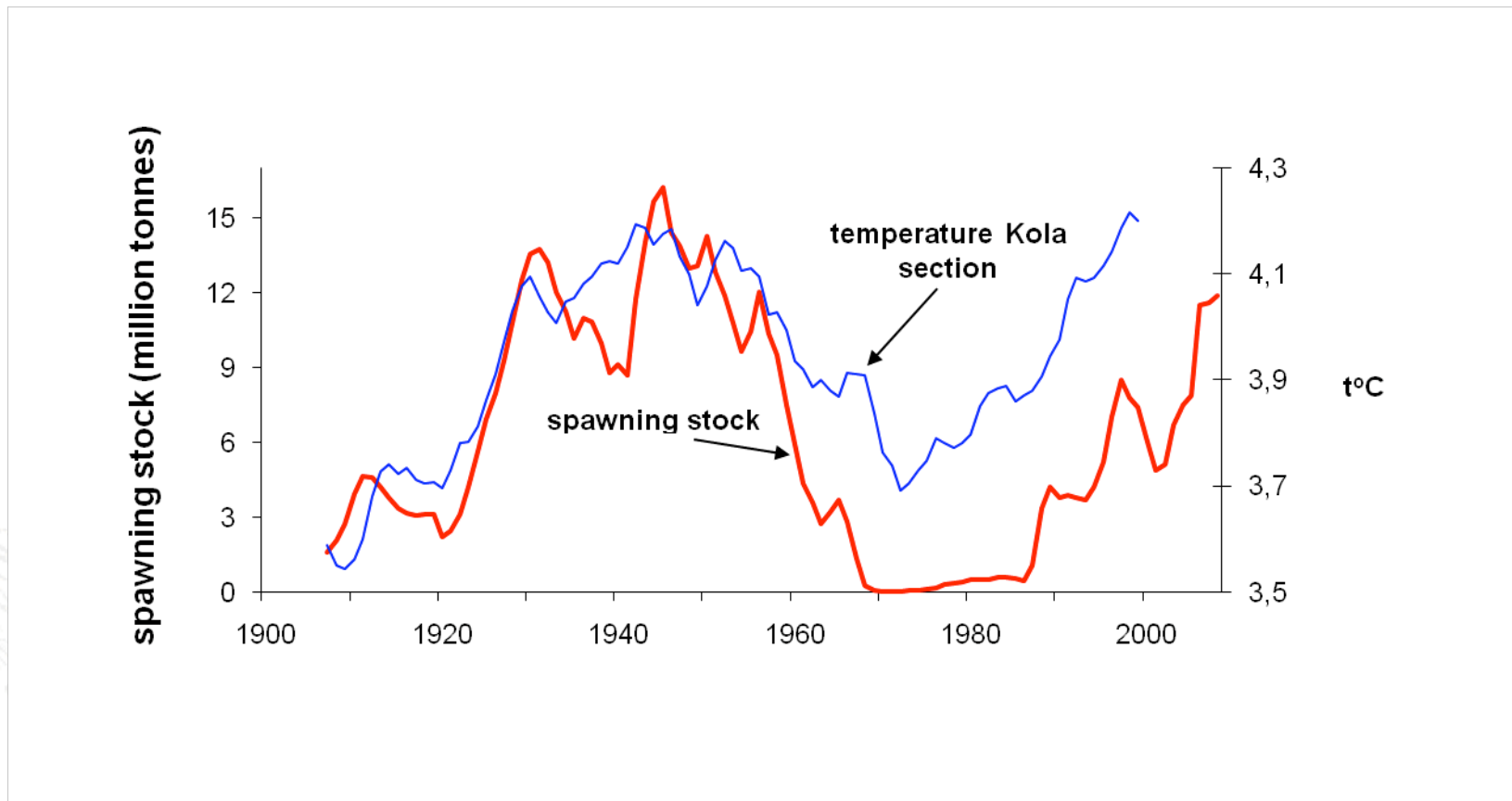


Candidates in the Northeast Atlantic

- Norwegian spring-spawning herring
- Northeast arctic cod
- Northeast arctic haddock
- Northeast arctic saith
- Barents sea capelin
- North Sea herring

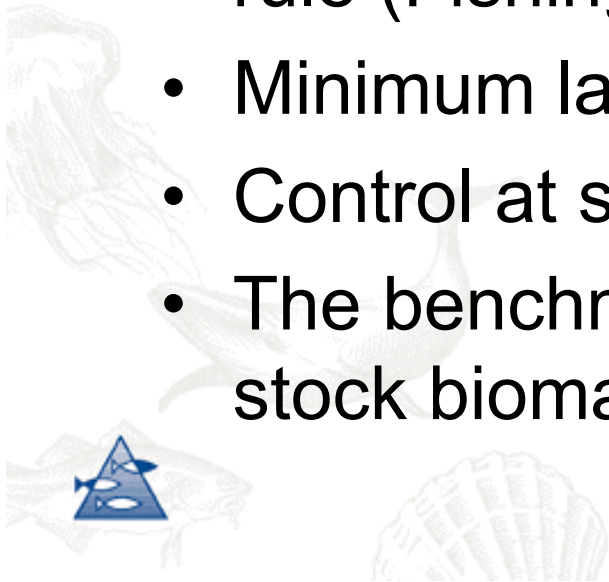


The Norwegian spring-spawning herring

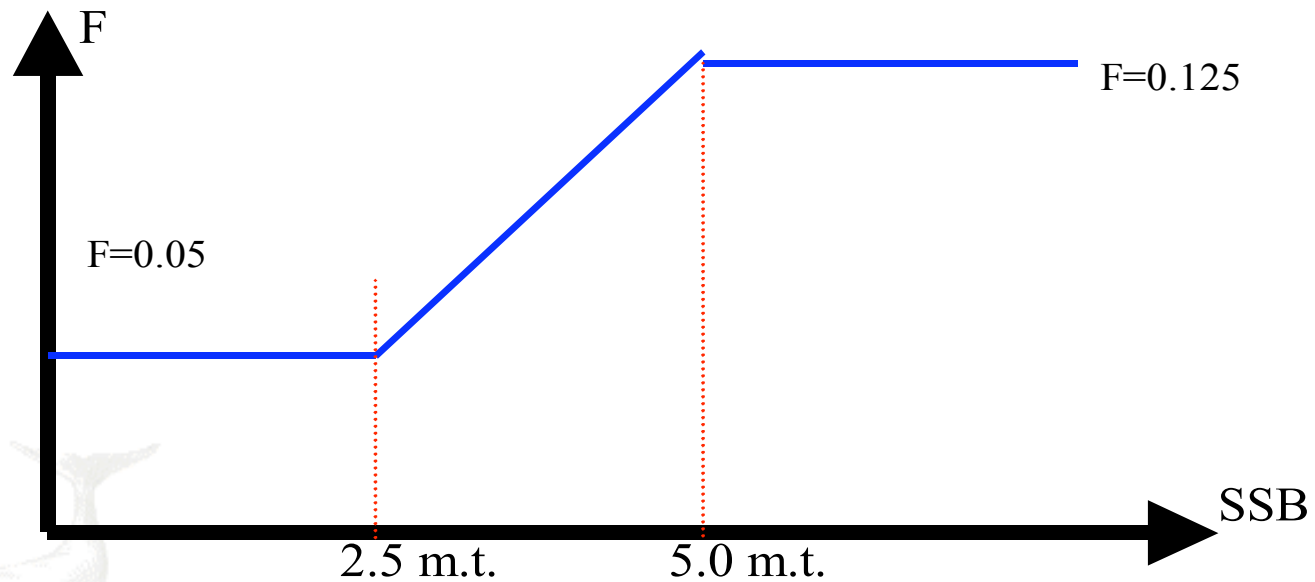


Is the stock harvested at a sustainable level?

- International acoustic abundance estimations
- Analytical assessment (ICES, WGWIDE)
- An agreed and implemented harvest control rule (Fishing mortality < 0.125) since 1998
- Minimum landing size regulation (25 cm)
- Control at sea
- The benchmark is the level of the spawning stock biomass and fishing mortality



Agreed harvest control rule Norwegian spring-spawning herring

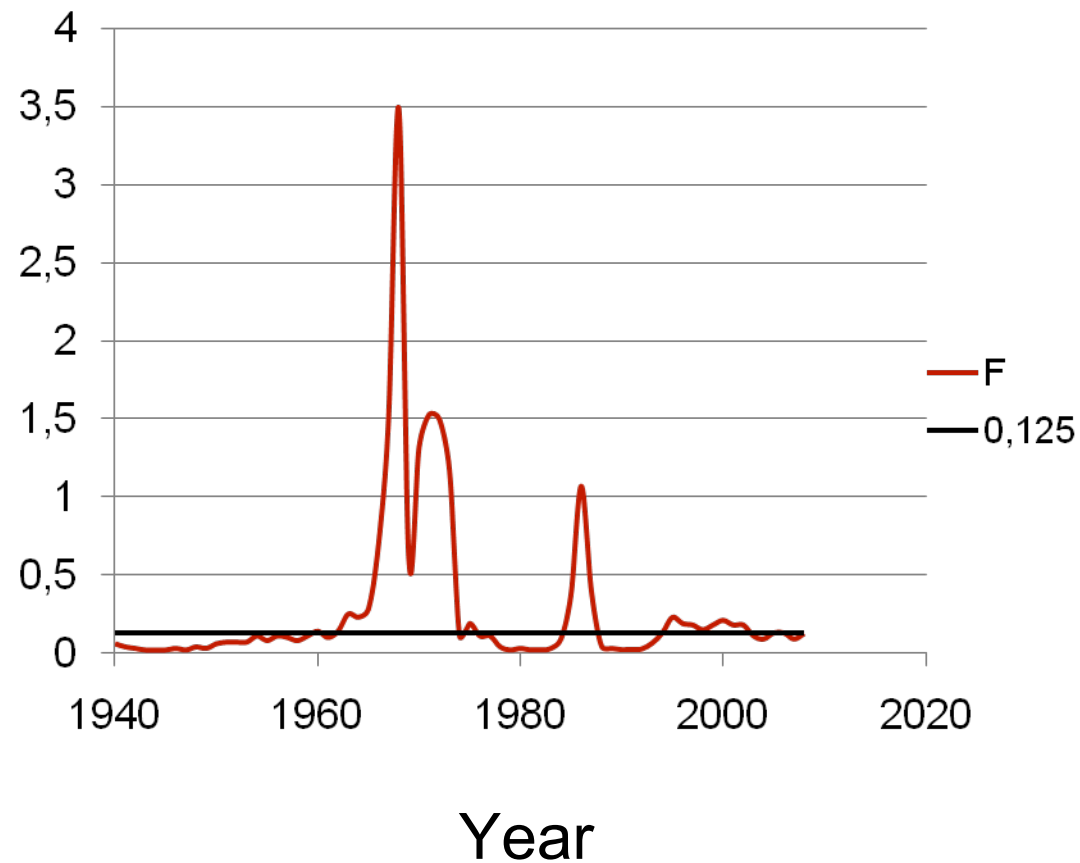


The Norwegian spring-spawning herring

Do they manage?

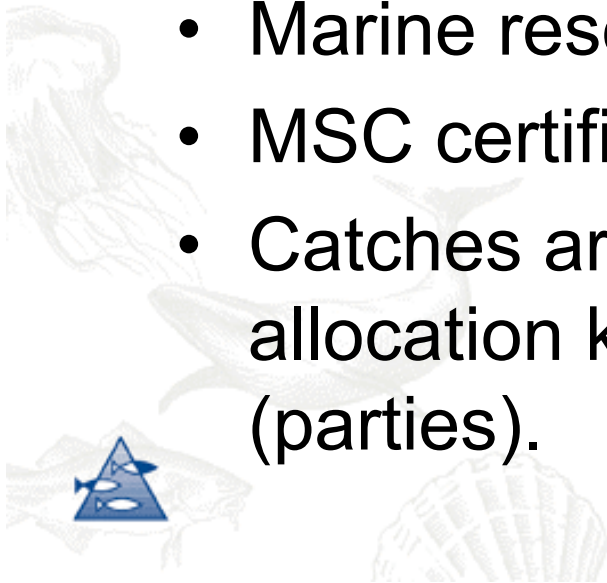
Fishing mortality

F



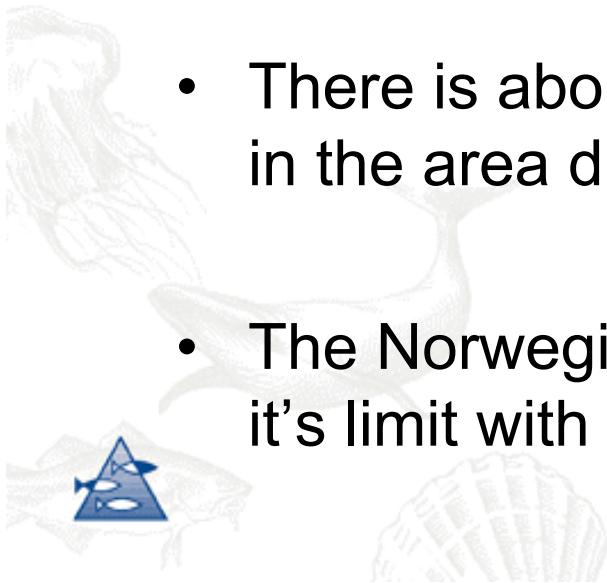
The fisheries

- Purse seiners take most of the catch (about 85% of the TAC).
- TAC in 2009 were 1,6 million tonnes.
- Bycatch very low. Catch is taken in the winter and in the gracing period.
- Marine reserves is not a management tool.
- MSC certified.
- Catches are shared according to agreed allocation keys between five countries (parties).



Is the fishery truly sustainable?

- Yes, but...
- There are indications that the zooplankton biomass in the Norwegian Sea has decreased during recent five years
- There is about 18 mill tonnes of pelagic fish feeding in the area during summer
- The Norwegian Sea ecosystem may have reached it's limit with regards to carrying capacity



Three points for sustainability

- Knowledge about the ecosystem and the resources (assessments)
- A management system needs to be in place (decisions, enforcement and control)
- Politicians need to have the ability and will to manage

