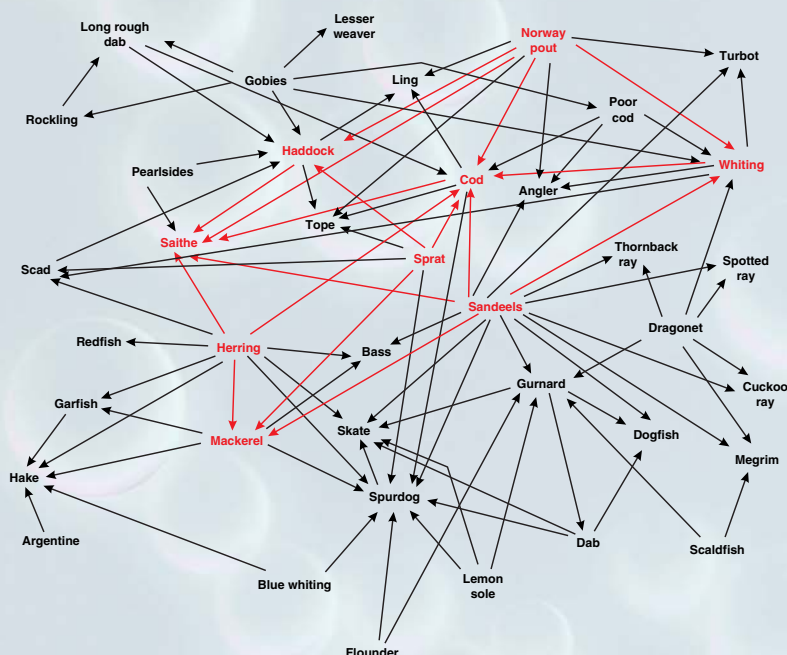


MULTISPECIES MODELLING OF NORTH SEA FISH STOCKS

*Advice on short term management can be adequately provided using single species **VPA**, but advice on longer term management requires that ecological interactions are also considered. **MultiSpecies VPA** is presently the most widely used of these models.*

Time Scale of Predictions	Type of Model	Reasoning
1 - 5/10 years	VPA	Fishing mortality dominates; species interactions are less important.
5 - 10/15 + years	MSVPA	Interactions between species become more important and cannot be ignored.

Simplified North Sea Food Web



The English groundfish survey has reported 125 fish species caught in the North Sea. Only 39 are included here, 9 of which are MSVPA species (red). There are 92 interactions in this food web of which 17 are between MSVPA species (red).

There is about 20 tonnes of surveyed fish biomass per km² in the North Sea. The MSVPA species above represent 70% of this biomass.

MSVPA is still a simplification of the system as it ignores many interactions including those involving birds, seals, whales etc.

MSVPA Inputs and Outputs

