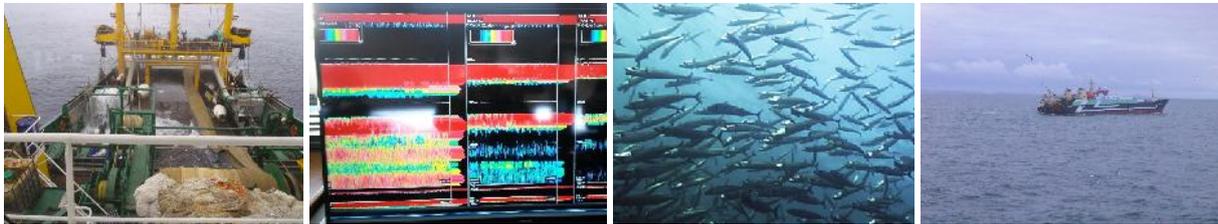


Search time of pelagic trawlers as a potential indicator of stock abundance of horse mackerel.

Ref 2015/02 (13/4/2015)

Introduction

Horse mackerel is a pelagic fish species that is of substantial importance to the PFA fleet. Three different stocks of horse mackerel are distinguished: North Sea horse mackerel, Western horse mackerel and Southern horse mackerel. The stocks assessments of both North Sea and Western horse mackerel are very uncertain because there is limited information available on stock trends. Traditionally, Catch per Unit Effort (CPUE) of pelagic trawlers is not considered an informative source for stock abundance because of the aggregating properties of pelagic species. However, Horse mackerel is mostly fished while it is very close to the bottom in relatively dispersed, small schools and where extensive search time may be involved. The thesis subject is devoted to the development of a new stock indicator based on search time.



Research questions

- How do skippers and quality managers on board of pelagic trawlers understand and describe the differences (or not) between North Sea and Western horse mackerel?
- What type of information on search time and catch volume of horse mackerel is held by the different companies (level of detail, length of time series, form of storage)
- Generate a dataset on search time and catch volume of horse mackerel from commercial records in combination with relevant environmental variables.
- Analyse search time for horse mackerel as a potential indicator of stock size for North Sea and Western horse mackerel. Apply an appropriate statistical framework, taking into account the nature of the fishery and other factors such as seasonality and alternative fishing opportunities.

Type of student work: thesis

Required background: fisheries science

Period: 5 months. Starting as soon as possible.

Comment: May be carried out in conjunction with project on mixing of horse mackerel stocks.

Contact persons: Martin Pastoors (PFA, mpastoors@pelagicfish.eu, +31 631901027) and Thomas Brunel (IMARES, Thomas.brunel@wur.nl, +31 317487161)

Organization: The Pelagic Freezer-trawler Association represents the interests of 9 European pelagic freezer-trawler companies. PFA members are responsible, family-run companies, mostly going back to the late 19th century, who benefit from several generations of fishing experience, and operate a combined fleet of 19 vessels. They are vertically integrated companies involved in the catching, processing, distribution and export of pelagic fish. The association currently has members in France, Germany, Lithuania, the Netherlands and the UK.

