

## Effects of environmental changes on the biology, physiology, and behaviour of pelagic fish (H)

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Changes appeared in the 90s in the major characteristics of pelagic fish in several areas of the world, e.g. changes in the spatial distribution and schooling behaviour of anchovy in the bay of Biscay, and on the backscattering cross section of herring in the Baltic Sea. Such observations demonstrated that fish are sensitive to environmental changes and change their major anatomical, physiological, and behavioural characteristics to adapt to these changes. A Study Group on the Target Strength Estimation of Herring in the Baltic Sea has met since 2001 and obtained a series of results that would be interesting to compare with observations on other populations. A wider overview of the effects of changes on the biology, physiology, and behaviour of clupeoids in a changed ecosystem would enrich the existing knowledge on the capacities of response by pelagic fish, and help to evaluate the impact such changes and adaptation may have on stock assessment.

A theme session on the effects of environmental changes on pelagic fish is organized with the aim to:

- measure the effects of biological changes on the TS of clupeoids in the Baltic;
- model the impact of the different biological/physiological/behavioural changes on the acoustic characteristics of the Baltic clupeoids;
- relate the environmental changes to the changes in the traits of the biology of pelagic fish;
- evaluate the impact of changes in fish biology on stock assessment and acoustic estimates.

The theme session will be an opportunity to make a synthesis of the work conducted in ICES groups WGPBI, WKAMF, WGRP, SGRESP, SGBEM, and GLOBEC/SPACC, and in PICES. Endorsement by EUROCEANS and GLOBEC will be sought.

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