Joint PICES-ICES Topic Session (S4)
Responses of small pelagic fish communities to recent climate regime shifts and climate extremes

Convenors

Motomitsu Takahashi (Japan; takahashi_motomitsu30@fra.go.jp)
Akinori Takasuka (Japan; atakasuka@g.ecc.u-tokyo.ac.jp)
Chris Rooper (Canada; Chris.Rooper@dfo-mpo.gc.ca)
Rebecca Asch (USA; aschr16@ecu.edu)
Susana Garrido (Portugal; susana.garrido@ipma.pt)

Description

Forage communities including small pelagic fish and squid are key components that link plankton and predators in marine food webs. These species exhibit large fluctuations in abundance, and the dominant species can alternate from one dominant species to another with changing environmental variables. Previous hypotheses, however, may not explain responses of small pelagic fish communities to the recent climate phases such as marine heat waves and unconventional regimes. Understanding the mechanisms of the population fluctuations and main drivers of the variability is essential to fill the gap of ecological knowledge on their critical role as consumers of plankton and the main prey for predators and to develop strategies for sustainable use of small pelagic fish species.

We invite contributions that investigate the drivers of recent dynamics, including the impacts of climate change, on small pelagic fish communities. We also seek presentations enhancing knowledge of the role of small pelagic fish on trophic webs, including modelling approaches that aim at better predicting the response of small pelagic fish communities to environmental changes. New advances in the assessment and monitoring of small pelagic fish species that target at obtaining more accurate and efficient data are welcome, as well as advances of small pelagic fish species assessment, particularly those integrating Ecosystem-Based Fisheries Management. Finally, we are interested in studies on the socio-economic impacts of small pelagic fish communities, including methodological advances in integrated biological-economic models, and models of fishing community response and adaptation to climate.