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Orientation: Sustainable use of Marine Resources  
Specialization Area: Management and Use of Resources  
Research Area: 2.3. Assessment of fish and shellfish resources



PhD project: **Annual Egg Production Method for Northeast Atlantic mackerel. (Método Anual de Producción de Huevos en la caballa (*Scomber scombrus* L.) del Atlántico Noreste)**  
Supervisors: Dr. Graham J. Pierce (Universidade de Aberdeen)

**Summary:** Northeast Atlantic (NEA) Mackerel fishery is currently one of the most important fisheries in the North Atlantic. In the context of the management of this fishery, an annual analytical assessment of NEA mackerel stock is carried out. An index of this analytical model for NEA mackerel is the mackerel egg survey spawning biomass (SSB) index from the triennial Mackerel and Horse Mackerel Egg Surveys.

This mackerel egg survey SSB index is estimated by the Annual Egg Production Method (AEPM). The AEPM combines the estimation of total abundance of eggs during the spawning season (egg production) from ichthyoplankton surveys and the estimate of average number of eggs per adult female gram in the spawning season (relative fecundity).

The main objective of this work would be to improve the knowledge of the reproductive dynamic of the NEA mackerel using the data of the triennial Mackerel Egg Surveys from the ICES Working Group of Mackerel and Horse Mackerel Egg Surveys: mackerel egg abundances and mackerel adult biological samples collected during the spawning season.

