

Comparison of the quantitative measure of fish abundance observed by fishing and scientific vessels in The Northern Region of the Humboldt Current System

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Abstract

Anchovy (*Engraulis ringens*) is one of the most abundant species in the Northern Humboldt Current System and support the largest fishery of the world. To produce useful information for the adaptive ecosystem management of the fishery it is performed a quantitative acoustic survey at the beginning of each fishing season- The survey is carried out by 1 or 2 research vessels within 30 to 40 days. This time interval is long enough to not to detect migration of clusters so that some compared results between surveys lacks of consistency. Facing this uncertainty it is being promoted the use of fishing vessels during scientific surveys in order to collect the needed data in shorter time intervals. Some experiments have already been made for calibrating, intercalibration of vessels, small scale surveys and testing of different distances between transects. It included the comparison of length structures obtained with purse seine and trawl nets in order to validate the length data obtained by the fleet Furthermore 2 sampling methods were tested to probe the consistency of the results obtained when the surveys are parallel or perpendicular to the coast line. Obtained results are consistent, support the needs of the quantitative monitoring of the ecosystem and enable the participation of fishing vessels when calibrated according to the designed protocols.

Keywords: quantitative monitoring, acoustics, Fishing Vessels, abundance.

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