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Acoustic abundance indexes for orange roughy and alfonsino in the Indian Ocean (SIOFA) from industry acoustics 2004 - 2008

Relates to agenda item: 8

Working paper info paper

Delegation of the Cook Islands

Abstract

Orange roughy (*Hoplostethus atlanticus*) and alfonsino (*Beryx splendens*) sustain the two most important deep-sea fisheries in the Indian Ocean, with annual catches between 2004 and 2009 estimated in the order of 3,000 and 8,000 tonnes respectively. No formal biomass estimates are available for either of these two species, in part due to the lack of management organizations and also because the extension of the area and the methodological difficulties inherent to deep-water resources. Regarding the later issue, acoustics methods have become the standard approach to evaluate orange roughy and alfonsino biomass in more developed orange roughy fisheries: New Zealand, Australia, Chile and Ireland.

To start reverting the knowledge gap for these fisheries, Sealord Group implemented in 2004 an orange roughy surveying program from its factory vessel *Will Watch*, which covered 17 of the 35 main orange roughy spawning aggregations (stocks) believed to exist in the SW Indian Ocean. In 2007, the program was extended to include alfonsino fishing grounds with a primary objective of assessing the feasibility of producing reliable abundance or biomass indexes for this fishery. This confidential data set was analyzed to estimate biomass of surveyed aggregations and to evaluate the feasibility of conducting a formal (larger scale-planned) biomass assessment in this area, using one or more commercial vessels. The primary goal at this stage was to produce minimum biomass estimates for each of these reporting zones, although some indexes were oriented to assess inter-annual changes within zones.
