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ABSTRACT

Recent changes in fish abundance over the Kerguelen Islands shelf and adjacent banks

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Abstract

Biomass survey cruises (named POKER: POissons de KERguelen) have been conducted in the range 100-1000 m over the Kerguelen Islands Shelf and surrounding banks from 2006 onwards (POKER 1 2006, POKER 2 2010, POKER 3 2013, POKER 4 2017). The same sampling strategy (about 200 randomly selected stations), vessel, bottom gear and period of the year allow comparisons between cruises during a decade. Results are available for 19 fish species, both commercial or not. Some species do not exhibit substantial trends but other show clear increase or decrease in their biomass. These trends are analysed considering the fishery history events (i.e. the trawl fishery targeting slope species *Notothenia rossii*, *Lepidonotothen squamifrons*, *Champscephalus gunnari* at the end of XXth century and presently longline fishing targeting only one top predator species - *Dissostichus eleginoides* - in deep water) or specific life cycles. Major species on the shelf and slope are Patagonian toothfish (*D. eleginoides*), mackerel icefish (*Champscephalus gunnari*) and unicorn icefish (*Channichthys rhinoceratus*) but other, such as *Zanclorhynchus spinifer*, seems locally dominant. Recent recovery of *Notothenia rossii* appears convincing. Some trends could be explained from balance between species but effects of additional events must not be excluded. Geographical stability of the fish concentration is remarkable and could help in the future management of the whole area, recently set up as a Marine Reserve.