

ADULT HAKE DISTRIBUTION
IN THE BAY OF BISCAY
FROM 1992 TO 1995

by

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ABSTRACT

Data on hake landings and effort provided by the Basque fleet operating in the Bay of Biscay (ICES Divisions VIII a, b, d) and in zones of Subareas VII and VI, in the period 1992 to 1995, have been analysed. Spatio-temporal distribution of hake catches in each fishing trip was derived from the EU sheets (landing day, hake catches by statistical rectangle and number of hauls per day -for trawlers- or number of hooks and hours -for longliners) in combination with the selling sheets (landing day, hake total landing by trip and by size category). Four approximate size categories have been used: Juveniles (<35 cm length), Juvenile Females/Mature Males (35-45 cm), Small adults (45-60 cm), Big adults (≥ 60 cm). The main fishing fleets/gears have been considered separately, i.e. longliners and trawlers. Special attention has been applied to the longliners because their catches offer better information about the distribution of big fish (all of them adults), specially in relation with the spawning period.

The results show a marked spatio-temporal evolution of catches and effort directed to the different hake sizes available in the fishery, with a pattern that appears constant along the years. In the Bay of Biscay the more abundant catches of big fish are made in the first quarter (mainly in February-March) and in the more northern parts (Division VIII a), in waters very close to the edge of the continental shelf. In this period and in this area the big fish are found in full reproductive activity. In the second quarter the more abundant catches are concentrated in the central part of the Bay of Biscay and rather in waters of the continental shelf, not so close to the edge. The proportion of big fish decreases considerably. This trend in the reduction of the big fish proportion and in the relation to inner waters goes on in third quarter. Finally, in the fourth quarter the total catches of longliners reach a minimum, the proportion of big fish is the lowest in the year and almost all of the catches are made in the continental shelf, rather far from the edge.

By other hand, the reduction in the catches of big fish from the second quarter henceforth in the northern Bay of Biscay coincides with an increase in the catches of big size hake in Subarea VII (Division VII h, j), that might indicate a certain shifting of adult hake to these sea areas. Finally it is to be pointed out the continuous decrease in total catches of big fish and in their catches per effort observed from 1992 to 1995 in the Bay of Biscay, above all in relation to the first quarter (probably the most important for reproduction of big fish in the northern Bay of Biscay).

Key words: Hake, *Merluccius merluccius*, catches, fishing effort, adult, distribution, Bay of Biscay.