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Annual Report of Ecuador to the SC – Jack Mackerel ANJ

Ecuador

INSTITUTE FOR AQUACULTURE AND FISHERIES RESEARCH (IPIAP)

ECUADOR ANNUAL REPORT: JACK MACKEREL IN ECUADORIAN WATERS, 2023

1. INTRODUCTION

Small pelagic fishery is one of the most important income to the country in continental Ecuadorian platform. Thread herring (*Opisthonema* spp.), chub mackerel (*Scomber japonicus*), Pacific anchoveta (*Cetengraulis mysticetus*), Frigatetuna (*Auxis* spp.), Round herring (*Etrumeus teres*), sardine (*Sardinops sagax*), anchovy (*Engraulis ringens*) and jack mackerel (*Trachurus murphyi*) are the species caught by the purse-seine vessels. The products are mainly intended to produce fishmeal, canning and direct human consumption (fresh – frozen); all depending on the species

This report presents biological and fishing information on jack mackerel, collected for the small pelagic fish monitoring program of the IPIAP (before known as the National Institute of Fisheries), considering when this resource is available in Ecuadorian waters and for the purse seine fleet.

2. FISHING ASPECTS

a. FLEET

The purse seine fleet operate 20 to 22 days in month, during the period called new moon; fishing trips are daily and the activity begins from 20h00 to 05h00 hour. IPIAP classified the fleet into four different class, related to Total Register Tonnage (TRT): Class I (independent fishermen, the activity is close to the coast), Class II, III and IV (belong to fisheries industries) catch mackerel, *Etrumeus teres*, *Auxis* spp., jack mackerel and occasionally *Cetengraulis mysticetus* and *Opisthonema* spp. It should be noted when Jack Mackerel is available in Ecuadorian continental waters, vessels class III and IV can capture this species (related to operational activity, 15 miles), while it is found near the coast, class I and II vessels can capture this species.

b. FISHING ZONES

The principal fishing zones were recorded in the Gulf of Guayaquil and around Peninsula de Santa Elena, when Jack Mackerel is available in Ecuadorian waters; catch information of JM is recorded in Research data base since 1990 (Figure 1).

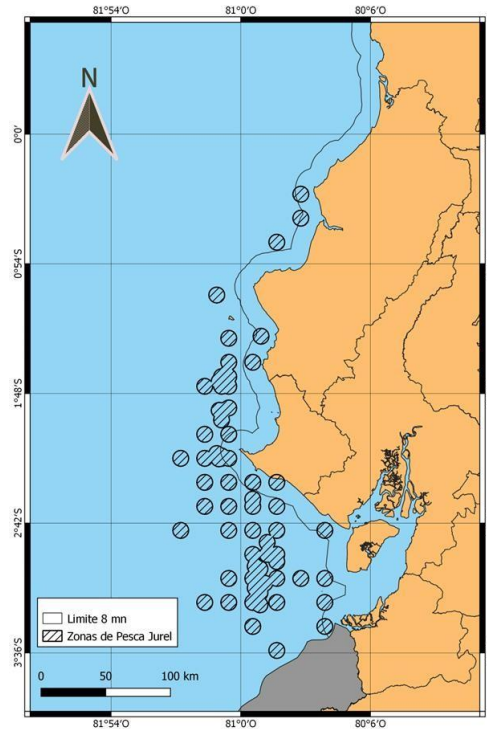
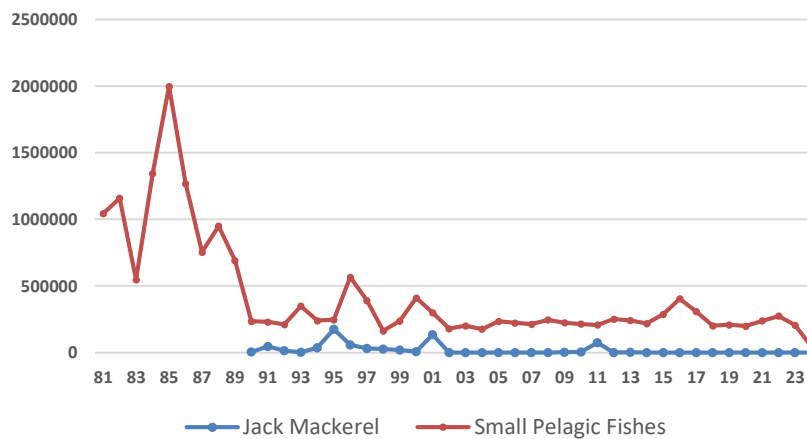


Figure 1. Historical spatial distribution of jack mackerel catches in Ecuadorian waters

c. LANDINGS

Jack mackerel catches are associated as a secondary species in the small pelagic fishery. In 1990 jack mackerel landings was 4 144 t and 1991 a total of 45 313 t; fishing records of this species were variable in subsequent years, reporting in 1995 up to 174 393 t. For the last years the catch records have been minimal in relation to the previous years (Figure 2); Until middle of year 2024 has been reported 30 t of jack mackerel by the purse seine fleet.

Figure 2. Historical catches (t) of JM in Ecuadorian continental waters.



3. BIOLOGICAL ASPECTS
a. SIZE STRUCTURE

The size structure ranges from 14 to 66 cm TL, noting the presence of three groups of size classes (19 - 31, 32 - 51, and 55-65 TL), as well as two strong modal groups (28 and 29 cm TL) (Figure 2).

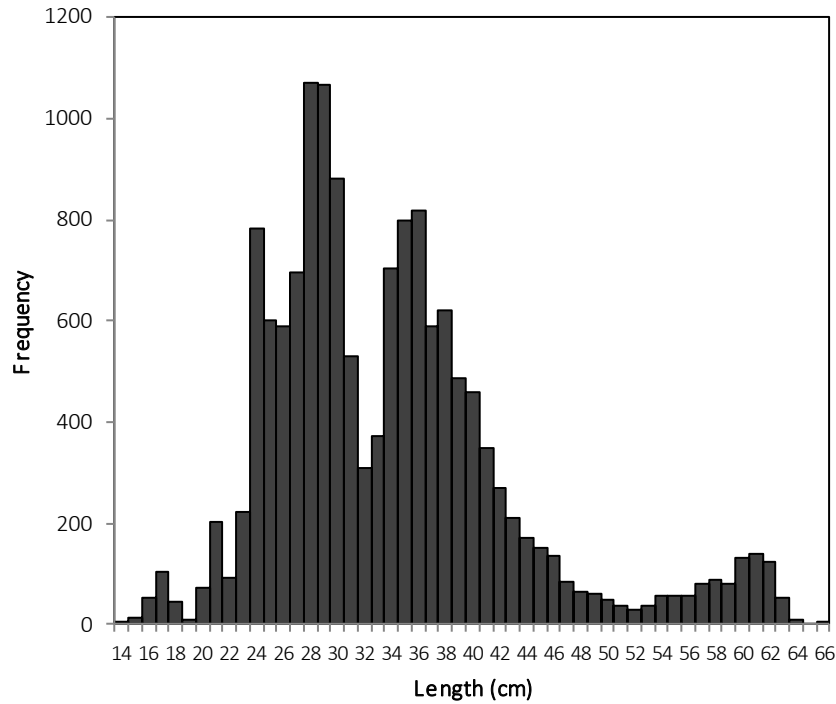


Figure 3. Historical Length composition of Jack Mackerel, registered in Ecuadorian Waters