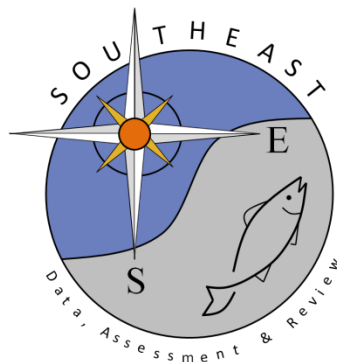


Fishery landings by fleet of king mackerel (*Scomberomorus cavalla*)
from the artisanal fishery operating in the southern Gulf of Mexico

Raúl E. Lara-Mendoza, Sebastián Caña-Hernández & Vequi Caballero-
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**MEXICAN INSTITUTE FOR SUSTAINABLE FISHERIES AND
AQUACULTURE RESEARCH**

DIRECTORATE OF FISHERIES RESEARCH IN THE ATLANTIC

**“Implementation of the Strategic Action Program of the
Gulf of Mexico Large Marine Ecosystem” Project**

Fishery landings by fleet of king mackerel (*Scomberomorus
cavalla*) from the artisanal fishery operating in the southern
Gulf of Mexico

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1. Abstract

Catch composition by fleet data for king mackerel (*Scomberomorus cavalla*) from artisanal commercial landings in the southern Gulf of Mexico were analyzed from 1970 to 2024, using official information from the Statistical Yearbooks of Aquaculture and Fisheries, fishing landing reports and monitoring programs conducted in fishing communities to reconstruct the landing series by year of each type of fishing fleet (trolling and gillnet) in the southern Gulf of Mexico.

2. Data sources

The historical catch time series of king mackerel in the southern Gulf of Mexico by fishing fleet (trolling and gillnets) was obtained for the period 1970–2024. The main source of information comes from the Statistical Yearbooks of Aquaculture and Fisheries published by the National Commission of Aquaculture and Fisheries (CONAPESCA, in Spanish), which serves as Mexico’s fisheries administrative authority. From 1970 to 1979, the information comes from the book “*Sustentabilidad y Pesca Responsable en México*”, better known as the Red Book, and from 1980 to 2024 it comes from the Statistical Yearbooks. Because the fisheries statistics are reported in a general manner, without considering separation by fishing fleet, a historical reconstruction of catches was therefore undertaken based on information collected from monitoring activities of Research Projects and Programs carried out in various fishing sites in the Gulf of Mexico by the Mexican Institute for Fisheries and Aquaculture Sustainable Research.

Similarly, information contained in commercial marine finfish fishing permits was also considered. These permits include information on historical permits, the number of small- and large-scale vessels, the quantity and types of fishing gear, associated fishing landing reports, fishing localities, among other details.

With all this information compiled, proportions were estimated for each fishing locality and by state in order to determine the share of the catch corresponding to each fleet. Finally, the reconstruction was carried out by applying the proportion of the catch attributed to each fishing fleet to the total catch for each year.

Another source of information used was the landing reports for each fishing trip made by small-scale vessels operating year-round in this region. These landing reports contain information on catches for each fishing trip, associated fishing areas, fishing gear, number of fishers, date, catch value, vessel records, landing sites, and other fundamental information used for the reconstruction of historical catch series.

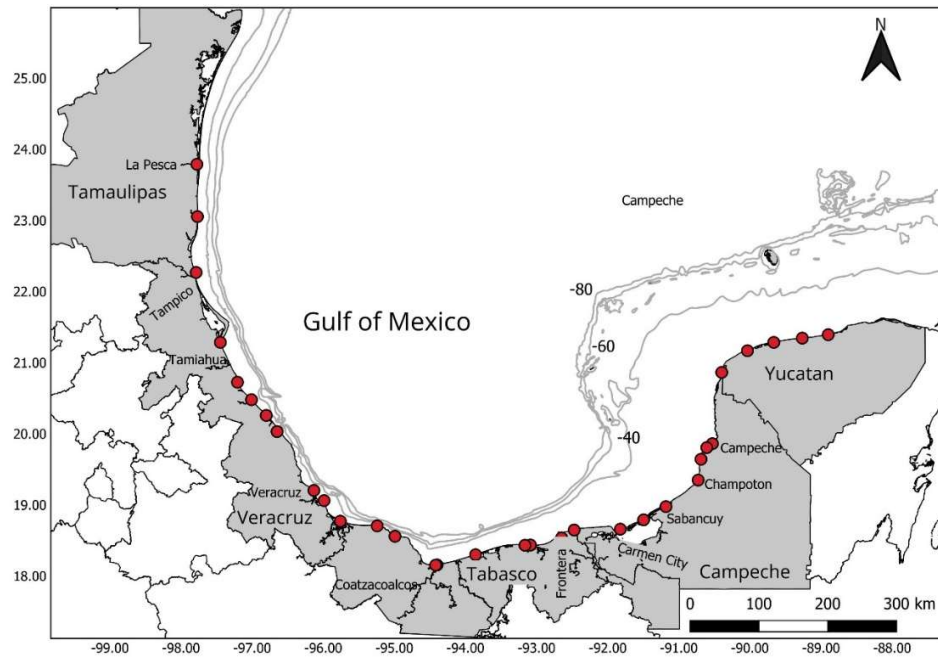


Figure 1. Map of the main sampling sites of king mackerel fishery in the southern Gulf of Mexico.

3. Results

Over the 1970–2024 period, the Gulf of Mexico king mackerel (*Scomberomorus cavalla*) fishery has been primarily driven by the gillnet fleet, with an average annual catch of 3,319 metric tons. This fleet exhibits pronounced interannual variability, with a historical minimum of 781 metric tons in 2021 and a peak of 6,836 metric tons in 1993, reflecting changes in exploitation dynamics and/or resource availability over time. In contrast, the handline/trolling fleet recorded an average annual catch of 2,836 metric tons over the same period. The minimum catch was 1,283 metric tons in 2021, while the maximum was observed in 2018 with 4,588 metric tons (Fig. 2).

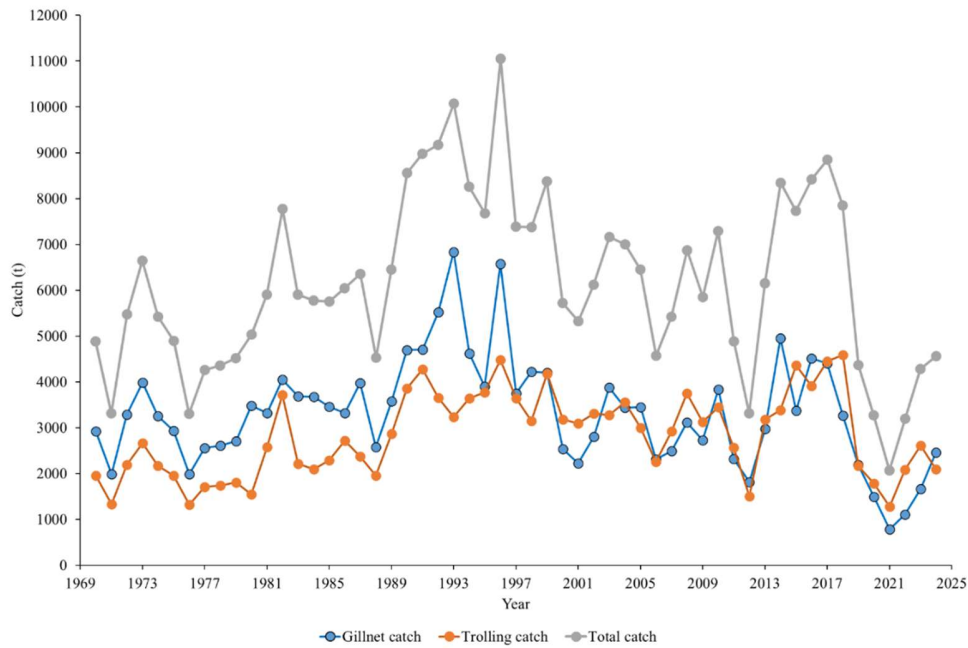


Figure 2. Annual landings (metric tons) of *Scomberomorus cavalla* in the Gulf of Mexico from 1980 to 2024, disaggregated by fishing gear.

Table 1. Annual landings (t) by gear and total catch for *Scomberomorus cavalla* in the Gulf of Mexico, 1980–2024.

Year	Gillnet	Trolling	Total
1970	2928	1952	4880
1971	1992	1328	3320
1972	3288	2192	5480
1973	3990	2660	6650
1974	3252	2168	5420
1975	2935	1956	4891
1976	1983	1322	3305
1977	2556	1704	4260
1978	2615	1743	4358
1979	2713	1808	4521
1980	3481	1550	5031
1981	3324	2584	5908
1982	4052	3720	7772
1983	3691	2218	5909
1984	3680	2097	5777
1985	3462	2289	5751
1986	3325	2721	6046
1987	3972	2380	6352
1988	2576	1954	4530
1989	3582	2866	6448

1990	4696	3863	8559
1991	4703	4278	8981
1992	5518	3650	9168
1993	6836	3237	10073
1994	4619	3643	8262
1995	3905	3768	7673
1996	6572	4478	11050
1997	3746	3643	7389
1998	4227	3154	7381
1999	4203	4179	8382
2000	2536	3182	5718
2001	2229	3091	5320
2002	2809	3314	6123
2003	3885	3275	7160
2004	3442	3561	7003
2005	3454	2996	6450
2006	2314	2257	4571
2007	2497	2928	5425
2008	3115	3755	6870
2009	2725	3125	5850
2010	3840	3451	7291
2011	2318	2568	4886
2012	1820	1500	3320
2013	2977	3177	6154
2014	4957	3388	8345
2015	3372	4363	7735
2016	4514	3907	8421
2017	4410	4445	8855
2018	3263	4588	7851
2019	2195	2171	4366
2020	1490	1783	3273
2021	781	1283	2064
2022	1111	2082	3193
2023	1662	2617	4279
2024	2458	2100	4558