

Data Collection of Handline Fishery from Thai-flagged Fishing Vessel in the Western Indian Ocean

Bunyarit Permnak¹ and Pavarot Noranarttragoon^{2*}

¹ Marine Fishing Ground Survey and Assessment Group, Marine Fisheries Research and Development Division, Department of Fisheries, Thailand

² Marine Fisheries Research and Development Division, Department of Fisheries, Thailand

*Corresponding author: pavarotn@gmail.com

Abstract

Data on handline fishery from a Thai-flagged fishing vessel were collected by an onboard observer during a fishing trip between April and May 2024 to identify fishing grounds and analyze total catch and length of species managed by the IOTC. The main fishing gear used by the vessel was otter board trawl, with handline as secondary gear. The study found that, among 42 days of handline fishing, IOTC-managed species was caught on 14 days, with all 14 days being observed. The fishing grounds were found in the high seas of the western Indian Ocean between latitude 09° 41' and 10° 33' south and longitude 61° 13' and 61° 48' east. The target species of the handline fishery were trevallies and snappers. Kawakawa (*Euthynnus affinis*) was the only one IOTC-managed species caught accidentally as bycatch. The total catch was 130.8 kg. The fork length ranged from 59 – 79 cm with an average of 66.31 cm. This study is the first to focus on a Thai fishing vessel using handline to catch IOTC-managed species.

Keywords: handline, neritic tuna, Kawakawa, Indian Ocean, Thai fishing vessel

1. Introduction

Thailand is a member of two Regional Fisheries Management Organizations (RFMOs) namely Indian Ocean Tuna Commission (IOTC) and Southern Indian Ocean Fisheries Agreement (SIOFA). Thailand has not had any vessels engaging in tuna fishing in the high seas under the IOTC area of competence for more than 5 years. Only small-scale purse seiners catch IOTC-managed species in Thai waters and most of the catch is neritic tunas. Meanwhile, Thailand has had fishing vessels engaged in demersal fisheries in the area under SIOFA area of competence since 2017. In 2024, there are two Thai-flagged fishing vessels registered to fish in the SIOFA area of competence. The primary fishing gear used is otter board trawl, with handline as secondary gear. For trawl, the main catch comprises of demersal fishes such as lizardfishes and threadfin breams and small pelagic fishes such as scads while handline targets trevallies and snappers (SIOFA, 2024a). Kawakawa (*Euthynnus affinis*) is sometimes caught by handline fishery and subsequently discarded.

According to IOTC Resolution 19/04, fishing vessels that are not in the IOTC Record of Authorised Vessels are not authorized to fish, retain on board, transship or land tuna and tuna-like species. Hence, any IOTC-managed species caught by handline from the Thai vessel must be discarded. The fishing grounds for handline fishery by the Thai vessel in the SIOFA area of competence overlap with IOTC area of competence (Figure 1 and 2). Therefore, the vessel applied for a fishing license to fish for the IOTC species in the IOTC area of competence and was registered in the IOTC Record of Authorised Vessels in 2024. Consequently, the vessel was permitted to fish, retain, and land IOTC species. This paper aims to identify fishing grounds and analyze the total catch and length of species managed by the IOTC.

2. Method

According to SIOFA CMM 01(2024), the *Conservation and Management Measure for the Interim Management of Bottom Fishing in the Agreement Area (Interim Management of Bottom Fishing)*, each contracting party, cooperating non-contracting party, participating fishing entity or cooperating non-participating fishing entity (collectively CCPs) operating trawl gear must deploy 100 percent scientific observer coverage for the duration of each fishing trip (SIOFA, 2024b). An observer was deployed in a Thai fishing vessel using trawl gear and handline during a fishing trip

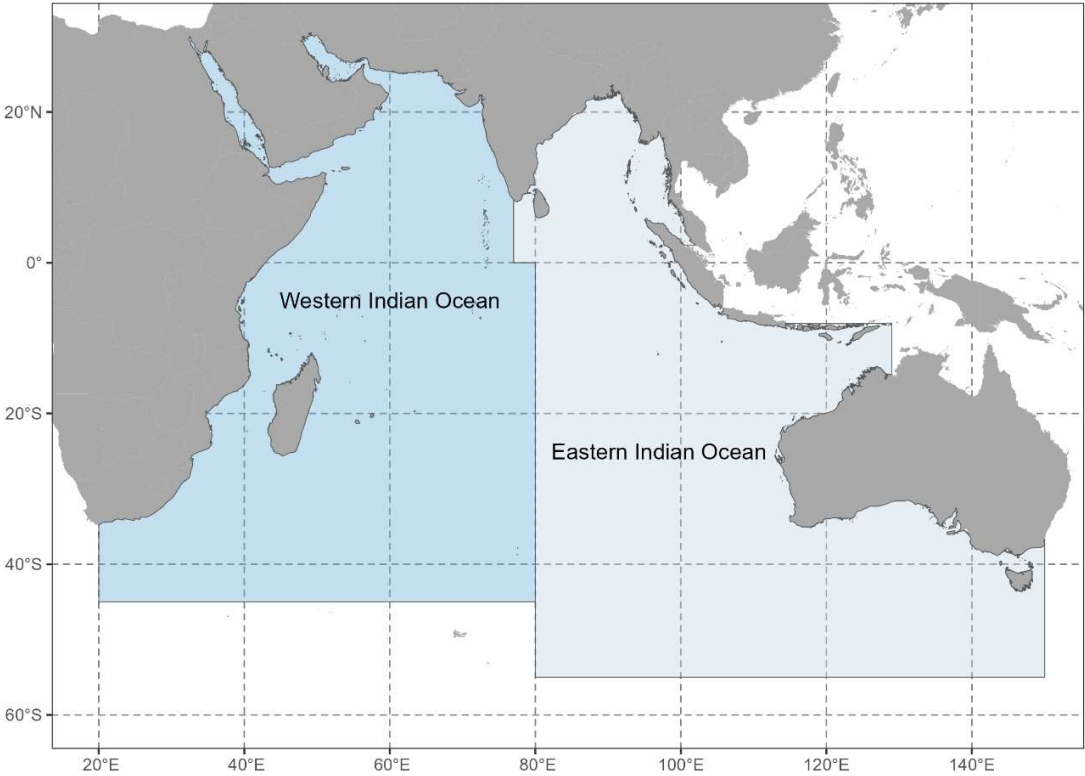


Figure 1 IOTC area of competence
Source: <https://iotc.org/about-iotc/competence>

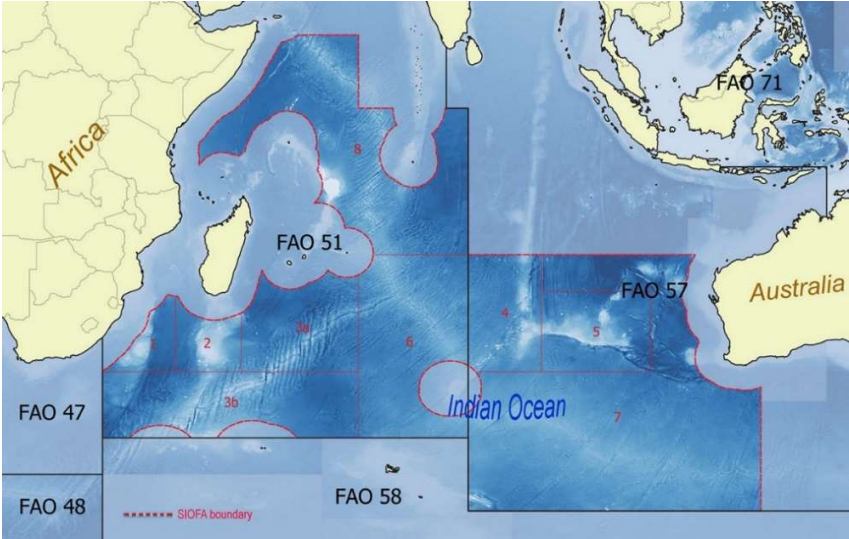


Figure 2 SIOFA area of competence
Source: <https://siofa.org/>

between March 24, 2024, and June 11, 2024. For handline fishery, the observer was assigned to collect scientific information for each operation. For IOTC species, the information collected included fishing position, weight by species, and length.

3. Result

From this study, the Thai fishing vessel conducted handline fishery for a total of 42 days. The only IOTC managed species found in the handline catch was kawakawa (*Euthynnus affinis*) with a total catch of 130.8 kilograms. Kawakawa was caught as a bycatch on 14 of those days. The fishing grounds were located in the high seas of the western Indian Ocean between latitude 09° 41' and 10° 33' south and longitude 61° 13' and 61° 48' east (Figure 3). The fork length of kawakawa caught by the handline ranged from 59 – 79 cm with an average of 66.31 cm.

This fishing trip was the first and only handline fishing operation by the Thai fishing vessel registered in the IOTC Record of Authorised Vessels. Due to some constraints, the Thai fishing vessel later ceased fishing for IOTC-managed species and the license for fishing in the high seas of IOTC area of competence was cancelled. Therefore, this study is the first to focus on a Thai fishing vessel using handline to catch IOTC-managed species.

Reference

SIOFA. 2024a. Annual Nation Report: Delegation of Thailand. Working Paper No. SC-09-11-Rev1-(REP)-2024. Available at <https://siofa.org/sites/default/files/documents/sc-meetings/SC-09-11-Rev1-%28REP%29-2024-Thailand-National-Report.pdf>

SIOFA. 2024b. Conservation and Management Measure for the Interim Management of Bottom Fishing in the Agreement Area (Interim Management of Bottom Fishing). Available at <https://siofa.org/management/CMM/01%282024%29>

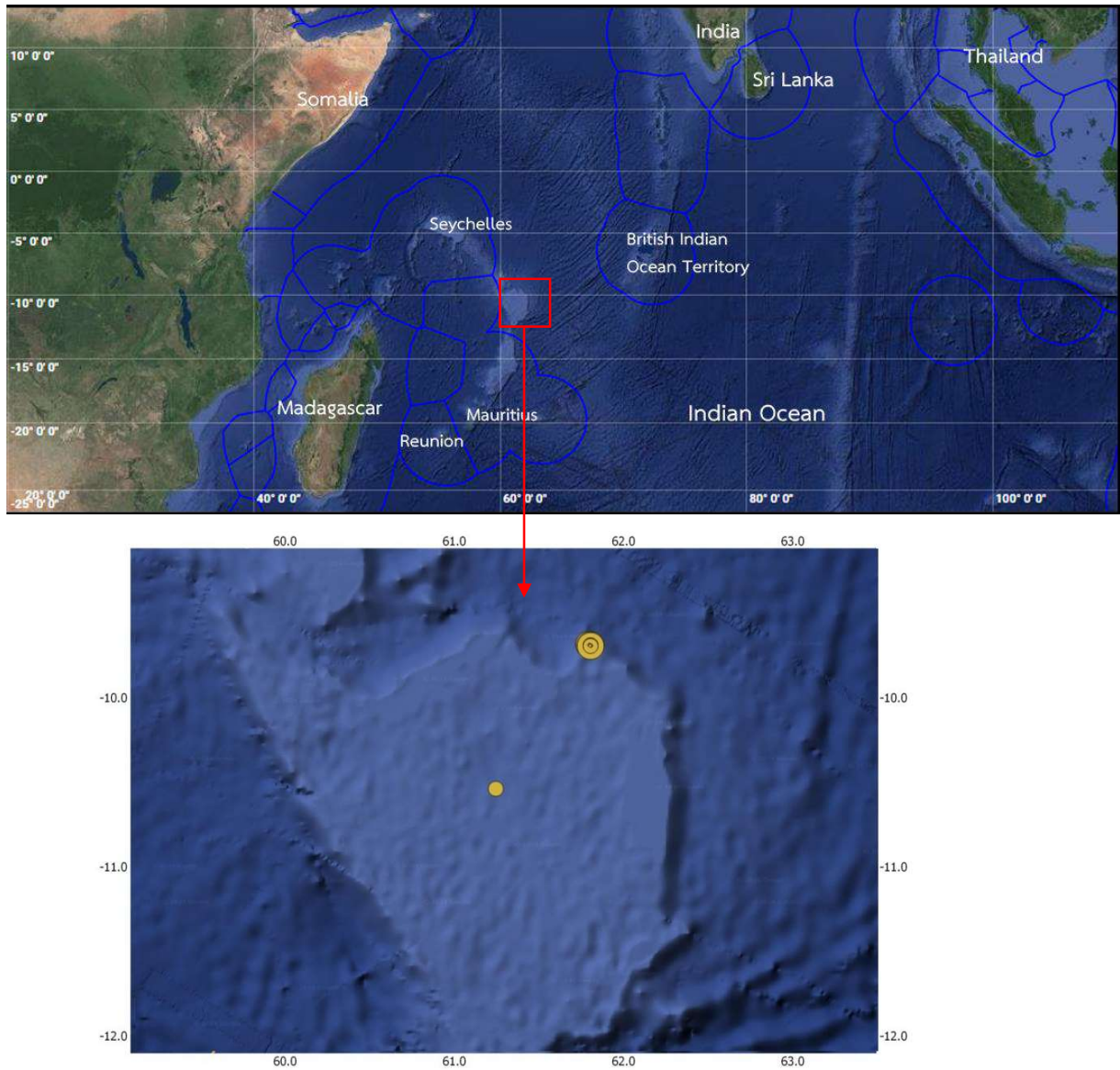


Figure 3 Fishing grounds for the Thai fishing vessel using handline in 2024

Remark: ● represents fishing grounds