

POPULATION TREND FROM 2013-2016 OF YELLOWFIN TUNA (*Thunnus albacares*) BASED ON LANDINGS IN SUBIC FISHPORT, ZAMBALES, PHILIPPINES

By

EUNICE TOMAS SANTOS

An undergraduate thesis presented to the faculty of the College of Fisheries in partial fulfillment of the requirements for the degree of

BACHELOR OF SCIENCE IN FISHERIES

**Department of Aquatic Post-harvest
COLLEGE OF FISHERIES
CENTRAL LUZON STATE UNIVERSITY
Science City of Muñoz, Nueva Ecija
Philippines**

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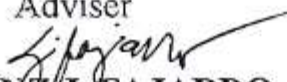
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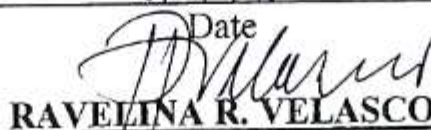
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ABSTRACT

The study was conducted to know the status of yellowfin tuna in Zambales, Philippines based on landings at the Subic Fishport. Pre-exploitation abundance (K) and catchability coefficient (q) were estimated by adding all the catch (kg) and sorted per month and per year. The catch per unit of effort (CPUE) data for yellowfin tuna was fit to Leslie Model. The number of vessel was used for CPUE. Catch (kg) per gear was computed by getting the mean of the daily catch per month and sorted into by year and by gear. The catch of the month that had no record was computed by getting the mean of the two consecutive months before the month that has no record. Plotting and computation were done in R Program.

Using Leslie Model, the pre-exploitation stock size of yellowfin tuna in Subic Fishport, Zambales, Philippines was 1,031,466 fish. Based on the National Stock Assessment Program data from 2013-2016, the estimated catchability coefficient based on number of vessels is 0.001.

The fishing gear with the largest catch was purse seine (32,270.04 kg) from 2013 to 2016 and followed by multiple handline (27,389.49 kg). Lowest catch was recorded in landings of Danish seine (25 kg). Average daily catch of yellowfin tuna per month ranged from 5,820.47 kg to 80 kg. The highest catch was recorded on November 2013 while least catch was in March 2014. Moreover, after interpolation of data, analyses reveals that yellowfin tuna has no seasonality. Probability of having seasonality ranged from 0.19 to 0.98.

Furthermore, other models can be used in analysis of catch and effort data such as Schaefer, Fox, and De Lury Models to compare results. Also, analysis of the whole coast of Zambales is recommended to know the status of the coast, including commercial and municipal landing site. The analysis done in this study can also be done to other demersal and pelagic species. Inclusion of the length frequency of the fish in the analyses is also suggested to know if there is existing growth overfishing in the area.

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