ABSTRACT

ONG TONNY SAMUEL ONGKERS. Relationship Between Capacity of Biomass Formation and Exploitation Level of Shorthead Anchovy (Encrasicholina heteroloba) In Inner Ambon Bay (Menofatria Boer as chairman, Ismudi Muchsin and Kardio Praptokardio as members of the Advisory Committee).

The objectives of this research were to identify and to evaluate the potency capacity of biomass formation, recruitment and growth as well as level of stock biomass utilization of shorthead anchovy (Encrasicholina heteroloba) in Inner Ambon Bay.

A year sampling was conducted in three sites of Inner Ambon Bay i.e. in the front (zone I), in the middle (Zone II) and in the back (zone III), in order to examine the habitat characteristics, stock distribution as well as fishing intensity and catch in both full and half-moon.

The results showed that habitat characteristics which consist of hydro-oceanography factors and water quality were suitable for growth and distribution of shorthead anchovy. Capacity of biomass formation in zone I, II and III reached a maximum level in June, July and August (east monsoon) and subsequently declined in September until November (transition II of monsoon), and relatively stable in December till/up to May (west monsoon and transition I).

It was indicated that utilization level of beach seine and lift net at zones I, II and III had not exceeded capacity of stock, however capacity of eliminated stock had exceeded in a particular months or season.

From 23 times sampling within one year period, it was found that stock utilization level which do not exceed eliminating carring capacity (under exploited) were 9, 8, and 9 times at zone I, II, and III consecutively. Whilst stock utilization level that exceed exploitation (over exploitation) were 14, 15, and 14 at zone I, II, and III consecutively.

It can be concluded that Inner Ambon Bay is a semi enclose waters that connected to Outer Ambon Bay through a ridge/sill. This area has biomass carring capacity which has experienced similar exchange i.e. increase at east monsoon, decrease at 2nd monsoon, and stable during west monsoon up to 1st transition monsoon. Stock biomass utilization level has exceeded biomass formation carring capacity that causes decrease in stock sustainability or currently this stock is under over exploitation level.

From this study it was suggested that management of shorthead anchovy should be based on capacity of biomass formation and elimination with the consideration of optimal utilization level towards stock potency (stock availability and capacity of stock) up to achievable sustainability levels.

Keywords: Shorthead anchovy, capacity of stock, utilization level, stability, elimination, sustainability.