Sex and size range composition of whale shark (Rhincodon typus) and their sighting behaviour in relation with fishermen lift-net within Cenderawasih Bay National Park, Indonesia


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Abstract. The study was conducted to identify sex and size range composition of whale shark individuals from sightings and their appearance behavior in Cenderawasih Bay National Park, Indonesia. A total of 74 fishermen lift-nets ‘bagans’ in Sowa, Kwatisore, and Yaur areas from March to June 2013 were visited to document date, time, location, sex, size range, and number of whale sharks seen each day. Photographic identification was used as a non-invasive means to describe the population throughout the study period. Shark sizes were estimated using a diver body as reference length. A total of 134 whale sharks sightings was recorded within study areas. The highest frequency appearance of whale shark was within Sowa region with 76 sightings, followed by 51 sightings in Kwatisore region, and 7 sightings in Yaur region. From 37 whale sharks identified individual observed in Cenderawasih Bay, there were 36 individuals were identified as male and one as female with a size range of 3-7 meter, dominated by individual with size under 4 meter. From all the observed whale sharks, 44.44% were found not having any scars on their body, but some were having scars on their fins and mouth. Whale sharks in Cenderawasih Bay National Park can be seen moving around in water surface near the lift-net as their feeding behaviour. The fishermen activities might also have an impact on this behaviour, as the fishermen catching activities might
drive whale sharks to move to the surface. The large percentage of juveniles recorded in this Cenderawasih Bay National Park population suggests that the area serves as an important habitat for young whale sharks.

**Key Words**: marine fish, coral triangle, photo identification, animal behavior, whale shark aggregation.