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Master Thesis Defense

Entitled

**Population Structure and Relative Abundance of
Elasmobranch Species Utilizing Inshore Waters of Abu Dhabi**

by

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<https://eu.bbcollab.com/guest/13ca111980054b5dbe89701e3624be41>

Abstract

The diversity, abundance, and distribution of elasmobranchs is poorly documented along the Arabian Gulf coast of the United Arab Emirates, with only a handful of publications focusing on elasmobranchs with the majority of data are collected through landing site and market surveys lacking site and species-specific data that are crucial for conservation management plans. The main objectives of this research were to determine the occurrence and

utilization; quantify the relative abundance across different seasons; and describe the demographic structure of elasmobranch species that occurs in shallow waters around mangroves in Khor Al Saadiyat and adjacent islands, northeast of Abu Dhabi, United Arab Emirates. To collect the data on species that occurs in the area, a dedicated longline and drumline surveys was conducted haphazardly on a weekly basis from September 2019 to March 2021. The study was divided into two phases, an exploratory phase that encompassed a larger study area, and a focal phase that focused on a smaller area within the exploratory phase. A total of 71 batoids, representing five species belonging to two families from four genera were caught during the sampling period with the majority of the catch was around the focal study area. Two of the most common species found were the halavi guitarfish (*Glaucostegus halavi*) and Pakistan whipray (*Maculabatis arabica*), accounting for 46% and 39% of the total catch respectively. Based on the latest IUCN assessment, both of these species have been classified as critically endangered due to their inshore habitat preference threatened by habitat loss, intense fishing pressure, or as incidental catch. Additional measures should be put in place including species protection, spatial management and effective enforcement, in order to conserve the population and permit recovery.

Keywords: Elasmobranchs, batoids, sharks, rays, guitarfish, whipray, catch per unit effort, drumline, longline, conservation, seagrass, mangrove, overexploitation, habitat loss, anthropogenic activity.