

ABSTRACT

Aliya Ikrimah Azzahra. 24020119140081. **The Vegetation Structure of Mangroves in the *Marine Science Techno Park* (MSTP) Area, Teluk Awur, Jepara Regency, Central Java.** Under the guidance Jumari and Sri Utami.

Marine Science Techno Park (MSTP) is an area located in the Teluk Awur Beach region, Jepara Regency, Central Java. This research aims to study the mangrove vegetation structure, including diversity, composition, evenness index, Importance Value Index (IVI), and assess the regeneration of true mangroves in the *Marine Science Techno Park* (MSTP) area in Teluk Awur, Jepara, Central Java. The study was conducted at 3 stations: the mangrove *track* area (Station 1), riverbank area (Station 2), and coastal area (Station 3). The sampling of mangrove vegetation is conducted using the quadrat method, aided by transect lines. Four quadrats were established at each station, covering tree strata (10m x 10m), sapling strata (5m x 5m), and seedling strata (1m x 1m). The research identified 20 mangrove species (5 major mangroves, 4 minor mangroves, and 11 associated mangroves) belonging to 15 families. The *Shannon-Wiener diversity index* ranged from 1.51 to 1.68, while the evenness index indicates relatively even evenness ranging between (0.63 – 0.69), indicating relatively even communities and stable populations. The highest Importance Value Index (IVI) at Station 1 was for *Rhizophora mucronata* Lamk, dominating all tree strata (IVI 148.18%), sapling strata (IVI 163.58%), and seedling strata (IVI 76.02%). At Station 2, the highest IVI was for *Rhizophora apiculata* BI (IVI 118.33%) in the tree strata, *Bruguiera cylindrica* (L) BI sapling strata (IVI 150.52%), and *Ardisia elliptica* Thunberg seedling strata (IVI 54.55%). Station 3 showed *Rhizophora mucronata* Lamk dominating all tree strata (IVI 161.07%), sapling strata (IVI 144.83%), and seedling strata (IVI 52.53%). The regeneration status of true mangroves in the MSTP area, categorized as good, includes *Xylocarpus granatum* Koen, *Bruguiera cylindrica* (L) BI, *Ceriops tagal* (Perr.) C.B. Rob, *Rhizophora apiculata* BI, and *Rhizophora mucronata* Lamk, while poor regeneration was observed in *Nypa fruticans* Wurmb, *Lumnitzera racemosa* Willd, *Excoecaria agallocha* L, and *Aegiceras corniculatum* (L.) Blanco.

Keywords: *vegetation structure, species diversity index, importance value index, Marine Science Techno Park (MSTP), mangrove, mangrove regeneration.*