ABSTRACT

THE INFLUENCE OF MANGROVE DENSITY TO GROUNDWATER QUALITY IN SIDODADI VILLAGE PESAWARAN DISTRICT

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Mangroves as a complex ecosystem has an important role for the environment. One of the ecological mangrove's role for the environment is as a barrier of sea water intrusion. Mangrove has the ability to filter seawater entering the mainland so that water entering the mainland can be more fresh. This study aims to determine the influence of mangrove density and distance to groundwater quality as well as to know the interaction between mangrove density and distance to the quality of groundwater in Sidodadi Village. Research on the influence of mangrove density and distance from coastline to groundwater quality is arranged factorially in Completely Randomized Block Design. The results showed that pH, electrical conductivity, total dissolved solid, and salinity of groundwater were significantly influenced by mangrove density, groundwater distance to mangrove and interaction between mangrove density and groundwater distance to mangrove. While dissolved oxygen and groundwater temperature are not significantly influenced by mangrove density, groundwater distance to mangrove and interaction between mangrove density and groundwater distance to mangrove.

Keywords: groundwater quality, mangroves density.

ABSTRAK

PENGARUH KERAPATAN MANGROVE TERHADAP KUALITAS AIR SUMUR DI DESA SIDODADI KECAMATAN TELUK PANDAN KABUPATEN PESAWARAN

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Keberadaan mangrove sebagai sebuah ekosistem yang kompleks memiliki peran yang penting bagi lingkungan sekitarnya. Salah satu peran ekologis mangrove bagi lingkungan adalah sebagai penahan intrusi air laut. Mangrove memiliki kemampuan memfilter air laut yang masuk ke daratan sehingga air yang masuk ke daratan dapat lebih tawar. Penelitian ini bertujuan untuk mengetahui adanya pengaruh kerapatan mangrove dan jarak terhadap kualitas air sumur serta mengetahui adanya interaksi antara kerapatan mangrove dengan jarak terhadap kualitas air sumur di Desa Sidodadi. Penelitian pengaruh kerapatan mangrove dan jarak dari garis pantai terhadap kualitas air sumur disusun secara faktorial dalam Rancangan Acak Kelompok Lengkap. Hasil penelitian diketahui bahwa pH, daya hantar listrik, *total dissolved solid*, dan salinitas air sumur nyata dipengaruhi oleh kerapatan mangrove, jarak sumur ke mangrove dan interaksi diantara keduanya. Sedangkan oksigen terlarut dan suhu air sumur tidak nyata dipengaruhi oleh kerapatan mangrove, jarak sumur ke mangrove dan interaksi diantara keduanya.

Kata kunci: kualitas air sumur, mangrove.