The Impact of Reclamation to Sedimentation and The Potency of Mangrove Growth in Jakarta Bay (Muara Angke)

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Abstrak

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Mangroves in Indonesia have a large enough area, but in the last 3 decades the area has been reduced to 40%. Besides
having a function as a coastal protector, mangroves are also able to maintain the quality of the waters around it. Currently, the construction of a reclamation island in Jakarta Bay is being carried out which will have an impact on the surroundingmangrove forests. Therefore, the purpose of this study was to identify the impact of island reclamation in Jakarta Bay onsedimentation and mangrove growth in surrounding area. This research was conducted with literature studies, vegetation analysis, water quality analysis and also spatial analysis with WorldView-2 satellite imagery. The results showed that the mangrove forests on the coast of North Jakarta, especially in the Muara Angke area tend to increase, especially in the reclaimed island area. The mangrove stands increase by approximately 1.32 ha / year. The density and stem diameters
vary in 5 locations. Oxygen levels at the study site are very low but the existing mangrove forests can absorb dissolved heavy metals. The results of the study also show that the area that has the potential to be planted with mangroves is 30 ha. Overall, the sedimentation process helps expand mangrove forests naturally while the bad quality of water does not significantly affect the development of mangroves. On the
contrary, the existing mangrove is able to keep the stability of the water quality in surrounding area.