

Kesesuaian Lahan Pengembangan Ekosistem Mangrove di Sekitar Muara Sungai Opak, Kabupaten Bantul

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INTISARI

Vegetasi mangrove tumbuh pada lahan dengan persyaratan khusus seperti kondisi perairan, substrat dan kemiringan. Muara sungai mempunyai potensi sebagai tempat tumbuh mangrove karena masih mendapat pengaruh air laut. Ekosistem mangrove yang teletak di Muara Sungai Opak merupakan ekosistem buatan dan terus dikembangkan oleh masyarakat. Penelitian ini bertujuan untuk menilai tingkat kesesuaian lahan dan menentukan daerah prioritas pengembangan ekosistem mangrove di sekitar Muara Sungai Opak.

Parameter substrat dan kemiringan lahan diamati dengan mempertimbangkan bentuklahan yang terdapat di daerah penelitian. Parameter hidro-oseanografi meliputi pasang surut, kecepatan arus, salinitas, pH dan suhu. Lokasi pengamatan kondisi perairan ditentukan dengan mempertimbangkan jarak dari mulut muara. Waktu pengamatan kondisi perairan ditentukan berdasarkan fase bulan (bulan baru, bulan purnama, bulan kuartal awal dan kuartal akhir). Parameter – parameter yang diamati dianalisis tingkat kesesuaiannya menggunakan metode *weight factor matching*. Daerah prioritas dipilih dengan pertimbangan tingkat kesesuaian tertinggi dan faktor pembatas paling sedikit.

Hasil penelitian menunjukkan bahwa daerah penelitian terbagi menjadi tiga kelas kesesuaian lahan mangrove yaitu sesuai (S2), sesuai bersyarat (S3) dan tidak sesuai (N). Kelas S2 meliputi rata-rata lumpur, rawa belakang dan sebagian gosong sungai. Kelas S3 terdapat pada gosong sungai, spit dan gisik pantai dengan faktor pembatas terberat berupa substrat dominan pasir. Sedangkan kelas N terletak pada lahan yang jauh dari mulut muara sehingga memiliki salinitas air yang rendah serta lahan yang tidak mendapat pengaruh pasang surut air seperti pada dataran aluvial, beting gisik dan dataran banjir. Daerah prioritas pengembangan ekosistem mangrove terbagi menjadi empat yaitu prioritas 1 pada rata-rata lumpur (F5.3), prioritas 2 dan 3 pada gosong sungai (F2.2 dan sebagian F2.3), prioritas 4 pada gosong sungai (F2.3) dan dataran banjir (F1.6). Pemilihan jenis mangrove yang sesuai dengan kondisi lahan penting dilakukan untuk mencapai keberhasilan pengembangan ekosistemnya.

Kata kunci: mangrove, kesesuaian, muara, *matching*.

Land Suitability for Mangrove Ecosystem Development Around The Opak Estuarine, Bantul Regency

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ABSTRACT

Mangrove vegetation grows on land with specific requirements such as water conditions, substrate and slope. The river estuary has the potential as a place for mangroves to grow because it is still affected by sea water. The mangrove ecosystem located at the Opak Estuarine is an artificial ecosystem and is continuously being developed by the community. This study aims to assess the level of land suitability and determine priority areas for the development of mangrove ecosystems around the Opak Estuarine.

The parameters of substrate and slope were observed by considering the landforms in the study area. Hydro-oceanographic parameters include tides, current velocity, salinity, pH and temperature. The location for water conditions observation was determined by the distance from the mouth of the estuary. The time for water conditions observation was determined based on the phase of the moon (new moon, full moon, early and late quarter moon). The parameters observed were analyzed for their suitability level using the weight factor matching method. Priority areas were selected by considering the highest level of suitability and the least limiting factors.

The results showed that the study area was divided into three classes of mangrove land suitability including suitable (S2), conditionally suitable (S3) and not suitable (N). Class S2 includes mud flats, back swamps and some stream bar. Class S3 was found on stream bar, spits and beach with the heaviest constraint factor being the dominant substrate of sand. While class N was located on land far from the mouth of the estuary so that it had low water salinity and land that is not affected by tidal water, such as alluvial plains, beach ridge and flood plains. Priority areas for mangrove ecosystem development were divided into priority 1 on mud flats (F5.3), priorities 2 and 3 on stream bar (F2.2 and partly F2.3), priority 4 on stream bar (F2.3) and flood plains (F1.6). The selection of mangrove species in accordance with land conditions is important to achieve the success of developing its ecosystem.

Keywords: mangrove, suitability, estuary, matching.