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Legality Analysis of Baros Mangrove Area Designation with the Status of Essential Ecosystem Area on Sultan Ground Land

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Abstract

This study aims to answer the question of why Baros mangrove forest area does not yet have legal legality and the opportunities for this area to be used as an essential ecosystem area, *Kawasan Ekosistem Esensial* (KEE).

This study used empirical normative research to integrate normative legal aspects at the level of theories, rules, and legal principles and empirical legal aspects, namely the application of law in social reality in society. The qualitative approach method is obtained from interviews, observations, recordings, and others.

The novelty of this study is related to the study object and the procedure for the designation of the candidate for the Baros mangrove KEE, which is different from the previous KEE designation, which was only based on national law. At the same time, the KEE designation in D.I Yogyakarta uses two legalities. They are a KEE Decree Letter (National Law) and a Certificate of Land Rights on Sultanate land (Privilege Law).

The study results found that there is already a wetland KEE management forum in the Special Region of Yogyakarta Province, which is contained in the Decree of the Governor of the Special Region of Yogyakarta Number 111/Kep/2022.

Concluded that efforts to determine the Baros KEE mangrove forest area have great opportunities.

Keyword: Legality; Mangrove; Essential Ecosystem Area; Sultan Ground.

Abstrak

Tujuan penelitian ini adalah untuk menjawab mengapa kawasan hutan mangrove Baros belum memiliki legalitas hukum, dan bagaimana peluang kawasan ini untuk dijadikan sebagai Kawasan Ekosistem Esensial (KEE).

Penelitian ini menggunakan jenis penelitian normatif empiris yang bertujuan untuk mengintegrasikan antara aspek hukum normatif dalam tataran teori, aturan, dan prinsip-prinsip hukum serta aspek hukum empiris yaitu penerapan hukum dalam realitas sosial dalam masyarakat. Metode pendekatan yang digunakan adalah metode pendekatan kualitatif yang diperoleh dari hasil wawancara, observasi lapangan, perekaman, dan lain-lain.

Kebaharuan dari penelitian ini adalah terkait objek penelitian dan tata cara penetapan calon KEE Mangrove Baros yang berbeda dengan Penetapan KEE sebelumnya yang hanya beralaskan hukum nasional, sedangkan Penetapan KEE di D.I Yogyakarta menggunakan dua legalitas berupa Surat Ketetapan KEE (Hukum Nasional) dan Sertifikat hak atas tanah di atas tanah Kasultanan (Undang-Undang Keistimewaan).

Hasil penelitian menemukan bahwa sudah ada forum pengelola KEE lahan basah di Provinsi Daerah Istimewa Yogyakarta, yang termuat dalam Surat Keputusan Gubernur Daerah Istimewa Yogyakarta Nomor 117/Kep/2022 namun belum dilaksanakan.

Kesimpulan bahwa upaya penetapan kawasan hutan mangrove Baros KEE memiliki peluang yang besar.

Kata kunci : Legalitas; Mangrove; Kawasan Ekosistem Esensial; Sultan Ground

1. INTRODUCTION

Mangrove forest areas are plant communities that live around estuaries and beaches. Mangrove vegetation has high adaptability to adapt to a humid and watery environment.¹ Indonesia is one of the largest archipelagic countries in the world, with about 17,508 islands and a coastline of 95,181 kilometers. It is the second longest coastline in the world after Canada. This long coastline makes Indonesia the country with the largest mangrove forest area in the world, according to data from Global Mangrove Watch (GMW). The total area of mangrove forests in Indonesia, according to data from the Ministry of Marine Affairs and Fisheries, is 3.3 million hectares with a good percentage of 80.74% (2,673,548 Ha) and 19.26% in critical condition (637,624 Ha) of the critical mangrove forest area about 460,210 Ha (72.1%) is in the forest area. The remaining 117,415 Ha (27.82%) is outside the forest area.² Indonesia's mangrove forest area occupies about 24% of the world's mangroves.³

Furthermore, based on data from the Indonesian government, between 2000-2014, Indonesia was recorded as the country that experienced the largest loss of mangrove forest in the world, around 4,362m² or about 313 km² in a year. The amount of mangrove forest currently in crisis is 637,624.31 ha due to the act of conversion and land reclamation used by the agricultural and industrial sectors. In the last 30 years, Indonesia has become the country with the largest mangrove forest damage in the world, with a percentage of damage of 30%, with the worst damage area located on the east coast of North Sumatra Province.⁴ Therefore, efforts are needed to protect the existence of mangrove forests, one of which is to provide legality in the form of Essential Ecosystem Areas (KEEs). KEEs are a new basis for restoring and protecting life in Indonesia outside of protected areas; they not only function for environmental protection but also aim to realize ecological justice as a form of distributing natural resources for human wellbeing.⁵

¹ Zainul Hidayah, Herlambang Aulia Rachman, dan Abd Rahman As-Syakur, "Pemetaan kondisi hutan mangrove di kawasan pesisir Selat Madura dengan pendekatan Mangrove Health Index memanfaatkan citra satelit Sentinel-2," *Majalah Geografi Indonesia* 37, no. 1 (2 Maret 2023): 84, <https://doi.org/10.22146/mgi.78136>.

² David Gina Kimars Ketaren, "Peranan Kawasan Mangrove Dalam Penurunan Emisi Gas Rumah Kaca Di Indonesia," *Jurnal Kelautan dan Perikanan Terapan (JKPT)* 1 (30 Januari 2023): 73, <https://doi.org/10.15578/jkpt.v1i0.12050>.

³ Monalisa Marta Siahaan, "Implementasi Undang-Undang Dan Kajian Hukum Serta Upaya Pelestarian Hutan Mangrove" 2, no. 3 (2024): 8, <https://jurnal.migascentral.com/index.php/p3ji/article/view/224>.

⁴ Yuslita Rinika dkk., "Pemetaan Dampak Kerusakan Ekosistem Mangrove Terhadap Lingkungan Keamanan Maritim," *Equilibrium: Jurnal Pendidikan* 11, no. 2 (2023): 171, <https://journal.unismuh.ac.id/index.php/equilibrium/article/view/10392>.

⁵ Andang Binawan dan Maria Grasia Sari Soetopo, "Implementasi Hak atas Lingkungan Hidup yang Bersih, Sehat,

Then, based on the Regulation of the Director General of Natural Resources and Ecosystem Conservation Number: P.1/Ksdae/Bpe2/Ksa.4/2/2021 concerning Technical Guidelines for Assessing the Management Effectiveness of Essential Ecosystem Areas Essential Ecosystem Areas (KEE) are areas outside of nature reserves, nature conservation areas, and hunting parks that are ecologically important for biodiversity. KEE typologies include wetland ecosystems, corridors, water storage areas, biodiversity parks, areas of high ecosystem value, *Areal Bernilai Ekosistem Tinggi* (ABKT), and geologically and geomorphologically specific landscapes.⁶ The existence of KEEs is important for nature conservation while remaining in harmony with human needs and community wellbeing.⁷

In the Special Region of Yogyakarta Province, community-based mangrove areas are very interesting to talk about, one of which is the Baros mangrove forest area, which is communally managed by the Baros Hamlet Youth Organization, namely the Baros Youth Family (KP2B). As an employee at Tirtohargo Sub-district, Kapanewon Tempel, Bantul Regency, Joko Boyo said that the Baros mangrove forest area is on Sultan Ground (SG) 12 and Sultan Ground (SG) 13.⁸ SG land is held by the Kasultanan Ngayogyakarta, which is managed by the community and village government that has not been given land rights at all.⁹ To obtain land rights on SG land, applying to Panitikismo, an institution authorized to manage SG lands, is necessary. For land with the status of property rights of the Ngayogyakarta Sultanate, following Article 7 paragraph (2) of the Regulation of the Ministry of ATR/BPN Number 2 of 2022 concerning Registration of Sultanate Land and Duchy Land in the Special Region of Yogyakarta, rights can be given to the community through a deed of granting building use rights, *Hak Guna Bangunan* (HGB), or use rights made before a Land Deed Official (PPAT).¹⁰

In terms of managing the Baros mangrove forest area, namely KP2B, it already has legality in the form of an Association engaged in the creative economy and tourism services (eco-tourism), but in terms of the forest area it has been controlled and managed *defacto* by KP2B, but *dejure* has no legal legality at all, so it is necessary to fight for the legality of the Baros mangrove forest area for the creation of legal certainty.¹¹

dan Berkelanjutan dalam Konteks Hukum Indonesia," *Jurnal Hukum Lingkungan Indonesia* 9, no. 1 (21 Februari 2023): 126, <https://doi.org/10.38011/jhli.v9i1.499>.

⁶ "Peraturan Direktur Jenderal Konservasi Sumber Daya Alam Dan Ekosistem Nomor: P.1/Ksdae/Bpe2/Ksa.4/2/2021 Tentang Petunjuk Teknis Penilaian Efektivitas Pengelolaan Kawasan Ekosistem Esensial," t.t., https://ksdae.menlhk.go.id/assets/news/peraturan/Perdirjen_P.1_KSDAE_BPE2_KSA.4_2_2021.pdf.

⁷ Siti Qomariah, Gusti Muhammad Hatta, dan Abdi Fithria, "Rekomendasi Penetapan Kawasan Ekosistem Esensial Di Desa Panjaratan," *Jurnal Hutan Tropis* 9, no. 2 (5 Agustus 2021): 283, <https://doi.org/10.20527/jht.v9i2.11276>.

⁸ Joko Boyo, Penentuan Status Legalitas Pengelolaan Hutan Mangrove Baros Dengan Status Kawasan Ekosistem Esensial, 7 Oktober 2024.

⁹ Winnanda Yudistira dan Sunarno Sunarno, "Faktor Pertimbangan Perubahan Penggunaan Tanah Sultan Ground Sebelum Dan Sesudah Merapi Tahun 2010 Di Desa Umbulharjo Cangkringan," *Media of Law and Sharia* 2, no. 2 (13 April 2021): 208, <https://doi.org/10.18196/mls.v2i2.11491>.

¹⁰ Erna Sri Wibawanti dkk., "Kepastian dan Perlindungan Hukum Penggunaan Tanah Kasultanan dan Kadipaten oleh Masyarakat Pasca Undang-Undang Keistimewaan Daerah Istimewa Yogyakarta," *Jurnal Hukum IUS QUIA IUSTUM* 31, no. 3 (31 Oktober 2024): 545, <https://doi.org/10.20885/iustum.vol31.iss3.art3>.

¹¹ Sidik M. Nurcholis, Penentuan Status Legalitas Pengelolaan Hutan Mangrove Baros Dengan Status Kawasan

Law Number 13 of 2012 on the Privileges of Yogyakarta is the foundation related to the authority of the Special Region of Yogyakarta in various aspects, provisions for filling the governor and deputy governor positions, regional government structure, land, culture, and spatial planning. Following Article 7 of Law Number 13 of 2012 on the Privileges of Yogyakarta, the utilization of Sultanate land must follow local wisdom values and favour the community.¹²

Specifically, the land authority of the Ngayogyakarta Hadiningrat Sultanate is regulated in articles 32 and 33. Article 32 Paragraph (1) says that "In the implementation of land authority as referred to in Article 7 paragraph (2) letter d, the Sultanate and Duchy are declared as legal entities by this Law" Therefore, the establishment of the Baros mangrove forest area as a KEE and the granting of land rights in the form of rights of use on the Sultanate's land requires approval from the Sultanate as contained in the Yogyakarta Special Region Regulation Number 1 of 2017 concerning Management and Utilization of Sultanate Land and Duchy Land in Article 14 Paragraph (2) "Registration of Sultanate Land and Duchy Land carried out by other parties must obtain written approval from the Sultanate for Sultanate Land and Duchy for Duchy Land".

In a review of previous studies, Agustina Merdekawati, Marsudi Triatmodjo, Sandy Nurvianto, Irkham Afnan Trisandi Hasibuan, Vivin Purnamawati, and I Gusti Putu Agung (2022) discussed efforts to conserve biological diversity outside of nature reserves, wildlife reserves, protected forests and others, through the concept of Essential Ecosystem Areas (KEE). The study discussed the dualism of different legal rules regarding the authority of the central government and the authority of local governments in managing KEEs and recommend the management of KEEs to local governments. It lines with the authority of KEE management by the local government in the Special Region of Yogyakarta through the Decree of the Governor of the Special Region of Yogyakarta Number 117/kep/2022 on the Establishment of the Forum for the Management of Essential Ecosystem Areas of Wetlands in the Special Region of Yogyakarta. The results concluded that the application of the KEE concept in biodiversity conservation is hampered by the dualism of authority between the central government and local governments. Drafting regulations related to KEE policy, funding, and management hinders its implementation.¹³

Rosdiana, Siti Fatimah, Ditasya Anisa Riani, and Sri Endang Rayung Wulan (2022) discussed KEE protection in Balikpapan Bay, East Kalimantan. The study found that the Balikpapan bay area has similar ecosystems to the Baros mangrove forest area in the form of wetland ecosystems, and the Balikpapan bay area has the same ecological function as the Baros mangrove forest area as a protected animal habitat. The results of this study conclude

Ekosistem Esensial, Juli 2024.

¹² Tirta Gautama, "Sultan Ground: Dialektika Pluralisme Hukum Dalam Pengelolaan Hukum Pertanahan Nasional," *Muhammadiyah Law Review* 8, no. 2 (2024): 2, <https://ojs.ummetro.ac.id/index.php/law/article/view/3562/0>.

¹³ Agustina Merdekawati dkk., "Indonesia and Conservation Outside Forests: An Option to Untangle Authority Dualism in the Implementation of the Essential Ecosystem Area," *Yustisia Jurnal Hukum* 11, no. 1 (28 April 2022): 55–67, <https://doi.org/10.20961/yustisia.v11i1.54789>.

that the establishment of the Balikpapan Bay area as KEE has not been implemented optimally. It is because there is no extraordinary institution that manages the area, so it will adversely affect the sustainability of Balikpapan Bay, which has an area of 211,456 hectares with a water area of 16,000 hectares and is an important habitat for protected animals such as proboscis bekantan and dugongs.¹⁴

Moreover, Erna Sri Wibawanti, Raden Murjiyanto, Wiwin Budi Pratiwi, and Imam Amalda Rizki Harahap (2024) discussed the process of SG land utilization by the community after the establishment of the Sultanate as a legal entity. It found that people who had used the Sultanate's land before Law No. 13/2012 on the Privileges of the Special Region of Yogyakarta was enacted were still recognized and could be given a new land right on the Sultanate's land through established procedures, thus increasing the opportunity for KEE designation on SG land in the Baros mangrove forest area because it has been managed since 2003 by KP2B.¹⁵

The previous literature review differs from the current study because it focuses more on the designation of the Baros mangrove forest area as a KEE on SG land. KEE designation of the Baros mangrove forest area is certainly different from KEE designation in general because two legal rules apply, namely, Regulation of the Director General of KSDAE Number P.1/KSDAE/BPE2/KSA.4/2/2021 as a technical assessment of KEE management and Law of the Republic of Indonesia Number 13 of 2012 related to DIY privileges which stipulates the Sultanate as a legal entity entitled to land ownership (SG) with property rights status, so that to obtain legal certainty over the Baros mangrove forest area, there will be two legal legalities that must be managed.

First, the Governor of Yogyakarta Special Region should obtain conservation legality in the form of KEE designation. Second, *serat kekancingan* and/or right of use can be obtained by applying Sultanate land management to Panitikismo. Thus, the topic of this research is relevant to address the issue of KEE designation of the Baros mangrove forest area by KP2B or the Department of Environment and Forestry of Yogyakarta Special Region Province on the land of SG 12 and SG 13 due to the dualism of the applicable legal rules in the process of designation as KEE through the Governor's Decree as the basis for the legality of KEE of the Baros mangrove forest area and the right of use on the Sultanate's land as the basis for the legality of land management of the Baros mangrove forest area. It is hoped that this research will also provide a new contribution to answering the problem of mangrove areas in the Special Region of Yogyakarta Province that have not been managed optimally because legality issues constrain them due to the dualism of the rule of law in the Special Region of Yogyakarta which is spread across Bantul Regency and Kulon Progo Regency.

These problems become the basis of this research, namely, First, what is the legal status of the manager and legality of the Baros mangrove forest area; and Second, what is

¹⁴ Rosdiana Rosdiana, Siti Fatimah, Ditasya Anisa Riani, dkk., "Perlindungan Hukum Terhadap Kawasan Ekosistem Esensial Teluk Balikpapan" 4 (2022): 2–15, <https://garuda.kemdikbud.go.id/documents/detail/3153014>.

¹⁵ Erna Sri Wibawanti dkk., "Kepastian dan Perlindungan Hukum Penggunaan Tanah Kasultanan dan Kadipaten oleh Masyarakat Pasca Undang-Undang Keistimewaan Daerah Istimewa Yogyakarta," 537–55.

the process and opportunity for the establishment of Essential Ecosystem Areas (KEE) in the Baros mangrove forest area which is on Sultan Ground (SG) land. The study's first objective was to analyze the tenure status and land use of the Baros mangrove forest area located on SG 12 and SG 13 land in Baros Hamlet, Tirtohargo, Kapanewon Kretek, Bantul Regency. The second objective is to explore the process and opportunities for designating the Baros mangrove forest area on SG land as KEE.

2. METHOD

This type of study is empirical normative legal research; this legal approach integrates aspects of normative law that speak related (rules, principles, and legal theories) and empirical law (which tries to find and explore information in the field related to the application of law in social reality). Thus, the normative-empirical research approach provides more benefits for the relevance of legal studies in the future. The reason the researcher used this type of empirical normative research is to examine the rules of law, opportunities, and challenges related to the designation of the status of conservation areas in the form of essential ecosystem areas for the Baros mangrove forest and facts related to efforts and opportunities for determining the Baros mangrove area as a KEE.

The type of approach taken by the researcher in this study is a qualitative approach, which is a way of research that can be obtained either from sound recordings, observations, interviews, or written materials (laws, legal documents, books, and others). This approach is used to analyze, study, and explore the obstacles to determining the legality of the Baros mangrove area as a KEE. Data collection in the field was carried out through interviews and observations with resource persons from KP2B, DIY Provincial Environment and Forestry Office, Bantul Regency Land and Spatial Planning Office, Bantul Regency ATR/BPN Land Office, Tirtohargo, and Akar Napas Mangrove Conservation Community.

3. DISCUSSION

3.1. The Legality of Baros Mangrove Forest

Legality comes from Latin, namely *lex* (law) and legalism, which means legal according to statutory rules. Legality is important because it is part of legal certainty to ensure consistent principles to form legal continuity. Quoted from the results of an interview with the chairman of KP2B, Sidik M. Nurcholis, said that initially, KP2B conducted river-based conservation activities that focused more on educating the community about fishing activities with the method of shocking in the Baros estuary; over time, conservation activities began to change to the realm of mangrove planting. The beginning of mangroves was due to research by students of Gadjah Mada University on the coast of Yogyakarta, especially in the Bantul area. The study found that the Baros area had the potential to grow mangroves. Departing from this, LSM Relung initiated mangrove planting in the Baros estuary for the first time in collaboration with KP2B, nature lovers, and related agencies, and received environmental assistance funds from the Toyota company. This activity took place from 2003

to 2006. In 2006, cooperation with Toyota in mangrove planting ended, and LSM Relung handed over mangrove management to KP2B.¹⁶

Talking about legality is important because it is part of the legality of an activity or action according to the applicable law for legal certainty. Legal certainty creates order in society so that the function of law can run as well as it should.¹⁷ Legal certainty becomes the purpose and essence of the law itself, creating an orderly society and a sense of security in every activity and activity of society. Regarding the legality of the Baros mangrove area, as quoted by Sidiq M. Nurcholis, the chairman of KP2B, the manager is an association registered in a notarial deed. Regarding land, it is still in the process of going to the KEE program formed by DLHK. It is because the sultan ground land still belongs to the sultan and still has to get permission from the Sultanate through Panitikismo to get the *serat kekancingan* for the process of planning the designation of the area into a new KEE processed in Kalurahan and at DLHK.¹⁸

The legality of the manager mentioned is a notarial deed for the manager with the name KP2B; the notarial deed, KP2B, is in the form of an association that carries explicitly out businesses such as planting businesses, tour packages, arts and crafts, and others. In addition, KP2B also received the title of forest farmer as a middle class from DLHK D.I Yogyakarta Province.¹⁹ Thus, when referring to the statement of the KP2B chairman, it is inevitable that from 2003, since this mangrove forest was born as an artificial mangrove until 2024, it does not yet have legality. However, *defacto* KP2B has controlled it as a forest manager. Legal legality is only on the manager as a legal entity engaged in mangrove tourism. In contrast, the Baros mangrove forest area as a legal object does not have legality because it is on Sultan Ground 12 and Sultan Ground 13.²⁰ Unfortunately, legal certainty is necessary to protect the Baros mangrove forest so it remains sustainable.

To answer this, in terms of environmental law principles, the designation of the Baros mangrove forest area as a KEE is a form of realization of the principles in the Law of the Republic of Indonesia Number 32 of 2009 on Environmental Protection and Management, namely, First, the principle of intergenerational justice (intergenerational principle), as initiated at an international conference on November 13-16, 1994 in Canberra, Australia; Second, the principle within one generation or intragenerational justice; Third, the principle of biodiversity protection (Biodiversity Conservation).

In terms of legal rules in the realm of laws, regional regulations, and technical rules in

¹⁶ M. Nurcholis, wawancara pribadi.

¹⁷ Tiara Dwi Rahayu, Yani Pujiwati, dan Betty Rubiati, "Kepastian Hukum Kepemilikan Hak Atas Tanah Setelah Mengalami Likuifaksi Tanah: Legal Certainty Of Ownership Of Land Rights After Experiencing Land Liquefaction," *LITRA: Jurnal Hukum Lingkungan, Tata Ruang, dan Agraria* 2, no. 2 (30 April 2023): 252, <https://doi.org/10.23920/litra.v2i2.1315>.

¹⁸ M. Nurcholis, wawancara pribadi.

¹⁹ M. Nurcholis.

²⁰ Boyo, Penentuan Status Legalitas Pengelolaan Hutan Mangrove Baros Dengan Status Kawasan Ekosistem Esensial.

ministrerial regulations, the Baros mangrove forest area has the potential to be used as a conservation area outside of nature reserves and nature conservation areas managed by the government. Judging from the function of the area, the Baros mangrove forest is a conservation area because it primarily preserves mangroves, especially *sonneratia* species, preserves Javanese Bubut birds, and protects coastal ecosystems. It lines with Article 1 number 9 of the Law of the Republic of Indonesia Number 41 of 1999 concerning Forestry. It is corroborated by the Regulation of the Director General of Natural Resources and Ecosystem Conservation Number: P.1/KSDAE/BPE2/KSA.4/2/2021 on Technical Guidelines for Assessing the Effectiveness of Management of Essential Ecosystem Areas, as well as article 18 letter (g) of Bantul Regent Regulation Number 7 of 2024 concerning the Detailed Spatial Plan for the South Coast Planning Region for 2024-2044 explaining that the Baros mangrove forest area is included in the protected zone with code EM.

The Environment and Forestry Service of Yogyakarta Special Region Province considers the Baros mangrove area a protected area. The Bantul Regency Land and Spatial Planning Office also considers it a southern coastal area with a green function because it is in a protected zone. Hence, the Baros mangrove forest area should be assigned legality as a KEE.

3.2. The Opportunities and Process of Establishing Baros Mangrove Forest Area as an Essential Ecosystem Area on Sultan Ground Land

Article 6 of the Regulation of the Director General of Natural Resources and Ecosystem Conservation No. P.1/KSDAE/BPE2/KSA.4/2/2021 states that the KEE typology consists of Wetland Ecosystems, Corridors Areas of High Conservation Value (ABKT), Biodiversity Parks, and Geologically and Geomorphologically Specific Landscapes. Regarding the article above, the Baros mangrove area is included in the KEE typology of wetland ecosystems because it is located in the Baros estuary with brackish characteristics. It is corroborated by Article 1 paragraph (1) of the Ramsar Convention, which categorizes wetlands into several areas such as brackish areas, swamps, peat, or waters, whether naturally or artificially constructed, temporary or permanent, with moving or still, brackish, salty, and freshwater, including waters that when the tide recedes are less than 6 meters deep.²¹

²¹ Muhammad Hadin Muhjad dkk., "Program Pendampingan Penyusunan Peraturan Desa Sebagai Upaya Perlindungan Dan Pengelolaan Lingkungan Lahan Basah Di Desa Pulau Sewangi Kabupaten Barito Kuala," *Jurnal Pengabdian Al-Ikhlās* 9, no. 2 (25 Desember 2023): 243, <https://doi.org/10.31602/jpaiuniska.v9i2.12579>.



Figure 1. Baros Mangrove Forest in Brackish muara Baros Area

The increased biodiversity is one of the requirements for an area to become a KEE. The area must have significant and specific levels of biodiversity, including endangered species of flora and fauna. Article 7 of the Regulation of the Director General of Natural Resources and Ecosystem Conservation No. P.1/KSDAE/BPE2/KSA.4/2/2021 states that the criteria for wetland ecosystems that can be made into KEEs consist of: 1. unique or distinctive ecosystems and/or a variety of vegetation types; 2. habitat for water birds and/or migratory birds; 3. habitat for endangered, endemic, and/or protected species; 4. clean water reserves for the surrounding area; and/or 5: economic, scientific, spiritual/cultural values, and other ecosystem services.

Baros mangrove forest area fulfills the five points above. The specific explanation related to the Baros mangrove area meets the requirements. First, the Baros mangrove area is a unique ecosystem because it is the estuary of 9 rivers in the city of Yogyakarta, such as the WinolSM River, Gajah Wong River, Oyo River, Opak River, and others. These nine rivers are unique because they will help fill marine sand in the Baros mangrove area. However, this has rarely happened in recent years due to illegal mining activities upstream of Merapi, so natural sand does not reach the estuary. On the one hand, the existence of the nine rivers also causes serious problems in preservation and conservation activities in the Baros mangrove area because it often causes serious environmental problems, namely garbage. If there is rain in Yogyakarta, the Baros mangrove area will be flooded and filled with garbage from the river flow. The garbage from these nine rivers will affect the growth and development of mangroves, and even many die and break due to this garbage.²² Second, the Baros mangrove forest also plays a role in holding back the rate of abrasion; the most

²² Momox, Penentuan Status Legalitas Pengelolaan Hutan Mangrove Baros Dengan Status Kawasan Ekosistem Esensial, Oktober 2024.

effective type of plant in dealing with abrasion problems is mangroves of the *Sonneratia* type (apple mangrove), which has the characteristics of breathable roots that play an important role in binding sandy soil. This plant is planted in zone 1 of the mangrove area.²³ Third, mangrove forests play a role in preventing the impact of tsunami hazards. The existence of mangrove forests and mangrove planting along the coast is a natural effort to mitigate natural disasters such as tsunamis.²⁴ Fourth is the biological protection function: Baros mangrove forest is a habitat for migratory birds. Baros mangrove forest has its uniqueness. For example, at one time, several species of Kuntul bird migrated to the Baros mangrove forest area. The type of egret often found is the Kuntul Perak (*Mesophoyx intermedia*).²⁵ Fifth, the habitat of the endangered Javanese Bubut bird, the Javanese Bubut bird, has a characteristic black color with a reddish-brown color. It preys on snails, frogs, chicks, and small snakes. The distribution of this bird includes forest edges, shrubs, and mangrove forests.²⁶ The existence of birds is protected in the Regulation of the Ministry of Environment and Forestry of the Republic of Indonesia Number P.106/MENLHK/SETJEN/KUM.1/12/2018 concerning the Second Amendment to the Regulation of the Ministry of Environment and Forestry Number P.20/MENLHK/SETJEN/KUM.1/6/2018 on Protected Plant and Animal Species. This bird has been spotted several times in the Baros mangrove area, which is one of the reasons why the Baros mangrove area deserves to be a KEE.

In addition to ecological functions, the Baros mangrove forest has a green economic function. The Baros mangrove area has many green economic benefits if appropriately managed and correctly; these potentials are supported by human resources from the KP2B manager and the Akar Napas community, who have been active in various empowerment and environmental education programs such as Eco-Educational tour packages that apply the principles of Sustainable Development Goals (SDGs).²⁷ Eco-tourism is a concept that combines eco-tourism and education—providing experiences to tourists related to how important the function of mangrove forests is for the environment through conservation activities. Sidik M. Nurcholis said that there are economic activities in the Baros mangrove forest area, and the origin of Eco-Educational Tourism was carried out in 2014. We initiated

²³ Masrukin dkk., "Penanaman Mangrove di Pantai Pondok Asem Dengan Tema Gaya Hidup Berkelanjutan," *TEKIBA: Jurnal Teknologi dan Pengabdian Masyarakat* 3, no. 1 (9 Mei 2023): 26, <https://doi.org/10.36526/tekiba.v3i1.2372>.

²⁴ Aulia Setya Lestari, Muzani Muzani, dan Cahyadi Setiawan, "Mitigasi Bencana Tsunami Pantai Pangandaran, Jawa Barat," *JPIG (Jurnal Pendidikan dan Ilmu Geografi)* 8, no. 1 (31 Maret 2023): 59, <https://doi.org/10.21067/jpig.v8i1.7435>.

²⁵ Assifa Yusana Anandita, Sri Redjeki, dan Hadi Endrawati, "Analisis Kesesuaian dan Daya Dukung Ekowisata Kawasan Mangrove Baros, Bantul, Yogyakarta," *Journal of Marine Research* 13, no. 2 (2 Mei 2024): 342, <https://doi.org/10.14710/jmr.v13i2.40544>.

²⁶ Mubarak Mubarak Falahi, "Mengenal Burung Bubut Jawa yang Semakin Langka" (Mongabay, 19 April 2020), <https://www.mongabay.co.id/2020/04/19/mengenal-burung-bubut-jawa-yang-semakin-langka/>.

²⁷ Sukuryadi Sukuryadi dkk., "Perencanaan Lanskap Sebagai Upaya Revitalisasi Ekowisata Bagek Kembar Di Desa Cendi Manik Kecamatan Sekotong Kabupaten Lombok Barat," *GEOGRAPHY: Jurnal Kajian, Penelitian dan Pengembangan Pendidikan* 12, no. 2 (16 September 2024): 845, <https://doi.org/10.31764/geography.v12i2.24676>.

eco-educational and education-based tourism, such as camping, which was later filled with material and then continued with planting. There are tour packages that may be based on education, all rich in fishing tourism, farming tourism, and cattle tourism. Economic empowerment also involves several groups, such as fishing, livestock, and farmer groups; in terms of consumption, we invite mothers of the women farmers group, Kelompok Wanita Tani (KWT).²⁸ In addition to Eco-Tourism carried out by KP2B, Shanti Ardha said that the Akar Napas mangrove conservation community has also been running this Eco-Tourism program since 2021, where most of the enthusiasts are young people, especially nature lovers students from various campuses in Yogyakarta Province, such as Mapala Janagiri Janabadra University Yogyakarta, Mapala Agni Yogyakarta "AAN" College of Administration, Mapatris Sarjanawiyata Tamansiswa University, Mapala Arga Tirta, Sispala Gramasurya SMK Negeri 3 Yogyakarta, and others.²⁹

Another green economic function developed by Akar Napas in collaboration with the KP2B KWT is ecoprint. Ecoprint comes from the English language, namely eco (ecosystem) and print, which means printing. The printing technique uses natural materials such as bark, leaves, and flowers of various types of plants and brings out natural color elements.³⁰ The printing process is done naturally without using harmful synthetic chemical products. Despite using the same leaves and colors, these natural materials create different results.³¹ Shanti Ardha said that the Baros mangrove area had been utilized on a limited basis for eco-printing and making natural dyes from mangrove propagules, fruits, and leaves. This activity has been oLSMing for approximately 3 years and has been sold online and offline. Participants in the eco-printing training consisted of the Akar Napas community, mothers of the KWT of Baros Hamlet, and Mapala Agni.³² From the data above, starting from the typology of KEE areas characterized by wetlands to article 7 of the Regulation of the Director General of Natural Resources and Ecosystem Conservation Number: P.1/KSDAE/BPE2/KSA.4/2/2021 on the criteria for wetlands that can be designated as KEEs, the Baros mangrove area meets these requirements and has excellent potential to be designated as a KEE.

Regarding spatial planning, the designation of the Baros Mangrove Area as a KEE follows the Bantul Regency Spatial Plan; spatial planning is a form of national development that cannot be separated from the environment because almost all aspects of spatial planning intersect with environmental issues.³³ Quoted from Budi Antoro, an employee of

²⁸ M. Nurcholis, wawancara pribadi.

²⁹ Shanti Ardha, Penentuan Status Legalitas Pengelolaan Hutan Mangrove Baros Dengan Status Kawasan Ekosistem Esensial, t.t.

³⁰ Zulaiha, "Penerapan Ecoprint Dengan Bahan Alam Untuk Meningkatkan Kemampuan Kreativitas Anak Usia 5-6 Tahun Di Tk Sri Tanjung Lampung Utara," *Universitas Islam Negeri Raden Intan Lampung*, Skripsi, 2024, 34.

³¹ Faridatun Faridatun, "Ecoprint; Cetak Motif Alam Ramah Lingkungan," *Jurnal Prakarsa Paedagogia* 5, no. 1 (28 Juni 2022): 231, <https://doi.org/10.24176/jpp.v5i1.9002>.

³² Ardha, Penentuan Status Legalitas Pengelolaan Hutan Mangrove Baros Dengan Status Kawasan Ekosistem Esensial.

³³ Helena Bella Anjelina, "Implementasi Peraturan Daerah Rencana Tata Ruang Wilayah Kabupaten Bantul

the land utilization section of the Bantul Regency Land and Spatial Planning Office, said that the spatial arrangements related to mangrove areas are regulated in the south coast spatial plan (*pansela*).³⁴ It is an important point as the basis for designating the Baros mangrove forest area as a KEE does not conflict with the Bantul Regency spatial plan. According to Article 18 letter (g) of Bantul Regent Regulation Number 7 of 2024 concerning the Detailed Spatial Plan for the South Coast Planning Area for 2024-2044, it explains that the Baros mangrove forest area is included in the protected zone with code EM, this reinforces that between the decree of the Governor of Yogyakarta D.I. Number 117/KEP/2022, Bantul Regent Regulation Number 7 of 2024, and Regulation of the Director General of Natural Resources and Ecosystem Conservation Number: P.1/KSDAE/BPE2/KSA.4/2/2021, in line and mutually reinforcing so that efforts to designate the Baros mangrove forest area as a KEE are getting bigger.³⁵ Therefore, establishing the Baros mangrove area as a KEE will undoubtedly provide long-term ecological, economic, and social benefits for the surrounding community, especially in the coastal areas of Bantul Regency.

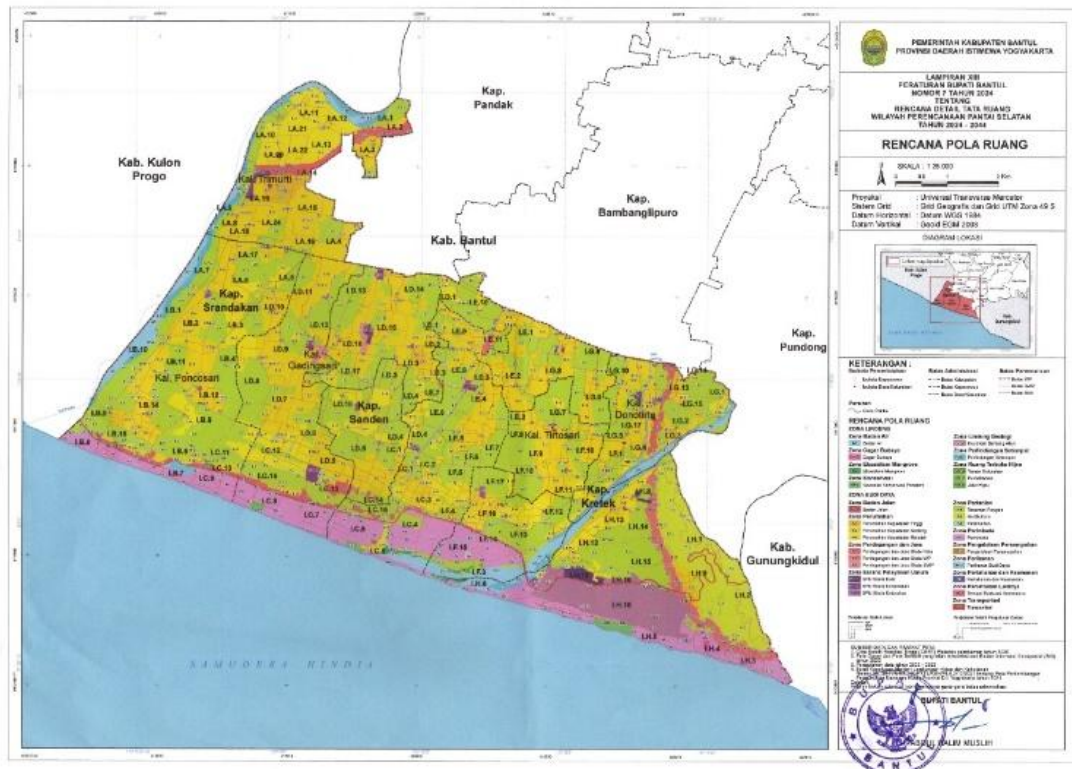


Figure 2: Bantul Regency Spatial Plan Map

Source: Bantul Regency Land and Spatial Planning Office

Terhadap "Pertambahan Pasir Di Kawasan Pesisir" 9, no. 2 (2024): 69, <https://journal.unsika.ac.id/positum/article/view/11113>.

³⁴ Budi Antoro, "Penentuan Status Legalitas Pengelolaan Hutan Mangrove Baros Dengan Status Kawasan Ekosistem Esensial," 29 Oktober 2024.

³⁵ "Peraturan Bupati Bantul Nomor 7 Tahun 2024 Tentang Rencana Detail Tata Ruang Wilayah Perencanaan Pantai Selatan Tahun 2024-2044," t.t., <https://peraturan.bpk.go.id/Details/287920/perbup-kab-bantul-no-7-tahun-2024>.

According to the Regulation of the Director General of Natural Resources and Ecosystem Conservation Number: P.1/KSDAE/BPE2/KSA.4/2/2021, determining KEEs is carried out through stages. The first is to manage non-spatial data, which is data that is processed to create information in the form of a KEE candidate profile in the form of a report, which includes the general condition of the KEE candidate, the potential of the area's flora and fauna, the utilization of the area's location, area management institutions, problems, and a map of the KEE candidate.³⁶ Non-spatial data collection of prospective KEEs utilized site surveys and supporting secondary data from relevant agencies and local governments. Direct surveys were conducted to obtain information on the potential, typology, and social, cultural, and economic characteristics of the communities surrounding the KEE candidates. Then, the data is processed descriptively. Thus, it becomes informative data.³⁷ Second, the process of implementing data collection, the data collection stage is carried out by first coordinating with the KLHK UPT (Balai Taman Nasional/BKSDA) or UPTD, in this case, DLHK D.I Yogyakarta Province. After that, an implementation team of the Directorate of Essential Recovery Management, UPT KLHK, Regional Work Units, Universities, and LSM was formed.³⁸ Data collection includes two types of data, namely, primary data taken directly during the survey and secondary data, which includes ecological, physical data, socio-economic, and cultural data, an overview of the location of the KEE candidate, location map, forest distribution, hydrology, and others.³⁹ Fourth, the designation of the KEE management implementation team is determined by the Ministry, Governor, or Regent/Mayor.

In the Special Region of Yogyakarta, the establishment of KEEs contains in the Decree of the Governor of the Special Region of Yogyakarta No. 117/KEP/2022 on the Establishment of the Forum for the Management of Essential Ecosystem Areas of Wetlands in the Special Region of Yogyakarta. This decree explains that the KEE management forum in Yogyakarta Province consists of:⁴⁰ a. The Governor of Yogyakarta Special Region, the Regent of Bantul Regency, and the Regent of Kulon Progo Regency as Patron; b. The Head of the Environment and Forestry Service of Yogyakarta Special Region Province as chairman; c. The Head of the

³⁶ "Petunjuk Teknis Identifikasi Dan Inventarisasi Kawasan Ekosistem Esensial Direktorat Bina Pengelolaan Ekosistem Esensial Direktorat Jenderal Konservasi Sumberdaya Alam Dan Ekosistem Kementerian Lingkungan Hidup Dan Kehutanan," t.t., https://pdf.usaid.gov/pdf_docs/PA00XFQV.pdf.

³⁷ "Petunjuk Teknis Identifikasi Dan Inventarisasi Kawasan Ekosistem Esensial Direktorat Bina Pengelolaan Ekosistem Esensial Direktorat Jenderal Konservasi Sumberdaya Alam Dan Ekosistem Kementerian Lingkungan Hidup Dan Kehutanan."

³⁸ "Petunjuk Teknis Identifikasi Dan Inventarisasi Kawasan Ekosistem Esensial Direktorat Bina Pengelolaan Ekosistem Esensial Direktorat Jenderal Konservasi Sumberdaya Alam Dan Ekosistem Kementerian Lingkungan Hidup Dan Kehutanan."

³⁹ "Petunjuk Teknis Identifikasi Dan Inventarisasi Kawasan Ekosistem Esensial Direktorat Bina Pengelolaan Ekosistem Esensial Direktorat Jenderal Konservasi Sumberdaya Alam Dan Ekosistem Kementerian Lingkungan Hidup Dan Kehutanan."

⁴⁰ "Surat Keputusan Gubernur Daerah Istimewa Yogyakarta Nomor 117/KEP/2022 Tentang Pembentukan Forum Pengelolaan Kawasan Ekosistem Esensial Lahan Basah Daerah Istimewa Yogyakarta," t.t., <https://jdih.jogjaprovo.go.id/hukum/keputusan-gubernur-daerah-istimewa-yogyakarta-nomor-117kep2022-tentang-pembentukan-forum-pengelola>.

Java Ecoregional Development Control Center as vice chairman. d. Head of Yogyakarta Natural Resources Conservation Center as secretary. e. Members consisting of elements of the DIY Regional Development Planning Agency, elements of the DIY Paniradya, elements of the DIY Public Works and Energy Mineral Resources Agency, elements of the DIY Tourism Agency, elements of the DIY Land and Spatial Planning Agency, elements of the DIY Agriculture and Food Security Agency, elements of the DIY Marine and Fisheries Agency, elements of the DIY Education, Youth and Sports Agency, elements of the DIY Culture, elements of the DIY Communication and Information Agency, elements of the Serayu Opak River Basin Center, elements of the Forestry Instrument Standard Testing Center (BBPSIK) Yogyakarta, elements of the Serayu Opak Watershed and Protected Forest Management Center, elements of the Faculty of Forestry, Gadjah Mada University, elements of the Faculty of Biology, Gadjah Mada University, elements of the Faculty of Forestry INTAN, elements of the Faculty of Forestry INSTIPER Yogyakarta, elements of the DAMAR Foundation, elements of LSM Relung, elements of the Baros Youth Group, elements of the Rejosari Youth Communication Forum, elements of the Wanatirta Mangrove group, elements of the Api-api Bridge Mangrove group, elements of the Maju Lestari Mangrove group, elements of the Kadilangu Pasir Tourism Group, elements of Penyu Abadi Group.

After the KEE management team for the wetland area was appointed by the Governor of Yogyakarta Special Region, the implementation team prepared a report on the preparation of the Mangrove Forest KEE Profile. At this stage, the team formed according to the Governor of Yogyakarta Decree No. 117/KEP/2022 must produce a report, namely, First, a location map report and record the distribution of Baros mangrove forest area wetlands along with the coordinates of the location points; Second, the status of the KEE plan location, in this case the status of the Baros mangrove area as sultan ground (SG) land.⁴¹ Joko Boyo, one of the staff in Titrohargo sub-district, stated that the Baros mangrove forest area is located on Sultan Ground 12 and Sultan Ground 13. Third, information on forest function and the function of the Baros mangrove forest must be mentioned in the KEE report. The Baros mangrove forest area has an ecological function by holding back the abrasion rate, becoming a natural fortress in the event of a tsunami, creating animal and plant habitats, and providing clean water for agriculture around the forest area. Information on the function of the Baros mangrove forest area is certainly in line with the Bantul Regency Spatial Plan, which establishes this area as a nature conservation area as stated in Article 50 paragraph (2) of the Bantul Regency Regional Regulation Number 04 of 2011 concerning the Bantul Regency Spatial Plan 2010-2030 which reads "Mangrove forested coastal areas covering an area of 12 (twelve) hectares in the Gading Sari area, Sri Gading Village, Sanden District, Poncosari Village, Srandakan District, and Tirohargo Village, Kretek District";⁴²

⁴¹ Boyo, Penentuan Status Legalitas Pengelolaan Hutan Mangrove Baros Dengan Status Kawasan Ekosistem Esensial.

⁴² "Peraturan Daerah Kabupaten Bantul Nomor 04 Tahun 2011 Tentang Rencana Tata Ruang Wilayah Kabupaten Bantul Tahun 2010-2030," t.t., <https://jdih.bantulkab.go.id/produkhukum/detail/5087/peraturan-daerah-tahun-2011-nomor-4.html>.

Fourth, the history of the area, cited by Sidik M. Nurcholis, said that the Baros mangrove area was formed artificially. It happened in 2003 when the current mangrove area was a muddy, brackish area; thanks to the help of LSM relung in collaboration with Toyota, this area finally became a mangrove forest with the help of residents, namely KP2B.⁴³ Before the Baros mangrove forest area existed, KP2B had made conservation efforts around the banks of the Baros estuary, such as planting trees around the river and educating fishermen regarding fishing activities using stun guns.⁴⁴ Fifth, the ecosystem type of the KEE candidate area, the ecosystem type of the Baros mangrove forest area, is a wetland ecosystem in the form of mangrove forests. This wetland ecosystem has a high wealth of fauna. In the Baros mangrove forest area, the types of fauna that are most often found are mangrove crabs (*Scylla* sp), silver herons (*Mesophoyx intermedia*), gelodok fish (*Periophthalmus argentilineatus*), mangrove snails (*Telescopium telescopium*);⁴⁵ Sixth, the area of the KEE candidate area, the Baros mangrove forest area is quoted from Sidik M. Nurcholis saying that the Baros mangrove forest has an area of about 12 hectares.⁴⁶ It is in line with Joko Boyo's statement and article 50 paragraph (2) of Bantul Regency Regional Regulation No. 04/2011 concerning the Regional Spatial Plan of Bantul Regency 2010-2030; Seventh, physical characteristics of the KEE candidate area, Baros mangrove forest area is located in the Baros estuary area with a tropical climate type. The soil type in this area is muddy, wet, and sandy. The closer to the riverbank, the more sandy the soil is, and vice versa; the further away from the riverbank, the muddy the soil type is. Eighth, accessibility of prospective KEEs relates to distance, travel time, and what means of transportation can be used to reach the location. Accessibility related to distance from the city of Yogyakarta to the Baros mangrove forest area is approximately 30 KM with a travel time of about one hour. The types of transportation that can be used to get to the location are tourist buses, private cars, and motorbikes. Ninth, facilities and infrastructure facilities and infrastructure that already exist at the Baros mangrove forest location are quite complete, with asphalted paths, interpretation boards and information related to the Baros mangrove forest area, resting places, and gazebos, toilets, simple stalls, and others.

Then, the KEE wetland management implementation team made a land use report, the Baros mangrove forest area within the area with an area of 12 hectares; on this 12-hectare land, several public facilities were built to support the area, such as prayer rooms, parking lots, gazebos, stalls, and others. In addition, the area is also limited by productive and non-productive agriculture of local residents, such as rice fields and cow grass. Then, make a priority biodiversity report; the biodiversity in question is to make information related to endemic flora and fauna that is a priority for KEE management. In the Baros mangrove area, endemic biodiversity includes: a. *Sonneratia Alba* (Apple Mangrove); this mangrove species is

⁴³ M. Nurcholis, wawancara pribadi.

⁴⁴ M. Nurcholis.

⁴⁵ Anandita, Redjeki, dan Endrawati, "Analisis Kesesuaian dan Daya Dukung Ekowisata Kawasan Mangrove Baros, Bantul, Yogyakarta," 343.

⁴⁶ M. Nurcholis, wawancara pribadi.

included in the *Lithraceae* family, which is often found in coastal areas with muddy or sandy beach characteristics. Characteristic of this type of mangrove is its unique root system, called the breath root. This root has a shape similar to a pencil protruding from the ground. The leaves are round and glossy, while the flowers are large with a green color and red stamens.⁴⁷ This breathable root system is functional in resisting abrasion and is a natural filter of pollutants from the water. Ideally, *Sonneratia* mangroves are planted in zone one or the leading zone because of their ability to withstand high abrasion; b. Javanese Bubut bird The Javanese Bubut bird has a characteristic black color, with reddish brown. This bird likes prey such as snails, frogs, bird chicks, and also small snakes. The distribution of this bird includes forest edges, shrubs, and mangrove forests.⁴⁸ The bird is protected under the Regulation of the Ministry of Environment and Forestry of the Republic of Indonesia Number P.106/MENLHK/SETJEN/KUM.1/12/2018 on the Second Amendment to the Regulation of the Ministry of Environment and Forestry Number P.20/MENLHK/SETJEN/KUM.1/6/2018 on Protected Plant and Animal Species. This bird has been spotted several times in the Baros mangrove area, which is one of the reasons why the Baros mangrove area deserves to be a KEE.

The last stage carried out by the KEE management team in the wetland area is First compiling KEE institutions. This institutional preparation includes plans and programs related to KEE, forms of cooperation and partnerships in KEE management, and future KEE funding strategies such as funding from the APBN, APBD, CSR, and grants.⁴⁹ Second, a report on the socio-economic and cultural conditions of the community. The social conditions of the Tirtohargo sub-district are divided into six hamlets, namely Baros Hamlet with four neighborhood associations, Gegunung Village with six neighborhood associations, Gunung Kunci Village, Kalangan Village, Karang Village, and Muneng Village. The total population of the Tirtohargo sub-village is 417 people, with average occupations as farmers and seasonal fishermen.⁵⁰ Third, report on the problems/challenges of prospective managers. The problems of prospective KEE managers in managing the Baros mangrove forest area are related to overlapping land tenure over the mangrove forest. It is based on the initial problem that the Baros mangrove forest area does not yet have any legality, so this area often intersects with livestock grass areas owned by residents. According to Sidik M. Nurcholis, conflicts over land issues in the Baros mangrove forest area often conflict with mangroves. Some use the right of use on sultan ground, with the right of use on behalf of

⁴⁷ Britney Liayanti Windewani dan Galuh P. W. Utami, "Identifikasi Jenis-Jenis Tumbuhan Mangrove Yang Ada Di Indonesia," *Journal of International Multidisciplinary Research* 2, no. 7 (11 Juli 2024): 215, <https://doi.org/10.62504/jimr775>.

⁴⁸ Mubarak, "Mengenal Burung Bubut Jawa yang Semakin Langka."

⁴⁹ "Petunjuk Teknis Identifikasi Dan Inventarisasi Kawasan Ekosistem Esensial Direktorat Bina Pengelolaan Ekosistem Esensial Direktorat Jenderal Konservasi Sumberdaya Alam Dan Ekosistem Kementerian Lingkungan Hidup Dan Kehutanan."

⁵⁰ "Profil Kalurahan Tirtohargo" (Kalurahan Tirtohargo), diakses 28 Oktober 2024, <https://tirtohargo.bantulkab.go.id/first/artikel/1>.

mangroves, but the designation is not for mangrove preservation.⁵¹ The worst thing about this overlap is that it is related to the narrowing of the mangrove forest area and to eliminating its conservation side because economic activities in the non-eco-tourism sector are more dominant than conservation activities. Fourth, appendices: this appendix is an important part of the preparation of Baros mangrove KEE management regarding additional data that cannot be included in the paper.⁵²

From those stages, the efforts to establish the Baros mangrove forest KEE have only been focused on forming a wetland KEE management forum, and no concrete steps have been taken in the area to realize the KEE.

After all the processes according to the Regulation of the Director General of Natural Resources and Ecosystem Conservation Number: P.1/KSDAE/BPE2/KSA.4/2/2021 have been carried out, the last thing that DLHK Yogyakarta Province must do is to register the land of the Baros mangrove forest area with the status of right of use after the Governor of Yogyakarta officially designates this area as a KEE. It is not without reason because KEEs are separate from the land status of the area that will become a KEE. In this case, if the Baros mangrove forest area is designated as a KEE without being registered as a right-of-use land, the Baros mangrove forest KEE will still be on the Sultan land only. Thus, the legality of the land is not guaranteed.

The right of use, as contained in Article 41 paragraph (1), is the right to use or collect products from state land or land with the status of property rights determined by an authorized official or based on an agreement with the landowner, as long as it is not contrary to the provisions of the law.⁵³ Budiyanto, an employee of the Yogyakarta Environment and Forestry Agency in the conservation sector, said that once an area has been designated as a KEE, it needs to be managed with Serat Kekancingan.⁵⁴ According to Budi Antoro, the authority to register the Baros mangrove forest area as a right of use/right to build if it has become a KEE is the DLHK of Yogyakarta Province as the head of the Yogyakarta wetland KEE management forum by applying the use of sultanate land to Panitikismo Ngayogyakarta Palace.⁵⁵

Budi Antoro said that before going to Panitikismo, the first thing to do is to take care of recommendations to the Bantul Regency Land and Spatial Planning Office regarding spatial plans that are not problematic, in which case the head of the DLHK office of

⁵¹ M. Nurcholis, wawancara pribadi.

⁵² "Petunjuk Teknis Identifikasi Dan Inventarisasi Kawasan Ekosistem Esensial Direktorat Bina Pengelolaan Ekosistem Esensial Direktorat Jenderal Konservasi Sumberdaya Alam Dan Ekosistem Kementerian Lingkungan Hidup Dan Kehutanan."

⁵³ Siti Rofiah, "Penguasaan Tanah Reklamasi Pantai Oleh Masyarakat Di Pesisir Pantai" 4, no. 2 (t.t.): 283–84, <https://riset.unisma.ac.id/index.php/hukeno/article/view/8665>.

⁵⁴ Budiyanto, Penentuan Status Legalitas Pengelolaan Hutan Mangrove Baros Dengan Status Kawasan Ekosistem Esensial, 2023.

⁵⁵ Antoro, "Penentuan Status Legalitas Pengelolaan Hutan Mangrove Baros Dengan Status Kawasan Ekosistem Esensial."

Yogyakarta Province will apply spatial planning recommendations to the Bantul Regency Land and Spatial Planning Office if it is complete and declared appropriate, this recommendation is sent to Panitikismo to be followed up.⁵⁶

The things that must be prepared to apply for registration of use rights on Sultanate land according to Article 6 letter b of Yogyakarta Special Region Regulation Number 49 of 2018 concerning Procedures for Utilization of Sultanate and Duchy Land.⁵⁷ First, a photocopy of the identity card of the head of the DLHK office of D.I Yogyakarta Province. Second, a passport photo of the head of the DLHK office of D.I Yogyakarta Province. Third, If it is authorized, it is proven by a power of attorney with a valid stamp of Rp. 6,000 (six thousand) accompanied by a photocopy of the identity card of the head of the DLHK office of D.I Yogyakarta Province. Fourth, a proposal containing the DLHL of D. Yogyakarta Province, the purpose and objectives, and data on land use. D.I Yogyakarta aims and objectives, land data including land parcels in this case in SG 12 and SG 13, the location of the land located in Padukuhan Baros, Kalurahan Tirtohargo, Kapanewon Kretek, Bantul Regency. Fifth, the Location plan of the Baros mangrove forest area. Sixth, a land certificate from the Head of Tirtohargo Kalurahan, known by Panewu Kapanewon Kretek, explains that the Baros mangrove forest area land is not disputed. Seventh, a recommendation on the suitability of land utilization in the Baros mangrove forest area from the Spatial Planning Coordination Team of the Bantul Regency Land and Spatial Planning Office contains the purpose of utilizing the Sultanate's land, an explanation of the letter from the Head of Tirtohargo Village that the utilization of the Sultanate's land is following the spatial plan, an explanation that there is no building on the Sultanate's land and if there is the year the building was built and a statement that the building was built before this regulation was made. Eighth, After the data is complete, it is submitted to Panitikismo. The office will conduct verification with a verification team formed by the Governor of Yogyakarta in coordination with Tirtohargo Sub-district, Bantul Regency ATR/BPN Office, and Bantul Regency Land and Spatial Planning Office. Ninth, if there are incomplete documents, the verification team will return the documents to KP2B to be completed. Tenth, If the data has been declared complete, the office will make an official report represented by the legal office of the Sultanate. Eleventh, after the minutes are issued, the agency recommends DLHK Yogyakarta Province's use of Sultanate land. Twelfth, the Sultanate registered the sultan ground of the Baros mangrove area as property rights to the Bantul Regency ATR / BPN Office. Thirteenth, after the Baros mangrove forest area land has the status of the Sultanate's property rights, the Sultanate, through Panitikismo, approves the utilization of sultanate land and provides recommendations for registering the Baros mangrove forest area land to the Bantul Regency ATR / BPN Office in the form of use rights (Application for the first time) to DLHK Yogyakarta

⁵⁶ Antoro.

⁵⁷ "Peraturan Gubernur Daerah Istimewa Yogyakarta Nomor 49 Tahun 2018 Tentang Prosedur Permohonan Pemanfaatan Tanah Kasultanan dan Tanah Kadipaten," t.t., <https://peraturan.bpk.go.id/Details/97584/pergub-no-49-tahun-2018>.

Province.

CONCLUSION

The Baros mangrove forest area manager status by the Baros Youth Family (KP2B) has legality in the form of an association engaged in the creative economy and Eco-Tourism. However, related to the area of the Baros mangrove forest area does not yet have legality, either in the form of *serat kekancingan*, building use rights (HGB) or use rights on the land of the Ngayogyakarta Sultanate because it needs registration of property rights by the Ngayogyakarta Sultanate to the Bantul ATR / BPN Office first. The Baros mangrove forest area has fulfilled the requirements as a KEE, both formal and material requirements, following the Regulation of the Director General of KSDAE Number P.1/KSDAE/BPE2/KSA.4/2/2021 concerning technical guidelines for assessing the effectiveness of the management of Essential Ecosystem Areas. A KEE management forum has been established based on the Decree of the Governor of the Special Region of Yogyakarta Number 177/Kep/2022 on the Establishment of a Forum for the Management of Essential Ecosystem Areas of Wetlands in the Special Region of Yogyakarta. Hence, the potential opportunity to become a KEE is enormous. Therefore, the D.I Yogyakarta Environment and Forestry Service, as the chair of the wetland KEE forum, had to form a Non-Spatial Data Management team for the Baros mangrove forest KEE candidate, which consisted of members listed in the Decree of the Governor of the Special Region of Yogyakarta Number 177/Kep/2022 on the Establishment of the Forum for the Management of Wetland Essential Ecosystem Areas in the Special Region of Yogyakarta. It is done to accelerate the establishment of the Baros mangrove forest area as a KEE. Based on what has been contained in the content, conclusions, and suggestions, the author recommends that the Yogyakarta Provincial Department of Environment and Forestry, as the chairperson of the Yogyakarta wetland essential ecosystem area management forum, register the Baros mangrove forest area as a right of use on Sultanate land to be the first step in the process of designating the area as a KEE, because KEE status and land status are two separate things so there needs to be two legalities on the Baros mangrove forest area, the legality of the right of use on Sultanate land and the KEE legality of the mangrove ecosystem.

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