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## Legal Protection for Nature Reserves as Providers of Watering Needs for Food Security

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### ABSTRACT

*This research investigates the critical issue of land encroachment and forest conversion into rice fields within the Rawa Danau Nature Reserve Area. These activities violate procedures set for the reserve, which serves as a critical source of raw water for the people of Serang and Cilegon. Consequently, these actions threaten the food security of Banten communities. The research aims to gain an overview of exploitation activities within the Rawa Danau Nature Reserve Area, including land encroachment and forest clearing for agriculture so that it can provide recommendations, for legal protection of the Rawa Danau Nature Reserve Area, ensuring its sustainability and continued ability to supply raw water and contribute to food security for Banten communities. This study employs a normative juridical and sociological legal research methodology. It is descriptive and analytical in nature, utilizing both primary and secondary data sources. Data collection techniques involve literature reviews, field studies with interviews, and observations. Initial findings from this research indicate that unauthorized land encroachment and forest conversion within the Rawa Danau Nature Reserve Area stem from coordination failures between the reserve management and the local government. These activities constitute environmental damage and contradict applicable laws and regulations.*

**Keywords:** Food Security, Legal Protection, Nature Reserves.

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### INTRODUCTION

Indonesia is recognized as an agricultural-based country.<sup>1</sup> Its policies focused on agriculture and labor-intensive practices. Indonesia boasts approximately 118 million hectares of forest, encompassing 49.3 million hectares of production forest, 39.9 million hectares of protected forest, and 29.0 million hectares of conservation and other forests.<sup>2</sup> Forests in Indonesia play a vital role not only from economic, social, and cultural perspectives but also from an ecological standpoint. Therefore, forests must be developed and preserved to provide a source of livelihood and support for the Indonesian population. In accordance with Article 33, Paragraph 3 of the 1945 Constitution of the Republic of Indonesia, “The land, waters, and natural resources within them are controlled by the state and utilized to the greatest benefit of the people.”<sup>3</sup>

Law Number 41 of 1999 concerning Forestry (Article 4) states that all forests within Indonesia’s territory, including the natural resources contained therein, are controlled by the

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<sup>1</sup>Anne Gunawati, Muhamad Muslih, Dede Agus, “Optimalisasi Pengelolaan Dan Pemanfaatan Lahan Untuk Mendukung Ketahanan Pangan Di Desa Sindangsari Dalam Mewujudkan Visi Integrated, Smart, And Green Campus”, *Madinah: Jurnal Studi Islam*, Vol. 8, No. 2, Desember 2021, hlm. 150-170.

<sup>2</sup>Salim. 2008. *Dasar-Dasar Hukum Kehutanan*. Sinar Grafika: Jakarta, hlm.1.

<sup>3</sup>Penjelasan Isi Pasal 33 Ayat 3 UUD tahun 1945.

state. This indicates that forests in Indonesia play a crucial role in life, and to maintain their productivity, these resources must be preserved.

Regarding its implementation, Law Number 5 of 1990 on the Conservation of Living Natural Resources and their Ecosystems, particularly for conservation areas, national parks, and nature reserves, is overseen by the Directorate General of Forest Protection and Nature Conservation (PHKA), along with the Natural Resources Conservation Agency (BKSDA) and National Park Agency under the Ministry of Forestry of the Republic of Indonesia. Meanwhile, protected forests and production forests are supervised by governors and Regents. The implementation is regulated by the Forest Land Use by Consensus (TGHK), which is managed by the respective local governments.

According to Article 1, Paragraph 9 of Law Number 41 of 1999 on Forestry, a conservation forest is a forest area with specific characteristics that primarily functions to preserve the diversity of flora and fauna as well as their ecosystems. Conservation forests themselves are divided into two conservation areas: nature reserve areas and natural conservation areas. Furthermore, under Law Number 5 of 1990 on the Conservation of Living Natural Resources and their Ecosystems, a nature reserve area is a region with specific characteristics, whether on land or in water, that primarily functions to preserve the diversity of flora and fauna and their ecosystems, while also serving as a life support system. In contrast, a nature conservation area is a region with specific characteristics, whether on land or in water, that functions to protect life support systems, conserve the diversity of flora and fauna, and sustainably utilize living natural resources and their ecosystems.

In the daily activities of society, deviations occasionally occur and can hinder efforts to conserve living natural resources and their ecosystems at certain stages. Access to forest damage can be classified as a specific legal violation in the field of forestry. Law Number 5 of 1990 on the Conservation of Living Natural Resources and their Ecosystems also stipulates penalties and fines. For instance, Article 40, Paragraph 1 states that anyone who intentionally violates the provisions as referred to in Article 19, Paragraph 1, and Article 33, Paragraph 1, shall be punished with a maximum imprisonment of 10 years and a maximum fine of IDR 200,000,000 (two hundred million rupiah).

This forest degradation is related to land, as land comprises both biotic and abiotic factors. One of the dominant abiotic factors in land composition is soil.<sup>4</sup>Soil is a key component of land parameters, playing a crucial role in supporting the availability of water, soil biota, and the plants that grow on it.<sup>5</sup>The potential for soil degradation, based on land use for forests, natural areas, and rice fields, has a very high percentage of damage.<sup>6</sup>

Recently, there has been an increasing issue of widespread forest destruction and improper land acquisition procedures. This destruction is not confined to production forests but has also encroached into protected and conservation forests. Forest destruction and land conversion have expanded significantly and have had extraordinary impacts, especially on the environment. Activities such as forest exploitation, land grabbing, opening land for agriculture, and even the trading of land have been prevalent. These activities can cause severe environmental damage and conflict with laws governing land and forest use.

<sup>4</sup>Pertami, Eliyatningsih, Salim, & Basuki, "Optimasi Penggunaan Lahan Berdasarkan Kelas Kesesuaian Lahan Untuk Pengembangan Tanaman Cabai Merah Di Kabupaten Jember" *Jurnal Tanah Dan Sumberdaya Lahan*, 9, No. 1, 2022, hlm. 163–170.

<sup>5</sup>Basuki, B., Mandala, M., Bowo, C., & Fitriani, V, "Evaluation Of The Suitability Of A Sugarcane Plant In Mount Argopura's Volcanic Land Using A Geographic Information System" *Jurnal Ilmiah Rekayasa Pertanian Dan Biosistem*, 10, No. 1, 2022, hlm. 145–160.

<sup>6</sup>Basuki, Bambang Hermiyanto, Subhan Arif Budiman, "Identification and Estimation of Soil Damage Using the Sentinel-2B Satellite Image OBIA Method and Weighting the Slope of Raung Mountain", *Jurnal Ilmiah Rekayasa Pertanian dan Biosistem*, Vol. 11, No. 1, 2023, hlm. 56-72.

Building on our earlier discussion, Kabupaten Serang boasts extensive agricultural lands managed by the local community. These agricultural lands produce a variety of crops such as bananas, mangoes, rambutans, and durians for local consumption in Banten Province and to supply the fruit needs of Jakarta city. Serang also features community plantations cultivating coconuts, peanuts, melinjo, coffee, cloves, pepper, rubber, vanilla, cocoa, and various spices.<sup>7</sup> Topographically, Kabupaten Serang consists of lowlands and mountains, making almost all of its land fertile due to the presence of alluvial deposits and Quaternary volcanic rocks. This fertile land is largely covered by alluvial soil and volcanic rocks. Additionally, Kabupaten Serang is endowed with several significant rivers such as Sungai Cijung, Cidurian, Cibanten, Cipaseuran, Cipasang, and Anyar. Furthermore, Serang also hosts a Nature Reserve, Cagar Alam Rawa Danau, which contributes to water supply in the region. All these factors collectively support the fertility of agricultural areas in Kabupaten Serang.<sup>8</sup>

Continuing from the above, in Banten, there is the Rawa Danau Nature Reserve, which serves as a buffer for water resource needs for the communities of Serang and Cilegon. Currently, this area is facing destruction by irresponsible parties. Land conversion within the Rawa Danau Nature Reserve continues unabated. Grasslands within the reserve have been extensively opened and converted by local communities into rice fields. This has led to conflicts between the reserve managers and the surrounding communities, significantly impacting the reserve's area. On the other hand, land conversion poses a threat to endemic ecosystems, particularly mountain swamps found within the reserve. Encroachment affects the benefits and functions of the Rawa Danau Nature Reserve, such as causing fluctuations in the water flow of the Cidano River, habitat loss for specific wildlife, and reducing the buffer zone that protects the swamp forest ecosystem in the reserve. Fluctuations in the Cidano River's flow disrupt the reserve's role in maintaining the sustainability of the Cidano Watershed, which is crucial for water supply to the residents of Serang and Cilegon, as well as industries in Cilegon. These issues are also crucial for the future development of Banten and have significant implications for its residents' food security.

## METHOD

This research uses the Juridical and Socio-Legal Normative methods. It is a Descriptive Analytical study using Primary Data Sources and Secondary Data Sources. Descriptively, this research portrays the situation, conditions, and realities present in the Rawa Danau Nature Reserve, which is increasingly eroded and significantly affects food security. The analysis focuses on identifying the issues to find solutions to these problems. Data sources for this research are obtained from Library Research. Juridical Normative analysis involves discussing various existing regulations, while Socio-Legal Normative research on law constructs law as a system of legislation that has been existing and then constructed in societal behavior. Descriptive Analytical methodology in this research systematically attempts to depict the situation so that data can be presented effectively and in line with the research objectives.<sup>9</sup>

The aim of this research is to provide an overview of activities such as forest exploitation, land grabbing, land clearing for agriculture, and land transactions. These activities can have adverse environmental impacts and often contradict existing legal regulations. This research

<sup>7</sup>Aris Suhadi, Muhamad Muslih, Anne Gunawati, "Praktek Pengalihan Tanah Secara Nominee Dalam Mewujudkan Ketahanan Pangan Di Provinsi Banten" *Madinah: Jurnal Studi Islam*, Vol. 7, No. 2, Desember 2020, hlm. 156-177.

<sup>8</sup>R. Ropingi, Agustono A., and Yuliani T. "Analisis Identifikasi Dan Peranan Sektor Pertanian Dalam Pembangunan Wilayah Di Kabupaten Cilacap", dalam *Jurnal Ekonomi Pembangunan: Kajian Masalah Ekonomi dan Pembangunan*, Vol. 10, No. 2, 2009, hlm. 139.

<sup>9</sup>Soerjono Soekanto, 1998, *Metodologi Research*, Yogyakarta: Andi Offset, hlm. 3.

also utilizes both primary and secondary data sources, analyzed using qualitative methods. Data collection techniques include Literature Review and Field Studies conducted in the Ranu Danau Area. Interviews and observations were conducted to gather necessary data. The data obtained through field research and literature studies are qualitatively analyzed using normative methods to clarify the issues under investigation.

## ANALYSIS AND DISCUSSION

### A. General Overview of Rawa Danau Nature Reserve, Serang, Banten

Indonesia is also known for having a fundamentally agriculture-based economy, including regions within Java Island such as Banten.<sup>10</sup> Despite global trends towards industrial and manufacturing sectors, not all regions in Indonesia follow this path.<sup>11</sup> Some areas continue to maintain their status as agricultural and entrepreneurial centers, prioritizing their agricultural products and local businesses.<sup>12</sup>

Banten plays a crucial role in achieving national food security due to its strategic location near the coast within a strategic economic zone.<sup>13</sup> One of the key contributors to food security in Banten is the Rawa Danau Nature Reserve. Located 15 km west of Serang City, Rawa Danau spans three subdistricts: Padarincang, Pabuaran, and Mancak, all part of Serang Regency. Geographically, it lies between 6°06'-1°06' South latitude and 105°52'-105°57' East longitude. The terrain within the reserve is mostly flat, with small hills in the northern part, notably Gunung Jamungkal covering approximately 8 hectares at an elevation of 150 meters above sea level. Much of the area remains submerged in water, with swamp depths ranging from 2 to 10 meters throughout most of the year.

The Rawa Danau Nature Reserve serves as the headwaters of the Cidanau River, which holds strategic importance for the communities and industrial areas in Cilegon City and Serang Regency. It plays a crucial role in supporting economic development by providing raw water and serving as the sole water reservoir with sufficient discharge in the region. Covering an area of 2,500 hectares, the Rawa Danau Nature Reserve was designated based on a decree by the Dutch Governor General on November 16, 1921. It is the last remaining mountain swamp on Java Island. The Cidanau River, as the main river, has an average flow rate ranging between 80,000 to 100,000 liters per second over the past five years, making it a strategic source of raw water not only for the local community within its catchment area but also for areas beyond such as Bojonegara, Merak, and Cilegon. Additionally, there are four hot spring points with temperatures exceeding 70°C.

Rawa Danau comprises two types of ecosystems: tropical rainforest ecosystem located on Mount Jamungkal covering an area of 8 hectares, situated at an altitude of 192 meters above sea level, and a dominant swamp ecosystem. The swamp ecosystem in Rawa Danau closely resembles a peat swamp ecosystem, characterized by a surface covered with shrubs and grasses overlying water beneath.

<sup>10</sup>Ana Toni Roby Candra Yudha dan Abdul Mu'izz, "Optimalisasi Potensi Lahan Pertanian untuk Ketahanan Pangan Di Kecamatan Panceng, Gresik, Jawa Timur" dalam *Journals of Economics Development Issues (JEDI)*, Vol. 3, No. 2 (2020), 297-308.

<sup>11</sup>N. Lewaherilla, "Inovasi Model Bioindustri Berbasis Sagu Spesifik Lokasi di Papua", dalam *Journals of Economics Development Issues (JEDI)*, Vol. 16, No. 2 (2020), Hal. 112-124.

<sup>12</sup>Zaki, "Implementation of Islamic entrepreneurial culture in Islamic boarding Schools", dalam *International Journal of Innovation, Creativity and Change*, Vol. 11, No. 11, Hal. 452-469.

<sup>13</sup>Rully Syahrul Mucharom, Mochamad Arifinal, Muhamad Muslih, "Kajian Hukum Psbb Dan Lock Down Terhadap Kondisi Ketahanan Pangan Di Provinsi Banten", *Legal Standing Jurnal Ilmu Hukum*, Vol. 5, No. 2, September 2021, hlm. 8-20.

In principle, the use of forest areas should align with their designated functions and purposes, as mandated by laws aimed at maximizing the welfare of the people. When enjoying environmental quality, including deriving social and cultural benefits for communities residing within and around forests, it is crucial for society to consistently consider the status and functions of these forests.<sup>14</sup> However, it is possible that forest areas may be used in ways that deviate from their intended functions and purposes. In the conservation efforts at the Rawa Danau Nature Reserve, several issues have been identified. These include encroachment or illegal land cultivation. According to measurements taken during the pre-conditioning phase of handling encroachment in 2014, it was found that approximately 823.8032 hectares of land had been illegally cultivated by local communities around the reserve area. Additionally, there is the issue of fuelwood theft, as the Rawa Danau Nature Reserve is surrounded by 11 villages, comprised mostly of rice fields, leaving very few areas for gathering fuelwood. One of the targeted areas for fuelwood collection is within the Rawa Danau Nature Reserve itself.

Furthermore, traditional hunting occurs because the Rawa Danau Nature Reserve is surrounded by vast rice fields owned by local communities, where wild boars, known as pests to farmers, inhabit the reserve area. Therefore, hunting of wild boars as pests is routinely carried out by local communities. Additionally, fishing activities take place because the Rawa Danau Nature Reserve consists mostly of closed and open water bodies containing various types of fish. The preferred species among locals is Lendi, a type of catfish. Fishing also serves as a livelihood for some community members. Moreover, boundary markers are sometimes moved or lost due to the Rawa Danau Nature Reserve directly bordering productive land such as community-owned rice fields, leading to cases of boundary marker displacement or loss. Illegal settlements also exist in the Cisalak block of Cikedung Village, Mancak District, Serang Regency. Furthermore, the use of chemical fertilizers has led to the flourishing growth of weeds along the Cidanau River and several other swamp areas, accelerating sedimentation processes within the Rawa Danau Nature Reserve.

Based on data and information from BKSDA West Java in 2014, there were several efforts in handling forest encroachment in the Rawa Danau Nature Reserve including:

1. Evaluation of encroachment data in the Rawa Danau Nature Reserve in 2014.
2. Reforestation of the forest area.
3. Empowerment of communities in the Rawa Danau Nature Reserve area.

## **B. Legal Protection of Nature Reserves as Providers of Raw Water Resources for the Community**

The government has made many efforts to address land use conversion for priority-scale needs to sustain food security. The government holds high hopes for the implementation of Law No. 41 of 2009 in maintaining the sustainability of agricultural land for the Indonesian people and opening land for various types of plantations and agriculture to support national food security.<sup>15</sup>

The activity of land encroachment contradicts several legal provisions including Law Number 5 of 1960 concerning Basic Agrarian Principles, Ministerial Regulation Number 18 of 2016 concerning Control of Agricultural Land Tenure, Provincial Regulation Number 5 of 2017 concerning Spatial Planning for the Province of Banten, and other provisions under Forestry Law. According to Article 50 paragraph 3 letter A of the Forestry Law, all parties utilizing forest areas must obtain permission from the Minister of Forestry, as it prohibits

<sup>14</sup>Dilla Pratiwi Puji Rahayu, Erika Puspitasari, Azwar Annas & Agus Pujianto, Recognition Of Indigenous Legal Community For Indigenous Forest (A Legal Historical Review, Unram Law Review, Vol. 3, Issue 2, Oktober 2019, hlm. 92-99.

<sup>15</sup>Palmawati Tahir, Muhamad Muslih, Rani Sri Agustina, "MUI Halal Certification On Milkfish Satay As An Effort To Support National Food Security", *Legal Standing Jurnal Ilmu Hukum*, Vol. 4, No. 1, Maret 2020, hlm. 233-246.

any unauthorized occupation or use of forest areas. However, in practice, many communities engage in encroachment and land seizure without permission. Article 16 paragraph 1 of Law Number 5 of 1960 on Basic Agrarian Principles defines several land rights, including Ownership Rights (HM), Cultivation Rights (HGU), Building Rights (HGB), Use Rights (HP), Lease Rights (HS), rights to open land, rights to collect forest produce, and other rights established by law. Notably, none of these encompass cultivation rights. The definition of cultivation rights is provided in National Land Agency Decision Number 2 of 2003 on Norms and Standards for Mechanisms of Government Authority in Land Affairs, executed by district or municipal governments. Cultivated land refers to a parcel of land that has been or has not yet been granted a specific right, worked and utilized by another party either with or without rightful consent, for a specified or unspecified duration.

Building on the previous discussion, a sale and purchase agreement involves a deliberate transfer of land rights from the seller to the buyer, that the rights are legally relinquished by the former and acquired by the latter. Legal procedures to safeguard such transfers must be entrusted to authorized officials known as PPAT (Official Land Deed Officers) under current legal frameworks.<sup>16</sup>

Up until now, there are many who engage in land transactions using private deeds. These private deeds are executed without the presence of authorized officials, involving only the parties involved in the land sale and purchase transaction. Article 1874 of the Indonesian Civil Code defines a private deed as a document signed privately, such as letters, lists, household affairs documents, and other writings, created without the intervention of a public official.<sup>17</sup>

According to Article 1313 of the Indonesian Civil Code, an agreement is defined as an act where one or more persons bind themselves to one or more others. In such agreements, the parties are legally bound to obtain rights or fulfill obligations stipulated within the agreement.<sup>18</sup>

The sale and purchase of land rights following the enactment of the Indonesian Agrarian Law (UUPA) constitutes a legal act of permanent transfer of ownership rights for consideration. This transaction is further regulated by implementing regulations of the UUPA, specifically Government Regulation Number 24 of 1997 concerning Land Registration. Article 37 of this regulation mandates that the sale and purchase of land rights must be evidenced by a deed executed before an authorized official, known as PPAT (Official Land Deed Officer).

Official proof of land ownership is provided through land certificates issued by the National Land Agency (BPN). Land classified as forest land falls under the authority of the Ministry of Forestry and is subject to Forestry Law, while land outside forest areas is under the jurisdiction of BPN and governed by Law Number 5 of 1960 concerning Basic Agrarian Principles.

Continuing from the above, the transfer of movable or immovable property, which is the legal object, always requires clarity regarding the legal subject as the supporter of rights and obligations. In community practice, cultivated land is often obtained through cultivation agreements or cultivation land agreement letters, either granted by village heads, traditional leaders, district or regional governments, or through transfer of rights via sale and purchase. Furthermore, the granting of cultivated land should ideally have a strong basis, especially in cases of sale and purchase and land control within the Rawa Danau Nature Reserve conservation area, as the granting or transfer of cultivation rights is closely related to land ownership legality and the legality of agreements. Therefore, it should adhere to the requirements for a

<sup>16</sup>Helena Lumban Gaol, "Kepastian Hukum Jual Beli Tanah Hak Milik Tanpa Melalui PPAT (Pejabat Pembuat Akta Tanah)," *Lex Privatum*, Vol. X, No. 1 (2022), hlm. 249–258.

<sup>17</sup>Komang Ayuk Septianingsih, I Nyoman Putu Budiarta, dan Anak Agung Sagung Laksmi Dewi, "Kekuatan Alat Bukti Akta Otentik Dalam Pembuktian Perkara Perdata," *Jurnal Analogi Hukum*, Vol. 2, No. 3 (2020), hlm. 336–340.

<sup>18</sup>Fathia Firli Rahma, "Prihati Yuniarlin, Pengesahan Perjanjian Jual Beli Tanah di Bawah Tangan Melalui Pengadilan Untuk Balik Nama Sertipikat Hak Milik", *Unes Law Review*, Vol. 6, No. 1, September 2023, 640-649.

valid agreement as stipulated in Article 1320 of the Civil Code (KUHPdata): firstly, mutual agreement between the parties to be bound by the agreement; secondly, legal capacity of the parties to enter into the agreement; thirdly, a specific subject matter; fourthly, legality and compliance with prevailing laws and regulations.

According to data from the West Java Natural Resources Conservation Center (BKSDA), the Rawa Danau Nature Reserve is facing disturbances in the form of forest encroachment totaling 416.75 hectares. These encroachments are spread across various blocks within the reserve: Rancakabeuleum Block (67.5 Ha), Kukulungbaru Block (37.25 Ha), Kalong Block (37.25 Ha), Cimanuk Block (75 Ha), Pojok Block (45 Ha), Cilowok Block (46.5 Ha), Gayam Block (37.5 Ha), Cikoneng Block (30 Ha), and Cukang Block (15 Ha).<sup>19</sup>

Ironically, in Indonesia, a country rich in natural resources and known for its agrarian roots, there persists a need to import several commodities. This situation stems from disparities in agricultural land ownership.<sup>20</sup> The activities of land occupation and encroachment are highly contradictory to the law; however, in practice, many people engage in these activities without permission. In principle, the use of forest areas should align with their designated functions and purposes. Official proof of land ownership is provided through land certificates issued by the National Land Agency (BPN). Land classified as forest land falls under the authority of the Ministry of Forestry and is governed by Forestry Law, while land outside forest areas is under the jurisdiction of BPN and subject to Law Number 5 of 1960 concerning Basic Agrarian Principles.

In many communities, the majority of land transactions involving cultivated land are conducted through informal means like operational cultivation, often relying solely on receipts as evidence of valid sales without supporting documents such as land certificates or proof of land ownership rights. An example of this practice occurred in the case of land sales by residents of Barugbug Village, Padarincang District, who sold cultivated land in the Rawa Danau Nature Reserve area to individuals based solely on payment receipts. Additionally, numerous residents continue to engage in buying and selling cultivated land above the Rawa Danau Nature Reserve in Serang Regency.<sup>15</sup>

Illegal exploitation and land seizure are increasingly expanding, and recently, deforestation and land seizure have extended beyond production forests to include protected and conservation forests. The destruction of forests and land conversion has grown significantly, leading to profound environmental impacts. Activities such as forest exploitation, land seizure in forest areas, clearing land for agriculture and plantations, and irregular land transactions are forms of activities that can cause environmental damage and unequivocally violate existing laws and regulations.<sup>21</sup>

### **C. The sustainability of the nature reserve area as one of the supporting factors for community food security**

The Food Law No. 18 of 2012 defines food security as the condition in which the food needs of a nation down to individual levels are met, reflected in the availability of sufficient, high-quality, safe, diverse, nutritious, evenly distributed, and affordable food that is consistent with the religious, beliefs, and cultural practices of the community, enabling them to live healthy, active, and productive lives sustainably. In the province of Banten itself, food security is considered very safe and well-managed. Banten possesses strategic characteristics, as part

<sup>19</sup>Balai Konservasi Sumber Daya Alam (BKSDA) Jawa Barat, *Buku Data Status Lingkungan Hidup Daerah Provinsi Banten tahun 2015*, <https://dlhk.bantenprov.go.id/read/buku-1-2015.html>,

<sup>20</sup>Palmawati Tahir, Muhamad Muslih, *Implementation Of Agricultural Zakat On Food Security (Hukum Islam Hukum Yang Hidup Di Indonesia)*, Depok: Badan Penerbit Fakultas Hukum Universitas Indonesia, April 2020, hlm. 119-143.

<sup>21</sup>Wawancara dengan Kepala Resort Cagar Alam Rawa Danau Kabupaten Serang.

of its territory serves as a buffer zone around the capital and also serves as a gateway to and from Sumatra..<sup>22</sup>

The Rawa Danau Nature Reserve, covering an area of 2,500 hectares, was designated as a Conservation Area during the Dutch colonial era under GB (Besluit van den Gouverneur-General) or Governor-General's Decree No. 60 Stbl. 683 on November 16, 1921. In 1999, the Indonesian government reclassified it as a Conservation Area through Minister of Forestry and Plantation Decree No. 491/Kpts-II/1999, maintaining its original size of 2,500 hectares. Subsequent re-measurements in 2012 by the Java Madura Forest Area Stabilization Office determined its expanded size to be 3,542.70 hectares, confirmed by Minister of Forestry Decree No. SK.3586/Menhut-VII/KUH/2014 on May 2, 2014. Rawa Danau Nature Reserve is recognized for its unique ecosystem of wetlands and mountains on the island of Java.

Indonesia distinguishes between wildlife reserves (suaka margasatwa) and nature reserves (cagar alam), with the latter facing particularly concerning conditions. According to Law No. 41 of 1999, a Nature Reserve is a protected area due to its unique plants, animals, and ecosystems that require natural conservation. Activities within a nature reserve are strictly limited to research, scientific development, education, limited tourism, and other activities that support the conservation of the reserve. Currently, managing Nature Reserves often conflicts with community interests, especially regarding land clearing or land conversion within these areas, a situation evident in the Rawa Danau Nature Reserve as well.

In principle, the use of forest areas must align with their designated functions and purposes. Forest areas can be utilized provided there is approval or permission from the Minister of Forestry (Article 5 paragraphs 1 and 2 of Government Regulation No. 28 of 1985 concerning Forest Protection). This provision is also in line with Article 38 of Law No. 41 of 1999, which states that the use of forest areas for development purposes outside of forestry activities can only be conducted within production forest and protected forest areas. However, there remains the possibility of misuse of forest areas contrary to their designated functions and purposes.

Efforts to conserve the environment receive serious attention not only from secular laws but also from religious laws, such as directives to revive barren lands and engage in reforestation. These messages encourage communities to enhance their awareness and care for the environment continually,<sup>23</sup> because land or soil holds significant value, it is considered a unique form of wealth that, regardless of its condition, remains fundamentally permanent in nature.<sup>24</sup>

In addition to encroachment and destruction of nature reserve lands, the rampant acquisition and transfer of land, such as the buying and selling practices conducted by communities around the Rawa Danau Nature Reserve, have become serious issues that require attention. Many people believe that if someone has cultivated a piece of land for decades, they automatically become the legitimate owner and have the right to transfer ownership to others.<sup>25</sup>

Land encroachment in the Rawa Danau nature reserve has encroached upon protected areas, particularly swamp forests, grasslands, and secondary forests. According to the area management, approximately 700 hectares of land have been converted into agricultural fields from the total area of 2,500 hectares in the Rawa Danau nature reserve. This encroachment has reached alarming levels, with paddy fields covering 746.37 hectares or 19.52% of the total

<sup>22</sup>Muhamad Muslih, Ahmad Rayhan, "The Role of Baduy Women in Strengthening Baduy Local Food as an Innovation for Food Security in the Banten Region", *Unram Law Review*, Vol. 7, Issue 1, April 2023, hlm. 18-27.

<sup>23</sup>Istianah, "Upaya Pelestarian Lingkungan Hidup Dalam Perspektif Hadis", *Jurnal Riwayah*, Vol. 1, No. 2, September 2015, hlm. 249-270.

<sup>24</sup>Jarkasi Anwar, Muhamad Muslih, "Protection of the Customary Land of the Baduy Indigenous Peoples as One of the Supporting Factors for Local Food Security in the Banten region", *Pena Justisia: Media Komunikasi Dan Kajian Hukum*, Vol. 22, No. 02, Juni 2023, hlm. 229-242.

<sup>25</sup>Hasil Wawancara dengan Petani dan Warga Kampung Cidadap, Desa Barugbug, Padarincang, Serang, Banten.



area. Such extensive encroachment can lead to significant impacts on both the environment and humans. The vast encroachment is suspected to stem from socio-economic issues related to human livelihood needs, especially among communities residing around the reserve.

According to the management of the Rawa Danau nature reserve, settlements already existed within the area before its designation. This has resulted in conflicts between the reserve management and the communities that had previously settled there. One notable conflict arose during the reserve's establishment regarding the relocation of residents from within the area to outside it. Only a portion of the residents agreed to relocate, while others chose to remain within the reserve. Consequently, land use activities by residents persist within the area. Due to increasing pressure from surrounding communities, illegal land encroachment and management within the 2,500-hectare nature reserve significantly affect environmental quality, such as reducing water flow from 2,000 liters per second to just 200 liters per second..<sup>26</sup>

The expansion of land by local residents into the Rawa Danau nature reserve has increased, particularly following the issuance of Government Regulation No. 22 of 1999 on regional autonomy. According to the management of the Rawa Danau nature reserve, field observations indicate there was a coordination error in implementing regional autonomy, particularly regarding the opening of dormant lands within the reserve. At that time, the Serang District Government allowed the utilization of dormant lands within the Rawa Danau nature reserve without approval from the reserve management. This has been cited as a reason why communities have expanded into the nature reserve, both for cultivating rice fields on swamp ecosystems and opening new lands for gardening within the Rawa Danau nature reserve..<sup>27</sup>

In addition to what has been mentioned above, all aspects of human life are touched upon by legal regulations as well as religious teachings, particularly regarding land use and food. Nature and all its contents should be preserved and sustained by ceasing all forms of exploitation, such as illegal logging, unsustainable fishing practices leading to water pollution, and others. These messages remind society to enhance their environmental awareness. If people can adhere to these regulations in utilizing the environment, we would likely not hear about threats like water shortages, global warming, illegal logging, floods, landslides, tsunamis, air pollution, and others..<sup>28</sup>

Considering the conditions mentioned earlier, the Rawa Danau nature reserve is experiencing a shift in land use. The direct and indirect processes of land use conversion are determined by two factors: firstly, the institutional systems developed by communities and governments, and secondly, the non-institutional systems that naturally evolve within society. Initially, this nature reserve was intended to preserve the watershed area of the Cidanau River, which serves as a water source for the surrounding communities. However, this objective is now threatened by ongoing land conversion activities within the reserve. Furthermore, land conversion can lead to increased surface erosion within the nature reserve, resulting in sediment accumulation that causes eutrophication and water siltation. These processes can degrade the swamp forest ecosystem and harm various wildlife species, especially the endangered wildlife inhabiting the Rawa Danau nature reserve..<sup>29</sup>

#### **D. Legal Status of Land Ownership Rights in Nature Reserve Areas**

<sup>26</sup>Hasil Wawancara dengan Pengelola Kawasan Cagar Alam Rawa Danau, Serang, Banten.

<sup>27</sup>Hasil Wawancara dengan Pengelola Kawasan Cagar Alam Rawa Danau, Serang, Banten.

<sup>28</sup>Istianah, "Upaya Pelestarian Lingkungan Hidup Dalam Perspektif Hadis", *Jurnal Riwayah*, Vol. 1, No. 2, September 2015, hlm. 249-270.

<sup>29</sup>Nasoetion, L. dan J. Winoto, "Masalah Alih Fungsi Lahan Pertanian dan Dampaknya terhadap Keberlangsungan Swasembada Pangan", dalam *Prosiding Lokakarya Persaingan Dalam Pemanfaatan Sumber daya Lahan dan Air: Dampaknya terhadap Keberlanjutan Swasembada Beras*, Bogor : Pusat Penelitian Sosial Ekonomi Pertanian dengan Ford Foundation, 1996, hlm. 64 - 82.

The ideology of utilization and control over natural resources is elaborated in Article 2 of Law No. 5 of 1960 concerning Basic Agrarian Principles (UUPA), which asserts the Right of Control by the state, as the organization of power of the entire people to regulate legal relationships and legal actions of citizens concerning land, water, and natural resources contained therein. The legal regulations regarding forest management in Java and Madura were first issued in 1865, under the name *Boschorddonnantie vor Java en Madura 1865* (Forestry Law for Java and Madura 1865), followed by the *Agrarische Besluit* (Agrarian Decree) *Staatblad* 1870 No. 118, in Article 2 the principle of state ownership known as the *Domein Verklaring* 1870 was introduced, stating that any land (including forest land) that cannot prove ownership rights becomes state domain.<sup>30</sup> Forests, as Indonesia's highest-level natural resource, are controlled by the state as the organization of power of the entire people, and are used to the greatest extent for the prosperity of the nation, the welfare, and the independence within the society and the legal state of Indonesia. In this context, forest control by the state does not imply ownership by the state, but rather a concept involving obligations and authorities in the field of public law as regulated in Article 4 paragraph 2 of Law No. 41 of 1999 concerning Forestry. This article states that state control over forests grants the government the authority to regulate and manage everything related to forests, forest areas, and forest products; designate specific areas as forest areas or non-forest areas; establish legal relationships between individuals and forests; and regulate legal actions related to forestry.

Based on Law No. 5 of 1990 concerning Conservation of Biological Resources and Ecosystems, particularly for nature reserve areas, supervision is conducted by the Directorate General of Forest Protection and Nature Conservation (PHKA) together with the Natural Resources Conservation Agency (BKSDA), and National Parks under the Ministry of Forestry of the Republic of Indonesia. In this context, the BKSDA serves as the technical implementing unit under the Directorate General of Forest Protection and Nature Conservation. Its responsibilities include managing conservation areas, particularly wildlife reserves (wildlife sanctuaries and nature reserves) and nature tourism parks. Additionally, the agency is tasked with monitoring the circulation of protected plants and animals in related areas, as well as overseeing breeding and conservation efforts of protected plants and animals by individuals, companies, and conservation institutions.

In general, each nature reserve area is designated for the purposes of protecting, conserving, and preserving biodiversity. However, in reality, there are many deviations leading to destruction that hinder the conservation process of forest areas. The Rawa Danau Nature Reserve faces disturbances such as encroachment, land appropriation, illegal logging, poaching, and other issues. Land appropriation by local communities is based on the belief that the land is ancestral heritage, a belief that has long persisted and is agreed upon as a form of land ownership, marked by unilateral recognition of the land by community groups. The low quality of human resources poses a significant challenge in facing free competition in the era of globalization. When technology advances are not accompanied by high-quality human resources, the management of natural resources will not be optimal; however, the reverse does not hold true.<sup>31</sup>

The various land rights held by the community strengthen the system of forest land control, as evidenced by the ongoing utilization of the land by individuals, groups, and the community as a whole. These community rights are also reinforced by the interconnected dimensions of rights. Empirically, the temporal dimension is notably strong due to the land utilization that has been carried out by the community for generations up to the present. The spatial dimension

<sup>30</sup>Soepardi, R., *Hutan dan Kehutanan dalam Tiga Jaman*, Jakarta : Perum Perhutani, 1974, hlm. 57.

<sup>31</sup>Muhamad Muslih, 2020, *Ketahanan Pangan Dan Halal Food Dalam Hukum Islam*, Tangerang: Media Edukasi Indonesia, hlm. 9.

implies the maximal utilization of forest trees and understory plants on the land. The subject dimension reinforces permanent ownership inherited based on familial relationships. The object dimension encompasses the forest land products utilized by the community to continuously meet their livelihood needs.<sup>32</sup>

The management of forest areas by the community is driven by economic pressures, leading to demands that result in disturbances to the forest areas. Encroachment within the Rawa Danau Nature Reserve is typically used for agricultural land, such as rice paddies, as well as for cultivating other horticultural crops like beans, cucumbers, chilies, and more. In addition to seasonal crops, some community members plant perennial crops such as coconut, melinjo, fruit trees, mango, banana, and even oil palm.

The community members encroaching on the land in the Nature Reserve do not possess proof of ownership over the land they cultivate, whether in the form of authentic certificates or letters of management rights from the local village head. Their long-term control over the land is based on unilateral claims by the community, who consider it their own land, thus feeling entitled to the benefits derived from it. Narrow land ownership impacts the sources and distribution of income; the diminishing land control by the community, most of whom are farmers, inevitably affects their economic capacity to meet their livelihood needs. From this perspective, economic pressure has driven the community to make demands that lead to disturbances in the forest area.

Continuing from the above, some community members clear land for farming and gardening to gain access to sufficient, safe, and nutritious food to meet their consumption needs and preferences for an active and healthy life, as humans are inseparable from air, soil, and water.

The efforts undertaken by the Natural Resource Conservation Agency (Balai Konservasi Sumber Daya Alam) to reduce land encroachment and damage activities in the Rawa Danau Nature Reserve include Protection and Area Security to maintain its sustainability. Preventive measures within the nature reserve involve guarding posts and patrolling the area. These patrol activities are conducted by the Forestry Police (POLHUT) with assistance from community partners (Mitra Polhut). Additionally, the area rehabilitation efforts target the Rehabilitation Block of the Rawa Danau Nature Reserve, which spans 694.85 hectares. This area has been subject to encroachment by local communities due to economic motives. According to field survey reports, the reference ecosystem for the Rawa Danau Nature Reserve aligns with the conditions and management objectives of the area. The rehabilitation activities for the Rawa Danau Nature Reserve include planting species such as gempol, tangtalang, gagabusan, jajaway, and sasalaman. The reforestation in the rehabilitation block of the Rawa Danau Nature Reserve has been ongoing since 2005, supported through a partnership between the West Java Natural Resource Conservation Agency and PT. Karakatau Tirta Industri (PT. KTI). Furthermore, community empowerment initiatives aim to reduce local pressures on the area by improving welfare through empowerment activities. These initiatives include conservation education, providing capital assistance to forest farmer groups, enhancing community human resources through skills training, and conducting conservation outreach to the community (via neighborhood forums, religious study groups, etc.).

Land and natural resources represent the measure of the rights of an indigenous community occupying that land. There are four categories of indigenous rights to land: the right to control (recognized ownership rights) which includes the right to manage and utilize the land and its natural resources; the right to apply customary law to the land under their control, including

<sup>32</sup>Tjhoa Martina. "Hak Penguasaan Lahan Hutan Pada Masyarakat Adat Di Desa Honitetu Kabupaten Seram Bagian Barat, Maluku", *Jurnal Sylva Lestari*, Vol. 6, No. 3, September 2018.

agreed-upon sanctions; the right to organize their own customary institutions; and the right to use their identity, culture, belief systems and religions, traditional wisdom, and native languages.<sup>33</sup>

In line with the above, the UN declaration states that indigenous peoples' ownership of land, which has existed for generations, grants them the right to use and develop that land for their livelihood. These activities can influence forest land cover.<sup>34</sup>

The management rights of forests by indigenous communities are regulated under forestry laws. The forms of rights regulated include the right to manage customary forests, special-purpose management, the conditions for harvesting forest products, and the application of customary law in forest management. Additionally, the management of forests for community welfare is also regulated. However, the current system of regulating rights over natural resources is considered insufficient in improving the livelihoods of indigenous communities.<sup>35</sup>

According to Article 1 of Minister of Agrarian Affairs/Head of BPN Regulation No. 5 of 1999 concerning Guidelines for Resolving Customary Community Rights Issues, "hak ulayat" refers to the authority, according to customs, held by a specific customary community over a particular territory which constitutes the living environment of its residents, to derive benefits from natural resources (including land within that territory) for their survival and livelihood. This authority arises from both visible and invisible ties passed down through generations, maintaining an unbroken connection between the specific customary community and the relevant territory.

Local regulations regarding the presence of customary communities in the Rawa Danau Nature Reserve area have not been established in Serang Regency. However, the management practices of forest land by communities surrounding the forest are primarily guided by customary rules that have been passed down through generations, governing rights over forest land for both individuals and community groups. Activities of the community in the Rawa Danau Nature Reserve area of Serang Regency are still considered to be informal by the government, given that many depend on farming and managing forest land for their livelihoods. Nonetheless, these activities are closely monitored, and efforts are being made to gradually enable communities to generate income outside the Nature Reserve area.

Empowering communities in poverty alleviation is a shared commitment between the central government and local authorities. Poverty is a social welfare development issue linked to various other development areas, characterized by unemployment, underdevelopment, and lack of empowerment. Therefore, poverty, particularly among the poor, is a critical national issue that cannot be postponed and must be a top priority in social welfare development efforts. Addressing poverty, especially among the poor, is challenging due to their longstanding issues with limited access to education, skills, business opportunities, and capital.<sup>36</sup>

In this case, the community in the Rawa Danau Nature Reserve cannot be categorized as a customary community because, according to the local inhabitants, the reserve area does not meet the criteria as stipulated in Article 3 of the Basic Agrarian Law (UUPA). Among these

<sup>33</sup>Nababan A, *Pengelolaan Hutan Berbasis Masyarakat Adat: Antara Konsep Dan Realitas*. Makalah dalam Pertemuan Mitra Siempenpu Foundation, Muara Jambi, 5 Nopember, 2008.

<sup>34</sup>Sinaga, RP. dan Darmawan A. "Perubahan Tutupan Lahan di Resort Pugung Tampak Taman Nasional Bukit Barisan Selatan (TNBBS)", *Jurnal Silva Lestari*, Vol. 2, No. 1, hlm. 77-86.

<sup>35</sup>Arizona Y. *Satu Dekade, Legislasi Masyarakat Adat: Trend Legislasi Nasional tentang Keberadaan Masyarakat Adat Atas Sumber Daya Alam di Indonesia (1999-2009)*, Jakarta: Kertas Kerja Epistema, 2010, hlm. 23.

<sup>36</sup>Palmawati Tahir, Muhamad Muslih, dkk. "Strategi Pemberdayaan Masyarakat dalam UMKM dan Produk Pangan Halal Dilihat dari Aspek Hukum Untuk Memperkuat Ketahanan Pangan dan Kemandirian Masyarakat Desa Lempuyang, Tanara, Serang", *Jurnal Hukum Pengabdian Kepada Masyarakat: ProBono and Community Service Journal*, Vol. 1, No. 1, Mei 2022, hlm. 24-28.

criteria, it must be proven that the customary community still exists in practice, aligned with national and state interests, and not in conflict with higher laws and regulations.

The individuals living in and engaging in activities within the Rawa Danau Nature Reserve are viewed as newcomers who have made unauthorized alterations without the Ministry of Forestry's approval. They participate in activities that could disrupt the conservation initiatives of the Rawa Danau Nature Reserve and other activities mentioned above that are in violation of the law.

Regarding the designation of the nature reserve it is essential for local communities to have a clear understanding of the land status between the nature reserve area and residential areas. This clarity is crucial to enable those who continue to live within the Rawa Danau Nature Reserve to maintain their livelihoods and economic activities without encroaching on forest land. It is evident that the nature reserve is designated solely for preserving specific endemic species and should not be disrupted or converted for other purposes.

## CONCLUSION

The conclusion of this research is that there has been a coordination error in the implementation of regional autonomy regarding the opening of idle land in the Rawa Danau Nature Reserve area. The Serang Regency Government has allowed the utilization of idle land within the Rawa Danau Nature Reserve without approval from the reserve's management. This has led to local communities expanding into the Nature Reserve area, establishing rice fields on swamp ecosystems and cultivating new plots for gardening within the Rawa Danau Nature Reserve. The communities engaging in land encroachment lack proof of land ownership, such as authentic certificates or proof of management rights from the local village head. Indeed, based on field observations, these communities are considered newcomers making unauthorized changes.

The researcher suggests the need for coordination between the Serang Regency Government and the Rawa Danau Nature Reserve management to align perceptions and instructions. Legal certainty is crucial to avoid ambiguity and contradiction, thus preventing doubt among the community. It is recommended that local regulations regarding the presence of communities in the Rawa Danau Nature Reserve area be established and enacted by the local government. Furthermore, the Natural Resource Conservation Agency (BKSDA) should intensify preventive efforts to reduce land encroachment and destruction in the Rawa Danau Nature Reserve, including enhancing protection and security measures to preserve its sustainability. Additionally, community empowerment efforts should be enhanced to alleviate pressure on the reserve, focusing on improving welfare through conservation education, providing capital assistance to forest farmer groups, enhancing community skills through training, and conducting conservation outreach to community forums (neighborhood associations, religious study groups, etc.).

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