



Central Papua Government Policy on Forest Protection in Nabire Regency in the Perspective of Environmental Security

Darius Yeheskiel Runaki; Roberto Octavianus Cornelis Seba; Christian Herman Johan de Fretes

Department of International Relations, Faculty of Social and Communication Sciences, Satya Wacana Christian University Salatiga, Indonesia

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Abstract

This research explores the Central Papua Government's measures related to forest protection in Nabire Regency from an environmental security perspective. The forest in Nabire, located in Central Papua, is an important ecosystem that has exceptional biodiversity and serves as a major source of livelihood and income for local communities. However, it is under serious threat from illegal logging, land conversion, and industrial exploitation including oil palm plantations and mining, with indigenous communities often sidelined in decision-making processes. The Central Papua Provincial Government has implemented a number of conservation policies, including forest rehabilitation, tree replanting, and partnerships with local communities and non-governmental organizations, to maintain forest sustainability and improve community welfare conditions. This research applies the environmental security framework and green theory to evaluate how effective these policies are in protecting environmental security as well as the rights of indigenous peoples. The findings of this analysis show that active government involvement and collaboration with indigenous peoples are essential to reduce the rate of forest destruction, although challenges in implementation on the ground are still very significant, especially related to law enforcement and capacity building of indigenous peoples.

Keywords: *Forest Protection; Environmental Security; Government Policy; Indigenous Peoples; Nabire Regency, Central Papua*

Introduction

Forests are the heart of human life with the existence of forests making humans more prosperous and prosperous in their daily lives, because forests have a positive impact on the environment, air, water, health, and also have an impact on the world's climate. Forests also help absorb carbon dioxide, helping to reduce the impact of greenhouse gases in the atmosphere. Protecting forests is critical to global efforts to combat climate change, especially in regions with extensive forest cover. Indonesia is one of the countries with tropical rainforests in the world. Indonesia's forests are highly biodiverse, making it the third most biodiverse forest in the world after Brazil and the Democratic Republic of Congo. It is estimated that this area is home to thousands of tree species and various animals, including endemic species found only in Indonesia (Ministry of Environment and Fisheries, 2021).

Forests in Indonesia are divided into several regions, from western Indonesia to eastern Indonesia and each region has excellent forest potential and one of the areas that has the best tropical rainforests in Indonesia is the Papua region where the Central Papua forest, especially Nabire district, has tropical rainforests that are very good for every living thing, from humans to animals and plants. Then the forests in Papua are one of the tropical rainforest ecosystems with the highest biodiversity in the world. One relevant study was published in the *Journal of Nature* in 2020, where researchers found that Papua Island has 13,634 plant species, with 68% of them being endemic species. The study involved 99 botanists from 19 countries and showed that Papua has more plant diversity than Madagascar, which was previously known as the center of biodiversity (Cannon, 2020).

Nabire Regency is one of the districts in Central Papua Province which has forests that are the heart of life for indigenous peoples there, because forests provide abundant natural resources and food resources to indigenous peoples, such as several hunting grounds ranging from mountains, hills.

The forest also provides a place for plants such as sago, bananas, yams and other foods that can be obtained from the forest. Indigenous peoples also highly value every element in the forest because the forest is the foundation of indigenous peoples' lives there, and also indigenous peoples depend on forest products such as sago which is a daily necessity and source of income for indigenous peoples in Nabire and also the forest provides protection to the community from natural disasters and other disasters (Tanah Papua Expedition, 2021).

Indigenous peoples in Nabire Regency understand that forests are a place of life for indigenous peoples, but in the current situation where forests are a serious problem on the national and international level, especially in Nabire Regency, which is facing serious problems due to the role of several parties making forests in Nabire district destroyed and affecting indigenous peoples. It can be seen that in recent years the forests in Central Papua have been under serious threat due to several cases such as the felling of trees which resulted in drastic environmental damage. The conversion of land into oil palm plantations, mining, illegal logging and other development projects. According to data, about 20 percent of Papua's total land area has been converted into mining and plantation areas, and more than 7.5 million hectares of forest in Papua have been cut down (Wibowo, 2024). Then seen from the data released by Greenpeace Indonesia that from 2001 to 2023, around 722,256.2 hectares of forest have been lost, especially in central Papua which recorded around 99,202.6 hectares of forest loss. With the loss of these forests, only 4,719,881.1 hectares remain. This threat is exacerbated by the expansion of industries such as oil palm plantations and mining, which are often carried out without involving indigenous peoples (Asra, 2024). Where indigenous peoples are very important in the forest protection sector, because indigenous peoples know more about the entire forest in Central Papua, especially in Nabire Regency.

The problem of forests in Nabire Regency makes the Central Papua Provincial government have to step in to be able to overcome the destruction of forests that will occur in the present and future that will come, because the role of the government is very important.

Because the government is a state actor who has a role in forest protection. But so far the Central Papua Provincial Government is still playing an active role and trying to implement policies towards forest protection in Nabire district, it can be seen from the sustainable forest management carried out by the Central Papua Provincial Government to be able to manage forests by rehabilitating forests to restore degraded forest areas and maintain a good ecosystem in this case too, the government made a program to replant ironwood trees, sago trees and also replant mangroves to be able to maintain a stable forest. Then the government also collaborates with customary stakeholders and NGOs to help preserve the forest, where the government provides indigenous peoples to develop tourism from nature to be developed into economic income (KSDAE Directorate General of Natural Resources and Ecosystem Conservation, 2017). The Nabire District Government also emphasizes forest protection against the law stipulated in the

Indonesian Constitution number 41 of 1999 concerning forestry which is regulated in articles 46-50 concerning forest protection (President of the Republic of Indonesia, 2009) regulated and recognized after the enactment of law number 23 of 2024 forestry authority including forest protection authority is delegated to its management to the provincial level.

An understanding of environmental security or commonly called Environmental Security is an understanding that explains that environmental security plays an important role in everyday life, because when viewed from the perspective of environmental security on forest protection in Nabire Regency, it can be seen from several cases of forest damage with the presence of several oil palm companies that open oil palm plantations by logging trees illegally, making the forest threatened with depletion. Thus this is the reason the author chose a topic related to the Central Papua Government Policy on Forest Protection in the Environmental Security Perspective by providing an understanding of environmental security related to security to the environment or in this case the forest with protective measures that must be taken by the Central Papua Provincial Government and indigenous peoples, so that these two parties can build environmental security properly (Amallia, 2019).

Methodology

The research approach used in this study was qualitative and focused on gaining an in- depth understanding of forest conservation in Nabire Regency. This approach allows researchers to investigate various aspects of the Central Papua Provincial Government's policy towards forest protection from an environmental security perspective, including awareness campaigns, political engagement, and interactions with indigenous peoples. This study uses a qualitative approach to explore the meaning and context behind the Central Papua Provincial Government's policy activities towards forest protection from an environmental security perspective and their impact on environmental policies and the social context of indigenous peoples. Data collection will be carried out using research techniques, document analysis, interviews regarding the Central Papua Provincial Government's policy on forest protection from the perspective of environmental security in the issue of deforestation in Nabire Regency.

Descriptive and explanatory research approaches are applied with the aim of detailing efforts to prevent deforestation in Nabire Regency and explaining the impact of these strategies. This research analyzes secondary data from the Central Papua Provincial Government's policy report on forest protection from an environmental security perspective, publications and news sources regarding deforestation in Nabire district. After that, this research will examine the impact of the Central Papua Provincial Government's policy activities on forest protection from the perspective of environmental security and public awareness of environmental issues. Therefore, the results of this study are expected to be useful in understanding the effectiveness of Central Papua Provincial Government activities related to forest protection and ecological sustainability in Nabire Regency.

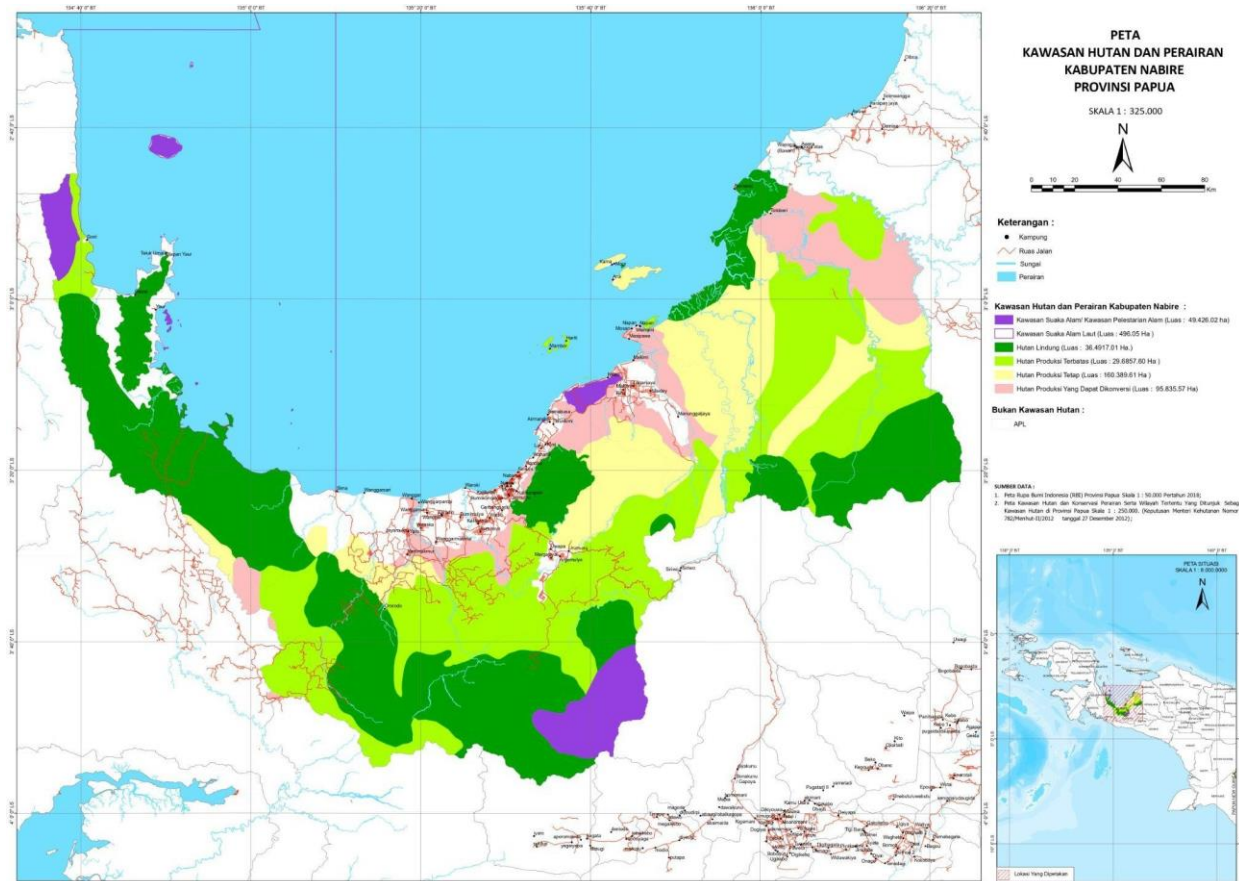
Results and Discussion

A. Environmental and forest damage that occurs in Nabire Regency

Environmental and forest damage that occurs in Nabire Regency is a very crucial problem, because this area has extensive forests, around 1.76 million hectares of a total of 6.7 million hectares of forest in Central Papua Province in 2021. According to information from the Department of Environment, Forestry, and Land of Central Papua Province, changes in the function and designation of forest areas are strictly regulated through national regulations, including ministerial regulations (Permen) LHK Number 7 of 2021 and LHK number 8 of 2022 ((Minister of Environment and Forestry of the Republic of Indonesia,

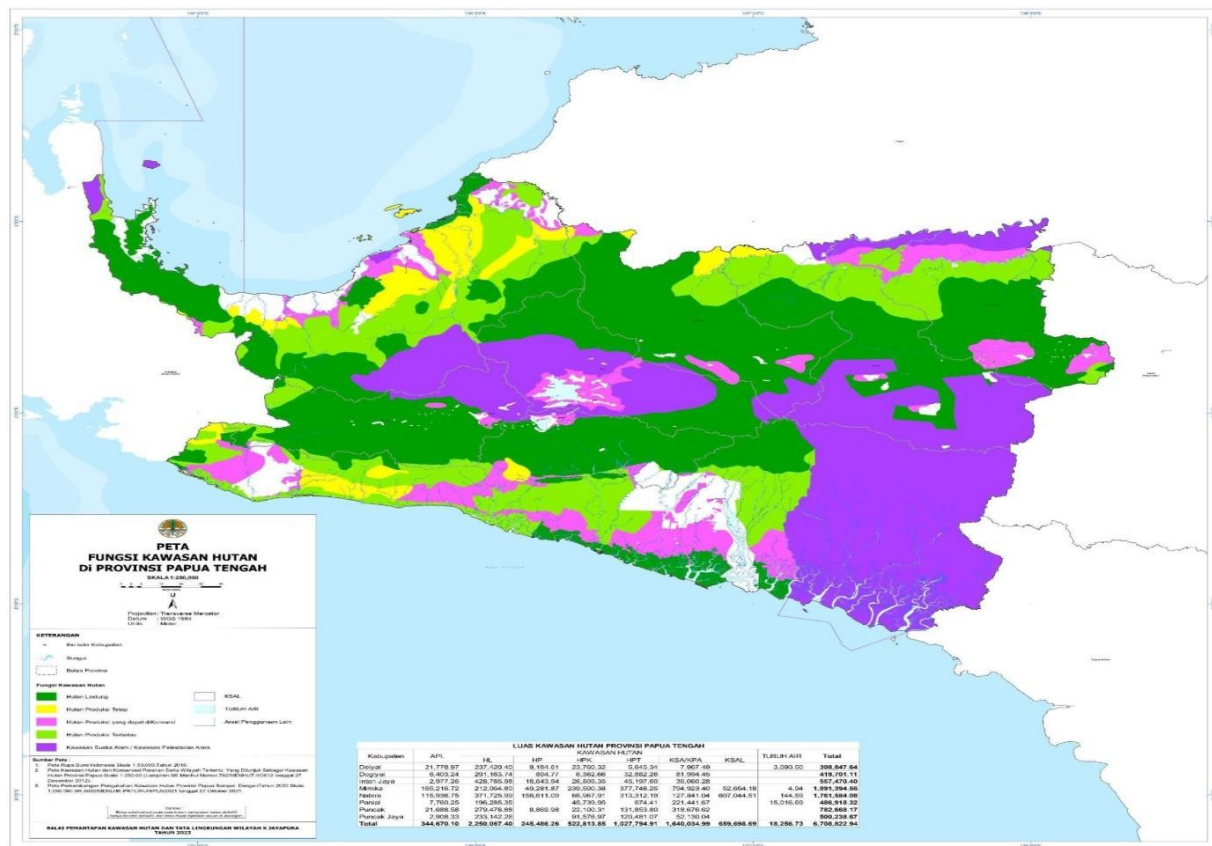
2021, & Governor of Central Papua, 2022). Then it can be seen from both Figure 1 and Figure 2 maps on the entire island of Papua and specifically Nabire Regency in 2012 to 2021, which provides an explanation of several regional divisions that will have an impact on the environment and forests and become forest problems in Nabire Regency.

Figure 1. Map of Forest and Waters Area of Nabire Regency, Papua Province in 2012



Source: Map-Kab.-Nabire-Luas-masing2-Function-Forest, BPKH Region X Jayapura (Map of Forest Areas and Waters of Nabire Regency, Papua Province.

Map of Forest Area Functions in Central Papua Province in 2021



Source: [Map-Central Papua_Baliho.pdf (based on recapitulation data and DLHKP in 2021)]

The first map titled "Map of Forest and Aquatic Areas of Nabire Regency, Papua Province, 2012" illustrates the details of the division of forest areas and water resources specific to Nabire Regency. This map presents information on the size and position of national parks, conservation areas, forest Nature Reserve Areas (KSA/KPA), Marine Nature Reserve Areas (KSAL), protected forests, limited production forests, permanent production forests, and transferable forests in Nabire. In addition, the map also shows geographical features such as rivers, roads, villages and administrative boundaries. In the bottom right corner there is an inset showing the location of Nabire Regency on a map of Papua, as well as a legend explaining the categories of forest areas and data sources used in making the map, then this first map shows the area in Nabire Regency that is still part of Papua Province.

The second map entitled "Forest Area Function Map in Central Papua Province in 2021" shows the separation of forest functions throughout Central Papua Province, especially Nabire Regency. This map applies different colors to represent various forest types such as conservation forest 66,967.91 ha, protection forest 371,725.99 ha, permanent production forest 158,611.09 ha, limited production forest 313,312.19, convertible production forest 66,967.91, and other use area (APL) 115,936.75. In addition, this map also illustrates the boundaries of the district administrative area, as well as rivers and lakes, combined with a legend that explains the meaning of the colors and symbols on the map. There is a table at the bottom of the map showing the forest area for each district/city in Central Papua, which makes it easier for readers to understand the distribution and proportion of each type of forest function in the province.

Forest Area Category	Area (Hectares)
Protection Forest	364.917,01
Permanent Production Forest	160.389,61
Convertible Production Forest (HPK)	95,835,57
Limited Production Forest	296.857,60
Nature Reserve Area/Nature Conservation Area (KSA/KPA)	49.426,02
Marine Nature Reserve Area (KSAL)	496,05
Other Use Area (APL)	(not explicitly listed)
Total	967.921,86

Table 1. Classification of Nabire Regency Forest Area (Based on 2012 Map) Source: Map-Kab.-Nabire-Luas-each2-Function-Forest, BPKH Region X Jayapura (Map of Forest Areas and Waters of Nabire Regency, Papua Province 2012).

Table 1 above, contains information about the categories of forest areas in Nabire Regency along with the area of each category in hectares. The categories listed include Protected Forest, Permanent Production Forest, Convertible Production Forest (HPK), Limited Production Forest, Nature Reserve Area/Nature Conservation Area (KSA/KPA), Nature Conservation Area (KSA/KPA), Nature Conservation Area (KSA/KPA).

(KSA/KPA), Marine Nature Reserve Area (KSAL), and Other Use Area (APL). Each category is accompanied by its size, such as Protected Forest which has an area of 364,917.01 hectares, Permanent Production Forest which is 160,389.61 hectares, and Limited Production Forest which is 296,857.60 hectares.

In addition, the table also lists the area of special areas such as KSA/KPA which reaches 49,426.02 hectares and KSAL which measures 496.05 hectares. Although Area for Other Uses (APL) is listed, its size is not clearly stated in the table. The total area listed in the table is 967,921.86 hectares. This table provides a comprehensive understanding of the distribution and proportion of forest area functions in Nabire Regency, which is essential for spatial planning and sustainable natural resource management.

Table 2. Classification of Nabire Regency Forest Area (Based on 2021 Map)

Forest Area Category	Area (Hectares)
Protection Forest	364.917,01
Permanent Production Forest	160.389,61
Convertible Production Forest (HPK)	95,835,57
Limited Production Forest	296.857,60

Nature Reserve Area/Nature Conservation Area (KSA/KPA)	49.426,02
Marine Nature Reserve Area (KSAL)	496,05
Other Use Area (APL)	(not explicitly listed)
Total	967.921,86

Source: [Map-Papua-Tengah_Baliho.pdf (based on recapitulation data and DLHKP in 2021)]

Table 2 shows the division of forest area categories in a region, possibly in Nabire Regency, along with the area of each category in hectares. The categories include Protection Forest (371,725.99 ha), Permanent Production Forest (158,611.09 ha), Convertible Production Forest or HPK (66,967.91 ha), Restricted Production Forest (313,312.91 ha), and Limited Production Forest (313,312.91 ha).

Limited Production Forest (313,312.19 ha), Nature Reserve Area (KSA/KPA) (127,841.04 ha), Marine Nature Reserve Area (KSAL) (607,044.51 ha), Other Use Area (APL) (115,936.75 ha), and Water Body (144.59 ha). The total area listed in this table reaches 1,761,584.08 hectares.

This categorization reflects good management and regional planning to maintain a balance between ecological, social and economic aspects of the forest. The presence of Protection Forests and conservation areas (KSA/KPA and KSAL) account for a significant percentage, indicating dedication to nature and biodiversity conservation. On the other hand, categories such as Permanent Production Forest, Limited Production Forest, and HPK provide space for sustainable use of forest resources. The existence of Areal Penggunaan Lain (APL) and Water Bodies are also crucial to meet the needs of the community as well as maintaining the hydrological function of the area. This information is valuable as a basis for formulating forest management policies and sustainable development in the area.

Table 3. Comparison of 2012 and 2021 of the two maps above

Forest Area Category	Year 2012 (Hectares)	Year 2021 (Hectares)	Change (Hectares)	Description/Forecast of Change
Protection Forest	364.917,01	371,725.99	+6.808,98	Slight increase, possible zoning adjustment or data update
Permanent Production Forest	160.389,61	158.611,09	-1.778,52	Slightly reduced, possible conversion to other functions or APL
Production Forest that Can	95.835,57	66.967,91	-28.867,66	Significantly reduced,
Converted (HPK)				most likely already converted to APL or other uses

Limited Production Forest	296.857,60	313.312,19	+16.454,59	Increased, possible zoning adjustment
Nature Reserve Area / Nature Conservation Area (KSA/KPA)	49.426,02	127.841,04	+78.414,02	Increasing in size, possible establishment of new conservation areas
Marine Nature Reserve Area (KSAL)	496,05	607.044,51	+606.548,46	Large spike, possible change in definition or addition of marine protected areas
Other use area (APL)	(not included)	115.936,75	-	2012 data not explicit explicit, 2021 has been recorded more clearly
Water Body	-	144,59	-	New data appears in 2021
Total	967.921,86	1.761.584,08	+793.662,22	Increase in area due to data update and zoning adjustment

Source: Peta-Kab.-Nabire-Luas-each2-Function-Forest, BPKH Wilayah X Jayapura (Map of Forest and Waters Area of Nabire Regency, Papua Province 2012). And [Map-Papua-Tengah_Baliho.pdf (based on 2021 recapitulation data)]

Table 3 provides information on changes in the area of various types of forest areas between 2012 and 2021 in an area, which is likely Nabire District. This table compares the area of Protection Forest, Permanent Production Forest, Convertible Production Forest, Limited Production Forest, Nature Reserve or Nature Conservation Area, Marine Nature Reserve Area, Other Use Area, and Water Body. From this data, there are significant changes, including an increase in the area of Protected Forest (+6,808.98 hectares), Limited Production Forest (+16,454.59 hectares), KSA/KPA (+78,414.02 hectares), and a large jump in KSAL (+606,548.46 hectares). On the other hand, there was a decrease in the area of Permanent Production Forest (-1,778.52 hectares) and Convertible Production Forest (-28,867.66 hectares). The caption in the table states that these changes are generally due to zoning adjustments, data updates, land use changes, as well as the establishment of new conservation or marine protection areas.

Overall, the total area recorded shows a significant increase from 967,921.86 hectares in 2012 to 1,761,584.08 hectares in 2021, with an additional 793,662.22 hectares. This increase is most likely the result of data updates, zoning adjustments, as well as the mapping of new categories such as Other Use Areas and Water Bodies that were previously not clearly recorded. This table reflects the dynamics in forest area management, which continues to adapt, both to conservation needs, land use changes, and improvements in forest recording and mapping systems. Such data is essential for assessing forest policy and planning sustainable development in the region.

Based on the data described above, explaining the comparison for the next 10 years, shows some additional forest areas and forest reduction that occurred in Nabire Regency, where significant additions to forest areas from 2012 to 2021. Especially in the category of marine natural reserve areas (KSAL) and nature conservation areas, and also a decrease in convertible production forests (HPK) which decreased dramatically, most likely because most of them have been converted into (APL) or other areas. The data above also shows that in the category of conversion production and the increase in APL indicates that the conversion of forests to other uses, indications of deforestation or land use change can cause problems for the environment and forests, which can be seen from several factors and forests which can be seen from several cases of forest damage and the impact of environmental problems that occur to the community, especially Nabire Regency.

In the division of areas and categories described by the data above that, the reality that occurs in the field is different from what has been categorized in the area, because many areas are misused such as land clearing activities for oil palm plantations, logging for companies, and infrastructure that often results in uncontrolled forest conversion, and pressure on forests also comes from regional development needs and population growth can be seen in Nabire Regency, which is the capital of Central Papua Province, automatically Infrastructure is increasing and the impact on forests and the environment is getting higher. thus accelerating deforestation and causing environmental damage in Nabire (antara papua, 2024). One of the real examples that occurred in Nabire district is the problem of flooding in Sima, Wanggar, Wami, and Yaro Villages in Nabire Regency, which is closely related to "Environmental and forest damage that occurs in Nabire Regency". In the statement, Nabire Regent Mesak Magai said that the main cause of flooding in Sima, Wanggar, Wami, and Yaro Villages is deforestation, which is the loss of forest cover due to human activities, such as cutting down trees and opening logging roads by oil palm companies. Automatically, this forest loss gives the soil the capacity to absorb and hold rainwater is no longer strong, so that when heavy rain occurs, water quickly flows into settlements and agricultural land, causing extensive flooding (nabirenews.com, 2025).

This situation explains how forest destruction in Nabire not only affects the loss of biodiversity, but also increases the risk of natural disasters such as flooding. Ongoing deforestation, whether caused by plantation expansion or the activities of timber and oil palm companies, has reduced the important function of forests as water buffers and soil protectors from erosion. As a result, residents around forest areas, such as in Sima, Wanggar, Wami and Yaro Villages, are direct victims of this environmental damage. Thus, the problem of flooding in Sima, Wanggar, Wami, and Yaro Villages is a concrete example of the impact of environmental and forest damage that occurs in Nabire Regency. This emphasizes the importance of protection and sustainable forest management to ensure that the ecological functions of the forest are maintained and the community is spared.

From costly disasters (Mongabay, 2016). If this is not matched by good management, it will exacerbate environmental and forest degradation. This can be seen from the increasing conversion of forest areas into other use areas (APL) without good planning, thus reducing the ecological function of the forest as a life support. And also reflects that handling the problem of environmental and forest damage in Nabire is not only strict regulation but also consistent implementation in the field. Synergy between the government, indigenous peoples, and the business sector is needed to ensure that any changes in the function and designation of forest areas are carried out selectively, transparently, and responsibly, in order to preserve the environment and the welfare of the Nabire community in a sustainable manner (Minister of Environment and Forestry of the Republic of Indonesia, 2021).

B. Central Papua Government Policy on forest protection

The policies implemented by the Central Papua Provincial Government regarding forest protection refer to national regulations contained in documents issued by the Law of the Republic of Indonesia and

the Minister of Environment and Forestry of the Republic of Indonesia, namely Law of the Republic of Indonesia number 18 of 2013 and Permen LHK No. 8 of 2021. These regulations govern forest management, including aspects of prevention, eradication of forest destruction, protection, security, and reporting of forestry activities. These two documents outline in full the legal and cost-related prevention, recognition and reporting as well as the provision of forest protection and security infrastructure. For example, all infrastructure that has an economic life of more than one year is considered a fixed asset, while those with a life of less than one year are recorded as operating expenses. This serves as a guideline for local governments, including Nabire District, in designing and implementing forest protection policies in line with national standards (President of the Republic of Indonesia, 2023, and Minister of Environment and Forestry of the Republic of Indonesia, 2021). The emphasis placed on asset management, forest development, and fulfillment of environmental and social obligations in the regulation document of the minister of environment and forestry of the Republic of Indonesia is in line with the Nabire Government's steps to ensure sustainable, clear, and responsible forest management, both from an environmental and economic perspective.

The Central Papua Provincial Government is required to comply with the cost recognition and reporting provisions stipulated in the document, specifically related to the procurement of protection facilities, forest security, and fulfillment of environmental and social responsibilities. This strengthens local regulations to align with national policies to conserve forests and prevent environmental damage. The process of changing the function and designation of forest areas, described in data from the Central Papua Provincial Environment, Forestry and Land Office, must follow strict administrative procedures. This includes designating the area using high-resolution satellite maps and marking coordinate boundaries on site. Any request to release forest areas, especially those related to unproductive Convertible Production Forest (HPK), must be accompanied by a proposal for a clear use plan that takes into account the carrying capacity and capacity of the environment (Governor of Central Papua, 2022).

The Central Papua Provincial Government classifies its forest areas into several categories, namely: 371,723.99 hectares of protected forest, 158,611.09 hectares of production forest, 66,967.91 hectares of conversion production forest, 313,312.19 hectares of limited production forest, 127,841.04 hectares of nature conservation area, 11,936.75 hectares of other use area, 607,044.51 hectares of navy chief of staff, and 144.59 hectares of water body. The overall area of forest area in Nabire reaches more than 1,761,584.08 hectares, with most of it allocated for conservation and protection purposes. The division of this zone aims to maintain the balance of the ecosystem and ensure that forest utilization is carried out with due regard to environmental sustainability (Minister of Environment and Forestry of the Republic of Indonesia, 2021 and Map of Forest Area Functions in Central Papua Province BPKH Wil.X Jpr). The Central Papua Provincial Government, including Nabire District, is actively disseminating regulations from the Ministry of Environment and Forestry, such as Permen LHK No. 7/2021 regarding forestry planning and Permen LHK No. 8/2021 which addresses forest management and forest utilization. Data from the Central Papua Province Environment, Forestry and Land Office confirms that changes in the function of forest areas are only allowed for national strategic interests, food security, handling natural disasters, agrarian reform object land (TORA), and urgent community needs.

With the regulations that have been regulated, and applied to each region to be able to develop every existing policy, to provide protection to forests and the environment so that they can be protected from various environmental problems. Then the Central Papua Provincial Environment, Forestry, Land Office conducted socialization to create a comprehensive understanding between the government, business actors, and indigenous peoples so that forest management is carried out wisely, sustainably, and takes into account economic, social, cultural, and environmental dimensions (Editorial Potret Papua, 2024).

The Central Papua Provincial Government and the region are collaborating with the Papua KSDA Center to strengthen the management of conservation areas such as Nabire Nature Tourism Park. This collaboration includes developing natural tourism, empowering communities, and reducing community dependence on forest areas. Monitoring illegal activities, such as illegal logging, remains a major challenge. The government encourages the participation of communities, NGOs, and environmentally concerned communities to carry out reforestation, socialization, and joint supervision. In addition, the government seeks to protect forest areas from the threat of illegal mining that harms the environment and surrounding communities, especially indigenous peoples. This initiative follows applicable regulations and involves preventive measures and law enforcement (Directorate General of Natural Resources and Ecosystem Conservation, 2019).

C. Analysis of Central Papua Government policies related to forest destruction from an environmental security perspective

In analyzing the forest destruction that occurred in Nabire Regency, which this problem has a major impact on the government of Central Papua Province, especially Nabire Regency, because the forests in Nabire Regency are decreasing with the problems of several individuals such as land clearing activities for oil palm plantations, logging for companies, and infrastructure that occurred in Nabire Regency due to the expansion of the capital of Central Papua Province which is in Nabire. from this problem makes a bad impact on human security, the environment, forests, the economy and others (between papua, 2024). Automatically the author needs an understanding that can explain and understand the protection of humans, forests, therefore, an understanding of environmental security is present to link environmental sustainability with human security, economy, forests and ecosystem stability in Nabire Regency for the better.

The environmental security perspective links nature conservation with the safety of humans, ecosystems, forests, social and political aspects, and the environment in Nabire Regency. In terms of forest protection, this view highlights the importance of maintaining the health of forest ecosystems as a key element in ensuring survival and preventing conflicts caused by environmental damage from several individuals who are eyeing forests in Nabire Regency. Environmental security refers to the ability of individuals, indigenous peoples, and governments to deal with various risks and threats that arise from environmental changes, such as forest destruction, which can disrupt welfare, social stability, and national security. These threats include deforestation, climate change, resource-related tensions, and natural disasters exacerbated by damage to the environment (Glenn et al., 2012).

The environmental security perspective asserts that forests provide critical ecosystem services, such as climate regulation, clean water provision, food supply, and habitat for biodiversity that supports food security and public health. Conserved forests reduce the likelihood of floods, landslides and erosion that can jeopardize community safety and security. It also ensures that natural resources are used in a sustainable way for current and future generations. Maintaining the sustainability of forest ecosystems is essential for human life and a wide range of species. It helps reduce the likelihood of social and political conflicts resulting from competition for natural resources, and increases the resilience of communities to the impacts of climate change and natural disasters. In addition, it supports the achievement of sustainable development goals, especially those related to the environment and food security in Nabire District (Glenn et al., 2012).

Based on data showing several problems related to the division of misaligned areas from 2012 to 2021, it shows that Conversion Production Forest (HPK) has decreased significantly from 95,835.57 hectares in 2012 to 66,967.91 hectares in 2021, while APL (Areal Penggunaan Lain) appeared in 2021 with an area of 115,936.75 hectares. Protected Forest grew from 364,917.01 hectares to 371,725.99 hectares, while Marine Nature Reserve Area (KSAL) increased dramatically from 496.05 hectares to 607,044.51 hectares. The decline in Convertible Production Forest and the emergence of Other Use Areas

indicate a shift in the function of forests to agricultural land or residences, which is in line with a study by Pratiwi et al. (2024) on the large deforestation in Nabire between 2000 and 2019 caused by the expansion of oil palm plantations. The regional mapping policy has not been fully successful in stopping illegal land conversion, thus threatening the balance of the ecosystem and the livelihoods of local communities (Pratiwi et al., 2024). Thus, the environmental security perspective is present to explain that every problem that occurs in Nabire district. It is not just about protecting trees and animals, but also relates to the safety and well-being of humans as a whole. Forest destruction can cause serious risks to social, economic and political stability, so sustainable forest management is a key element in national and international security approaches, especially to forests in Nabire Regency.

D. Central Papua Government's policy towards forest protection in the perspective of environmental security

The environmental security perspective highlights the importance of preserving the earth as an integral part of national security and community welfare. In Nabire Regency, forest protection efforts aim not only to maintain the ecological functions of the forest but also to avoid threats that can disrupt social, economic and environmental stability such as illegal logging, land damage, natural disasters, and resource-related conflicts. The Central Papua Provincial Government manages forests in a planned manner, through a clear division of zones, such as conservation forest areas, production forests, and protected forests, to create ecosystem balance and provide opportunities for sustainable utilization. This method reflects the principle of environmental security (principles that combine environmental and forest protection with the social and economic dimensions of indigenous peoples (Glenn et al., 2012).

The Central Papua Provincial Government's policy to provide forest protection in Nabire Regency is based on two significant national regulations. Law No. 18 of 2013 regulates efforts to prevent and overcome forest damage, including aspects of protection, security, and law enforcement against individuals who damage forests. Minister of Environment and Forestry Regulation No. 8 of 2021 regulates comprehensive forest management, including asset management, reporting of forestry activities, and fulfillment of environmental and social responsibilities. These documents provide technical and administrative guidance underpinning the Central Papua Provincial Government in designing and implementing forest protection policies that are in line with national standards, and an automated understanding of environmental security is present to provide understanding to the community to jointly maintain environmental security (President of the Republic of Indonesia, 2023 & Governor of Central Papua, 2022).

The Central Papua Provincial Government implements an asset management policy as stipulated in Permen LHK No. 8/2021, where infrastructure for forest protection with an economic life of more than one year is recognized as fixed assets, while those less than one year are considered operational expenses. This ensures that there is transparency and accountability in local financial management related to forest protection. Local governments are required to comply with reporting and cost recognition rules set by national regulations, which strengthens oversight of forestry activities and facilitates periodic evaluation of the effectiveness of forest protection. As stipulated by the Central Papua Provincial Environment, Forestry and Land Office, any changes to the function of forest areas, particularly Conversion Production Forest (HPK), must follow strict administrative procedures, including the use of high-resolution satellite maps and environmental carrying capacity analysis. This aims to ensure that modifications to forest functions are only carried out for national strategic purposes, food security, or basic community needs, so as not to jeopardize ecosystem sustainability (Governor of Central Papua, 2022).

The Central Papua Provincial Government classifies forests into several categories with a total area of more than 1.7 million hectares, mostly allocated for conservation and protection. The division of these zones aims to maintain the balance of ecosystems and biodiversity. Ensure that forest utilization is carried

out in a sustainable and responsible manner. This is in line with the principles of forest management stipulated in Permen LHK No. 8 of 2021 and Law No. 18 of 2013, which emphasize environmental protection while meeting the social and economic needs of the community (President of the Republic of Indonesia, 2023 & Governor of Central Papua, 2022). The Central Papua Provincial Government and Nabire District are actively socializing forestry regulations to local governments, business actors, and indigenous peoples. This aims to create a comprehensive understanding of the wise and sustainable management of forest protection forests, taking into account economic, social, cultural and environmental aspects. In addition, collaboration with the Papua KSDA Center strengthens the management of conservation areas such as Nabire Nature Tourism Park, including the development of nature tourism and community empowerment so as not to depend on direct forest exploitation.

Monitoring illegal activities such as illegal logging and illegal mining remains a major challenge for the Central Papua Provincial Government. The government also encourages the active participation of indigenous peoples, NGOs, and environmental care communities to carry out reforestation, socialization, and joint supervision. Preventive action and law enforcement are carried out in accordance with the provisions of national regulations, so that forest protection can run effectively and sustainably. The Central Papua Provincial Government's forest protection policy from an environmental security perspective is a concrete implementation of national regulations, namely Law No. 18 of 2013 and Permen LHK No. 8 of 2021. This policy integrates aspects of prevention, protection, security, and reporting of forestry activities with the principles of maintaining ecosystem balance, community empowerment, and law enforcement. Thus, forest protection in Nabire not only preserves the environment, but also ensures the ecological and socio-economic security of the community, in accordance with the concept of holistic and sustainable environmental security (President of the Republic of Indonesia, 2023 & Governor of Central Papua, 2022).

Conclusion

The Central Papua Provincial Government's policy on forest protection, when viewed from an environmental security perspective, has shown good initiatives through forest rehabilitation, reforestation, and collaboration with indigenous peoples and non-governmental organizations. This policy plays a role in maintaining the ecosystem while improving the quality of life of indigenous peoples. However, challenges remain, especially in terms of weak law enforcement, lack of participation of indigenous peoples in decision-making processes, and pressure from the extractive industry sector that threatens forest sustainability. Cooperation between the Central Papua provincial government, indigenous communities and other stakeholders is essential to realize sustainable and equitable forest protection.

Reference

Amallia, N. (2019, June 1). Community Participation In Neighborhood Security System To Improve Security And Order.Community. file:///C:/Users/Multimedia/Downloads/653-1944-2-PB.pdf, 02(neighborhood security system), 9. between papua. (2024, 10 9). Provincial government encourages sustainable forest management in Central Papua. <https://papua.antaranews.com/berita/729866/pemprov-dorong-pengelolaan-hutan-berkela-njutan-papua-central>. Retrieved 5 7, 2025, from Antara Papua.

Asra, M. I. (2024, January 14). Papua issue needs empathy from all Indonesian people: Greenpeace. <https://betahita.id/news/detail/10853/isu-papua-butuh-empati-seluruh-masyarakat-indonesia-greenpeace.html?v=1736816942>.

Babbie, E. (2013). *The Practice of Social research*. Cengage Learning.

- Cannon, J. C. (2020, September 10). Study: Papua, the Island with the Most Plant Species in the World. <https://www.mongabay.co.id/2020/09/10/studi-papua-pulau-dengan-ragam-hayati-tumbuhan-most-in-the-world/>. Directorate General of Natural Resources and Ecosystem Conservation. (2019, 9 13).
- Strengthening the Function of TWA Nabire in the Cooperation Agreement between the Papua KSDA Center and the Nabire Regency Environment Office. <https://ksdae.menlhk.go.id/info/6702/penguatan-fungsi-twa-nabire-dalam-perjanjian-kerja-sama--balai-besar-ksda-papua-and-dinas-environment-life-nabire-district.html>. Retrieved 5 8, 2025, from KSDAE
- Land of Papua Expedition 2021. (2021, 4 26). Manawari Sago Forest, the Lifeblood of the Yerisiam People. <https://jelajah.kompas.id/ekspedisi-tanah-papua-2021/baca/hutan-sagu-manawari-tumpuan-the-living-backbone-of-the-yerisiam-people/>.
- Glenn, J. C., Gordon, T. J., & Perelet, R. (2012). Environmental Security: Emerging International Definitions, Perceptions, and Policy Considerations. https://millennium-project.org/wp-content/uploads/2023/08/Chapter-9_2-ES-definitions.pdf.
- Governor of Central Papua. (2022). Organization and Work Procedures of the Environment, Forestry, and Land Agency of Central Papua Province. Governor of Central Papua.
- Iskandar. (2011, september 3). Actualization of the Legal Principles of Preserving Environmental Functions in the Change of Fortune, Function, and Use of Forest Areas. Actualization of Legal Principles of Preservation of Environmental Functions in Changes of Fortune, Function, and Use of Forest Areas, 11 (environmental issues), 16.
- Ministry of Environment and Fisheries. (2021, November 12). World's Three Largest Tropical Forest Owning Countries Establish Trilateral Cooperation. <https://ppid.menlhk.go.id/berita/siaran-pers/6284/tiga-negara-pemilik-hutan-tropis-terbesar-in-the-world-establish-trilateral-cooperation>.
- Kobepa, F. (2021, 9 18). Forest Cleared, Floods Result in Reflection of Nabire Forest. <https://www.papualives.com/hutan-dibabat-banjir-didapat-refleksi-hutan-nabire/>. Retrieved 5 8, 2025, from Papua Lives
- KSDAE Directorate General of Natural Resources and Ecosystem Conservation. (2017, August 24). Brainstorming with Nabire Indigenous Stakeholders Regarding the Management of Nabire TWA and Tanjung Wiay CA. <https://ksdae.menlhk.go.id/info/1300/brainstorming-dengan-pemangku-adat-nabire-terkait-managing-twa-nabire-and-ca-tanjung-wiay.html>.
- KSDAE Directorate General of Natural Resources and Ecosystem Conservation. (2019, September 13). Strengthening the Function of TWA Nabire in the Cooperation Agreement between the KSDA Papua Center and the Nabire District Environment Office. <https://ksdae.menlhk.go.id/info/6702/penguatan-fungsi-twa-nabire-dalam-perjanjian-kerja-sama--balai-besar-ksda-papua-and-dinas-environment-life-nabire-district.html>.
- Martanto, U. (2007, November). Environmental Change and Violent Conflict Reading Papua Through an Environmental Security Approach. 11 (environmental change and violent conflict in papua), 21.
- Minister of Environment and Forestry of the Republic of Indonesia. (2021). Forest Planning and Preparation of Forest Management Plans, and Forest Utilization in Protected Forests and Production Forests.

- Mongabay. (2016, 3 25). When Floods Hit Nabire, Banjarnegara Landslides. <https://www.mongabay.co.id/2016/03/25/kala-banjir-landa-nabire-banjarnegara-longsor/>. Retrieved 5 7, 2025, from Mongabay nabirenews.com. (2025, 5 5). Nabire Regent Reveals the Cause of Flooding in Yaro Village: Due to Deforestation. <https://nabirenews.com/2025/05/05/bupati-nabire-ungkap-penyebab-banjir-di-kampung-yaro-caused-deforestation/>. Retrieved 5 7, 2025, from nabirenews.com
- Papua Provincial Government. (2014, October 23). Local Government Law Weakens Forest Monitoring in Papua. <https://papua.go.id/view-detail-berita-6063/uu-pemerintahan-daerah-lemahkan-pengawas-an-forests-in-papua.html>. President of the Republic of Indonesia. (2023, 8 10). Law of the Republic of Indonesia. Prevention and eradication of forest destruction, 100.
- Pratiwi, A. S., Syartinilia, & Pravitasari, A. E. (2024, october 28). Land Cover Change, Forest Degradation and Deforestation in Nabire Regency for the Period 2000-2019. Land Cover Change, Forest Degradation and Deforestation in Nabire District in 2000-2019 periods, 16(10).
- Pratiwi, A. S., yartinilia, & Pravitasari, A. E. (2024, 10 1). Land Cover Change, Degradation, and Forest Deforestation in Nabire District in 2000-2019 Period. <https://journal.ipb.ac.id/index.php/jli/article/view/54249>. Retrieved 5 21, 2025, from <https://journal.ipb.ac.id/index.php/jli/article/view/54249>
- President Of The Republic Of Indonesia. (2009, September 23). Government Regulation Of The Republic Of Indonesia Number 60 Of 2009 Concerning Amendments To Government Regulation Number 45 Of 2004 Concerning Forest Protection By The Grace Of God Almighty The President Of The Republic Of Indonesia,. <https://jdih.kemenkeu.go.id/api/download/0aa8b5e5-5ff6-418c-8da2-1791ef35e857/60TAHUN2009PP.pdf>.
- Editorial of Papua Portrait. (2024, 10 9). Central Papua Provincial Government Holds Socialization of Ministry of Environment and Forestry Regulations in Sustainable Forest Management. <https://potretpapua.com/pemprov-papua-tengah-gelar-sosialisasi-peraturan-kementerian-lhk-in-sustainable-forest-management/>. Retrieved 5 8, 2025, from PotretPapua.com
- Wibowo, D. (2024, February 23). Fighting in Papua's Forest: When Youth, Women, and Indigenous Elders Organize to Fight Eviction. <https://projectmultatuli.org/pertarungan-di-hutan-papua-kala-pemuda-perempuan-dan-tetua-adat-atur-siasat-against-displacement/>.

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