



Policies for Overcoming The Environmental Damage Due to Forest Conversion in Bima, West Nusa Tenggara

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ABSTRACT

Environmental damage caused by forest conversion in Bima was quite worrying, the impacts were quite diverse. preliminary observations found that Bima Regional Forests were mostly critical because of conversion. On the other hand, there were no visible signs for stopping the natural disasters. Research Objectives: first; to describe an environmental damage of forest conversion; second; to describe policies on overcoming environmental damage and concepts in tackling the sustainable development. Research method were qualitative analysis. The results of this study, environmental damage in Bima were caused by illegal logging, forest encroachment, land conversion by farmers. The factors are due to economic demands, lack of public awareness, lack of socialization from the government, in overcoming prevention and enforcement, in terms of policies carried out by: 1) Mitigation, especially in residential areas; 2) Reforestation; 3) tracing or installation of supporting stones in deforested areas; 4) socialization and guidance, by calling the community to be educated and given knowledge about forest utilization and sustainability, 5) distributing circulars, 6) spraying plants planted on forest land that is functioned.

Keywords: Environmental Damage; Switch Function Forest; Development Sustainable

1. Introduction

Environmental damage due to forest encroachment is basically caused by human actions (A. Absori et al., 2017). This is a sign that human activities can cause environmental damage through industrial activities, development, or agricultural activities. It will give direct impact on environmental damage. There are many impacts of human activities on the environment such as; impacting air pollution, environmental damage, pollution, marine pollution, or adversely affecting the occurrence of landslides and floods.(Absori, et., 2008).

Forests have an important and vital function in human life because they have social, economic, and other functions. For this reason, forests must be preserved and used as well as possible in a sustainable manner (Siboro, 2019). The character of human anthropocentrism, which puts the forests and other ecosystems as inanimate objects and economic commodities, will be the bearer of disaster and catastrophe. Forest damage due to illegal logging and forest conversion is a complex problem to solve and has long implications, not only for the current generation but also for generations to the future(Pratiwi & Alhadi, 2021).

In addition, various improvements and restorations were made to the environment due to the damage and pollution that occurred. The data showed environmental damage due to land conversion with the concept of development and free trade, mostly caused by the entry of national and international companies that continuously exploited the environment and resources.(Absori, nd) This is also stated by J. Barros and J.M. Johnston that disasters are closely related to development activities carried out by humans and can affect the survival of human generations.(A. Absori et al., 2020)

In Bima, West Nusa Tenggara, the impact of environmental damage due to the conversion of forest is affected by flash floods and crop failure, and we have to be ready for fire, drought, and lack of clean water during the dry season.(Langgudu & Bima, 2018; Salam, et al., 2019) These kinds of natural disasters always happen and every year it gets worse. The data shows that of the 1 million (ha) forest area owned by NTB, the critical forest area is around 896 thousand hectares or 75 percent of the total forest in Bima 25.3 47575. Ha.(Ma'arij et al., 2021)

Most of the Bima Regional Forests are critical, due to the shift in function.(Hijri, 2021). On the other hand, there are no visible signs of stopping. The rate of forest destruction and inherent implication is natural disasters. Empirical reality shows that environmental damage in Bima is caused by uncontrolled use patterns. As a result, environmental damage occurs.(Ma'arij et al., 2021) This utilization pattern is caused by: First, permits to use pesticides and other chemicals on agricultural land such as onions, rice, and corn on farmers' land; Second, there are mining operations in Bima Regency, such as PT. Bunga Raya (Monggo Village), PT. Koynesia (Parado Village), (3) PT. Iron Sand (Wera), PT. Gold Mining (Wawo), and PT. Gold Mining (Sape). Third, Grass Cultivation. Fourth, illegal fishing activities (fish bombing) that cause damage to coral reefs and marine life, and Fifth, illegal logging activities that cause deforestation, flooding and landslides. The results of Ridwan's research (2020) the main causes of forest damage in Bima, West Nusa Tenggara, are illegal logging, forest encroachment, and land conversion.(Ma'arij et al., 2021) similar with andriadin's findings on his research (2021) that environmental damage in Bima is mostly caused by forest encroachment, such as patterns of using Tax Returns Payable (SPPT) that are not appropriate and illegal logging activities carried out by the community. edge of the forest as well as the group of owners (corporation).(Andriadin, Absori, 2021) of these various problems are motivated by economic demands, alack of socialization from stakeholders, and low public awareness.

The urgency of this research was considered by; first, because the environmental damage due to the conversion of forest in Bima is worrying and always happens. It has an impact on the occurrence of floods and landslides every year. Second, the conversion of forest is due to uncontrolled use for farming, as well as illegal logging activities. Third, the policy for dealing with environmental damage carried out by stakeholders for the conversion of forest is not effective because it is based on the rate of forest destruction, which is increasingly uncontrollable. Fourth, formulate an ideal concept for the policy of overcoming environmental damage due to the conversion of forest with the concept of sustainable development and social welfare.

Research objectives and research focus, firstly to describe environmental damage due to land conversion; second, to describe policies for overcoming environmental damage; and third, to offer an ideal concept for tackling environmental damage due to land conversion in Bima, which is sustainable development and social welfare.

2. Method

The location of this research was in the Bima area of West Nusa Tenggara. The subjects of this research are the Government of Bima Regency, the Environment Service, the Regency Spatial Planning, and KPH Donggo Masa, to obtain data related to the policy of overcoming environmental damage due to the conversion of forest, including the suitability of targets and the results to be achieved. The choice of location is based on how well it fits with the needs for primary data and how well it fits with the goal and focus of this research.

The research methods used in this research were: First, the Initial Identification Phase: by identifying the problem and conducting data collection, as well as conducting interviews from various sources who know about the problem of environmental damage due to forest conversion in Bima, West Nusa Tenggara. Second, the categorization stage, qualitative analysis through legal documents and interviews, interpretation, and conclusions. While the type of research is empirical or non-doctrinal legal research, normative approach, cases, and policies, the types of data used are primary and secondary data. There is then a qualitative analysis using laws, theories, and expert opinions.

3. Result and Discussion

3.1 Description of Environmental Damage Due to Forest conversion in Bima, West Nusa Tenggara

The Bima Region of West Nusa Tenggara is geographically located at the eastern of the West Nusa Tenggara Province, with an area of about 4,394.38 km² Bima Region, with 18 sub-districts and 191 villages.(Local Government, 2021) while for forest areas according to their functions and uses, such as protected forest 83,189 (Ha), nature reserve forest area 21,095 (Ha), conservation forest 55,600 (Ha), permanent production forest 44,740 Ha and limited production forest 66.86 (Ha).(LHK data, 2021) According to the data collected, the majority of the forest areas in Bima have changed status to critical land and bare forest due to human activities such as the habitual pattern of taking wood, clearing forest areas for agricultural land, and the high demand for logs (snorkeling wood or the like) by local and national companies.which are spread over 5 sub-

districts, such as in Langgudu, Wawo, Belo, Lambitu, and Parado sub-districts. (Andriadin, Absori, 2021) To this condition, there are several factors that cause environmental damage due to the forest conversion in Bima, NTB.

On the other hand, research on environmental damage due to forest conversion in Bima, West Nusa Tenggara, first shows deforestation every year. It changes from the area of protected debt in 2017 in Bima, starting from the forest of KH Maria RTK.25, which reached 2,079.02 (Ha). Due to deforestation, the total area of protected debt in 2019 decreased from 4,736.76 (Ha) to 225,744 (Ha), implying that half of the protected debt is reduced, and it can be determined that the reduced protected debt forest reaches 247,932 (Ha). Second, there is a land conversion that make the the dryness of springs in Bima continues to occur (Muslim, nd).

Based on data collected from the Department of Environment and Forestry of the Province of West Nusa Tenggara-KPH Hall Maria Donggomasa Bima, October 10, 2021, several areas in the forest area in Bima are classified as high-critical land, forest with a definitive area of 250,396 (Ha), or 50% of the total area of Bima, which needs an intensive handling pattern. Most of the forest area has been exploited, causing the loss of forest functions and forest areas. Mining activities, land conversion, and illegal logging continue to be carried out by certain groups of people, so that they have spread to all sub-districts starting from Kec. Parado, Wawo, Lambitu, Langgudu, Wera, Ambalawi, Sape, Lambu, Belo, Palibelo, Sanggar, Tambora, WoHa, Donggo, Kec. Monta, Etc.

From the forest area based on function, the protected forest area in Bima is around 83,189 (Ha), the limited production forest area is around 66.86 (Ha), and the permanent production forest is 44,740 (Ha). From the area of the forest area, especially the protected forest, there have been many changes, as seen from the number of corn farming activities, illegal timber theft and mining in each sub-district. First, the forest conversion from protected debt to plantation land areas reached the highest 50% percent of the 18 sub-districts in Bima Regency. The area of rice fields or plantations increased by 8.53 km² compared to 2008, which was 307.43 km². The increase in land area is driven by the activities and activities of local communities, in which these activities penetrate into state-owned forests, as shown by data on forest damage in Bima with an area of 161,256.53 ha, or about 50% caused by illegal timber harvesting and corn encroachment, into state-owned forest areas. The second relates to mining activities in Bima, such as iron sand mining on the beach in Oi tui Village, in Werasub-district, which has been operating since 2014. This mining activity has damaged the coastal area and the edge of the mountain. It is even worse related to mining activities and gold exploitation without a permit in Pesa Village, in Wawo sub-district. The mining is considered to damage the environment and forest ecosystems(Ahyar, 2021).

3.2 Policy for the Management of Environmental Damage Due to Forest conversion.

In Indonesia, the policy of fixing environmental damage can be seen in different laws and rules. These laws and rules are used to stop, protect, and fix environmental damage (KH. Manik, 2022). Article 28 H paragraph (1) and paragraph (2) of the Constitution of the Republic of Indonesia contain the basis and the political direction of legal development that everyone has the right to live in physical and spiritual prosperity, to live and to have a good and healthy environment. Whereas Article 3 of the Law on Environmental Protection and Management (UUPPLH) contains legal principles as norms in the implementation of a good and healthy environment (Effendi, 2011): These principles aim to: (1) protect forest areas from pollution and environmental damage; (2) guarantee the safety and survival of human life; (3) guaranteeing the survival of living things and the preservation of the ecosystem; (4) guarantee and preserve environmental functions; (5) achieving environmental harmony and balance; (6) ensure justice and survival for present and future generations; (7) guarantee the protection and fulfillment of environmental rights as human rights; (8) wise use and utilization of natural resources; (9) realizing sustainable development; and (10) anticipating environmental issues globally(A. Absori et al., 2020).

The policy is revealed in the District Regulation. Bima No. 9/2011 concerning the Spatial Planning of the Bima Regency for 2012–2032, the regulation states that in the context of overcoming environmental damage, it must be carried out in the following ways: first, land management and pay attention to the designation; second, pay attention to aspects of conservation and aspects of environmental sustainability. In order to support this policy aspect, the strategies are carried out by: (1) maintaining the area of protected areas and protected forests; (2) development of at least 30% of protected areas; (3) restoration and improvement of protected area functions; (4) realizing and maintaining the balance of regional ecosystems; (5) integrated implementation in improving the quality of protected area functions; (6) maintenance of environmental capacity from pressure to support humans and other living creatures; and (7) efforts to prevent the occurrence of actions either directly or indirectly due to

environmental damage in order to support sustainable development (Perda, 2011). In addition, the Government of Bima Regency in dealing with environmental damage has formed the Institute for the Prevention and Eradication of Forest Destruction (LP3H) as mandated by Law No. 18/2013 on the Prevention and Eradication of Forest Destruction.

LP3H is a special institution authorized to take action against violations or criminal acts of forest destruction, illegal logging, and the use of forest areas outside the designation. Meanwhile, the regional government of West Nusa Tenggara Province formed a Task Force (Satgas) to prevent and eradicate forest damage as contained in the Decree of the Governor of West Nusa Tenggara No. 522-205/2018 concerning the Task Force for the Prevention and Eradication of Forest Destruction. This task force consists of the NTB Provincial Environment Service, the NTB Regional Police Chief, the Army, and the NTB High Prosecutor's Office, as well as a control task force, including a task force from the District Police. Bima, Kodim 1608 Bima, Forestry Police, Pamom Praja Police Unit, Bima Natural Resources Conservation Center (BKSDA).

In order to support and carry out the policy of overcoming environmental damage due to the conversion of forest functions as mentioned above, the Donggo Massa KPH Balai has several ways to deal with forest damage, including by making bronjonization. It aims to accommodate many stones as possible, then installed on the edge of the forest or on the banks of the river. The installation of gabion wire is part of the government's efforts to prevent landslides in areas of forest that have been deforested. Besides that, the Maria Donggomasa KPH Center Team and other Task Forces also carry out reforestation efforts on critical lands or bare forests in several sub-districts that are considered vulnerable (Basri, 2021).

In line with the statement from the Donggo Massa KPH Hall, according to Jainudin ST, as the Head of Prevention and Preparedness of BPBD Bima, to carry out countermeasures through bronjonization at the edge of the forest and watershed areas, there are also prevention efforts against forest damage, flooding and landslides by means of; first carry out Mitigation, especially in residential areas; second efforts were made in the upstream areas, for example rice fields and corn fields, so the strict measures taken were stopping corn planting; third, replanting tree seedlings/reforestation on deforested areas; the fourth is tracing or installation of supporting stones in bare forest areas (Jainudin ST, (2021): taking countermeasures as contained in the 4 (four) points above. Supporting capacity in overcoming environmental damage, the Donggo Masa KPH Balai also formed a task force consisting of the Bima 1608 Kodim, the Prosecutor's Office, the Resort Police, the Forestry Police, the Bima Regency/City Pol PP Unit, the subdistrict head and the Village Head in preventing and eradicating environmental damage caused by environmental damage caused by forest conversion in Bima, West Nusa Tenggara (Upik, (2022).

In terms of prevention and prosecution of the teams that are members of the task force, it is more of a persuasive approach to solve existing cases. This is because KPH Donggomasa feels pity for the perpetrators of environmental damage. A persuasive approach is used to carry out the coaching and education process so the environmental damage activities can be overcome (Upik, (2021). Other efforts were also made by the National Disaster Management Agency (BPBD) Bima in the fight against forest damage, referring to Regional Regulation no. 4/2014 concerning the Implementation of Communications and Informatics. In relation to the regional regulation, BPBD Bima formed the so-called Disaster Risk Development Forum at the points that were directly impacted by the damage, BPBD had established a Disaster Resilient Village in partnership with BPBD in handling the disaster. Environmental damage caused by the conversion of forest functions.

According to the author, forest utilization must be managed properly, correctly, and sustainably. Forests have a very fundamentalist function because they are occupied by plants, trees, and accommodate all natural wealth, both flora and fauna, so it is very important for the community to maintain forest sustainability. Protecting the forest is protecting the environment. According to Absori (2017), protecting forest ecosystems and the universe is part of human love for the condition of the universe (MI Absori, 2021). For this reason, the state must properly function the legal products that are formed for the best and sustainable management and utilization of forests as mandated by Article 33 paragraph (3) of the 1945 Constitution, where the earth, water, and natural resources contained therein are controlled by the state for as much as the magnitude of the people's welfare and sustainable prosperity warrants.

In line with the stated in Law no. 41/1999, it emphasizes that forestry administration must be based on the principles of benefit, sustainability, democracy, justice, togetherness, openness, and integration (Purnomo et al.,

2018). For this reason, the government and all elements of society are obliged to maintain forest integrity in order to improve national development and create good governance principles in protecting and securing sustainable forest functions (Data from the Ministry of Environment and Forestry of the Maria Donggomasa KPH Hall in 2021).

Protection of forest ecosystems and environmental management have been carried out by the government, but the implementation and stages are massive and organized because forest damage and clearing of land cover in the Bima area of West Nusa Tenggara increase year by year, as data shows forest destruction in Bima, which reached 161,256.53 (Ha).

Departing from data on forest damage collected by the Environment and Forestry Service in the unitary area of the Maria Donggomasa KPH Balai, the author concludes that government policies in the forestry sector do not lead to sustainable forest development because the government and law enforcement have never acted decisively. Many rules and laws are useless if criminals can still get around them and do things like illegal logging, encroachment (Ocuvasi), illegal mining, and planting without a permit in forest areas.

The results of the interview show that the real action of the local government against people who do forest encroachment is giving education to make them understand the importance of maintaining, preserving, and sustaining forest ecosystems (Upik, 2022). This approach is used to maintain harmony between the government and the community in the administration of the government system. This is by looking at the pattern of forest damage in Bima, which is mostly caused by economic demands and people's ignorance of the functioning of the forest (Upik 2022).

In addition, the results of the author's interview show that the persuasive approach taken by the local government of Bima, West Nusa Tenggara, which is an alternative in resolving forestry cases, as mentioned above, provides an ineffective legal settlement step because the government emphasizes maintaining good relations as part of maintaining a healthy environment. This condition also has the potential to be bad for the law enforcement system itself because the persuasive approach that is used seems political because most of it involves investors (capitalists), companies (corporations), bureaucrats, and law enforcement, and the actions can be repeated again by the perpetrators.

In fact, the decisive steps taken will have a positive impact on environmental sustainability and can achieve sustainable development. With the attitude of the government taking this approach, which is considered pragmatic and oriented towards economic development, it will encourage the exploitation of natural resources.

According to the author's opinion, as offered by Absori, et al, that the Policy for Managing Environmental Damage Based on Sustainable Development have to pay attention to the following aspects: first, equity and social justice, by ensuring an even distribution of land resources, and a fair balance of production and economic factors. ; second, respecting diversity in the form of biodiversity by ensuring that natural resources are maintained and always available and sustainable, while cultural diversity is to encourage equal treatment of every person or community in terms of attitude and knowledge; Third, an integrative approach. That indicators of sustainable development prioritize the relationship between nature and humans. People thought that nature can be influenced by exploiting or destroying, For this reason, the use of nature must be based on an understanding of the complex relationship between the two systems (natural systems and social systems) in a more integrative way in the implementation of development. Fourth, long-term use, people always think that the present was important than the future. For this reason, human's mindset must be changed for the sake of sustainable development (S. Absori & Hum, nd).

According to Absori (2006), ideally sustainable development requires: 1) Ecological sustainability; 2) economic sustainability; 3) social and cultural sustainability; 4) political sustainability; 5) sustainability of defense and security,(S. Absori & Hum, nd)

Another thing was also conveyed by Surya T Djajadiningrat in Absori (2006) in order to achieve sustainable development there are several supporting factors: first, having the ability to manage natural resources so that they function sustainably; second, the quality of the environment, the higher the quality of the environment, the higher the quality of its natural resources and can support high-quality development; third, the population factor. This factor is also a determining element in the dynamics of development which tends to be a

burden. So it must be changed with a useful factor to become a development capital now on (S. Absori & Hum, nd).

Overcoming environmental damage is oriented towards sustainable development requires the cooperation and integration of all parties. as well as legal aspects in environmental management and natural resource conservation need to be studied intensively. Thus, the essence of the role of environmental law is to contain the principles of agent of stability and agent of development.(A. Absori et al., 2020) The purpose of environmental law is to realize community development against pollution or environmental damage in order to provide legal protection, so sustainable development and a healthy environment are realized, as the basic principles contained in Law 32/2009 concerning Environmental Protection and Management (PPLH).

4. Conclusion

Environmental damage due to forest conversion in Bima, West Nusa Tenggara is largely the result of illegal logging, corn farming, and the use of forest products outside their intended use. When the rainy season arrives, the people of Bima will face flash floods, landslides, and crop failures, while it is the turn of the dry season to prepare for fire, drought, and lack of clean water. Meanwhile, from a policy perspective, it can be classified into 3 forms: first, restoration of forest areas by 1) conducting mitigation, especially in residential areas; 2) reforestation; and 3) tracing or installation of supporting stones in deforested areas. Second, socialization and coaching, by calling on the community to be educated and given knowledge about the use and preservation of forests. Third, prosecution through: 1) circular distribution, 2) spraying of plants planted on forest lands, and, on the other hand, countermeasure policy.

Overcoming environmental damage due to forest conversion requires cooperation and integration of all parties in order to realize ideal sustainable development and have the ability to manage natural resources so they can be used in a sustainable manner. Aspects of legal regulation in environmental management and natural resource conservation need to be studied intensively to create protection, ecosystem sustainability, and balance between nature, humans, and development to be achieved as the basic principles contained in Law 32/2009 on Environmental Protection and Management (PPLH).

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