



Protection of the Environment Due to Reclamation on Bungin Island, West Nusa Tenggara

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ABSTRACT

Self-help coastal reclamation by the Bajo people on Bungin Island, Sumbawa, is carried out due to limited land and high population density. Without a legal basis and adequate environmental studies, this activity damages marine ecosystems such as seagrass beds and coral reefs. This study examines (1) the form of legal protection for the environment in reclamation based on the principles of sustainable development and (2) the impacts of reclamation and efforts to enforce environmental law. The method used is empirical juridical with a sociological approach through observation and interviews. The results indicate that legal protection is ineffective due to weak oversight, low public legal awareness, and the lack of integration of reclamation with environmental regulations. Although national laws are in place, local implementation remains weak. This study recommends synergy between the government and the community, increased environmental legal literacy, and the development of local regulations based on sustainable development.

Key Words: Coastal Reclamation, Bungin Island, Environmental Law, Sustainable Development.

1. INTRODUCTION

Coastal reclamation can be understood as the modification of coastal areas by humans through the filling of water bodies to expand land, which is then allocated for various development purposes such as housing, economic activities, and the provision of public infrastructure. In the presidential regulation, Presidential Regulation of the Republic of Indonesia Number 122 of 2012, reclamation is an activity carried out by individuals to enhance the benefits of land resources from an environmental and socio-economic perspective through reduction, land drying, or drainage. Bungin Island, located in the Alas District, Sumbawa Regency, West Nusa Tenggara (NTB), is one of the islands with the highest population density in the world. With a land area of only about 8.5 hectares and more than 3,000 people inhabiting it, the local community faces severe land limitations. To meet the need for living space, the community has been carrying out beach reclamation independently by filling in the shallow waters around the island using coral stones, sand, and other materials. This practice has been ongoing for several decades as a form of local adaptation to land limitations. However, reclamation without proper spatial planning and environmental impact assessments has caused several ecological problems. Coastal ecosystems such as seagrass beds, coral reefs, and marine biodiversity are experiencing damage due to massive and uncontrolled reclamation activities. In addition, this reclamation process also contributes to increased sedimentation, water pollution, and the disruption of the natural functions of coastal areas. In this context, it is important to understand the concept of the environment as a unity that encompasses space, living beings, objects, and various forces that interact and support the continuity of human and natural life.

On Bungin Island, the community comprises people from the Bajo Tribe, well-known for its skilled sailors who live and die at sea. The Bajo Sengaka community's residences are built jutting out into the sea because the sea is their source of livelihood for survival and the only place they can rely on. The word Bungin comes from the Bajo language, "Bubungin," which means a mound of white sand. Initially, this island was just a mound of white sand, but over time, the expansion through reclamation on Bungin Island has spread, making the island larger. According to the

Republic of Indonesia Law Number 32 of 2009 on Environmental Protection and Management, all forms of spatial utilization must consider the sustainability of ecosystems as life-supporting systems—coastal reclamation, as regulated in Law No. 27 of 2007. Law Number 1 of 2014 concerning the Management of Coastal Areas and Small Islands is legally valid if conducted cautiously and oriented towards environmental sustainability.

However, reclamation on Bungin Island is carried out without adhering to these regulations, potentially causing long-term and difficult-to-repair environmental damage. Land issues also arise because the reclaimed land is often not recorded in official documents. This creates legal uncertainty regarding ownership and increases the potential for disputes between residents or between residents and local governments. Based on Law Number 5 of 1960 concerning the Basic Agrarian Law (hereinafter referred to as UUPA 1960), land control by individuals or groups must be based on legal legitimacy recognized by the state, thereby ensuring certainty and legal protection of agrarian rights held. In addition to ecological issues, reclamation also causes social impacts, such as land ownership conflicts resulting from reclamation and the deterioration of residential infrastructure quality due to limited spatial management. In addition to ecological aspects, coastal reclamation issues are also closely related to environmental protection within the framework of sustainable development, which requires a balance between economic, social, and environmental dimensions. If reclamation is carried out without strong legal protection, such activities can hinder achieving environmentally conscious and socially just development goals.

In the context of Bungin Island, reclamation that is not based on the principle of caution and does not follow legitimate legal procedures indicates weaknesses in the environmental management system. Therefore, a comprehensive legal analysis is needed to examine the impact of reclamation from an environmental law perspective. This study is important to identify forms of violations against applicable legal norms and to formulate legal protection instruments in line with the principles of sustainable development as mandated in Articles 3 and 10 of Law Number 32 of 2009 concerning Environmental Protection and Management and in Law Number 1 of 2014 concerning Amendments to Law Number 27 of 2007 concerning Management of Coastal Areas and Small Islands. Therefore, an in-depth academic study is needed regarding the impact of coastal reclamation on environmental damage in Bungin Island. The results of this research are expected to serve as a basis for local governments and communities in designing more just and sustainable coastal management strategies. Based on the abovementioned issues, the problem formulation is obtained: What is the legal protection for the environment in reclamation activities on Bungin Island within the principle of sustainable development? Moreover, what are the impacts of reclamation on the environment, particularly the marine ecosystem, and what efforts can be made to enforce environmental law in reclamation activities on Bungin Island?

2. MODEL PAPER

This research uses an empirical juridical approach, which combines the analysis of written legal norms and the reality of their application in society. The juridical approach is used to examine regulations related to coastal reclamation, such as Law No. 32 of 2009 and Law No. 1 of 2014, while the empirical approach illustrates how the implementation of reclamation on Bungin Island affects the environment and the effectiveness of law enforcement. Type of Data: Primary Data: Obtained through direct interviews with the Head of the Sumbawa Environmental Agency, the Subdivision Head of the Sumbawa Regency Legal Affairs Bureau, the Head of Bungin Village, and the community involved in reclamation. Secondary Data: In the form of legal documents and literature, such as Law No. 32 of 2009; Law No. 1 of 2014; Presidential Regulation No. 122 of 2012; Government Regulation No. 27 of 2021. The data collection method is field studies: Conducted through observation and structured interviews to explore reclamation practices and public perceptions. Library Study: Analyzing library materials and legal documents to strengthen the theoretical foundation and assess the conformity of reclamation practices with applicable norms.

3. DISCUSSION

3.1 Forms of Legal Protection for the Environment in Reclamation Activities on Bungin Island

One of the main instruments in environmental protection is the Environmental Impact Assessment (AMDAL). Based on Articles 22–26 of the UUPPLH, reclamation is categorized as an activity with significant impact that an

AMDAL must accompany. This is reiterated in Presidential Regulation No. 122 of 2012, which mandates reclamation planning by all parties, including the community. Another form of protection is through environmental permits. Article 36 of the UUPPLH regulates that every activity requiring an AMDAL must have an environmental permit, which is issued based on technical recommendations from the AMDAL or UKL-UPL documents. In the context of reclamation, location and implementation permits are also required as stipulated in Presidential Regulation No. 122 of 2012, Article 15. However, field facts show a disparity between law and practice. Based on interviews with officials from the Sumbawa Regency Government, the authority to regulate coastal areas is now at the provincial level according to Law No. 23 of 2014, while reclamation occurs at the regency level. The absence of a specific Regional Regulation (Perda) on reclamation leads to overlapping and unintegrated policies. The people of Pulau Bungin carried out reclamation without permission and without considering the AMDAL document as mandated by Article 22 of the UUPPLH and Article 23 regarding large-scale activities.

Legal protection is further provided through supervision and control. According to Article 36 of Law No. 27 of 2007 in conjunction with Law No. 1 of 2014, the government and local governments are obligated to monitor and evaluate the management of coastal areas. The government is also mandated to facilitate the granting of permits to local communities as a form of empowerment and protection for traditional groups. The Head of the Sumbawa Environmental Agency revealed that the reclamation permit process is too complicated and lengthy, making it difficult for residents to follow the official procedures. Many residents eventually build houses without building permits or other legal documents, which creates legal vulnerabilities. Although the government has conducted education, legal enforcement in the field remains weak and tends to be permissive towards violations under the pretext of socio-economic reasons.

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On the other hand, the environmental damage caused by reclamation is becoming increasingly evident. Coral reefs, seagrass beds, and marine biota are experiencing degradation. Law No. 1 of 2014 emphasizes the importance of environmentally friendly coastal management, which not only pursues economic benefits but also protects ecological functions and local cultural values. Article 20 of this law mandates granting management permits to local communities to utilize aquatic resources sustainably.

The reclamation practices on Bungin Island, as stated by the village head Jaelani, still utilize dead coral reefs due to limited access to materials. The community considers this reasonable due to the urgent need for land, especially for new families. More than three families can even inhabit one house. However, the local government has no active supervision to ensure that reclamation is carried out legally and environmentally sustainably.

The issue of permits has also become more complicated after the enactment of Government Regulation No. 22 of 2021, where the feasibility study for AMDAL for cross-authority activities (central, provincial, district) is conducted by the Feasibility Study Team at the central or provincial level. This procedure is not accessible to small communities like those on Bungin Island. The village head stated that the residents have never applied for official permits because they do not know how to do it and have not received assistance from the relevant agencies. Furthermore, Presidential Regulation No. 122 of 2012 Article 4 states that the determination of reclamation locations must be based on the Coastal and Small Islands Zoning Plan (RZWP-3-K) and consider technical, social, and environmental aspects. However, the reclamation activities on Bungin Island do not refer to this zoning and are carried out independently without an impact study. This clarifies the weak implementation of regulations and the lack of coordination between levels of government. Overall, the legal protection for the environment on Bungin Island is already regulated by various laws and regulations. However, its implementation is still far from ideal. The absence of regional regulations, overlapping authority between levels of government, and weak law enforcement have allowed reclamation activities on Bungin Island to proceed without supervision and continue to damage the coastal ecosystem. The ideal protection efforts should involve synergy between the government and the community, considering the socio-cultural context and the principles of sustainable development.

The role of local governments has a strategic position in the management of coastal areas and small islands, particularly in the implementation of precise and transparent zoning plans. The active involvement of the government is essential to prevent deviations in the zoning permit process that could lead to detrimental legal consequences. With the government's presence in the oversight process, the potential environmental damage caused by unilateral reclamation without official procedures can be minimized. This is important considering that reclamation activities that are not directed and do not go through legitimate oversight mechanisms are at risk of causing severe damage to the marine ecosystem. Therefore, the established licensing system must operate structured and be controlled by the competent authority so that reclamation activities remain in line with the principles of sound environmental governance.

Reclamation in coastal areas such as Bungin, according to the framework of Law No. 32 of 2009 on Environmental Protection and Management (PPLH), should adhere to the precautionary principle, the obligation to prepare an Environmental Impact Analysis (AMDAL), and open up space for public participation at every stage of the permitting process. The Job Creation Law substantially revises several key articles in Law No. 32/2009, particularly concerning AMDAL and environmental permits. One of the crucial changes is the integration of environmental permits into risk-based licensing through the Online Single Submission (OSS) system, where projects categorized as low to medium risk are no longer required to have a full Environmental Impact Assessment (AMDAL). This change significantly impacts coastal areas like Bungin, as reclamation carried out by private entities can proceed without comprehensive ecological evaluation. Moreover, the Job Creation Law did not reinforce the provisions regarding community participation in the environmental planning and supervision process guaranteed in Article 70 of Law 32/2009. This results in minimal involvement of the people of Bungin Island in decision-making directly related to their living space and resources. The research conducted by Grigorius (2020) explains that the formation of the Job Creation Law itself neglects the principles of information openness and participation as mandated in environmental law. As a result, the potential for environmental damage on Bungin Island has increased because reclamation projects tend to be legalized without strong ecological accountability mechanisms.

The lowering of protection standards contradicts the spirit of sustainable development, which is the main essence of Law 32/2009. The law places the environment as an object of protection and guarantees the community's right to a good and healthy living environment. Therefore, the reclamation on Bungin Island needs to be re-evaluated technically and legally, considering the validity of permits and adherence to the principles of precaution and ecological sustainability. If left unchecked, reclamation can lead to ecological damage, loss of marine biodiversity, and horizontal conflicts due to the loss of traditional fishing grounds.

3.2 Legal Protection for the Environment Within the Paradigm of Sustainable Development

The implementation of environmentally friendly reclamation requires vigorous law enforcement. In many cases, environmental laws in many countries, including Indonesia, face challenges in their enforcement. Weak enforcement can result in illegal actions that damage sensitive ecosystems, such as wetlands and coastal areas, which are often targeted by reclamation activities. In some areas, such as coastal zone management, inadequate regulation often results in habitat loss and environmental degradation. For example, coastal reclamation has repeatedly been proven to harm biodiversity and reduce the ecosystem's ability to sequester carbon and protect against climate change impacts. As part of a broader approach to reclamation management, integrated policies that include clear restrictions related to reclamation activities are needed. According to research reports, unplanned development often leads to irreparable environmental degradation, so formulating policies that consider long-term sustainability is critical. Regulations requiring the implementation of an environmental impact assessment (EIA) are an initial step that needs to be applied, where every reclamation project must undergo a rigorous evaluation process to assess its ecological impact. In addition, efforts to rehabilitate the reclaimed land must be considered to restore the disrupted ecosystem functions.

The necessity for authorities to impose sanctions for violations of environmental protection laws in reclamation activities is also vital. Law enforcement must be complemented by raising public awareness and education about the importance of preserving their surrounding ecosystems. Research shows that communities involved and directly affected by reclamation activities tend to be more concerned and active in environmental

protection programs. At the international level, environmental protection policies can influence each other. From a legal perspective, there are many conclusions that countries with stricter environmental laws tend to show success in preserving biodiversity and ecosystems. Various countries have adopted policies that support sustainable development, including enacting laws that consider the environmental impact of development projects, including reclamation. For example, legal reforms in China that introduce strict limitations on reclamation activities also reflect the country's concern for the sustainability of its coastal ecosystems. Pulau Bungin in Sumbawa Regency presents complex socio-ecological dynamics in coastal reclamation practices. Self-initiated reclamation by the community is a response to land limitations and the pressure for housing due to population growth. Although the reclamation does not comply with legal provisions such as Law No. 32 of 2009 and Presidential Regulation No. 122 of 2012 because it is not accompanied by an Environmental Impact Assessment (AMDAL) and official permits, this violation is more due to the mismatch between the legal system and local conditions. The complicated bureaucratic procedures and limited access to information make it difficult for the community to comply with the regulations.

On the other hand, the weak regulations at the regional level, such as the absence of reclamation bylaws, indicate the government's lack of support for coastal communities. The technocratic and centralized legal approach fails to understand the socio-cultural context, such as the tradition of providing land before marriage. Coastal area management should integrate social and ecological aspects, not just emphasize conservation. From an environmental perspective, uncontrolled reclamation can damage marine ecosystems such as coral reefs and seagrass beds. However, mere prohibition is not enough. The solution needed is the provision of environmentally friendly reclamation alternatives, enhancing legal and environmental literacy, and implementing participatory policies. The state must be present not only as a supervisor but also as a fair and adaptive facilitator. Legal protection for the environment in reclamation must accommodate community interests while preserving ecosystem sustainability. A social justice-based approach, operational law, and sustainability principles must be the foundation for designing inclusive and effective reclamation policies.

This research found that reclamation practices on Bungin Island violate environmental law principles as regulated in various regulations, such as Law No. 32 of 2009, Law No. 1 of 2014, and Presidential Regulation No. 122 of 2012. The reclamation activities carried out independently by the community are conducted without an AMDAL, location permits, and a basis for regional zoning, thus lacking formal legality and damaging the marine ecosystem. The discrepancy between legal norms and field practices reflects weak supervision and the minimal active role of the local government. Besides legal violations, this reclamation practice contradicts the sustainable development paradigm. There is an imbalance between the community's social needs—such as the need for housing—and environmental preservation efforts. The local government failed to provide legal and environmentally friendly housing solutions, prompting the community to engage in illegal reclamation without considering its impact on the coastal environment. The local government's failure to formulate reclamation policies that favor the community and the environment indicates weak governance of coastal spatial planning. This exacerbates the imbalance between ecological, legal, and social aspects in reclamation practices. This research concludes that legal environmental protection has not been adequate, and sustainable development has not yet been realized. Therefore, an integrated approach based on regulation, collaboration, and community participation is needed. Law enforcement against illegal reclamation must be accompanied by alternative solutions, such as providing legal housing and environmental education, to achieve ecological and social justice on Bungin Island.

3.3 The Impact of Reclamation Activities on the Environment

Reclamation activities significantly impact the sustainability of marine ecosystems, particularly in affecting the life of the biota inhabiting those waters. On Bungin Island, most of the Bajo ethnicity population have long practiced traditional reclamation by utilizing dead coral reefs as the primary material for house foundations. This reclamation process fills shallow waters with coral fragments until the area can be used as residential land. Reclamation on Bungin Island impacts environmental damage and creates complex social issues. With the high population density and limited land, the Bajo tribe community is forced to carry out reclamation independently without proper planning and coordination. As a result, horizontal conflicts among residents have emerged, land ownership disparities, and changes in the social structure, particularly in the lives of fishermen whose fishing areas

continue to shrink. The tradition of land reclamation has been ongoing since the arrival of the Bajo tribe on Bungin Island. This activity is even considered a cultural heritage closely related to the local community's identity. However, these practices have expanded massively and uncontrollably over time, causing damage to coral reefs, seagrass beds, and a decline in marine biodiversity. The community acknowledges that reclamation using coral reefs (especially dead ones) has become a cheap and practical solution due to limited access to other construction materials like fill soil. Some residents, such as Supiani and Heri, explained that economic and cultural compulsion are the main factors keeping reclamation ongoing. Residents are not allowed to leave Bungin Island, and local culture demands that every young man provide his land before getting married. As a result, one house is often inhabited by 3–4 heads of families. The reclamation process also takes a long time because the collection of coral reefs must be adjusted to weather conditions and limited operational costs. From a legal standpoint, this reclamation practice violates various provisions, such as Article 35 of Law No. 27 of 2007, which prohibits coral reef mining and physical development that harms the environment. However, weak supervision and minimal effectiveness of outreach have caused this activity to continue without control. The Sumbawa Regency Environmental Agency stated that they can only provide recommendations, while the licensing process and coordination with technical agencies have not been optimal.

Several residents, like Zul, have shown awareness of switching to alternative materials such as soil from mines. However, difficult access and high costs make this option difficult to implement on a large scale. Theresome residents are still forced to use live coral to expand residential areas. This situation is exacerbated by the absence of local regulations specifically governing reclamation and the lack of synchronization between the district and provincial governments regarding the authority to oversee coastal areas. From an ecological perspective, reclamation causes severe degradation to coastal systems, including coral reefs, mangroves, and seagrass beds. The 2009 UUPPLH regulates environmental damage standards but has not been effectively implemented in Pulau Bungin. The further effects of this damage include the loss of marine biota habitats, disruption of fish migration, and a decline in the quality of life for fishing communities. Overall, reclamation practices on Bungin Island are caught in a dilemma between the community's basic needs and environmental preservation. An approach that only emphasizes legal prohibitions is not practical enough without being accompanied by concrete solutions such as providing alternative materials, financial assistance, and participatory spatial planning. The state must be present not only as a regulator but also as a facilitator that provides solutions for the community.

3.4 Environmental Law Enforcement in Reclamation Activities on Bungin Island

Environmental law enforcement in reclamation activities is becoming increasingly crucial amid the rising pressure on coastal ecosystems. Although reclamation is often considered to bring economic and social benefits, this practice can cause severe environmental damage if not adequately controlled. Therefore, law enforcement is not sufficient solely from the regulatory side; it must also involve the active participation of the community, local government, and the private sector. By Presidential Regulation No. 122 of 2022, every reclamation activity must have planning and location and implementation permits. In addition, the AMDAL document is an absolute prerequisite for identifying and managing potential environmental impacts. However, the implementation in various regions, including Bungin Island, is still very weak. Economic pressure, budget constraints, and local interests often lead to neglecting the licensing process and ineffective supervision. In the context of the reclamation of Bungin Island, the local government has issued a call to stop the practice of coral reef extraction. Unfortunately, the limited land, the high cost of soil materials, the lack of heavy machinery, and the weak coordination between agencies have rendered the appeal ineffective. Reclamation practices continue without clear legal procedures, even using live coral reefs that are important habitats for marine biota. This activity is not due to malicious intent, but rather a response to urgent livelihood needs amidst rapid population growth and a local culture that does not allow the community to leave the island.

This social issue is exacerbated by the absence of Regional Regulations (Perda) that govern reclamation management. Although Law No. 27 of 2007 explicitly prohibits activities that damage ecosystems, the local government has not shown real commitment through concrete supervision and law enforcement. Community-driven reclamation activities continue without administrative or technical oversight. Ecologically, the impacts that arise include the loss of coral reef habitats, disruption of fishing areas, decline in biodiversity, and marine water pollution due to sedimentation and waste. Moreover, ecological pressure is exacerbated by converting coastal areas into dense

settlements without environmental zoning. Livestock such as goats are forced to eat plastic and paper because there are no green spaces. This shows extreme environmental degradation.

Based on the approach of Legal Ecology Theory, this condition demonstrates the failure of the legal system to live and function within society. Environmental regulations that tend to be legalistic and centralistic are irrelevant to the local context. As a result, the community that should be protected ends up being ensnared as violators because the law does not provide a fair and contextual solution. On the other hand, civil law enforcement can be an alternative. The community that feels aggrieved by reclamation can file a lawsuit for unlawful acts (PMH) as regulated in Article 1365 of the Civil Code. Moreover, Article 91 of Law No. 32 of 2009 opens the door for class action or group lawsuits by the community or environmental NGOs to fight for the right to a healthy environment. However, this mechanism is remedial and highly dependent on citizen initiative and legal support.

For that reason, law enforcement strategies must be multidimensional and collaborative, taking into account the following approaches: Ecosystem restoration in every reclamation project, Nature-based solutions, such as ecosystem engineering, Involvement of local communities, including in the planning and supervision of reclamation, Regulatory reform, both at the central and regional levels, to be more adaptive to the realities of coastal communities.

The government should issue appeals and be present in concrete ways by providing environmentally friendly alternatives, logistical support, and legal and participatory community reclamation policies. Only with a collaborative approach and social justice can law enforcement against reclamation be effective and sustainable. Meanwhile, criminal law enforcement against illegal reclamation perpetrators is also possible if it is proven that environmental pollution or damage occurs due to intent or negligence. Articles 98 to 100 of Law No. 32 of 2009 state that anyone who intentionally commits acts that result in pollution or environmental damage can be sentenced to imprisonment for a maximum of 10 to 15 years and fined up to Rp15 billion. In the case of Pulau Bungin, if it can be scientifically proven that reclamation has caused the loss of marine habitats such as seagrass beds, damage to coral reefs, or increased coastal erosion, then the perpetrators can be held criminally liable for environmental offenses. However, the practice of criminal law enforcement in the environmental sector still faces serious obstacles, particularly due to the high standards of scientific proof, the limited capacity of environmental investigators (PPNS), and the weak coordination among law enforcement agencies. Therefore, a combination of administrative, civil, and criminal law enforcement becomes a strategic approach that must be considered simultaneously to ensure environmental protection on Bungin Island. As a follow-up to law enforcement against illegal reclamation on Bungin Island, active Involvement from various parties is necessary, especially the local government, law enforcement agencies, and environmental institutions.

The regional government, together with the Environmental Agency of West Nusa Tenggara Province, must immediately verify the legality of the reclamation that has been and is currently taking place, as well as conduct an environmental audit of the impacts of the reclamation. This is in line with Article 76 of Law No. 32 of 2009, which regulates the government's authority to impose administrative sanctions in the form of temporary cessation of activities, restoration of environmental functions, or even revocation of permits. If indications of more serious legal violations are found, the government can report to environmental civil servant investigators (PPNS) or the police to conduct a criminal investigation based on Article 94. Article 98 of the same law. In addition, non-governmental organizations (NGOs) such as WALHI or LBH can act as independent monitors and legal advisors for citizens, including filing environmental lawsuits through the class action mechanism, as regulated in Article 91 of Law 32/2009. This mechanism can serve as an effective means to encourage compensation, ecosystem restoration, and even the cancellation of illegal reclamation.

On the other hand, the people of Bungin Island must be empowered legally and socially to have the capacity for environmental advocacy. They can utilize their participatory rights as guaranteed in Article 70 of the PPLH Law. Thus, law enforcement follow-up should rely on a repressive approach and be supported by participatory and restorative approaches to ensure the environmental sustainability and socio-ecological continuity of Bungin Island. Reclamation on Bungin Island carried out by the Bajo tribe community reflects the conflict between tradition, social needs, and ecological pressure. Starting as an effort to adapt to spatial limitations, reclamation practices have evolved into a necessity due to rapid population growth. The community uses coral reefs—both dead and alive—as reclamation materials, even though this practice damages the marine ecosystem. Ironically, despite the land expansion

of up to 16 hectares, the community's welfare has not improved; more than three families occupy many houses, and the community's income, which is mostly from fishermen, remains low.

Reclamation activities are carried out sporadically without an AMDAL, environmental permits, or legal zoning plans, thus violating various provisions in Law No. 32 of 2009, Law No. 1 of 2014, and Presidential Regulation No. 122 of 2012. In addition to legal repercussions, reclamation causes severe ecological damage: coral reef death, biodiversity loss, sea water pollution, and disruption of fishing areas. From a social perspective, land conflicts, access disparities, and degradation of quality of life also arise. The outreach efforts conducted by the Environmental Agency have not been practical because they are not accompanied by concrete solutions such as subsidies for environmentally friendly materials or sustainable spatial planning. Law enforcement is also symbolic—without sanctions or decisive actions against environmental violations. In this context, reclamation is not merely a technical issue, but rather a manifestation of the failure of local government governance in presenting policies that integrate social, ecological, and legal aspects.

4. CONCLUSION

Legal protection for the environment in reclamation on Bungin Island has been normatively regulated in various regulations such as Law No. 32 of 2009, Law No. 1 of 2014, and Presidential Regulation No. 122 of 2012, which mandate planning, AMDAL studies, and permits before reclamation. However, its implementation has been ineffective because the local government only applies a persuasive approach without strict law enforcement and precise coastal spatial planning. The impact of reclamation that damages the marine ecosystem, such as the destruction of coral reefs and the loss of marine biota habitats, indicates weak supervision and the failure to use repressive legal instruments as regulated in the Environmental Protection and Management Law (UU PPLH). This reflects that the principle of sustainable development has not yet become the primary foundation in managing the coastal area of Bungin Island.

REFERENCES

- A Raihan, "An Econometric Evaluation of the Effects of Economic Growth, Energy Use, and Agricultural Value Added on Carbon Dioxide Emissions in Vietnam," *Asia-Pacific Journal of Regional Science* 7, no. 3 (2023): 665–96, <https://doi.org/https://doi.org/10.1007/s41685-023-00278-7>.
- B. Sembiring, T., Tuhuteru, L., Fuada, N., Sudarmanto, B., & Nugroho. "Millennial Generation Environmental Law Compliance Analysis Through Clean Beach Activities," *Jurnal Ilmu Sosial Mamangan* 12, no. 2 (2023): 259–70, <https://doi.org/https://doi.org/10.22202/mamangan.v12i2.6587>.
- B. Wang, X., Xiao, X., Zhang, X., Wu, J., & Li, "Rapid and Large Changes in Coastal Wetland Structure in China's Four Major River Deltas," *Global Change Biology* 29, no. 8 (2023): 2286–2300, <https://doi.org/https://doi.org/10.1111/gcb.16583>.
- Chintya Khaerunnisa, *Reklamasi Pesisir Pantai di Pulau Bungin Menurut Undang-Undang Nomor 27 Tahun 2007 dan Perspektif Fikih Lingkungan* (Skripsi, Fakultas Syariah, UIN Maulana Malik Ibrahim Malang, 2022),
- E. Sulistyaningsih, "Community Participation in Improving Environmental Protection and Effort Management," in *Iop Conference Series Earth and Environmental Science*, 2022, 12–21, <https://doi.org/https://doi.org/10.1088/1755-1315/1030/1/012021>.
- Fanani, F., Utari, A., & Pramana, A. Y. E. (2024). Karakteristik Lingkungan Permukiman Pesisir Suku Bajo di Pulau Bungin dan Pulau Kaung. *Jurnal MATRA*
- Grigorius, E.S. (2020). *Keterbukaan Informasi dan Partisipasi Publik dalam Pembentukan Legislasi: Studi Kasus RUU Cipta Kerja*. Universitas Airlangga
- H. Wuijts, S., Graversgaard, M., Brink, C., Boekhold, S., Sundnes, F., Farrow, L., ... & Rijswijk, "Protection of Water Resources From Agricultural Pressures: Embracing Different Knowledge Domains in Governance Approaches," *Environmental Policy and Governance* 35, no. 2 (2024): 201–13, <https://doi.org/https://doi.org/10.1002/eet.2136>.
- Eashy, I. (2024). Dampak Permukiman Nelayan terhadap Lingkungan di Pulau Bungin. Universitas Muhammadiyah Mataram.

- Nurhidayah, L. (2017). *Challenges in Environmental Law Enforcement in Indonesia*. Indonesian Journal of Environmental Law, 4(2), 221–243
- Rahmah, M. & Zaidun, M. (2015). *Mewujudkan Investasi Berwawasan Lingkungan Melalui Integrasi dan Harmonisasi Pengaturan Corporate Environmental Responsibility di ASEAN*. Universitas Airlangga Pratama,
- D. S. (2022). Perancangan Kampung Vertikal Nelayan dengan Pendekatan Eko-Arsitektur di Pulau Bungin. Universitas Islam Indonesia.
- Salim, H. S. (2015). *Hukum Lingkungan di Indonesia*. Jakarta: Rajawali Pers.
- Samir, S. (2021). Status Hukum Tanah Hasil Reklamasi untuk Kawasan Permukiman Masyarakat di Pulau Bungin. Universitas Hasanuddin
- Soerjono Soekanto, *Pengantar Penelitian Hukum*, (Jakarta: UI Press, 1986)
- Sudirman Saad, *Bajo Berumah di Laut Nusantara*, (Jakarta: COREMAP II, 2009), 31.
- S. Suharyansyah, S., and Mandala, "Law Enforcement Against Perpetrators of Environmental Destruction Based on the Principle of Direct Responsibility in Class Action Civil Lawsuits," 2022, <https://doi.org/https://doi.org/10.4108/eai.16-4-2022.2319760>.
- T. Abdullah, D., Sudarwis, R., Triwibowo, A., & Ramadhan. "Tyre Drop Structure For Treatment of Erosion," *Journal of Environmental and Agricultural Studies* 4, no. 2 (2023): 12–15, <https://doi.org/https://doi.org/10.32996/jeas.2023.4.2.3>.
- T. Zhou, D., Lin, Z., Ma, S., Qi, J., & Yan, "Assessing an Ecological Security Network For A Rapid Urbanization Region in Eastern China," *Land Degradation and Development* 32, no. 8 (2021): 2642–60, <https://doi.org/https://doi.org/10.1002/ldr.3932>.
- Undang-Undang Republik Indonesia Nomor 32 Tahun 2009 tentang Perlindungan dan Pengelolaan Lingkungan Hidup.
- Undang-Undang No. 27 Tahun 2007 jo. UU No. 1 Tahun 2014 tentang Pengelolaan Wilayah Pesisir dan Pulau-Pulau Kecil.
- Undang-Undang No. 5 Tahun 1960 tentang Peraturan Dasar Pokok-pokok Agraria (UUPA)
- Undang-Undang No. 32 Tahun 2009 tentang Perlindungan dan Pengelolaan Lingkungan Hidup
- Undang-Undang No. 32 Tahun 2009 tentang Perlindungan dan Pengelolaan Lingkungan Hidup, Pasal 22–24 dan Pasal 70 tentang partisipasi publik.
- Undang-Undang No. 11 Tahun 2020 tentang Cipta Kerja dan Peraturan Pemerintah No. 22 Tahun 2021 tentang Penyelenggaraan Perlindungan dan Pengelolaan Lingkungan Hidup.
- Wibisana, A. G. (2012). Prinsip Kehati-hatian dalam Hukum Lingkungan Internasional dan Relevansinya bagi Indonesia. *Jurnal Hukum & Pembangunan*, 42(3).
- X. Zhu, G., Xie, Z., Li, T., Ma, Z., & Xu. "Assessment Ecological Risk of Heavy Metal Caused by High-Intensity Land Reclamation in Bohai Bay, China," *Plos One* 12, no. 4 (2017): 175–627, <https://doi.org/https://doi.org/10.1371/journal.pone.0175627>.