

Realizing Climate Justice through the Fullfillment of Environmental rightss for Indonesia's Coastal Communities

Rismawati Nur ¹⁾, Alfin Dwi Novemyanto ²⁾, Retno Meilani ³⁾

^{1, 2, 3)}Master in Business and Constitutional Law, Faculty of Law

Universitas Gadjah Mada, Indonesia

Corresponding Author: Rismawati Nur, Email: rismawatinur@mail.ugm.ac.id

History: Received 17/05/2025 | Revised 29/05/2025 | Accepted 21/10/2025 | Published 30/10/2025

Abstract. The urgency of this research departs from the growing inequality between those most affected by climate change and those most responsible for it, particularly among Indonesia's coastal communities who face severe ecological degradation, livelihood loss, and violations of environmental rights despite limited contribution to greenhouse gas emissions. This study aims to analyze the extent to which environmental rights for coastal communities are fulfilled within Indonesia's legal and policy frameworks and to identify the structural and regulatory barriers that hinder the realization of climate justice. The research employs a qualitative socio-legal approach using document studies sourced from statutory regulations, scholarly articles, and government reports, analyzed through normative legal interpretation and thematic analysis to integrate legal and social perspectives. The findings show that although environmental rights are constitutionally and statutorily recognized, their implementation remains fragmented due to regulatory disharmony, weak institutional coordination, and economic dependence on extractive industries, which collectively perpetuate systemic rights violations and climate inequality. These results imply that achieving climate justice requires coherent regulation, institutional reform, and participatory environmental governance. The novelty of this research lies in its integration of socio-legal analysis that connects normative legal guarantees with the lived realities of vulnerable communities, an approach rarely applied in previous studies. This study contributes theoretically and practically by offering a policy-oriented framework for developing participatory and justice-based climate governance and proposing the establishment of a dedicated Climate Change Law to protect coastal populations

Keywords: *Climate Justice; Environmental Rights; Coastal Communities; Socio-Legal Approach; Climate Change Law.*

INTRODUCTION

Climate change impacts will threaten the sustainability of 17,380 (Badan Informasi Geospasial, 2024), as well as more than 8,090 villages scattered in coastal areas and small islands inhabited by millions of people in Indonesia (Kurniadi dkk., 2023). A total of 42 million people live in areas less than 10 meters above sea level, so that in the event of a 1 meter sea level rise, it is estimated that 405,000 hectares of coastal land will be submerged (Bappenas, 2022). This phenomenon is exacerbated by the acceleration of global carbon emissions, which causes sea level rise, leading to more frequent coastal flooding, coastal erosion, loss and alteration of coastal ecosystems, and poor salinity (Oppenheimer dkk., 2019) has threatened the socioeconomic life of

coastal communities (Manik et al., 2024) most of whose population work as fishermen (Manik dkk., 2024a) whose residents mostly work as fishermen (Mukaddas, 2021; Sulaiman dkk., 2014).

Climate change poses a real threat to coastal communities that depend on marine resources to meet their daily needs (Nurholis & Mokodompit, 2024; Prisma Akbar dkk., 2024). Unpredictable weather makes it difficult for fishermen to go out to sea, catches are declining, and many are losing their livelihoods (Irwan dkk., 2023). This has also triggered tensions in border areas and worsened the social and economic situation through mass migration (Parluhutan Sagala dkk., 2025). Not only that, climate change also adversely affects human health (Susilawati, 2021), including women, children, and adolescents, which not only affects physical health but also mental health due to anxiety over the loss of household resources and uncertainty about the future (Hadfield dkk., 2025).

Based on a report by the Intergovernmental Panel on Climate Change (IPCC), coastal communities, especially in developing countries, will experience an increased risk of disasters and loss of livelihoods if there are no inclusive adaptation policies (IPCC, 2023). Based on a study from Development Planning Agency (Bappenas) in 2019 revealed that Indonesia's economic losses due to climate change in four priority sectors in 2020-2024 were estimated to reach Rp544 trillion (Pidhegso dkk., 2022).

Table 1. Sectoral Budget Projections by Year (in trillion rupiahs)

Sector	2020	2021	2022	2023	2024
Marine & Coastal	81.30	81.43	81.57	81.69	81.82
Water	3.83	4.74	5.61	6.45	7.29
Agriculture	11.20	13.40	15.59	17.77	19.94
Health	6.03	6.15	6.26	6.37	6.48
Total	102.36	105.72	109.03	112.29	115.53

Source: Bappenas, 2021

Data shows that the marine and coastal sector consistently suffers the highest losses compared to other sectors. This condition reflects the high vulnerability of coastal areas to climate change, which threatens the fulfillment of human rights (Golo dkk., 2025). Therefore, protection for vulnerable communities is necessary to ensure that their rights are guaranteed and protected by the state. Demands for climate justice have emerged in response to the need for fair protection of human rights against the impacts of climate change (Mary Robinson Foundation, 2020). Prihatiningtyas in (Bahri, 2024) emphasizing that climate justice is a crucial issue that raises ethical and moral dimensions in addressing climate change, thus requiring fair and equal treatment.

Research related to the protection of coastal communities amid climate change has been conducted by (Octavian dkk., 2022) which shows that government efforts to protect against the impacts of climate change are still sporadic, reactive, uncoordinated, and unsustainable. In addition, research by (Syaifudin & Rusmana, 2024) shows that countries and corporations have a responsibility to fulfill human rights in the context of climate change, where there has been progress in regulation, but there are still many countries and corporations that have not fully taken responsibility for mitigating the impacts of climate change.

The urgency of this research lies in the growing inequality between those most affected by climate change and those most responsible for it. Coastal communities in Indonesia contribute the least to greenhouse gas emissions, yet they experience the most severe consequences in the form of ecological degradation, loss of livelihoods, and violations of their right to a healthy environment. Existing studies have mainly focused on the socio-economic or ecological impacts of climate change but have rarely explored its legal dimensions, particularly regarding how environmental rights operate as an instrument of justice for coastal populations. This gap reveals a crucial need for legal scholarship that connects normative frameworks with the lived realities of vulnerable communities.

The novelty of this research lies in its integration of socio-legal analysis to examine the fulfillment of environmental rights as a foundation for achieving climate justice. Unlike previous studies that treat legal and social issues separately, this study bridges the doctrinal interpretation of environmental law with empirical social contexts to reveal inconsistencies between law in theory and law in practice. By combining legal interpretation, thematic analysis, and contextual understanding, this research provides a multidimensional framework that contributes both theoretically and practically to the discourse on environmental governance and climate justice in Indonesia.

Accordingly, this study seeks to analyze the extent to which environmental rights for coastal communities are fulfilled within Indonesia's current legal and policy frameworks, and to identify the structural, institutional, and regulatory factors that hinder the realization of climate justice. In doing so, it aims to generate contextually grounded insights to support the formulation of participatory and justice-oriented climate governance.

RESEARCH METHODS

Research Type and Approach

This research uses socio-legal research. Socio-legal studies can also be referred to as an alternative approach that examines doctrinal studies of law and its implementation which

represents the interrelationship between contexts where law is enforced (an interface with a context within which law exists) (Irianto, 2012). The socio-legal approach is considered most appropriate for this research because it allows for a comprehensive understanding of how legal norms concerning environmental rights are implemented and experienced by coastal communities affected by climate change. Rather than treating law as a self-contained system, this approach situates it within its broader social, political, and economic context that combines social and legal aspects (Luthfi dkk., 2024).

Data Collection Method

Data were collected using document studies sourced from laws and regulations, journal articles, books, government reports, and other documents relevant to the research topic using the keywords climate justice; environmental rights; coastal communities; climate change and law; and socio-legal analysis.

Data Analysis Techniques

The analysis process was carried out in two interconnected stages. First, normative legal analysis was conducted to examine the extent to which existing legal instruments recognize and guarantee environmental rights for coastal communities. This involved statutory interpretation, doctrinal review, and comparison across related legal regimes (environmental, coastal, and human rights law).

Second, thematic analysis was employed to synthesize patterns emerging from empirical and secondary data, such as community participation, policy implementation gaps, and institutional weaknesses. The thematic approach enables the identification of recurring social and legal issues that influence the realization of climate justice. Themes were developed inductively from the data through repeated reading and coding, followed by triangulation across multiple data sources to ensure analytical validity.

The application of thematic analysis in this study is justified as it enables the researcher to transcend mere descriptive accounts and achieve a deeper, interpretative understanding of socio-legal dynamics. This approach facilitates the exploration of how legal norms, institutional structures, and community practices interact within the broader context of environmental vulnerability. In parallel, the use of legal interpretation is indispensable for delineating the normative scope, coherence, and limitations of the existing legal framework, as well as for critically assessing the extent to which current regulations embody the fundamental principles of environmental and climate justice. Collectively, these analytical methods construct a

comprehensive framework that bridges doctrinal legal analysis and social reality, thereby allowing the research to generate contextually grounded and policy-relevant insights aimed at strengthening environmental protection and advancing justice for Indonesia's coastal communities.

Data Validity

This research relies on secondary data sources; thus, direct field verification was not conducted. Ethical standards were observed by ensuring accurate citation and acknowledgment of all data sources. The study also recognizes the limitation inherent in socio-legal research that depends on document analysis, as it may not fully capture the lived experiences of coastal communities. However, this limitation is addressed by triangulating data from multiple scholarly, governmental, and institutional sources to ensure analytical reliability and contextual depth.

RESULT

The results of this study reveal several key findings concerning the fulfillment of environmental rights and the realization of climate justice for Indonesia's coastal communities. First, although Indonesia has ratified several international environmental instruments, including the United Nations Framework Convention on Climate Change (UNFCCC) through Law No. 6 of 1994, the Kyoto Protocol through Law No. 17 of 2004, and the Paris Agreement in 2015, their implementation in national regulations remains fragmented. There is no specific legal framework that comprehensively governs climate change and explicitly protects the rights of vulnerable groups such as coastal populations.

Second, at the national level, constitutional and statutory guarantees, particularly Article 28H of the 1945 Constitution and Law No. 32 of 2009 on Environmental Protection and Management recognize the right to a good and healthy environment as a fundamental human right. However, the protection of these rights in practice is hindered by overlapping regulations and weak institutional coordination between the Ministry of Environment and Forestry and the Ministry of Marine and Fisheries. The lack of synchronization between environmental licensing mechanisms and spatial planning policies has resulted in double permitting, legal uncertainty, and limited community participation in decision-making processes.

Third, field-based secondary data indicate that the socio-ecological vulnerability of coastal communities continues to increase due to sea-level rise, seawater intrusion, and coastal erosion, which have directly reduced water quality, fishery productivity, and household income.

For example, communities in the Thousand Islands and Lampung have experienced significant livelihood losses due to coastal degradation and pollution from extractive industries.

Fourth, the economic dependence of the Indonesian government on extractive industries such as mining and palm oil has worsened the environmental conditions of coastal areas. This dependence has led to deforestation, biodiversity loss, and increased greenhouse gas emissions, contradicting Indonesia's commitment to emission reduction and sustainable development.

Overall, the findings show that the lack of legal coherence, the dominance of economic interests, and the absence of a participatory climate governance framework have caused the environmental rights of coastal communities to remain unfulfilled. These conditions highlight the urgent need for comprehensive climate legislation that integrates justice, sustainability, and community participation principles in Indonesia's environmental governance system.

DISCUSSION

Fulfillment of Environmental rightss for Coastal Communities

Indonesia's coastal areas have geographical characteristics that make them vulnerable to the impacts of climate change, such as coastal erosion, tidal flooding, seawater intrusion, and an increased frequency of hydrometeorological disasters. One of the instruments used to measure this level of vulnerability is the Coastal Vulnerability Index (CVI), which classifies coastlines based on a vulnerability scale from very low to very high.

Table 2. Coastal Hazard Vulnerability Levels in Indonesia

Island Region	CVI 1	CVI 2	CVI 3	CVI 4	CVI 5
Sumatera	10824.93	1054.45	2989.37	6769.58	487.49
Kalimantan	4379.84	37.77	20008.24	3782.24	0.00
Java and Bali	4368.09	420.13	760.27	1106.41	99.32
Sulawesi	8807.00	1102.99	2608.58	4134.06	904.51
Nusa Tenggara	8334.63	72.17	205.08	40.96	279.04
Maluku	12802.45	288.26	3276.91	472.97	49.15
Papua	16965.49	1211.83	1598.78	354.35	0.00
Total Km	66482.43	4187.59	13447.23	16660.57	1819.51

Source: Bappenas, 2021

The data shows the distribution of coastline length in various regions of the Indonesian archipelago based on their vulnerability levels. Overall, Indonesia has a total coastline length of 66,482.43 km, with the largest distribution being in index 1 (very low) at 66,482.43 km and index 3 (medium) at 13,447.23 km. This shows that most of Indonesia's coastal areas are in the low to medium risk category for coastal hazards.

As a country in the *global ocean conveyor belt (thermohaline circulation)*, Indonesia plays a strategic role in efforts to combat climate change. Indonesia's commitment to this issue began with the ratification of the United Nations Framework Convention on Climate Change through Law No. 6 of 1994 concerning the Ratification of the United Nations Framework Convention on Climate Change (Law No. 6/1994). Ten years later, Indonesia strengthened its commitment by ratifying the Kyoto Protocol through Law No. 17 of 2004 on the Ratification of the Kyoto Protocol to the United Nations Framework Convention on Climate Change (Law No. 17/2004). In addition, Indonesia also participated in the 2015 Paris Agreement, which gave rise to the Nationally Determined Contribution (NDC) commitment (Prihatiningtyas dkk., 2023).

In the context of national law, there is a constitutional obligation to guarantee every citizen's right to a good and healthy environment as a fundamental right that cannot be reduced under any circumstances (non-derogable rights). This right includes the guarantee for every individual to enjoy an environment that supports physical and mental health and sustainable well-being. (Natamiharja dkk., 2022). The fulfillment of the right to the environment is guaranteed in Article 28H paragraph (1) of the 1945 Constitution of the Republic of Indonesia, which states that *“every person shall have the right to live in physical and spiritual prosperity, to have a place to live, and to have a good and healthy environment, as well as the right to obtain health services.”* This is reinforced in Law 32/2009 on Environmental Protection and Management, specifically in Article 65 paragraph (1), which states that *“everyone has the right to a good and healthy environment as part of their human rights.”* Specifically, the fulfillment of human rights for coastal communities is regulated in Article 60 of Law Number 1 of 2014 concerning Coastal Zone and Small Islands Management.

In practice, efforts to fulfill the rights of coastal communities to a healthy environment still face various obstacles, both in terms of regulatory frameworks, inter-agency coordination, and budget constraints for climate change mitigation. Climate inequality in Indonesia's coastal regions is clearly reflected in various forms of socio-ecological vulnerability. For example, communities on Kelapa Island and the Thousand Islands are experiencing a clean water crisis due to increasingly severe seawater intrusion as sea levels rise and freshwater resources become limited (Azni dkk., 2025); (Prasita dkk., 2023).

The phenomenon of environmental degradation in coastal areas is becoming more widespread and has a direct impact on people's lives. In the coasts of Lampung and East Kalimantan, for example, fishing communities have lost their livelihoods due to coastal erosion, declining fish catches, and marine pollution from extractive industries and mining activities (Manik dkk., 2024b). Mining activities in coastal areas and small islands cause serious

environmental damage, such as water pollution and a decline in biodiversity (Rahayu dkk., 2024). This situation hinders the fulfillment of people's rights to a clean and healthy environment, as is the case in North Morowali Regency, where industrial expansion has limited fishing grounds and reduced the quality of water resources (Lampe dkk., 2025).

This ecological damage also has an impact on the social and economic aspects of coastal communities. Competition for access to resources and decision-making that does not involve local communities often triggers conflicts between industry and fishermen (Lampe dkk., 2025); (Rahmah, 2019). In addition to losing their livelihoods, coastal communities also lose their living space and face the threat of reduced food security, which has the potential to increase malnutrition rates (Situmeang & Aflaha, 2022). These conditions show that the vulnerability of coastal communities is not only caused by natural factors, but also influenced by socio-political dynamics, including economic marginalization, non-participatory decision-making, and unequal access to resources.

This has led to the emergence of climate justice for coastal communities through a rights-based approach and public participation. This concept has been implemented in the United States, where public participation in the environmental impact assessment process is required by law under the National Environmental Policy Act, although its implementation still faces power imbalances between communities and corporations (Grote, 2024). Efforts to fulfill the environmental rights of coastal communities essentially require sustainable environmental management oriented towards ecosystem restoration (Milanés-Salinas dkk., 2025); (Adi Wibowo & Karim, 2023). This approach needs to be realized through climate change adaptation and mitigation programs that involve active community participation (Anwar & Shafira, 2020). Community involvement is important given that coastal communities possess a wealth of traditional ecological knowledge and resilience mechanisms that have been passed down from generation to generation, including sustainable natural resource management practices and strategies for adapting to environmental change (Saputra dkk., 2024).

Despite various efforts, weaknesses in coastal zone management remain a major obstacle to fulfilling the environmental rights of coastal communities. Lack of coordination and synergy between the government, communities, and the private sector has resulted in sectoral and fragmented environmental management, meaning that the rights of coastal communities in the face of climate change have not been optimally fulfilled (Yulianti, 2021). Therefore, ideal coastal zone management needs to be developed through effective collaboration between the government, the community, and the application of local wisdom values to ensure environmental sustainability and the protection of community rights (Ari Atu Dewi, 2018).

Climate Justice for Coastal Communities

The geographical condition of a region is a natural factor that must be managed wisely, because the right to a good and healthy environment is a human right guaranteed to every individual (Bram, 2011). Environmental and climate justice is a global movement that aims to ensure equal protection of human rights amidst the climate crisis (Isaac & Hilal, 2024). The concept of climate justice goes beyond mere environmental protection; it encompasses a broader struggle for social and economic equality by demanding that climate action align with human rights (Humphreys & Robinson, 2009).

Climate justice is directly proportional to the fulfillment of environmental justice, Bullard reveals various views that indicate the existence of inequality towards the fulfillment of environmental justice. According to him, environmental justice has several basic elements, namely:

1. There is a right for everyone to be protected from environmental damage;
2. Adopt a public health model of prevention (eliminating threats before harm occurs) as a preference.
3. Shifting the burden of proof to polluters, those who discriminate, or those who do not provide equal protection to certain groups.
4. To infer discrimination, statistical evidence and/or differences in perceived community impact are used as evidence rather than intent to treat differently; and
5. Using "*targeted*" actions and resources to address inequality in environmental risk sharing (Afinnas, 2023).

Coastal communities, despite their relatively small contribution to greenhouse gas emissions, are at the forefront of the most severe impacts of climate change. Thus, climate justice needs to be seen as an effort to deeply examine the structural inequalities that worsen the conditions of the community, while encouraging solutions that truly favor the protection, resilience and welfare of coastal communities. Climate justice calls for holistic development, both in terms of the social connections people make in the face of uncertainty, chaos, loss and trauma, and how wealth, opportunity, risk and responsibility are shared equitably. In this endeavor, it is important to promote protection and empowerment that does not only focus on technical solutions, but also addresses social disconnects and promotes solidarity across communities in the face of the climate crisis (Kinol dkk., 2023).

This requires not only addressing immediate threats such as sea level rise, extreme weather and ecosystem damage, but also fundamental changes to socio-economic structures of

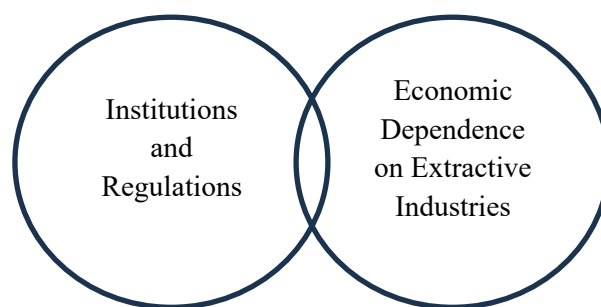
power and advantage that have maintained environmental injustice (Smith & Rhiney, 2016). It aims to reduce unequal harms from climate change by seeking to generate equitable benefits as part of climate solutions by involving affected communities as part of the decision-making process (Carman dkk., 2025).

The principle of climate justice is reflected in Article 3 of the *United Nations Framework Convention on Climate Change*, which stipulates that countries should protect the climate system based on the principle of *common but differentiated responsibilities and respective capabilities*. This principle underscores that developing countries, including vulnerable communities such as coastal communities, are entitled to special protection and international support. Therefore, climate justice is not just a policy agenda, but a legal obligation that must be realized by the state through policies that are participatory, accountable, and in favor of the most affected groups as an important step in encouraging social stability and promoting sustainable management of coastal areas (Ali dkk., 2021).

Factors Affecting the Fulfillment of Climate Justice for Coastal Communities

The fulfillment of climate justice for coastal communities cannot be separated from complex structural, policy, socio-economic and environmental dynamics. Coastal communities are often the most affected by climate change, yet ironically contribute the least to the causes of environmental degradation that directly or indirectly affect climate change. To understand the barriers and potential for realizing climate justice, it is important to identify a number of factors that influence the fulfillment of rights and protection of coastal communities in the context of the climate crisis.

Figure 1. Factors affecting the fulfillment of the rights of coastal communities



Source: Author

1. Institutionalization and Regulation

One of the main factors that hinder the fulfillment of climate justice for coastal communities is the weak legal and institutional framework that should protect the right to a decent

living environment. The lack of synchronization between regulations at the central and regional levels (Anwar & Shafira, 2020), the low effectiveness of environmental law enforcement, and the limited legal instruments that specifically regulate the protection of coastal communities from the impacts of climate change are significant obstacles.

Another key finding of this research concerns the persistent disharmony among environmental and coastal management regulations, which contributes directly to the violation of environmental rights for coastal communities. Although Law No. 32 of 2009 on Environmental Protection and Management, Law No. 1 of 2014 on Coastal Zone and Small Islands Management, and Law No. 27 of 2007 share similar objectives of sustainability and public participation, their operational provisions remain fragmented and often contradictory. For instance, while Law 32/2009 emphasizes the principle of environmental justice and public participation in decision-making, Law 1/2014 allows coastal area utilization permits (*hak pengelolaan wilayah pesisir*) that frequently prioritize private and industrial interests over community access and ecological protection.

This regulatory inconsistency creates overlapping institutional authority between the Ministry of Environment and Forestry and the Ministry of Marine and Fisheries, resulting in weak enforcement and legal uncertainty. The lack of synchronization between environmental licensing mechanisms and spatial planning policies also leads to double permitting, where environmentally harmful projects can still obtain approval under sectoral regulations. Such fragmentation not only undermines the constitutional right to a good and healthy environment guaranteed in Article 28H of the 1945 Constitution but also perpetuates structural injustice against coastal residents who lose access to their livelihoods and living spaces.

In essence, the disharmony of these legal regimes illustrates how fragmented environmental governance translates into systemic rights violations. A coherent and unified legal framework is therefore essential to ensure that environmental protection and coastal management laws mutually reinforce rather than contradict each other in upholding the principles of climate and environmental justice.

This shows that Indonesia needs a special regulation related to climate change, namely a legal umbrella that becomes the basis and reference in national policy making (Kusuma dkk., 2024). The establishment of special regulations related to climate change shows the seriousness of the state in overcoming the adverse effects of climate change that are now increasingly felt by the community, especially for those who live in coastal areas and small islands.

2. Economic Dependence on Extractive Industries

Indonesia's economic dependence on extractive industries creates significant barriers to climate justice. This is inseparable from the over-management of natural resources and is not supported by a strong commitment to shift to a new renewable energy sector that can reduce the rate of global warming. Extractive industries dominate major economic sectors in Indonesia, such as the mining sector, where coal, nickel, copper, gold, and tin are the leading domestic sectors that are the main contributors to Indonesia's Gross Domestic Product (GDP) and national exports. According to data from the Ministry of Energy and Mineral Resources (MEMR), the mining sector contributes around 5% of Indonesia's GDP (BPS, 2023). For coal in particular, Indonesia is one of the world's largest coal exporters with production reaching 614 million tons in 2022. However, mining activities have contributed to deforestation, land degradation, water pollution, and increased greenhouse gas emissions (Kementerian Energi dan Sumber Daya Mineral, 2023).

Mining causes deforestation, land degradation, water pollution and increased greenhouse gas emissions. A study by Greenpeace Indonesia also found that coal mining has damaged agricultural land and caused water sources to be degraded which has a direct impact on people's lives in East Kalimantan (GREENPEACE, 2014). The environmental damage that is fueling climate change is also caused by the expansion of oil palm plantations which have contributed significantly to deforestation and the loss of diversity of tropical rainforest ecosystems as well as the extinction of animals (Hidayah, 2025). While unsustainable forest exploitation has caused Indonesia to lose an estimated 6.5 million hectares of primary forest between 2001-2022 (Global Forest Watch, 2023) which contributes significantly to the ability of forests to sequester carbon. This dependence exacerbates the vulnerability of coastal communities to climate injustice. In addition to direct impacts on coastal communities, unsustainable resource exploitation also violates the principle of intergenerational equity, which demands that current policies do not compromise the rights of future generations to a decent environment. Development policies based on extractive industries must be redirected to be in line with the principles of sustainable development and climate justice.

The factors discussed above demonstrate that realizing climate justice for coastal communities requires an integrated understanding across legal, socio-economic, and ecological dimensions. The following table summarizes the main findings across these dimensions.

Tabel 3. Synthesis of Findings Across Dimensions

Aspect	Findings and Impacts on Climate Change
Legal and Institutional	Regulations remain unsynchronized between national and local levels, with the absence of a specific climate law leading to weak enforcement and limited protection for coastal communities' environmental rightss.
Socio-Economic	High dependence on extractive industries has deepened poverty and inequality among coastal fishers, undermining community resilience and perpetuating climate injustice
Environmental-Ecological	Coastal abrasion, seawater intrusion, and mangrove degradation have diminished ecosystem resilience, threatening the right to a healthy and sustainable environment

Source: Author

Table 3 shows that coastal communities' vulnerability to climate change is multidimensional, encompassing legal, socio-economic, and ecological aspects. From an institutional perspective, weak synchronization of regulations between the national and regional levels has resulted in ineffective implementation of environmental rightss protection. In the socio-economic dimension, high dependence on extractive industries exacerbates poverty and inequality, while hindering community resilience in facing climate impacts. Meanwhile, from an ecological perspective, coastal abrasion, seawater intrusion, and mangrove degradation have reduced the resilience of coastal ecosystems, threatening the fulfillment of people's rights to a healthy and sustainable environment.

CONCLUSION

This study concludes that the fulfillment of environmental rightss serves as a fundamental pillar for realizing climate justice for Indonesia's coastal communities, who are among the most vulnerable to the impacts of climate change. Although constitutional and statutory guarantees exist such as those embedded in Article 28H of the 1945 Constitution and Law No. 32/2009 implementation remains fragmented, reactive, and sectoral. Weak institutional coordination, overlapping regulations, and limited community participation have resulted in the continued marginalization of coastal residents.

Through a socio-legal approach, this research highlights the structural gap between legal commitments and social realities. The lack of legal coherence and enforcement mechanisms has hindered the translation of environmental rightss into effective protection for vulnerable groups. Achieving climate justice therefore requires more than normative recognition; it demands institutional reform, policy harmonization, and the integration of community-based approaches.

The study recommends three policy directions: (1) strengthening climate governance through a dedicated Climate Change Law that explicitly protects vulnerable communities; (2) institutionalizing participatory mechanisms in coastal and environmental decision-making; and (3) promoting equitable energy transition policies that reduce dependence on extractive industries. Future research should expand field-based socio-legal studies to capture lived experiences of coastal populations and develop context-specific models of climate justice implementation.

REFERENCES

- Adi Wibowo, E., & Karim. (2023). Perspektif keperdataan akibat pencemaran lingkungan hidup berdasarkan Undang-Undang Nomor 32 Tahun 2009 tentang Perlindungan dan Pengelolaan Lingkungan Hidup. *Jurnal Magister Ilmu Hukum*, 13(1), 182–201. <https://doi.org/10.56943/dekrit.v13n1.158>
- Afinnas, M. A. A. (2023). Telaah taksonomi keadilan lingkungan dalam pemenuhan hak atas lingkungan. *Prosiding Seminar Hukum Aktual Problematika Kemudahan Proyek Strategi Nasional: Konflik Norma dan Tantangan Kesejahteraan*, Yogyakarta. <https://journal.uui.ac.id/psaha/article/view/30956/15745>
- Ali, M. M., Aditya, Z. F., & Fuadi, A. B. (2021). Perlindungan hak konstitusional masyarakat pesisir: Urgensi harmonisasi regulasi pengelolaan pesisir terpadu. *Jurnal Konstitusi*, 17(4), 799–827. <https://doi.org/10.31078/jk1745>
- Anwar, M., & Shafira, M. (2020). Harmonisasi kebijakan pengelolaan lingkungan pesisir Lampung dalam rezim pengelolaan berbasis masyarakat. *Jurnal Hukum Lingkungan Indonesia*, 6(2), 266–287. <https://doi.org/10.38011/jhli.v6i2.156>
- Ari Atu Dewi, A. A. I. (2018). Model pengelolaan wilayah pesisir berbasis masyarakat: Community based development. *Jurnal Penelitian Hukum De Jure*, 18(2), 163. <https://doi.org/10.30641/dejure.2018.V18.163-182>
- Azni, I. N., Hasibuan, H. S., & Kusnopotrantanto, H. (2025). Analisis kualitas dan kuantitas air bersih di Pulau Kelapa, Kepulauan Seribu. *Jurnal Kesehatan Lingkungan Indonesia*, 24(1), 28–36. <https://doi.org/10.14710/jkli.24.1.28-36>
- Badan Informasi Geospasial, B. I. G. (2024). Pulau Indonesia bertambah jadi 17.380, mengapa angkanya berubah setiap tahun? *Badan Informasi Geospasial*. <https://sipulau.big.go.id/news/11>
- Bahri, S. (2024). Legislasi keadilan iklim: Respon pemerintah terhadap fatwa MUI tentang hukum pengendalian perubahan iklim. *INNOVATIVE: Journal Of Social Science Research*, 4(4), 15156–15175.
- Bappenas, B. (2022). Posts tagged: Loss and damage. <https://lcdi-indonesia.id/tag/loss-and-damage/>
- BPS, B. (2023). Laporan Perekonomian Indonesia 2022. *Badan Pusat Statistik*.
- Bram, D. (2011). Perspektif keadilan iklim dalam instrumen hukum lingkungan internasional tentang perubahan iklim. *Jurnal Dinamika Hukum*, 11(2). <https://doi.org/10.20884/1.jdh.2011.11.2.187>
- Carman, J. P., Lu, D., Ballew, M., Low, J., Verner, M., Rosenthal, S. A., Barendregt-Ludwig, K., Torres, G., Gelobter, M., McKenney, K., Burga, I., Magaña, M., Amer, S., Williams, R. T., Burgess, M., McRae, G., Larson, A., Salgado, M., Kioko, L. N., ... Leiserowitz, A. (2025). Americans' support for climate justice. *Environmental Science & Policy*, 163, 103976. <https://doi.org/10.1016/j.envsci.2024.103976>
- Global Forest Watch, G. F. W. (2023). Indonesia's primary forest loss 2001-2022. <https://www.globalforestwatch.org/dashboards/country/IDN/>
- Golo, H. K., Ibrahim, S., & Erinosho, B. T. (2025). Impacts of climate change on children's

- rights to food and health in coastal communities in Ghana. *Environmental Development*, 54, 101151. <https://doi.org/10.1016/j.envdev.2025.101151>
- GREENPEACE, G. (2014). Bagaimana pertambangan batubara melukai perekonomian Indonesia. GREENPEACE. <https://www.greenpeace.org/static/planet4-indonesia-stateless/2019/02/340f0fe9-340f0fe9-bagaimana-pertambangan-batubara-melukai-perekonomian-indonesia.pdf>
- Grote, K. M. (2024). Indigenous peoples and the power(lessness) of public participation: Assessing effects of Indigenous community input in the Alaskan Coastal Plain oil and gas leasing program environmental impact statement. *Environmental Science & Policy*, 158, 103787. <https://doi.org/10.1016/j.envsci.2024.103787>
- Hadfield, K., Sulowska, M., Rasolomalala, N., Solomon, S., Ramaroson, S., & Mareschal, I. (2025). "There is no hope; only strong wind": How climate change impacts adolescent mental health in southern Madagascar. *The Journal of Climate Change and Health*, 23, 100438. <https://doi.org/10.1016/j.joclim.2025.100438>
- Hidayah, M. R. (2025). Dampak perkebunan kelapa sawit terhadap lingkungan: Menyeimbangkan risiko ekologis dengan keuntungan ekonomi. *Globe: Publikasi Ilmu Teknik, Teknologi Kebumihan, Ilmu Perkapalan*, 3(1), 90–94. <https://doi.org/10.61132/globe.v3i1.763>
- Humphreys, S., & Robinson, M. (2009). *Human rights and climate change*. Cambridge University Press.
- Irianto, S. (2012). *Kajian sosio-legal (Edisi Pertama)*. Pustaka Larasan.
- Irwan, I., Zusmelia, Z., Siska, F., Melia, Y., Fata, F., & Falenia, R. (2023). Structure strategy living fisherman suburbs: Dynamics fisherman on class intermediate down in the village Pasie Nan Tigo, Padang city. 8(1).
- Isaac, J., & Hilal, J. (2024). Environmental and climate justice in Palestine. *American Journal of Climate Change*, 13(02), 251–280. <https://doi.org/10.4236/ajcc.2024.132014>
- Kementerian Energi dan Sumber Daya Mineral, K. E. dan S. D. M. (2023). *Laporan Kinerja 2022*. Kementerian Energi dan Sumber Daya Mineral.
- Kinol, A., Miller, E., Axtell, H., Hirschfeld, I., Leggett, S., Si, Y., & Stephens, J. C. (2023). Climate justice in higher education: A proposed paradigm shift towards a transformative role for colleges and universities. *Climatic Change*, 176(2), 15. <https://doi.org/10.1007/s10584-023-03486-4>
- Kurniadi, B., Minsas, S., & Helena, S. (2023). Sosialisasi dan edukasi mitigasi bencana perubahan iklim bagi masyarakat pesisir Batu Ampar. *Lambung Inovasi: Jurnal Pengabdian kepada Masyarakat*, 8(4), 791–796.
- Kusuma, L. A. N., Putra, E. A. M., Syahid, F. I. J., Tekayadi, S. K., & Alfurqan, I. (2024). Pembentukan Undang-Undang Perubahan Iklim: Langkah responsif menuju keadilan iklim. *Jatiswara*, 39(3).
- Lampe, I., Hendra, H., & Saputra, G. B. R. (2025). Nelayan di tengah pusaran industri nikel, livelihood dan corporate social responsibility. *Jurnal Ilmu Sosial dan Humaniora*, 14(1), 101–116. <https://doi.org/10.23887/jish.v14i1.87806>
- Luthfi, F., Aseri, A. F., Umar, M., & Khasyi'in, N. (2024). Pendekatan sosio-legal terhadap fatwa: Analisis kedudukan dan peran fatwa MUI di Indonesia. 2.
- Manik, T. K., Timotiwu, P. B., & Adinugraha, Q. S. (2024a). Sosialisasi dampak perubahan iklim bagi masyarakat pesisir: Desa Kelawi dan Desa Maja, Kabupaten Lampung Selatan. 03(02).
- Manik, T. K., Timotiwu, P. B., & Adinugraha, Q. S. (2024b). Sosialisasi dampak perubahan iklim bagi masyarakat pesisir: Desa Kelawi dan Desa Maja, Kabupaten Lampung Selatan. *Jurnal Pengabdian Fakultas Pertanian Universitas Lampung*, 03(02), 225–236.
- Mary Robinson Foundation, M. R. F. (2020). *Climate justice: A man on the moon moment for our planet*. Dublin: MRF.

- Milanés-Salinas, M. D. L. Á., Norzagaray, C. O., Seingier, G., Gómez-Hernández, G., Zepeda-Domínguez, J. A., & Beltrán-Morales, L. F. (2025). Drivers of pro-environmental behaviors and risk perception to climate change in small coastal communities: An insight from the Mexican Pacific. *Environmental Development*, 55, 101194. <https://doi.org/10.1016/j.envdev.2025.101194>
- Mukaddas, J. (2021). Analisis kelembagaan desa dan pemberdayaan masyarakat pesisir kawasan daerah perlindungan laut Kecamatan Soropia Kabupaten Konawe. *SIBATIK JOURNAL: Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, dan Pendidikan*, 1(1), 77–84. <https://doi.org/10.54443/sibatik.v1i1.77>
- Natamiharja, R., Rudy, R., Putri, R. W., & Sabatira, F. (2022). Peningkatan kesadaran masyarakat terhadap perlindungan hukum hak lingkungan yang baik dan sehat. *Jurnal Pengabdian Kepada Masyarakat Sakai Sambayan*, 6(2), 101. <https://doi.org/10.23960/jss.v6i2.353>
- Nurholis, K., & Mokodompit, E. A. (2024). Laut sebagai sarana mata pencaharian dan ancaman akibat pencemaran lingkungan bagi masyarakat pesisir Konawe Utara. *Almufi Jurnal Sosial dan Humaniora (ASH)*, 1(3). <https://almufi.com/index.php/ASH/article/view/360/226>
- Octavian, A., Marsetio, M., Hilmawan, A., & Rahman, R. (2022). Upaya perlindungan pesisir dan pulau-pulau kecil Pemerintah Provinsi Sumatera Barat dari ancaman abrasi dan perubahan iklim. *Jurnal Ilmu Lingkungan*, 20(2), 302–315. <https://doi.org/10.14710/jil.20.2.302-315>
- Oppenheimer, M., C. Glavovic, B., Hinkel, J., & van de Wal, R. (2019). Sea level rise and implications for low-lying islands, coasts and communities (hlm. 321–445). <https://www.ipcc.ch/srocc/chapter/chapter-4-sea-level-rise-and-implications-for-low-lying-islands-coasts-and-communities/>
- Parluhutan Sagala, Muhammad Jamil, Ilman Hadi, & Arief Fahmi Lubis. (2025). Analisis hukum ancaman krisis iklim terhadap pulau kecil terluar dan implikasinya terhadap pertahanan dan keamanan nasional Indonesia. *Eksekusi: Jurnal Ilmu Hukum dan Administrasi Negara*, 3(1), 242–260. <https://doi.org/10.55606/eksekusi.v3i1.1779>
- Pidhego, A. Y., Huda, F. N., Lestari, V. P., Putra, H. D., Bagaskara, C., Vanny, C., & Oktaviani, A. (2022). Pelaksanaan penandaan anggaran perubahan iklim pada pemerintah pusat dan daerah. *Pusat Kajian Akuntabilitas Keuangan Negara, Badan Keahlian Sekretariat Jenderal DPR RI*.
- Prasita, V. D., Rosana, N., Agustina, N. A., & Kusuma, A. (2023). Pemanfaatan sumberdaya lahan pesisir berbasis daya dukung lingkungan dalam menghadapi perubahan iklim global (Cetakan Pertama). UHTPress Universitas HangTuah.
- Prihatiningtyas, W., Wijoyo, S., Wahyuni, I., & Fitriana, Z. M. (2023). Perspektif keadilan dalam kebijakan perdagangan karbon (carbon trading) di Indonesia sebagai upaya mengatasi perubahan iklim. *Refleksi Hukum: Jurnal Ilmu Hukum*, 7(2), 163–186. <https://doi.org/10.24246/jrh.2023.v7.i2.p163-186>
- Prisma Akbar, L., Sumardi, L., Alqadri, B., & Nuralisa, Y. (2024). Eksistensi Sekolah Pesisir Juang dalam memenuhi hak pendidikan bagi anak-anak pesisir di lingkungan Bintaro Kecamatan Ampenan Kota Mataram. *Jurnal Pendidikan, Sains, Geologi, dan Geofisika (GeoScienceEd Journal)*, 5(4), 834–840. <https://doi.org/10.29303/goescienceed.v5i4.512>
- Rahayu, N. N., Oktavia, M., Ardini, M., Yustisia, P. S., & Fatahillah, I. A. (2024). Larangan mutlak kegiatan pertambangan di wilayah pesisir dan pulau-pulau kecil sebagai bentuk perlindungan hak asasi nelayan dan masyarakat pesisir. *Bureaucracy Journal: Indonesia Journal of Law and Social-Political Governance*, 4(3), 3152–3164.
- Rahmah, S. (2019). Perlindungan hukum terhadap hak masyarakat nelayan wilayah pesisir. *DINAMIKA: Jurnal Ilmiah Ilmu Hukum*, 25(10). <https://jim.unisma.ac.id/index.php/jdh/article/view/3513>
- Saputra, R. M., Somantri, G. R., & Subroto, A. (2024). Socio-cultural dimensions in the

- development of Indonesian maritime strength: Strengthening maritime identity and resilience archipelago society. 9(3).
- Situmeang, W. H., & Aflaha, F. R. (2022). Ragam modal perempuan perdesaan dalam menghadapi perubahan iklim di tengah subordinasi. *Jurnal Perempuan*, 27(3), 241–253. <https://doi.org/10.34309/jp.v27i3.734>
- Smith, R.-A. J., & Rhiney, K. (2016). Climate (in)justice, vulnerability and livelihoods in the Caribbean: The case of the indigenous Caribs in northeastern St. Vincent. *Geoforum*, 73, 22–31. <https://doi.org/10.1016/j.geoforum.2015.11.008>
- Sulaiman, S., Abdullah, M. A., Mansur, T. M., & Zulfan, Z. (2014). Pembangunan hukum perlindungan nelayan tradisional di Aceh dalam kaitan pemanfaatan sumber daya perikanan secara berkeadilan. *Jurnal Media Hukum*, 2(1), 310–321.
- Susilawati, S. (2021). Dampak perubahan iklim terhadap kesehatan. *Electronic Journal Scientific of Environmental Health and Disease*, 2(1), 25–31. <https://doi.org/10.22437/esehad.v2i1.13749>
- Syaifudin, M. A., & Rusmana, D. (2024). *Journal of Mandalika Social Science*. *Journal of Mandalika Social Science*, 2(1).
- Yulianti, R. (2021). *Perlindungan hukum bagi hak masyarakat atas sumber daya pesisir (Cetakan Pertama)*. Scopindo Media Pustaka.