

From Legal to Customary Approach: Seeking an Alternative Policy on the Coastal Area Solid Waste Management in Jambi, Indonesia

JISPO
Jurnal Ilmu Sosial dan
Ilmu Politik
2023, Vol. 13, No. 1: 1-20
[https://journal.uinsgd.ac.id/
index.php/jispo/index](https://journal.uinsgd.ac.id/index.php/jispo/index)
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Abstract

The waste issue in coastal areas is an important and urgent problem for maritime regions like Indonesia. The task of the government in coastal areas is more complex than in mainland areas because the problem of coastal waste is more complex, and it causes more environmental impacts. This article analyzes waste management policies in the coastal areas of Jambi Province, especially in East Tanjung Jabung Regency. The research uses literature study as the primary method, supported by qualitative field studies on government and community paradigms on waste management regulations. The study shows that the East Tanjung Jabung Regency Government has a waste management policy, but none specifically concerns coastal or marine waste. However, the waste management program in the coastal area has not been implemented due to various technical reasons, especially geographical conditions, which are difficult to reach from the district capital. These constraints are caused by the positive regulation paradigm, in which the laws in Indonesia are hierarchically stopped at the district/city level so that waste management work is concentrated in the district government. The village government has the right to issue village regulations, but innovation in village regulations still needs improvement, especially in Jambi Province. This condition allows the decision maker to uphold the customary approach as a local alternative policy.

Key Words

Solid waste management, coastal area, public policy, customary law, Jambi coastline

Abstrak

Masalah sampah di wilayah pesisir merupakan masalah penting dan mendesak bagi wilayah maritim seperti Indonesia. Tugas pemerintah di wilayah pesisir lebih kompleks dibandingkan wilayah daratan karena permasalahan sampah pesisir lebih kompleks, dan lebih banyak menimbulkan dampak terhadap lingkungan. Artikel ini menganalisis

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kebijakan pengelolaan sampah di kawasan pesisir Provinsi Jambi khususnya di Kabupaten Tanjung Jabung Timur. Penelitian menggunakan studi kepustakaan sebagai metode utama, didukung dengan studi lapangan kualitatif tentang paradigma pemerintah dan masyarakat terhadap peraturan pengelolaan sampah. Kajian menunjukkan bahwa Pemerintah Kabupaten Tanjung Jabung Timur memiliki kebijakan pengelolaan sampah, namun tidak ada yang secara khusus menyangkut sampah pesisir atau laut. Program pengelolaan sampah di kawasan garis pantai belum terlaksana karena berbagai alasan teknis, terutama kondisi geografis yang sulit dijangkau dari ibukota kabupaten. Hal ini terjadi karena paradigma aturan hukum yang dipakai adalah aturan hukum positif yang secara hierarki perundangan di Indonesia berada pada level kabupaten/kota sehingga kerja pengelolaan sampah terpusat di pemerintah kabupaten. Pemerintah Desa memang memiliki hak mengeluarkan peraturan desa, namun realitasnya inovasi peraturan desa masih sangat terbatas, khususnya di Provinsi Jambi. Kondisi ini memberikan peluang untuk menggunakan pendekatan adat sebagai alternatif kebijakan yang bersifat lokal.

Kata-kata Kunci

Pengelolaan limbah padat, wilayah pesisir, kebijakan publik, hukum adat, garis pantai Jambi

Introduction

Like cases in other coastal areas in Indonesia, solid waste is a crucial issue in Jambi Province, which historically was once an important part of the world's spice route and was even one of the most prosperous ports in Sumatra (Sagala, 2021). The coastline of Jambi Province stretches across West Tanjung Jabung and East Tanjung Jabung Regencies with a length of about 276.5 Km, which is directly connected to the South China Sea through the Berhala Strait. About 230.90 Km (83.5%) of the coastline constitutes the administrative area of East Tanjung Jabung (BAPPEDA, 2020). Most of Jambi's coastal area is overgrown with mangroves which are designated as a nature reserve conservation area through the Decree of the Minister of Agriculture No. 507.Kpts-Um/6/1980 amended by Decree of the Minister of Forestry No. 14/kpts-II/2003, stipulating five districts (Kuala Betara, Mendahara, Kuala Jambi, Muara Sabak Timur, and Nipah Panjang) as East Coast Mangrove Forest Reserves with an area of 4,126.60 Ha.

There are many estuaries (AIRRIESS, 2003) along this coastline that flow from the two main rivers (Tungkal and Batanghari Rivers) and other small rivers. The estuaries of Sungai Batanghari in Kampung Laut and Nipah Panjang (East Tanjung Jabung) and the estuary of the Tungkal River in Kuala Tungkal (West Tanjung Jabung) are the largest and have an important position in the history of Jambi civilization. Like other Sumatran east coastlines, these estuaries also make the Jambi coastal area have distinctive characteristics of transportation routes that reach various regions to the interior. The Batanghari River, the longest river in Sumatra, about 800 Km, has at least 17 tributaries, each of which still has watercourses (Asnan, 2016). Since ancient times, the Batanghari River has functioned as transportation that connects the coastal areas to the hinterland (uluan) (Miksic, 2009).

The Jambi Province Medium Term Development Plan document for 2021-2026 states that Jambi Province's potential for waste accumulation reaches 1,746 tonnes/year and only has ten final processing sites (TPA), 51 waste bank units, and 14 3R temporary shelters (TPS) (Rencana Pembangunan Jangka Menengah Daerah Provinsi Jambi (RPJMD) 2021-2026, 2020). The number of waste management sites is certainly not sufficient. In coastal areas, it is clear that waste is not managed properly. Garbage is scattered around residential areas and beaches, moving with the tides. The problem also happens along river basins, mass transporting waste to the coast. As presented by some previous studies, the coastal waste problem originates from land-based waste, from river basins, as well as waste that moves due to ocean currents from one coast to another (Galgani et al., 2013; Herdiansyah et al., 2021) due to weak waste management policies and low public awareness of waste issues (Herdiansyah et al., 2021; Mutaqin et al., 2020).

As an area with the most extensive coastal and swamp regions of Jambi Province, East Tanjung Jabung Regency faces more severe coastal waste management problems in Jambi Province. The importance of this waste management problem is emphasized in the 2019 Regional Environmental Management Performance Information document for the Environmental Service of East Tanjung Jabung Regency. The document states several environmental priority issues in East Tanjung Jabung Regency: a) Increasing landfills, b) Forest and land fires, and c) Land use change. Sadu District is the most extended coastline district in Tanjung Jabung Timur, where the entire area is a coastal area.

The central and regional governments have issued several regulations related to waste management. These regulations become a reference for implementing waste management programs related to prevention, reduction, and waste processing. However, the programs managed by the East Tanjung Jabung Environmental Service do not reach coastal areas, especially Sadu District. The Head of the Waste Management and Hazardous and Toxic Materials of the Environmental Service explained that this was due to geographical issues and that the coastal areas were difficult to reach from the district capital. Garbage in the Jambi coastal areas is not adequately managed, polluting residential and coastal environments. Even provincial-scale tourism activities, such as the annual Mandi Shafar Festival (Sagala, 2018)¹ and *Menyumbun* Festival², has no waste management mechanism. This condition indicates the need for a comprehensive analysis of waste management in the Jambi coastal area.

Many studies on coastal waste management have been carried out. In general, these studies are related to three main aspects, namely the form of the waste management program carried out by the government and the effectiveness of its implementation (L.A. et al., 2013; Purwaningrum, 2016; Sánchez-Lizaso & Li, 2022; Voukkali et al., 2021; Wijayanti et al., 2016), participation in the waste management program (Herdiansyah et al., 2021; Kharimah & A., 2021), or the interrelation of the two (Suryani, 2019). This study evaluates the policy concerning waste management in the Jambi coastal area and seeks alternative models for more effective policy approaches based on local characteristics. Therefore, the evaluation of waste management policies requires not only an analysis of policies *an sich* but also needs to analyze community participation in policy implementation and their clean and healthy lifestyle. Sociological-anthropological studies of local tribes on the coast of Jambi will significantly assist in formulating policy recommendations.

East Tanjung Jabung Regency's Regulations of Solid Waste Management

The Law on Regional Government in Indonesia regulates in detail the division of authority for concurrent affairs between the central and regional governments. Waste management is a matter for Public Works and Spatial Planning, which stipulates that waste management is a matter for the central, provincial, and regency/city governments according to their respective areas. Therefore, waste management in the regions must refer to the relevant laws and regulations above.

The central government has issued several regulations related to solid waste (garbage), liquid waste, and waste from hazardous and toxic materials as seen in Table 1.

No	National Regulations
1.	Government Regulation Number 82 of 2001 concerning Water Quality Management and Water Pollution Control
2.	Law Number 27 of 2007 concerning Management of Coastal Zone and Small Islands
3.	Law Number 18 of 2008 concerning Waste Management
4.	Law Number 32 of 2009 concerning Environmental Protection and Management (PPLH)
5.	Government Regulation Number 81 of 2012 concerning The Management of Household Waste and Household-like Waste
6.	Regulation of the Minister of Public Works Number 03/PRT/M/2013 concerning Implementation of Waste Infrastructure and Facilities in Handling Household Waste and Household-like Waste
7.	Government Regulation Number 101 of 2014 concerning B3 Waste Management (Prev. 85/1999; 74/2001)
8.	Presidential Regulation Number 97 of 2017 concerning National Policy and Strategy for the Management of Household Waste and Household-like Waste
9.	Regulation of the Minister of Environment and Forestry Number P.95/MENLHK/SETJEN/KUM.1/11/2018 concerning Licensing for Management of Hazardous and Toxic Waste Integrated with Environmental Permits Through Electronically Integrated Business Licensing Services
10.	Presidential Regulation Number 83 of 2018 concerning Marine Waste Management
11.	Regulation of the Minister of Environment and Forestry Number P.75/MENLHK/SETJEN/KUM.1/10/2019 concerning Road Map for Waste Reduction by Producers
12.	Government Regulation Number 27 of 2020 concerning Specific Waste Management (e-Waste)
13.	Regulation of the Minister of Environment and Forestry Number No. 14 of 2021 concerning Waste Management at Waste Banks

Table 1
National Regulations of Waste Management

Policies related to coastal waste are integrated into these policies, especially Presidential Regulation No. 83 of 2018 concerning the Management of Marine Waste, which also contains the National Action Plan for handling marine waste. These national laws and regulations serve as a reference for local waste management standards as well as a reference for the division of tasks and authorities between levels of government. The regulations in the table above explain the duties and authorities of the government in waste management as follows:

1. Waste management is a joint responsibility of the central and regional governments according to their respective regions;
2. Waste management is regulated by laws and technical programs compiled in waste management policies and strategies. The existing national and regional waste management policies and strategies are only available for household and household-like waste. Specific waste is still under the authority of the central government;
3. The central and regional governments must have a master plan to manage solid waste infrastructure and facilities;
4. The central and regional governments direct, facilitate, coordinate, develop, supervise, and resolve disputes in their territories;
5. Regency/municipal governments have the authority to determine the location of TPS, TPST, and TPA in their area and carry out monitoring and evaluation every six months for 20 years for TPA with an open disposal system that has stopped operating. Regency/city governments are also responsible for preparing and implementing an emergency response system for waste management;
6. Communities have the right to participate in all stages of waste management, including planning, implementation, program monitoring, and policy evaluation;
7. Producers and managers of residential areas, commercial areas, industrial areas, particular areas, public facilities, social facilities, and other facilities must participate in waste management supervised and evaluated by the national or regional governments;
8. Waste management policies must be designed with a participatory perspective, namely efforts to increase public awareness and participation in waste management activities; and
9. The national and local governments can provide incentives and incentives to people or groups of waste managers who excel in managing waste.

Referring to the guidelines for tasks and authorities, technical waste management in the coastal area is regulated by regional regulations, especially related district regulations. The legal system in Indonesia stipulates that sub-district governments do not have the authority to issue laws and regulations. Meanwhile, the village has special authority to make regulations through the Village Law. Based on this authority, several villages in Indonesia already have village regulations regarding waste management. However, similar regulations have not been found in villages throughout Jambi Province.

Waste management policies in Jambi Province are generally issued by the district government. Regarding national laws and regulations, district governments must have a Regional Policy and Strategy (Jakstrada) for waste management and regional regulations for waste management. In the context of the waste study on the coast of Jambi, especially in the area of East Tanjung Jabung Regency, there are some regional and local regulations as seen in Table 2.

No	Local Regulations
1.	Jambi Province Regional Regulation No. 17 of 2017 concerning PPLH
2.	Tanjabtim Regency Regulation No. 20 of 2013 concerning Waste Management
3.	Tanjabtim Regent Regulation No. 60 of 2018 concerning Policies and Strategies for Managing Household Waste and Household-like Waste in East Tanjung Jabung Regency

Table 2
Local Regulations of Waste Management in Jambi

The data show that juridically, East Tanjung Jabung Regency already has waste management regulations as mandated by law, except for the Master Plan for the Implementation of Waste Infrastructure and Facilities (PSP). In addition to these regional regulations and the regent's regulations, the East Tanjung Jabung Regency government is also preparing a regent's regulation regarding reducing the use of plastic shopping bags. This regulation has completed the discussion stage at the Legal Bureau of Jambi Province and is awaiting signature by the regent. Apart from that, the district government also has regulations related to waste fees which are regulated separately, namely the Tanjung Jabung Timur Regency Regulation (Perda) no. 10 of 2012 concerning Regional Retribution.

Jambi Province and East Tanjung Jabung Regency have no specific policy related to coastal waste management. The 2021-2026 Environment Service Strategic Plan also states that Tanjabtim Regency does not yet have a coastal area master plan, so the district cannot yet map out an appropriate waste management plan. Therefore, the problem of coastal waste needs to be appropriately managed, in addition to the problem of inadequate road infrastructure for transporting waste from coastal areas.

Structural Constraints of Waste Management Policy Implementation

There is no guarantee that adequate regulation could solve the waste problems. The realization of its objectives is highly dependent on the policy implementation factors, primarily related to the performance of the implementation service unit, facilities, community participation, and the availability of adequate information and socialization. The waste management program in Ambon shows that even though the waste management laws and regulations are sufficient, the waste management performance still needs to be improved. This laxity is partly due to a lack of human resources and infrastructure, operational costs still burdening regional budgets, weak law enforcement, and a lack of community participation (Herdiansyah et al., 2021).

In general, the substance of Regency Regulation (Perda) No. 20 of 2013 is similar to Law No. 18 of 2008 on Waste Management, with adjustments to aspects that fall under the authority of districts/cities. The substances are more directed towards normative rules, and innovation has yet to emerge in the substance of the policy. Referring to this Regency Regulation (Peraturan Daerah), the workflow of household and household-like waste (SRT and SSRT) management includes collecting waste at households to transporting and processing waste at the final processing site (TPA) involving regency government structures down to the village. The Waste Management Agencies are formed in the regency down to the RT level (sub-villages administration) to support the Environment Service in waste management (see Figure 1).

Waste management in Jambi Province, both at the provincial and Tanjung Jabung Timur (Tanjabtim) Regency levels, is carried out by the Environment Service, which is currently working according to the Strategic Plan and Key Performance Indicators for the 2021-2026 period. The Tanjabtim Regency Environmental Service has 146 employees consisting of 20 civil servants, 30 non-permanent employees, and 96 cleaners. Cleaning workers are supported by eight vehicles intended to transport

waste from TPS to TPA: four units of dump trucks, three units of arm rolls, and one L300 pick-up model. The employees are placed into three work areas: the Environmental Management Sector, the Waste and B3 Waste Management Sector, and the Pollution Control and Environmental Capacity Building Sector.

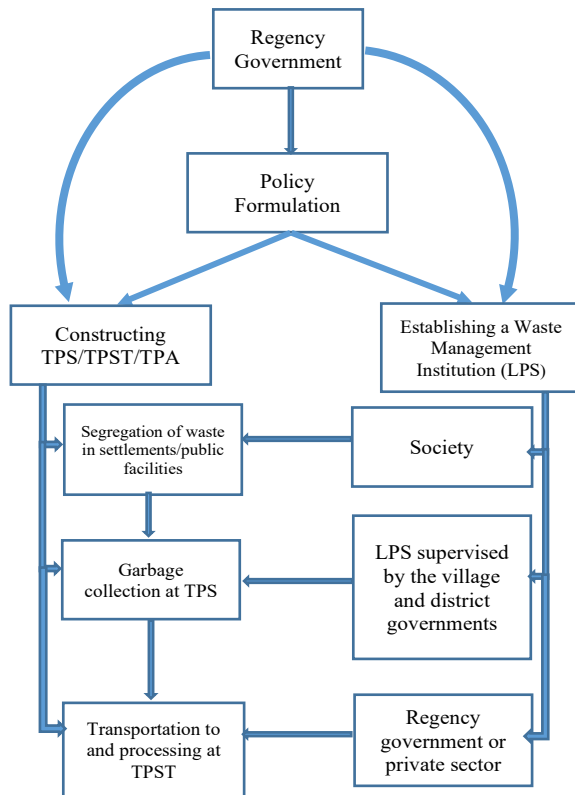


Figure 1
SRT and SSRT Management Chart from Segregation to Waste Processing

Referring to the policies issued by the regional government, Tanjabtimthe Regency Environmental Service has implemented several waste management programs. Still, it has not established a hierarchical Waste Management Institution as mandated by laws and regulations. The Environmental Service was still working alone to manage waste, so existing programs still need to fully cover the Tanjabtim Regency area, especially the coastal areas. The Head of the Waste and B3 Waste

Management Sector for the Environment Agency explained that they could only provide solid waste services in seven out of eleven sub-districts: Muara Sabak Barat, Muara Sabak Timur, Dendang, Geragai, Kuala Jambi, Rantau Rasau and Nipah Panjang. Based on the garbage service locations above, the programs cover three coastal area districts: Kuala Jambi District, Muara Sabak Timur District, and Nipah Panjang District. So far, the waste management programs have not covered Sadu District, which has the longest coastline in Tanjabtim.

Even though the three sub-districts of the coastal area are included in the solid waste service, the condition of waste management still needs to be improved. Observations in coastal/riverside villages in the three sub-districts clearly show that trash is still scattered in residential areas and beaches. My interviews and TPS locations and waste transportation routes also show that solid waste services are only focused on Muara Sabak Barat District as the regency centre. The Environmental Service admits that the main obstacle is the problem of difficult access roads, especially to Sadu District, as well as the limited resources of the Environmental Service.

These arguments are understandable considering the number of cleaning workers and the garbage collection fleet owned by the Environmental Service. Therefore, the Environmental Service expects initiatives and innovations for sub-districts to manage waste in their area. Meanwhile, sub-district governments that do not have the authority to issue public policies have their constraints. For example, my interviews with the Sadu sub-district government indicated that the sub-district government was still experiencing difficulties in implementing waste management, especially related to the lack of budget and difficulties in waste processing. The concentration of waste management work at the Environmental Service has consequences on the concentration of the budget also in the district. The obstacles in waste processing were caused by the lack of management staff owned by sub-districts and villages and geographical conditions that made it difficult to transport plastic waste to collectors in Jambi City. Meanwhile, Sadu District is a strategic area for swamp conservation on the coast of Jambi on a national scale.



Figure 2
ArcGIS Map of Sadu District

The government of Sadu District and the villages in its area have been working on sporadic waste management programs (see Figure 2 for Sadu District map). The district government, for example, once implemented a solid waste service that only lasted two years. Sungai Itik sub-district had built two temporary waste collection sites, but now they are no longer functioning. Cooperation activities and cleanliness competitions are held during certain celebrations, such as the commemoration of Indonesian independence every August 17. The village administrations of Sungai Lokan, Sungai Itik, Sungai Jambat, and Air Hitam Laut, the most densely populated areas, admit that they have tried to socialize waste management to the community, but the community is still littering due to limited waste facilities. No village has yet issued a village regulation regarding waste management, as has been done by several village governments like Cinunuk Village (Bandung Regency), Sampalan Tengah Village (Klungkung Regency), Kedungringin Village (Banyuwangi District), and Segobang Village (Banyuwangi District). However, field studies in these villages show that the waste management paradigm is still government-centric. As a result, the burden of solid waste management, which is indeed significant, rests on human resources and the government's budget structure. This problem, along with technical-geographical issues, causes sub-district and village governments to be sceptical about implementing waste management.

Previous studies in several regions in Indonesia show that collaboration between the government and the community is crucial to the success of waste management programs. Experience in Ambon Bay and Pari Island (South Sulawesi), for example, the community carries out waste

management activities in an integrated manner with the government. The community actively participates in various activities while the government provides infrastructure. By doing this, the government's responsibility becomes a little lighter because the community has voluntarily prepared the personnel aspect. Furthermore, government-community cooperation can cover other aspects such as financial and technical infrastructure development, waste services, application of technology, green practices, and coastal and marine ecosystem programs (Herdiansyah et al., 2021).

In general, the Tanjabtim coastal community understands the importance of cleanliness but needs more insight and concern regarding waste management and its long-term impact on the environment, especially on the coast. Several studies in developing and archipelagic countries, such as Indonesia, show that people's knowledge about waste, especially marine debris, is still limited and influenced by variables such as gender, age, and education (Herdiansyah et al., 2021). Community understanding of the importance of cleanliness can be seen from my interviews with the community in Kuala Jambi District, Muara Sabak Timur District, and Sadu District. The results of the interviews show that the community's answers are generally normative that cleanliness is necessary for health, and they realize that the source of the waste comes from their household waste. However, littering is carried out because there is no temporary waste disposal site or it is far away in the village. In addition, there is still a community perspective that waste management is solely the government's responsibility. Littering is considered normal if the government does not carry out waste transportation services.

Optimizing community participation in waste management certainly requires a strategy that refers to local wisdom values. For this reason, the formulation of public policies needs to understand the sociological-anthropological characteristics of the local community so that the policies issued will be more effective. For public policy to solve public problems, this problem must be transformed into a policy problem so that it becomes input on the policy agenda that can impact people's lives (Subekti et al., 2017).

Opportunities for Empowerment of Customary Law in Coastal Waste Management

The coastal area of Jambi is mainly inhabited by seafaring communities, especially the Bugis and a small number of Orang Laut, now more commonly called the Duano Tribe. The Duano tribe occupies a small area of Kuala Tungkal (West Tanjung Jabung Regency) and Kampung Laut Village in Kuala Jambi District (East Tanjung Jabung Regency).

Historically, the Orang Laut has played an important role in the political-economic arena in the areas around the Malacca Straits, including Jambi. During these sultanates, the Orang Laut generally played the role of captain/navigator of ships, collectors of trade taxes, and even involved in warfare to help the rulers. Historical records show that many Jambi rulers had close relations with the Orang Laut and even fostered foster brotherhood (Andaya, 2008).

Regardless of the relationship with the political power, the Orang Laut depend on the sea for their lives. Orang Laut lives in kinship ties that control certain sea areas with the concept of usufruct. The usufruct concept allows the taking/utilization of cross-territorial kinship marine products by jointly protecting the sea (Andaya, 2008). Even though the Duano Tribe are currently settled, and their assimilation with other residents in their area has caused many changes in their lifestyle, they continue to practice several local wisdoms, like a set of rules and taboos in protecting marine ecosystems (Oryza et al., 2018). The existence of the Duano tribe is an important asset for the Jambi coastal area to empower customary law in environmental preservation.

Meanwhile, the Bugis tribe is the majority population in five sub-districts on the coast of East Tanjung Jabung Regency. In the Sadu sub-district, which has the longest coastline, the majority of its population (more than 75%) are Bugis. In its history, the Bugis people have long been known as a nation of seafarers who even had laws or a code of ethics for shipping and trade (*Ade' allopi-lopang studimanna pa'balu-balué*), which is now commonly called *Amanna Gappa*. *Amanna Gappa*, which was written on April 1, 1676 AD, contains 21 articles that have contents related to how to trade, shipping, the bureaucratic structure on the ship, the requirements to become a captain, and the division of plots on the ship. This law adheres to the shared ownership paradigm and may be used by all nations, the perspective of free shipping and trade that existed long before the international law of the sea (Arief, 2008; Hamid, 2018; Maryam, 2021; *Mengenal Hukum Laut Amanna Gappa Warisan Bugis*, 2021). The Bugis people also carry out various traditions related to the sea, such as thanksgiving ceremonies for the sea and processions going down to the sea (Arief, 2008; Junaidi et al., 2018; Yuwono, 2019).

According to older fishermen in Sadu District, these ritual traditions of going down to the sea were also practised by the Bugis fishing community in Jambi. However, such traditions are now rarely practised. However, the traditional knowledge of fishermen is still inherited from generation to generation, including the ethics of not being proud of the sea. The annual

event of the Mandi Shafar Festival is still of sacred value to the community. In social life, the traditions and kinship system of the Bugis community are still relatively strong in this area. The community still respects traditional leaders who are generally also religious leaders. Based on the author's observations in Sadu District, traditional kinship ties are still relatively well passed on to the younger generation. Although the younger generation generally lives in a modern style, they are still bound by tribal traditions and customs, including respect for elders. This condition indicates an opportunity for empowering traditional leaders and the customary law system in maintaining the environment, including waste management. Therefore, the government should try to establish cooperation with traditional leaders or ethnic elders to build public awareness of maintaining the coastal environment. Moreover, ideologically, the Bugis and Duano tribes are very attached to the marine environment.

The application of customary law in environmental preservation is legally recognized in Indonesia. Article 63 of Law No. 32 of 2009 states that local governments can issue public policy regarding procedures for recognizing the existence of customary law communities, local wisdom, and the rights of customary law communities related to environmental protection and management both at the provincial and regency levels. So far, the most commonly practised forms of local wisdom in protecting natural resources in Indonesia include the Lubuk Larangan (prohibited fish pond) and Sea Customary Rights practices. This Lubuk Larangan practice is well-known in several areas in Jambi (Handayani et al., 2018; Sari et al., 2016), but the practice of Sea Customary Rights has not been found (Barata & Kurnia, 2003). The local government needs to facilitate the strengthening of this customary system again, whether it is legalized by the formal legal system or as a social institution. Development of customary law can be carried out in an integrated manner between environmental maintenance, including waste management, and utilization of marine products. The inclusion of an economic perspective in environmental management will add to the attractiveness and bonding power of the community. Moreover, the goal of economic empowerment is also expressly stated in policies related to waste management nationally and regionally.

Conclusion

This paper has shown that the Provincial Government of Jambi, in particular East Tanjung Jabung Regency, has policies related to solid waste management as mandated by the national regulations. However, there is no specific policy regarding handling coastal solid waste, even though the

issue of coastal waste is a crucial problem in the coastal area of Jambi Province. In addition, researchers have yet to find specific documents for coastal waste management, including the Regional Action Plan (RAD) related to handling marine waste as regulated at the central level in Presidential Regulation Number 83 of 2018 concerning Marine Waste Management.

The East Tanjung Jabung Regency Environmental Service (DLH) implements several waste management programs, but the services focus on Muara Sabak Timur as the regency's capital. On the contrary, there is only limited service in coastal areas, and even there is no solid waste management program in Sadu District, the area with the longest coastline in Tanjung Jabung Timur Regency. The regency waste management programs do not reach the coastal areas due to various technical reasons, especially geographical conditions, which these locations are difficult to reach from the regency capital.

Based on the above results, recommendations for solid waste management policies in the coastal area of Jambi Province can be made here. First, it is necessary to make specific regency policies and action plans for waste management in coastal areas integrated with waste management in river basins. Second, according to the geographical conditions of coastal areas, the regency waste management policies and action plans need to be downgraded to the village level, either in the form of positive law or customary law. However, the limitations of village regulations, especially in terms of root values and tactics such as financing and human resources, encourage the empowerment of customary law in environmental preservation.

Acknowledgement

This research was funded by Sulthan Thaha Saifuddin State Islamic University Jambi for the 2022 fiscal year.

Notes

- ¹ For more information about *mandi shafar*, see Irmawati Sagala, "Extension of Religious Ritual Functions in Development Process: Study of Mandi Safar in Air Hitam Ocean Indonesia," *IOP Conference Series: Earth and Environmental Science*, 156 (1), (2018). <https://doi.org/10.1088/1755-1315/156/1/012009>.
- ² *Menyumbun* is a tradition of the Duano Tribe to catch bamboo shells in certain seasons. The Government of East Tanjung Jabung Regency manages this tradition to become a cultural tourism activity as an annual festival.

References

- Airriess, C. A. 2003. "The Ecologies of "Kuala" and "Muara" Settlements in the Pre-Modern Malay Culture World." *Journal of the Malaysian Branch of the Royal Asiatic Society* 76 (1). <https://www.jstor.org/stable/41493488>
- Andaya, L. Y. 2008. *Leaves: Trade and Ethnicity in the Straits Melaka*. University of Hawaii Press.
- Arief, A. A. (2008). "Studi Mengenai Pengetahuan Lokal Nelayan Pattorani di Sulawesi Selatan." *Jurnal Hutan Dan Masyarakat III*(2): 111–118.
- Asnan, G. 2016. *Sungai dan Sejarah Sumatera*. Ombak.
- Rencana Pembangunan Jangka Menengah Daerah Provinsi Jambi (RPJMD) 2021-2026, Pub. L. No. 11, Pemerintah Daerah Provinsi Jambi 451 (2020). https://bappeda.jambiprov.go.id/welcome/Dokumen_perencanaan/42/PERDA-N0.-11-TAHUN-2021-TENTANG-RPJMD-PROVININSI-JAMBI-TAHUN-2021-2026
- BAPPEDA. 2020. "Profil Daerah Kabupaten Tanjung Jabung Timur 2020." In *BAPPEDA Kabupaten Tanjung Jabung Timur*.
- Barata, A., & Kurnia, I. 2003. *Bepantang Demi Anak Cucu: Kumpulan Seloko Adat Perikanan dan Selarik Catatan tentang Revitalisasi Hukum Adat Jambi dalam Pengelolaan Sumberdaya Perikanan*. DKP Provinsi Jambi bersama KSP Jambi.
- Galgani, F., Hanke, G., Werner, S., & De Vrees, L. 2013. "Marine Litter within the European Marine Strategy Framework Directive." *ICES Journal of Marine Science*, 70(6), 1055–1064. <https://doi.org/10.1093/icesjms/fst122>
- Hamid, A. R. 2018. *Sejarah Maritim Indonesia*. Ombak.
- Handayani, M. and Rini Hertati. 2018. "Sistem Pengelolaan Lubuk Larangan Sebagai Bentuk Kearifan Lokal di Sungai Batang Tebo Kabupaten Bungo Provinsi Jambi." *SEMAH Jurnal Pengelolaan Sumberdaya Perairan* 2(3). <https://doi.org/10.36355/SEMAHJPSP.V2I3.206>
- Herdiansyah, H., Saiya, H. G., Afkarina, K. I. I., & Indra, T. L. 2021. "Coastal Community Perspective, Waste Density, and Spatial Area toward Sustainable Waste Management (Case Study: Ambon Bay, Indonesia)." *Sustainability* 2021 13 (19), 10947. <https://doi.org/10.3390/SU131910947>
- Junaidi, A., Alkadrie, S. I. T., & Malik, A. 2018. "Mengenal Kearifan Lokal Nelayan Bugis-Mandar di Kalimantan Selatan: Membalas Budi Indo Bwau (Hiu Paus)." *Prosiding Simposium Nasional Hiu Pari Indonesia Ke-2*, 227–232.

- Kharimah, U., & A., A. 2021. "Partisipasi Masyarakat dalam Menjaga Kelestarian Lingkungan Pesisir Melalui Program Jaga Pesisir Kita." *Jurnal Sosial dan Teknologi 1*.
- L.A., G., G., M., & W., H. 2013. "Solid Waste Management Challenges for Cities in Developing Countries." *Waste Management 33*(1).
- Maryam, A. 2021. *Pengajuan WBTB Hukum Pelayaram Amanna Gappa (Dalam Lontara disebut Ade' Allopiloping bicaranna Pa'balue). Mengenal Hukum Laut Amanna Gappa Warisan Bugis*. (2021). <https://sulsel.idntimes.com/life/education/ahmad-hidayat-alsair/hukum-laut-amanna-gappa-warisan-berharga-dari-bugis-untuk-dunia?page=all>
- Miksic, J. 2009. "Highland-Lowland Connection in Jambi, South Sumatra, and West Sumatra, 11th to 14th Centuries." In *From Distant Tales: Archaeology and Ethnohistory in the Highlands of Sumatra* (p. 80). Cambridge Scholars.
- Mutaqin, B. W., Marfai, M. A., Helmi, M., Nurhadi, N., Umarella, M. R., & Munir, M. 2020. "How important Risk Analysis of Plastic Pollution in Coastal Area? Case Study in Masohi, Central Maluku." *E3S Web of Conferences 200*, 02014. <https://doi.org/10.1051/E3SCONF/202020002014>
- Oryza, D., Samsuddin, S., Sagala, I., Nugroho, A. D., Jamaluddin, J., Malik, A., & Bahri, S. 2018. "Duano's Local Wisdom in Preserving Marine Ecosystem at Jambi Coastal Area." *IOP Conference Series: Earth and Environmental Science 175*(1). <https://doi.org/10.1088/1755-1315/175/1/012227>
- Purwaningrum, P. 2016. "Upaya Mengurangi Timbulan Sampah Plastik di Lingkungan." *Indonesian Journal of Urban and Environmental Technology 8*(2):141–147. <https://doi.org/10.25105/URBANENVIROTECH.V8I2.1421>
- Sagala, I. 2018. "Extension of Religious Ritual Functions in Development Process: Study of Mandi Safar in Air Hitam Ocean Indonesia." *IOP Conference Series: Earth and Environmental Science 156*(1), 012009. <https://doi.org/10.1088/1755-1315/156/1/012009>
- Sagala, I. 2021. *Islam dan Adat dalam Sistem Pemerintahan Jambi Masa Kesultanan dan Kolonial Pada Tahun 1855-1942*. Ombak.
- Sánchez-Lizaso, L., & Li, Y. 2022. "Legislation and Policy on Pollution Prevention and the Control of Marine Microplastics." *Water 2022, 14*: 2790, *14*(18): 2790. <https://doi.org/10.3390/W14182790>
- Sari, D., Zakaria, I. J., & Novarino, W. 2016. "Pengelolaan Lubuk Larangan sebagai Upaya Konservasi Perairan di Desa Rantau Pandan Kabupaten Bungo, Jambi." *Dinamika Lingkungan Indonesia 3*(1): 9–15.

- Subekti, M., Faozanudin, M., & Rokhman, A. 2017. "Pengaruh Komunikasi, Sumber Daya, Disposisi dan Struktur Birokrasi Terhadap Efektifitas Implementasi Program Bantuan Operasional Sekolah pada Satuan Pendidikan Sekolah Dasar Negeri di Kecamatan Tambak". *IJPA - The Indonesian Journal of Public Administration* 3(2): 58–71.
- Suryani, A. S. 2019. "Pengaruh Kebijakan Pemerintah dan Peran Serta Masyarakat terhadap Kualitas Lingkungan Pesisir Benoa Badung Bali." *Jurnal Masalah-Masalah Sosial* 10.
- Voukkali, I., Loizia, P., Navarro Pedreño, J., & Zorpas, A. A. 2021. "Urban Strategies Evaluation for Waste Management in Coastal Areas in the Framework of Area Metabolism." *Waste Management and Research* 39(3): 448–465. <https://doi.org/10.1177/0734242X20972773>
- Wijayanti, S., Ritohardoyo, S., & Djaka, M. 2016. *Kajian Kebijakan Pengelolaan Sampah di Kota Tarakan*. Universitas Gadjahmada.
- Yuwono, D. B. 2019. Pergeseran Mata Pencarian dan Pudarnya Ritual Syukur Laut Pada Masyarakat Nelayan Bugis di Sungailiat Bangka." *Al-Qalam* 25(2): 441–454.

Government Regulations

- Government Regulation Number 82 of 2001 concerning Water Quality Management and Water Pollution Control.
- Government Regulation Number 81 of 2012 concerning Management of Household Waste and Household-like Waste.
- Government Regulation Number 101 of 2014 concerning B3 Waste Management (Prev. 85/1999; 74/2001).
- Government Regulation Number 27 of 2020 concerning Specific Waste Management (e-Waste).
- Law Number 27 of 2007 concerning Management of Coastal Zone and Small Islands.
- Law Number 18 of 2008 concerning Waste Management.
- Law Number 32 of 2009 concerning Environmental Protection and Management (PPLH)
- Law Number 23 of 2014 concerning Local Government.
- Presidential Regulation Number 97 of 2017 concerning National Policy and Strategy for the Management of Household Waste and Household-like Waste.
- Presidential Regulation Number 83 of 2018 concerning Marine Waste Management

Regulation of the Minister of Public Works Number 03/PRT/M/2013 concerning Implementation of Waste Infrastructure and Facilities in Handling Household Waste and Household-like Waste.

Regulation of the Minister of Environment and Forestry Number P.95/MENLHK/SETJEN/KUM.1/11/2018 concerning Licensing for Management of Hazardous and Toxic Waste Integrated with Environmental Permits Through Electronically Integrated Business Licensing Services.

Regulation of the Minister of Environment and Forestry Number P.95/MENLHK/SETJEN/KUM.1/11/2018 concerning Licensing for Management of Hazardous and Toxic Waste Integrated with Environmental Permits Through Electronically Integrated Business Licensing Services.

Regulation of the Minister of Environment and Forestry Number P.75/MENLHK/SETJEN/KUM.1/10/2019 concerning Road Map for Waste Reduction by Producers.

Regulation of the Minister of Environment and Forestry Number No. 14 of 2021 concerning Waste Management at Waste Banks.

