

THE ENVIRONMENTAL DAMAGE CAUSED BY THE WASTE PROBLEM IN THE BATANGHARI JAMBI RIVER AFFECT ECONOMIC SUSTAINABILITY?

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Abstrak: Sungai Batang Hari ini memiliki peran penting dalam kehidupan masyarakat Jambi. Selain sungai sebagai sumber pencarian masyarakat, Sungai Batang Hari juga dimanfaatkan untuk kegiatan sehari-hari masyarakat. Tempat pembuangan sampah yang tidak terkendali akibat ulah manusia akan berdampak pada keindahan kawasan, munculnya bau busuk sampah, pencemaran udara akibat pembakaran sampah yang mengganggu kesehatan masyarakat dan menjadi sumber penyakit bagi kesehatan manusia. Ada kebiasaan masyarakat menjadikan sungai sebagai tempat pembuangan sampah ke saluran air. Penelitian ini bertujuan untuk mempelajari faktor-faktor yang mempengaruhi perilaku masyarakat dalam membuang sampah dengan metode etnografi. Penelitian dengan pendekatan etnografi berupa pengumpulan data dan informasi melalui pengamatan terhadap keadaan yang menjadi objek penelitian dan dipadukan dengan penyajian dokumentasi. Hasil penelitian menunjukkan kurangnya pemahaman masyarakat tentang akibat yang dapat ditimbulkan oleh sampah, kurangnya biaya pemerintah untuk menyediakan/mengupayakan pengelolaan sampah yang baik dan memenuhi syarat. Oleh karena itu, jika tidak ditangani dengan baik akan menimbulkan dampak seperti pencemaran air, udara, dan tanah sehingga menjadi sumber penyakit. Ada pula hubungan antara pengetahuan, pendidikan, pendapatan, dan sikap yang mempengaruhi perilaku masyarakat membuang sampah.

Kata Kunci: Implementasi, Pembangunan, Bencana, Desa.

Abstract: This Batang Hari River has an essential role in the Jambi people's lives. Besides the river as a source of public search, the Batang Hari River is also used for the people's daily activities. Uncontrollable garbage dumps due to human activity will impact the beauty of the region, the emergence of the smell of waste decay, air pollution due to the burning of garbage that disrupts public health and becomes a source of disease for human health. There is a habit of people making rivers as a place of garbage dump into waterways. This research aims to study the factors affecting the behavior of people in removing garbage by ethnographic methods. Research with ethnographic approaches in the form of data collection and information through observing the situation that became the object of Research and combining with documentation serving. Research results showing a lack of public understanding of the consequences that can be caused by garbage, lack of government costs to provide/strive for proper waste management and qualify. Therefore, if not handled correctly, it will cause impacts such as water pollution, air, and soil resulting in the source of disease. There is also the relationship between knowledge, education, income, and attitude that affects people's behavior throwing waste.

Keyword: Implementation, Development, Disaster, Village.

Informasi Artikel: Disubmit: 2022-08-26; Direvisi 2022-09-26; Disetujui: 2022-10-22

PENDAHULUAN

Batang Hari River is a long river on the island of Sumatra, about 800 km, the springs are derived from Mount Rasan (2585 m), and the upstream of Batang Hari is up to the lake above, Solok Regency. It flows south to the area of Sungai Pagu. Batang Hari River basin (watershed) is the second-largest DAS in Indonesia, covering the catchment area of \pm 4.9 million (Tikno, Tabir, & Sumai, 2000). The function of the Bantanghari River is essential for all Jambi people. The Batanghari River is used for daily necessities (MCK, drinking water,



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and watering plants), sand and rock mining activities, fishing, PDAM, raw water use, and a water tourism destination in Jambi City (Efhreim Sibuea, 2017).

The significant challenges facing economic development are the fulfillment of development needs by maintaining environmental sustainability (Haikal & Umami, 2020). Developing natural resource-based economies that do not respect the Ecosystem's sustainability dimension would inevitably negatively impact the environment itself (Heryawan, Fauzi, & Hidayat, 2014). Since virtually, there is a finite amount of natural and environmental capital. Sustainable development aims to meet the community's needs without compromising the fulfillment of future generations' requirements. However, each country's condition is not the same, so the solution must be adjusted to the state of a nation. Sustainable development (Setiawan & Yulian, 2016) should be undertaken in a planned manner and with national-based performance standards. And the most important thing is that technological innovations in national governments' scope should continue to be undertaken until finally achieved on a global scale.

According to (Andi Zulfitri, 2017), the principle of implementation of SDGs is implemented by advancing the law of universal development. The meaning is that SDGs is achieved not only by developing countries but also by developed countries to reach all nations in the world. The SDGs are a comprehensive and interconnected dimension of social development, economics, and the environment. According to Sustainable Development (Retno Setianingtias, M. Baiquni, 2019), it is a more inclusive and Performance development process. One of the factors that ultimately hinders the adoption of a sustainable development approach is applying a sectoral approach, which has been an obstacle in adoption or field implementation. Sustainable development should be an integrated sector-wide and multidisciplinary project, which needs to be carefully organized. Beginning at the middle level until the region and community (Saepudin, Sumara, & Asriani, 2018). United Nations (2014), as the 2015–2030 Global Development Agenda, known as the Sustainable Development Goals 2030 (SDGs 2030), has made this development framework. It is expected that every nation, market, region, the industry will embrace and contribute to sustainable development as a global platform (Purba & Sipayung, 2017).

Currently, Indonesia's environmental policy for the long-term menace at Law No. 17 of 2007 about in the next 20 years in various aspects/development sectors as an effort to spread and achieve national objectives as in the opening of the Constitution Act 1945. Indonesia's long-term mission about the environment is on the vision and mission of the national development 2001-2025, in the 6th item that is explained: "Realizing Indonesia is beautiful and sustainable." In RPJP 2005-2025 about the Environment according to the law No. 17 the year 2007, as follows target of RPJP 2005-2025 in a particular situation. The Application of Law No. 26 of 2007 on the spatial arrangement could not be implemented rigidly (Junef, 2017). Therefore, to create a social space productive and sustainable area of harmonization between the natural environment and artificial environment, the alignment in natural resources and artificial resources about the source of and protection of room functions to avoid any negative impacts on environmental damage due to space utilization.

Implementing the Sustainable Social Field Development Plan is Regional Development Agency Kediri Regency conducting the study of the development of the English Village, culminating in creating the British Village Brigadier to preserve the protection and social order (Wicaksono, 2016). The Ministry of Culture and Tourism manages the introduction of cultural activities in the field of sustainable development. According to (Rivai & Anugrah, 2016), one of the factors of sustainable development approach is not fully implemented. Implementing the sectoral system is still an obstacle to the adoption or implementation in the field now. Research results (Burhany, 2013) that prove the effectiveness of environmental management accounting to improve ecological Performance bring important implications for sustainable development. A critical aspect of sustainable development is the environmental/environmental part will be fulfilled if the company implements environmental management accounting, which proved to improve envir. According to (Zaini & Darmawanto, 2015), the Development and Environment of interconnected relationships and have a mutual interaction Very carefully. Undeniable, development can influence the environment, and the environment can also Influence development.

Sustainable development based on ecology to create a sustainable system based on the environment must maintain resources to remain in a stable state, avoiding the exploitation of nature for plants to perform absorption functions correctly (Utami & Mardiana, 2017). Also, ecological-based sustainable development concerns biodiversity maintenance, air space stability, and other ecosystem functions that are not included in economic resources. The high level of air pollution such as air pollution due to the high level of dust flying in residential areas resulted from the company's activities, such as causing the state of the highway to suffer severe damage that disrupted the road riders who crossed it (Muhajir Haris & Priyo Purnomo, 2016). According to (Effendi, Salsabila, & Malik, 2018), the number of ecosystem components is balanced if ecosystem balance occurs. Among the members of the Ecosystem with interaction, mutual need and mutual benefit provide its needs. This balance must be maintained so that the Ecosystem will be sustainable development and the flow of energy that reaches far-reaching ecosystems will be held.



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Renewal and harmonization of the environment's laws and regulations and space arrangement in Indonesia to sustainable development must be sourced from the principle. Considering the nation's characteristics, Indonesia set rules that can be easily implemented (Priyanta, 2015). Environmental legislation is the basis for the development planning of established legal efforts to unite the direction of development to realize state objectives for the Justice of the present and future generations. The environment is very influential in the survival of natural resources for ages. Therefore, this Research tries to answer how environmental damage affects economic sustainability? Case study of waste problem in Batanghari River Jambi.

LITERATURE REVIEW

The garbage problem in Indonesia is still a problem that is difficult to solve. The majority of society's uncaring attitude will be the main trigger because people are accustomed to throwing garbage without thinking of the consequences. A lot of negative impacts happened. Flood, landslide, disease, and so forth (Adhiharto, 2018). Disruption of the aquatic Ecosystem is generally caused by human activity either directly, such as excessive fishing, and indirectly such as removing waste on the Marine Ecosystem. One of the abundant waste found in the waters is plastic waste (Nugraha, 2019). A river is a form of aquatic Ecosystem that has an essential role in hydrological recycling and serves as a catchment area for the surrounding area. The condition of a river is strongly influenced by the characteristics that are owned by the surrounding Environment (Adyatma, 2016). Also, the river is one component of the environment that has an essential function for human life. The river's primary role as a source of water to irrigation agricultural land and meet the needs of clean water, both for household needs and on the industrial sector's activities. Disposal of garbage-garbage to the river will cause water pollution. The narrowing and refinement of the river also obstructed its groundwater process, significantly if a lot of plastic waste that the soil can not describe will accumulate garbage and debris.

Population density and social activity are increasing, causing the amount of garbage to improve (Fikriyyah, 2018) continuously. The knowledge of waste management with the 3R principle (Reduce, Reuse, Recycle) has been a national policy since the dismissal of law number 18 the year 2008 about waste management. By applying this principle, it is generally expected that garbage will be reduced from its source so that the trash dumped into the final disposal is also reduced. It can also be a tool to optimize the utilization of garbage so that garbage has economic value and can open the job (Indah, 2015). On the ecosystem side, the waste produced is a polluter in the river. Garbage can also cause sediment so that the total level of suspended solids in the river increases and dissolved oxygen decreases (Kadaria & Jati, 2017). Land and water utilization problems will eventually decrease the environment's environmental capacity defined by the ground to support human life and other living creatures (Sarminingsih, 2017). The utilization of waste should be a priority before environmental pollution occurs that impede public health. There needs to be waste management. Waste management requires specific and continuous systematic activities that include reducing and handling waste (La Harudu, 2020).

The processing of garbage currently done is still manually, namely by picking up waste using human power (garbage collector) and using heavy equipment that has not been maximized, especially in the flow of rivers that require maximum countermeasures. To improve water's environmental quality and the first main problem, it is necessary to prepare its technology, regulation, and management (Komarawidjaja, 2017). With the advancement of technology that develops today, countermeasures and waste processing can be simplified. This can be done by utilizing pre-existing technologies or innovations to design an automatic garbage processing tool, energy-saving, environmentally friendly, and shorter usage time (Nurmantis, 2019). And with the application of the waste Bank program can be a strategy to raise the community's awareness of garbage because it gained the economic benefits of waste. Applying waste Bank can be a solution for the problem of garbage solutions focused on cleaning officers and the active participation of the community (Diyanah et al., 2019).

Garbage always raises complicated issues in communities that lack sensitivity to the environment. Lack of availability TPS (temporary waste shelter) is closely related to visitors, managers, and residents to control the garbage they cause. The fleet's capacity and inadequate cleaning officers will slow the process of distributing waste to TPA (Bahrum, 2019). The increased volume of trash but has not been followed by improved management of good. It can also cause environmental degradation. It is necessary to manage the control of the waste involving aspects: financing aspects, institutional aspects, operational aspects, legal and regulatory aspects, and community participation aspects. Improved waste management should include an increase in the fundamental element (Malinda, 2017).

Behavior is a manifestation of necessity. Behaviour is reasonable when self-adjustments are to be aligned with human roles as individuals, socially, and conditioned needs. Action is a movement that can be observed from the outside, such as eating or walking. For this activity, they must do something. Knowledge of environmental hygiene will affect the behavior of hygiene management. There is a positive relationship between experience with the action of vegetable traders in managing the environment hygiene improved community understanding of waste management and waste hazard, will realize a right attitude towards waste management



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and will form proper behavior in the direction of waste, so that the environment is created clean, healthy, and free from waste pollution. The perception that communities have is influenced by knowledge of garbage, attention to the ground, and communities' mental sets. The perception is also influenced by the need for garbage and the community's prevailing value system (Prasetyo, 2016).

RESEARCH METHOD

Qualitative Research refers to the goal of understanding the phenomena experienced by the object of Research, such as behavior, perception, motivation, action, etc., holistically and through descriptions of words and language forms under a unique natural setting. By using various natural means (Moleong, 1993). Research with ethnographic approaches in data collection and information through observing the situation became the object of study and a combination of the documentation. Also, ethnographic methods constitute criticism and involvement of researchers seeing the subject's position to fulfill human rights, social justice to restore nature's service, or specific injustice in a particular living space (Aisyarah, 2018).

Ethnography is a form of research that focuses on the sociological significance of individuals and socio-cultural backgrounds compiled from field observations based on research priorities (Nursapiah, 2020). Ethnographic Research is social science research, suitable for:

1. Know-how, if, and why people behave this way when interacting with other people in specific environments/situations (such as social interactions).
2. Understand what happens in the natural environment
3. Know why people have done this in the past
4. Understand information/data that supports people's understanding so that they can understand a more complex society.

This study saw how the government and community efforts in tackling the garbage on the Batang Hari River, where the river is one of the sources of local problems, and seeing how so far the community looked at the current situation and found solutions for the management of waste well. Data collection using in-depth interviews around the Batang Hari River.

RESULT AND DISCUSSION

Several factors heavily influence Batanghari River water quality due to community activities, both personally and groups and companies of illegal sand ponds. The habit of dumping garbage into the river that until now is still done by the community. The wild gold mining activity in the upstream part of the Batanghari River makes the water quality in Batang hari river not worth it anymore. Every action of living beings is more precisely human, from waking up, start to activity to sleep again, not escape the name of garbage. Efforts to improve environmental quality have been implemented mostly by local governments and cities in Indonesia. The improvement of environmental quality consists of various aspects. One of the most influential aspects is the management of waste in the residential environment. Garbage is the main problem agenda facing almost all cities in Indonesia. The success factor in implementing waste management is entirely dependent on local governments or cities and communities' willingness. The garbage problem is a significant environmental problem and the nation's responsibility throughout Indonesia. Waste production is not comparable to the transport and management system so far, so garbage buildup is everywhere. Regarding the waste management that is still a problem, if the garbage is not done well, it will cause problems. Uncontrollable garbage dumps due to human activity will impact the beauty of the region, the emergence of the smell of waste decay, air pollution due to the burning of garbage that disrupts public health and becomes a source of disease for human health.

View trash in Batang Hari River

Sustainable development for all sectors that are pursued in each policy to create the collateral balance and sustainability of the function of natural resources and the environment in the future, to realize the condition of natural resources management and sustainable environment is a challenge because of the efforts to prevent the implementation of weak law enforcement hampers excessive exploitation that resulted in environmental destruction.

Regional Regulation (PERDA) of Jambi City number 8 of 2013 concerning waste processing. Government efforts in handling waste have been carried out, such as procuring trash bins for each house, in interviews conducted by the author of 21 informants, with three months, using cellphones. According to Nada, who lives around the Batang Hari River;

"The condition and amount of garbage on the banks of river Batanghari can be said is very concern. Although there have been efforts to countermeasures waste but not sufficient to reduce the amount of garbage that eventually dumped into the river Batanghari ". The flooding of the Batanghari River continues. One of the



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leading causes is domestic waste or household waste. If it continues to be left, batang hari river water can be consumed again.



Figure 1. Garbage on the Batang Hari River

The river is a source of life for the people around which if the drought arrived, the river could be used as a source of water for people's lives. Many are only those who utilize the river water to provide adequate daily necessities such as cooking, bathing, etc. The Riverbank area is strategic and has high accessibility. Dependence on rivers resulted in riverbank areas.

Unlike the opinions Wahyu, whose daily life utilizes the Batang Hari River, argues that *"Circulating his garbage on the banks of river Batanghari let alone around that there is a settlement because of the customs of the people around the past, besides throwing garbage they also threw his hajj into the river. Also, it is a lack of socialization of citizens of the government and lack of awareness will keep the environment from the citizens around"*.

River pollution is primarily due to the lack of public awareness of the importance of maintaining the environment. Therefore, it is necessary to socialize general waste management to change the habit of throwing waste into managing garbage for each community to collect the trash so that it becomes a habit of living with efforts made to improve the knowledge of citizens through the socialization of Community waste management, especially in mothers or women, where the function of the mother is as a household manager.

The practice of clean water management carried out at the household level has not been able to create efficient water use and has not conserved water and preserved the environment in a sustainable manner (Ulya, 2019). It seems that price is an essential factor influencing the participation of homemakers in paid plastic bag policies. Behavior may be affected by income levels, where homemakers should be prioritized in spending their money to fulfill their daily lives instead of paying for plastic bags (Andrawina, Zulfikri, Maranatha, & Handayani, 2019). Sustainable consumption is an umbrella condition that can bring all-important issues such as own needs, quality of life, increased resource efficiency, increased use of renewable energy sources, waste, a life cycle perspective, and understanding the dimensions of Justice (Prastiwi & Rabia, 2019).

The behavior of throwing waste out of place is likely due to knowledge of the unwell environment. Community behavior is established long and enduring when it is based on sound knowledge. Experience can include an understanding of garbage, impacts, and how to manage them. The right expertise will direct the mindset, perception/attitude of a person to do the right thing because it is conscious and knows the deed's consequences. The environmental movement is part of a social movement, a collective effort to pursue a common interest or achieve a common goal through collective action (Kusumadewi, 2019). One of the steps to overcome the garbage problem on the river Cikapundung is the collaboration between the government, community, and social organizations (trash Banks) in the region. The government can act as a facilitator in changing the conventional waste management process into waste management participation (Bintarsih Sekarningrum, 2017).

The landscape of Batang River Day

The river is a large and elongated water stream that flows continuously from the upstream (the source) towards the downstream (estuary). Batang Hari River is the longest river in Sumatra, around 800 km, the springs are derived from Mount Rasan (2585 m), and the upstream of Batang today is up to the lake above, Solok



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Regency. It flows southward to the Pagu River area. Batang Hari River basin (watershed) is the second-largest DAS in Indonesia.

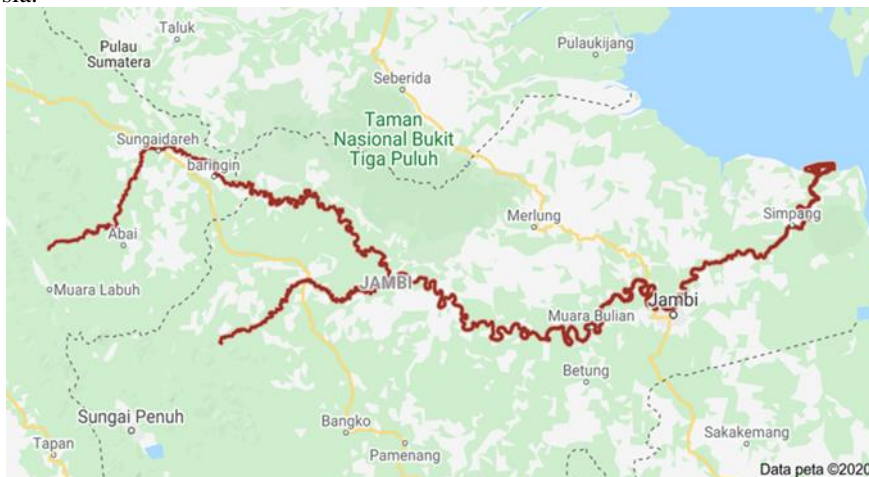


Figure 2. Batang Hari River

The utilization of the Batang Hari River is very felt in the farming community, fishers and merchants. This river becomes a searching eye. However, the river is not used correctly, so that the water condition of river trunk Day can not be in the category worth it to wear. Illegal sand mines, palm waste disposal, and environmental conditions adversely affect public health.

Actions from the government prevent people who dispose of garbage in the river, such as making regulations about the sanction of the sanctions to dispose of waste and provide facilities such as garbage disposal and transport vehicles. The most formidable challenge prevents and tackles the Batanghari River's pollution, which is to appreciate or give education or learning to the community. It is tough to change the habit of public habits throwing garbage into rivers if not carried out counseling about the dangers of river pollution.

Perception and behavior in throwing garbage in rivers are related to environmental literacy that is community-owned. The achievement of ecological education objectives can be known from the change of perception and behavior raised by the community. Communities that have a low perception of the environment and still bring about throwing garbage in the river indicate that the purpose of education has not been achieved.

One that causes river pollution is people's behavior in the river basin that still throw garbage into the river. The action and culture of people throwing waste into the river are always intense. The problem is due to a lack of awareness of citizens of the importance of the environment. The restoration of the river requires a change of viewpoints, attitudes, and behaviors of the river. During this time, there is still a strong view that residents can dispose of waste, waste, and other dirt into the river as a groove of water. Public awareness about ecological functions and the significance of the river is a significant prerequisite of river restoration. Therefore, the river's restoration must begin to change the awareness, perspective, attitude, and behavior of people to the river. This change of consciousness, understanding, and philosophy can be done through environmental movements. The findings (Yulida, 2016) are aligned with Lawrence Green's theory that attitudes affect behavior. Thus, to get a right and correct attitude towards throwing waste, need to be given information or counseling routinely about waste management and waste hazard for health and the environment.

CONCLUSION

Based on the analysis, it can be withdrawn the root problem is that the public receives no information about how to manage waste to become economically valuable. Garbage buildup in the environment needs to be addressed with the system's waste management programs and add new income for the community. Given the miracle of community participation in activities in the region, the empowerment program can be a solution to the problem. The knowledge of waste management with the 3R (Reduce, Reuse, Recycle) principle has been a national policy since the dismiss of law No. 18 of 2008 on waste management. Applying this principle, it is generally hoped that garbage will be reduced from its source so that the trash dumped into TPA is also reduced. It can also be a tool to optimize waste utilization so that garbage has economic value and can open the job field.

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