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ANALYSIS OF WASTE HANDLING AND MANAGEMENT ON THE BANKS OF THE BARITO RIVER, RANTAU BADAUH DISTRICT, BARITO KUALA, SOUTH KALIMANTAN

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ABSTRACT
Waste is a resource that has economic value that can be utilized, for example for energy, compost, or for industrial raw materials. From the explanation above, it is necessary to conduct research to change people's habits in managing waste on the banks of the river. The research objective was to analyze the handling and management of waste on the banks of the Barito River, Rantau Badauh District, Barito Kuala, South Kalimantan. The research was conducted along the Barito River, Rantau District. The research method uses descriptive qualitative and quantitative. The research population was taken deliberately using census results (all samples were taken) in communities living on the banks of the Barito River based on the criteria of living 0-100 meters from the riverbank. The research data collection tools were questionnaires, interviews, direct observation and documentation. Data analysis using a Likert Scale and SWOT. The handling and management of waste on the banks of the Barito River, Rantau Badauh District, Barito Kuala South Kalimantan shows that 78.05% of the community attitudes and behavior strongly agree with waste management, 86.23% of the community strongly agree with the improvement of facilities and infrastructure and 87.76% of the community strongly agree with the policy of the Regional Government of Barito Kuala Regency. Based on the results of the SWOT analysis, the researchers used an average good score for the development of waste management on the banks of the river in quadrant I, which is a very favorable condition.

KEYWORDS: Garbage, Barito River, Management, Handling.

INTRODUCTION
The continued increase in the amount of waste is in line with the increasing quality of people's lives and the number of inhabitants or humans and is accompanied by advances in technological science which also results in a shift in people's lifestyles that tend to be consumptive (Ridho, 2020). The problem of waste, especially household waste, is a major problem faced by the community. Waste has become a national and global problem, not only local, there is an increase in waste generation by 2-4% per year, but this is not matched by the support of supporting facilities and infrastructure that meet the technical requirements so that a lot of waste is not transported.

People not only live in urban areas but also for people who live on the banks of rivers, this also happens to people who live on the banks of the Barito river in Sungai Gampa and Sungai Sahurai Villages, Rantau Badauh District, Barito Kuala Regency, where almost all people living in the banks of the river do not (Mahyudin, 2017) carry out waste management properly, one of which is by throwing garbage into the river. Factors that influence waste management which are considered as obstacles to the system are population distribution and density, environmental characteristics, attitudes, behavior and culture in society and socio-economic according to (Islami, 2019).

The habit of throwing garbage into the river is caused by habit/behavior and cultural factors that exist in the community, the lack of facilities and infrastructure provided by the Regional Government and also due to the lack of coordination between the Regional Government, the District and the people who live on the banks of the river. According to Dobiki (2018), waste is a resource that has economic value that can be utilized, for example for energy, compost, or for industrial raw

materials. From the explanation above, it is necessary to conduct research to change people's habits in managing waste on the banks of the river. The research objective was to analyze the handling and management of waste on the banks of the Barito River, Rantau Badauh District, Barito Kuala, South Kalimantan.

MATERIALS AND METHODS

The research was conducted along the Barito River, Rantau Badauh District, which is one of the sub-districts in Barito Kuala Regency, with the capital city of the sub-district, Gampa Asahi Village, geographically located between 114o40' - 114o50' East Longitude and 2o50' - 3o18' South Latitude with coordinate points District Office 3.0683 South Latitude; 114.7115 East longitude. The administrative area boundaries of Rantau Badauh District from the area map are shown in the following figure:

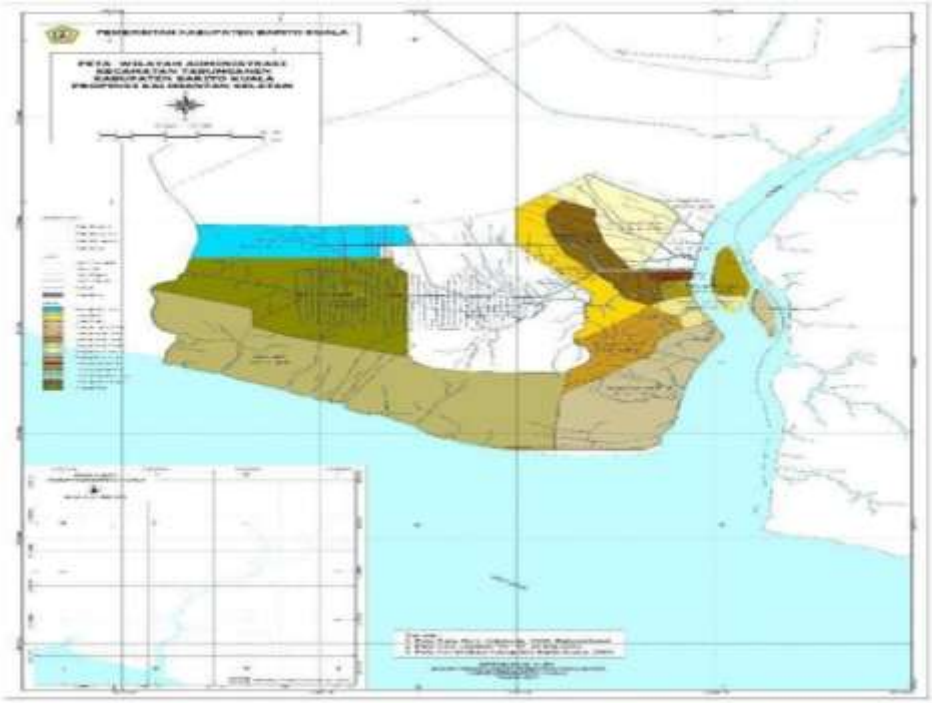

Figure 1: Map of Research Locations.

The research method uses descriptive qualitative and quantitative. The research population was taken deliberately using census results (all samples were taken) in communities living on the banks of the Barito River based on the criteria of living 0-100 meters from the riverbank, namely 147 heads of households. Consisting of Sungai Gampa Village RT 01 50 families, Sungai Sahurai Village RT.01 42 families and RT 02 as many as 55 families, the number of samples for each village was calculated using the proportional random sampling formula. So that the total sample population of the village is 312 households. In order to reduce the sample size, it was calculated using the Slovin formula, so that 76 families were obtained. Research data collection tools are questionnaires, interviews, direct observation and documentation. Data analysis using a Likert Scale and SWOT.

RESULTS AND DISCUSSION

Analysis of Community Habits in Waste Management Based on Questionnaire Calculation Results Using a Likers Scale

The results showed that the community agreed to activities in waste management on the banks of the Barito River, Rantau Badauh District, Barito Kuala Regency.

- 78,05% In terms of attitudes and behavior, the community strongly agrees with waste management on the banks of the Barito River in Rantau Badauh District, Barito Kuala Regency
- 86,23% there is an increase in facilities and infrastructure from the Regional Government of Barito Kuala Regency, the community strongly agrees with waste management on the banks of the Barito River in Rantau Badauh District, Barito Kuala Regency
- 87,76% there is a policy from the Regional Government of Barito Kuala Regency, the community strongly agrees with waste management on the banks of the Barito River in Rantau Badauh District, Barito Kuala Regency.

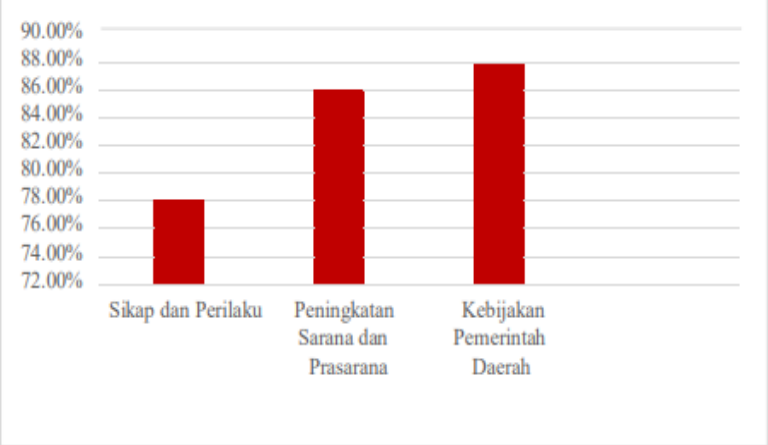

Figure 2 Results of community analysis using a Likert scale.

Table 2: Calculation of people's attitudes and behavior.

Description	Strongly Agree (%)	Agree (%)	Disagree (%)	Strongly Disagree (%)
sikap dan prilaku	78,05	21,45	0,5	0

Table 3.

Number of family members	Total waste generation (0.3 kg/person/day)	Organic Waste (69.5%)/ Kg	Inorganic waste (30.3%)/ kg
294	88.2	61.5	26.9

A study from the UPT Garbage Generation of waste was 0.3 kg/person/day while the number of respondents was 294 family members, the waste generated was 88.2 kg/day. The percentage for organic waste is 69.5% so that the resulting organic waste is 61.3 kg/day, while the percentage for inorganic waste is 30.5% so that the inorganic waste produced is 26.9 kg/day.

The prospect of developing waste management on the outskirts of the River in Rantau Badauh District uses a SWOT analysis

Water pollution caused by waste that is thrown into the river must receive special attention, for people who live on the banks of the river, proper waste management is needed so that people no longer throw garbage into the river, of course, community-based by involving the community's role in waste management. for this reason, support from the Regional, District and Village Governments is needed for the implementation of this waste management, to analyze how the development of waste management on the banks of the river in Rantau Badauh District is carried out using a SWOT analysis which analysis is carried out one by one; strengths, weaknesses, opportunities and threats so that researchers can evaluate what kind of waste management is expected to be developed later in the research area. The following is a SWOT analysis table for the development of waste management on the banks of the Barito River, Rantau Badauh District (Aseptianova, 2020).

Table 4: SWOT Analysis Calculations.

Internal Factor (Strength) /S 1. There are human resources from the community who are capable of implementing waste management 2. Increased community demands for waste management in Rantau Badauh District 3. There is a desire of the community to participate in management Rubbish	**Internal Factors (Weaknesses)/W** 1. Lack of budget for waste management 2. Lack of waste facilities and infrastructure provided by the Regional Government 3. Low public understanding of waste management
External Factors (Opportunities)/O 1. Development of knowledge in waste management 2. There are laws and regulations from the Government regarding waste management 3. There is strong support from the Regional Government for waste management 4. High appreciation from stakeholders Interest	**ernal Factors (Challenges)/Q** 1. There is no socialization and establishment of waste banks on the banks of the river 2. Low coordination between the Village Government and the community 3. Weak coordination between the Regional Government and the District and Village governments

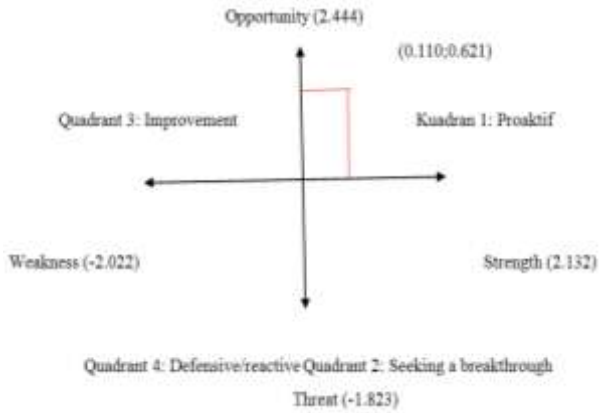

Figure 4: SWOT analysis quadrants and the types of strategies.

The results of the study using a Likert scale showed that 78.05% in attitude and behavior of the community strongly agreed with waste management, 86.23% of the community strongly agreed that there was an increase in facilities and infrastructure and 87.76% of the community strongly agreed with the policy from the Regional Government of Barito Kuala Regency. Based on the results of the SWOT analysis, the researchers used the average scores from both researchers and Expert/Professional Judgment from IFAS = 0.110 and EFAS = 0.621, so the development of waste management on the banks of the river is in quadrant I, namely conditions that are very favorable, where waste management activities in the area research can be carried out by taking advantage of existing opportunities, so that the strategy that must be implemented to support this activity is to implement waste management policies in the research area, from the Regional Government through increasing the waste management budget, adding facilities and infrastructure, carrying out outreach/bintek activities to increasing science and technology and improving good coordination with sub-districts, villages and communities. Meanwhile, the role of the community itself in implementing waste management policies is by participating actively in maintaining the cleanliness and health of the environment (Faridah, 2019).

Strategies that can be carried out based on the calculation results of the EFAS and IFAS analysis for the development of waste management programs in the study area are as follows:

- Increasing community participation to meet community demands for waste management. Forms of participation that can be carried out by the community in this case, such as not throwing garbage into the river, applying waste segregation from home according to the type of waste produced, such as organic waste, inorganic waste and B3 waste, by providing segregated waste bins in their respective homes. and throw it into the TPS that has been provided by the Government. Limiting the use of plastic waste in daily activities such as using cloth bags/baskets for shopping, using reusable containers for drinking/eating water, reusing waste such as using soap/shampoo bottles used as refill containers (Astina, 2020) .
- Forming a Community Concerned Waste (MPS) group, carrying out socialization and forming a group of waste banks with the application of the 3R principles where the community's own participation is very large in this waste bank activity. The 3R concept (Reduce, Reuse and Recycling) itself aims to utilize existing household waste in the community to be managed by recycling household waste into products that still have economic value, such as recycling plastic waste into handicraft materials that can be for sale where the proceeds from the sale can increase people's income such as used food plastic waste to turn into bags, aqua plastic cups to become egg holders, and compost organic waste to become organic fertilizer where the results of this organic fertilizer apart from being used by the community themselves to fertilize plants can also be sold for increase your daily income.
- Participating in training/bintek activities carried out by the government in terms of waste management to increase community resources who understand science in terms of waste management.
- Providing cleaning workers from the community who are paid by the community to pick up the garbage that has been collected in each other's yard for disposal by the cleaning staff to TPS.
- Get involved in mutual cooperation activities together in keeping the environment clean together and get used to clean and healthy living in order to maintain personal hygiene and the environment around where you live.
- Improving coordination with the local government for additional waste facilities and infrastructure, in this case villages and sub-districts can propose to the local government to be able to add infrastructure assistance that is really needed for waste management in the research area. Assistance for waste infrastructure facilities can be in the form of a 3-wheeled waste transportation facility according to road conditions or the assistance of wheelbarrows for temporary waste disposal which will later be transported by cleaners from the community to be transported to the nearest TPS.
- Local government can also coordinate with third parties, in this case business actors, in providing assistance with waste management facilities and infrastructure to the community in the research area, namely through the Corporate Social Responsibility (CSR) Program. The CSR program is a form of corporate social responsibility towards stakeholders and society for the environmental impacts caused by the activities of the company (Kadaria, 2018).
- The benefits of CSR for the environment are helping to protect the environment. A company is asked not only to pursue profits within a certain period of time, but must actively contribute to environmental quality through the company's CSR funds. For the community itself, the benefit of CSR is to contribute

to society, such as the establishment of factories in the midst of society by paying attention to the comfort and safety of local residents (Huda, 2020). In addition, the company's CSR can also be realized by absorbing labor from residents in the company's environment. The benefits for the company itself SCR is to help the company improve its image in the eyes of the public. When a company name is well formed in the eyes of the community, the branding process will also be easier, especially if the target community is experiencing national-scale CSR, such as football scholarships, building wells in dry areas, and so on. Meanwhile, for the government itself, the benefit of CSR is to support government programs related to the progress of the nation and state. Corporate CSR is here to assist the government in dealing with various social problems such as environmental pollution, unemployment, poverty, lack of health facilities, education, and so on (Yulida, 2016)

The community throws garbage into the river in the research area due to the habit, behavior and culture of the people who do not implement a clean and healthy lifestyle, lack of facilities and infrastructure provided by the Government and lack of outreach to the community by the Regional, District and Village Governments regarding waste management (Ridho, 2017). The implementation of waste management policies in the research area has not been fully implemented by both the Regional Government and the community. This is due to the lack of coordination carried out by the Regional Government both towards the District, Village Officials and Communities, there is still a lack of budget for waste management, a lack of facilities and infrastructure and a lack of public knowledge about waste management.

CONCLUSION

The handling and management of waste on the banks of the Barito River, Rantau Badauh District, Barito Kuala South Kalimantan shows that 78.05% of the community attitudes and behavior strongly agree with waste management, 86.23% of the community strongly agree with the improvement of facilities and infrastructure and 87.76% of the community strongly agree with the policy of the Regional Government of Barito Kuala Regency. Based on the results of the SWOT analysis, the researchers used the average score from both researchers and Expert/Professional Judgment from IFAS = 0.110 and EFAS = 0.621, so the development of waste management on the banks of the river is in quadrant I, which is a very favorable condition.

REFERENCES

1. Asseptianova, A., & Yuliany, E. H. Application of Healthy Clean Living Behavior of Residents in Kelurahan Kebun Bunga, Sukarami District, Palembang City on Methods of Household Waste Management. SOLMA Journal, 2020; 9(1): 68-78.
2. Astina, N., Fauzan, A., & Rahman, E. Factors Associated with Community Behavior in Disposing of Household Garbage Into the River in Pamarangan Kanan Village, Tabalong Regency in 2019. Med Technol Public Heal J., 2020; 4(2): 181-90.
3. Dobiki, J. Analysis of Availability of Garbage Infrastructure on Kumo Island and Kakara Island in North Halmahera Regency. Spatial, 2018; 5(2): 220-228.
4. Faridah, H. D., & Sari, S. K. Utilization of Microorganisms in the Development of Biotechnology-Based Halal Food. Journal of Halal Products and Research, 2019; 2(1): 33-43.
5. Huda, M. A. N., Hadi, H., & Subhani, A. Garbage Management Along the River Borders of Pancor Sub-District and Sekarteja Sub-District. Geodika: Journal of Geography Science and Education Studies, 2020; 4(1): 95-106.
6. Islamic, A. N. Plastic Biodegradation by Microorganisms, 2019.
7. Kadaria, U., & Jati, D. R. The influence of the knowledge and education aspects of the people on the banks of the Kapuas river in disposing of garbage. Journal of Vocational Health, 2018; 4(1): 6.
8. Mahyudin, R. P. Study of waste management problems and environmental impacts at the TPA (Final Processing Site). Jukung (Journal of Environmental Engineering), 2017; 3(1).
9. Ridho, A. Y. Study on Riverbank Slum Settlement Waste Management Case Study of Sungai Kuin, City of Banjarmasin (Doctoral Dissertation, Gadjah Mada University), 2017.
10. Yulida, N., Sarto, S., & Suwarni, A. Community behavior in disposing of garbage in the Batang Bakarek-Karek river, Padang Panjang City, West Sumatra. Public Medicine News, 2016; 32(10): 373-378.