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The Impact of Sand Mining on Communities Working as Lift Laborers
(Study in Sunju Village, Marawola District, Sigi Regency)

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ARTICLEINFO	ABSTRACT
	This study aims to find out how mining impacts people who work as sand lifters. This research was conducted in Sunju Village. This type of research is qualitative descriptive research. Data collection techniques were done through observation, interviews, and documentation from sand lifting workers, village communities, and the Sunju Village government. The source of this research data is primary data. The results of the research show that sand miners have a positive impact on the income of sand lift workers. Along with the increasing number of orders for sand utilization from various regions, the number of orders and trucks that come in benefits miners who work as laborers, giving miners an excellent opportunity to improve the economy. The income obtained by the owner of the sand suction machine for one car truck is Rp. 130,000. The lifting workers employed by the machine owner are three to four people for each truck. The income of lifting workers every day is Rp75,000. The calculation for the monthly income of sand lifters is Rp2,250,000. The sand mine in Sunju Village also has a lot of impact on the environment and health.

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1. INTRODUCTION

Indonesia is a developing country, both in terms of politics and economic development. The natural resources contained in it are many and potential. Using natural resources, especially industrial excavated materials in various regions, has excellent potential for developing Indonesia's economic growth (Bahasoan et al., 2024). Large-scale natural resource utilization activities have a positive impact on economic growth but also hurt the environment. Therefore, an activity that utilizes natural elements must be accompanied by conservation measures and environmentally friendly activities to make the environment sustainable (Akbar, 2020). One of the mines that is quite widely contained in Indonesia's earth is the sand mine. Sand is the primary raw material for civil buildings such as houses, buildings, roads, bridges, ports, and dams. Sand material also meets local communities' needs outside the area. Open pit mining activities generally consist of land clearing, overburden stripping, demolition, selection, loading, transporting, size reducing, washing/refining, marketing, and reclamation (Wasis, 2020)

Economic empowerment is an effort to improve the welfare of local communities through productivity and independence activities by involving the community in achieving their welfare. By utilizing existing natural resources, we will realize empowerment that utilizes local potential and truly supports community development (Dinda, 2022). A country's economy will determine the economy (Hapsari, 2016).

In Sunju Village is a flow of Kasubi River, the river bordering Kalukubula Village, where sand mining activities occur. Sand mining activities in Sunju Village began in 1990. At first, this mining was carried out manually, but over time, miners began to use sand suction machines.

Sand miners have become a livelihood for the people of Sunju Village, and sand mining activities become jobs for people in the village. More or less, the villagers work as sand-lifting laborers. (Source: Sunju Village office). Lift laborers employed by ordinary machine owners are three to four people for each truck that will buy sand. In each truck, the machine owner provides an Rp wage. 60,000 for all lifting workers who work, meaning that if the lifting workers work as many as four people, the wages of Rp. 60,000 will be divided among four sand lifters, and it can be concluded that in one sand lifting, lifting workers only get a salary of Rp. 15,000. On a day of lifting, workers can load up to five trucks, and it can be said that the income obtained is Rp. 75,000. Conversely, lifting workers, a total of three people, earn 1 *ret* of sand Rp. 20,000, with a load of 5 *ret* of sand, and then, each day, they get a daily wage of Rp. 100,000.

This research will be conducted on miners who work as sand lifters in Sunju Village, Marawola District, Sigi Regency. This study aims to determine the impact of sand mining on rural communities. The problems in this study are: How much economic impact do sand lifting workers get from Sunju Village, Marawola District, and Sigi Regency?

2. RESEARCH METHOD

The location of this research was Sunju Village, Marawola District, Sigi Regency. Qualitative descriptive research aims to collect information about pre-existing symptoms, namely the condition of the symptoms that existed when the study was conducted. Qualitative descriptive research describes what a variable, symptom, or situation means. Of course, qualitative descriptive research wants to prove conjecture, but this rarely happens. In general, qualitative descriptive type research does not aim to test hypotheses. This research seeks to explain in more detail the problems to be studied. This study aims to explain the phenomenon in as much detail as possible by collecting detailed data to show the importance and detail of a phenomenon under study. In addition, the primary purpose of this study is to find out the impact of sand mining on the community and the sand-lifting workers in Sunju Village.

The type of data used in this study is primary data. Primary data is obtained directly from the first source (not through intermediaries). Thus, primary data are obtained from observations, interviews, and documentation (Nyompa et al., 2020).

3. RESULTS AND DISCUSSIONS

Sunju Village is in Marawola District, Sigi Regency, Central Sulawesi Province. The total area is 1.64 km2, consisting of 4 hamlets and 9 RTs. Sunju Village is at the coordinate point starting from the northern part of Dusun, located in the southern part of PT. Meriba Jaya, East of Kasubi Bridge, West of rice fields. The total population in Sunju Village is 1422 people, of which there are 732 males and 690 females. Sand mining in Sunju Village is a business built by the community and developed using more sophisticated tools. The sand mine in Sunju Village has been operating since 1990 until now.

The characteristics of respondents based on age groups obtained through interviews can be seen in the table below.

Table 2. Miner Age Group

No.	Age Group (Year)	Frequency	Presentase (%)
1.	≤ 29	4	33,33
2.	30-34	2	16,66
3.	35-39	3	25
4.	40-44	3	25
5.	45-49	1	8,33
Total		**12**	**100**

Source: Processed Data in 2023

Table 2 shows that miners aged ≤ 29 gained 33.33 percent, while those aged 45-49 gained 8.33 percent. Therefore, the largest age group of respondents is the age of ≤29 years. This profession has no age limit, so the age of miners varies greatly.

Table 3. Education Level of Sand Lift Labor Miner

No.	Education Level	Frequency	Percentage (%)
1.	No School	6	50
2.	Graduated from Elementary School	1	8,33
3.	Graduated from Junior High School	3	25
4.	Upper High School Graduation	2	16,66
	Total	**12**	**100**

Source: Processed Data in 2024

Table 3 shows that the highest level of education is those who do not attend school, with a frequency of 6 or 50 percent, and the lowest is elementary school graduates, who number 1 person or 8.33 percent. It can be concluded that the education level of sand-lifting labor miners in Sunju Village is still shallow.

The mining experience of mining workers, especially sand lifters, is also influenced by how long they work as miners. It can be seen more clearly in table 4 below:

Table 4. Mining Experience

Long Mining (Year)	Frequency	Presentase (%)
≤5	9	75
≥5	3	25
Total	**12**	**100**

Source: Processed Data in 2024

Table 4 shows that of the 12 respondents, 9 respondents, namely miners, especially sand lift workers, 75 percent have worked ≤5 years, and 3 respondents, namely sand lift labor miners, show that 25 percent have worked as sand lifters for ≥5 years.

Working hours or working time is one factor that affects the performance of a job. The working time in question is the amount of time the sand lift labor miners spend to complete their work daily. The time the labor miners lift the sand in a day is quite large. For more details, see the table below:

Table 5. Long Working Miners Workers Lift Sand a Day

Length of work (hours/day)	F	Percentage (%)
4	3	25
7	5	41,66
9	4	33,33
Total	**12**	**100**

Source: Processed Data in 2024

Table 5 shows that out of 12 respondents, 3 respondents, or 25 percent, worked for 4 hours per day, 5 respondents, or 41.66 percent, worked for 7 hours per day, and 4 respondents, or 33.33 percent, worked 9 hours per day.

This income is the net income received by the sand-lifting miners. More details can be seen in the table below :

Table 6. Significant Income of Sand Lift Labor Miners

No.	Revenue (Rp) / Day	Revenue (Rp) / Month	F	Percentage (%)
1.	75.000	2.250.000	9	75
2.	100.000	3.000.000	3	25
Jumlah			12	100

Source: Processed Data in 2024

Table 6 shows miners' lowest 75 percent income, especially sand lifters, is Rp2,250,000 per month, while the most significant income is 25 percent, with an income of Rp3,000,000 per month. Thus, the economic impact on the lives of sand lift workers and miners can have a positive effect because people who work as sand lifters can meet their daily needs.

However, sand mining also has an environmental impact on local communities through the sand mining business. Based on the study's findings, data and information about the ecological effects of sand mining in Sunju Village, Marawola District, Sigi Regency, were obtained through interviews with the village government and the community. The environmental impact of sand miner activities can be seen through several supporting indicators in this study. These indicators show that sand mining activities in Sunju Village impact land damage, such as cliff landslides and hollows on river banks so that they can potentially flood. In addition, it hurts the environment, causing erosion of land and the formation of holes, resulting in erosion. In addition, the environmental impact realized by the community is air pollution, which is part of the physical impact on the environment, and air pollution due to sand suction devices and sand transport vehicle activities, resulting in air pollution, especially during the dry season. The water quality of the Sunju River has become dirty and polluted with waste from sand suction machines.

Another impact of environmental damage felt by the surrounding community is the activity of sand miners, who continue to spread to road facilities and infrastructure, often traversed by vehicles transporting sand. Thus, the roads used by the community become damaged, and the existence of roads is troubling to the community because the road conditions are damaged and can be at risk of accidents, especially at night.

The community around the mine also experiences negative health impacts caused by sand miners. Health is an aspect that will never be separated from the environment because the environment is a factor that contributes highly to health conditions. The health impacts that occur due to sand mining include air pollution. The results of interviews with the community and health workers in Sunju Village show that few people complain because of vehicle traffic activities that carry sand and can cause dust scattering, shortness of breath, and coughing.

4.   CONCLUSION

Based on the results of this study, it can be concluded that sand mining in Sunju Village is very influential and has a positive impact on the community's economy because the income obtained by sand lift labor miners is Rp2,250,00-Rp3,000,000 per month. Researchers also concluded that sand mining causes environmental damage and affects public health

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