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Gold Mining Activities Impact on the Socio-Economic and Cultural Community in the Working Area of the UPTD Puskesmas Ujung Padang Rasian, South Aceh Regency

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Abstract**:** *Indonesia, as an archipelagic country, has abundant natural resource potential, including mineral resources such as gold. One area experiencing gold mining activity is South Aceh Regency, specifically the working area of the Ujung Padang Rasian Community Health Center (UPTD), which covers 11 villages with approximately 17–25 mining locations, of which 7 locations are still actively operating. This study aims to analyze gold mining activities and their impacts on the social, economic, and cultural aspects of the local community. The study used an observational analytical design with a quantitative cross-sectional approach. The study population was all gold mining workers with a sample size of 35 respondents determined through a total sampling technique. Data collection was carried out using questionnaires and observations, then analyzed using the chi-square test. The results showed that gold mining activities were categorized as high (57.1%) and very high (42.9%), with the majority of respondents having worked for 1–4 years. There was a significant relationship between mining activities and economic conditions and community income levels (p=0.019). Conversely, no significant relationship was found between mining activities and socio-cultural aspects (p=0.091) or length of employment (p=0.66). These findings indicate that gold mining activities contribute positively to improving the community's economy, while social structures and cultural values remain relatively stable. Therefore, sustainable management through supervision, health education, the use of personal protective equipment, and the implementation of environmentally friendly technologies is needed to minimize potential negative social and environmental impacts.*
Keywords: Gold Mining, Socio-Culture, Economy, South Aceh

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INTRODUCTION

Indonesia is an archipelagic nation with abundant natural resource potential, both biological and non-biological. Mineral resources are one type of non-biological resource. Indonesia's mineral resources are highly diverse in both quality and quantity. These include petroleum, gold, coal, silver, tin, and others (Iyai & Rumbekwan, 2024). One area in Aceh Province that has felt the impacts of illegal gold mining is Nagan Raya Regency. These impacts include contaminated water sources, damaged soil ecosystems, illegal logging, and contamination of aquatic life caused by the amalgamation process (Nisah & Ashari, 2020).

The South Aceh Regency area of Aceh Province has great potential for development. In addition to farming for a living, the people of South Aceh can also work in other fields. This is because the South Aceh Regency is quite rich in natural resources, including land, water, forests, and minerals, most of which are not optimally utilized. One potential natural resource is gold. South Aceh Regency is also known as a gold-producing area in the Aceh region. The Baro Village area is located in Meukek District, South Aceh Regency, Aceh Province. Since 2016, gold mining has been carried out in the Alue Baro Village area, carried out in forest areas or land. Evidence of gold mining activities carried out by Alue Baro villagers in 2016 proves that gold mining activities still occur today (Yana & Yulianti, 2024).

Based on data obtained from the Ujung Padang Rasian Health Center, in the working area of the Ujung Padang Rasian Health Center UPTD, Pasie Raja District, South Aceh Regency, it consists of 11 (eleven) villages, namely; Seuneubok Village, Ie Mirah Village, Pasie Rasian Village, Ujung Padang Rasian Village, Ujung Padang Asahan Village, Krueng Kalee Village, Pulo Ie II Village, Lhok Sialang Cut Village, Lhok Sialang Rayeuk Village, Teupin Gajah Village, and Kampung Baro Village, it is estimated that there are around 17-25 mining locations, but until now only around 7 mining locations are still actively operating, namely located in Krueng Kalee Village, Ie Mirah Village, Ujung Padang Rasian Village, Seunebok Village, Lhok Sialang Rayeuk Village, Teupin Gajah Village, Ujung Padang Asahan Village, Ladang Tuha Village, and Lhok Sialang Cut Village (Ujung Padang Rasian Health Center, 2024).

Gold mining has a significant impact on the social, economic, and cultural life of local communities. One of the most obvious benefits of this industry is increased income for many people who previously relied on agriculture and turned to gold mining, which typically offers higher wages than their previous jobs. While generating economic benefits, mining activities also damage agricultural land and increase the risk of workplace accidents (Palar, 2021). Mining certainly has impacts on communities, both positive and negative. The positive impact of artisanal mining is the creation of jobs. Meanwhile, the negative impact of artisanal gold mining is the lack of community participation in village social activities, leading to environmental damage such as land, water, and forest degradation (Sudiyarti et al., 2021).

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METHODOLOGY

This research uses the methodquantitative correlation test withusing observational analytical research type. research design; designcross-sectional. the population in this study was 35 people, the sampling technique in this study used the total sampling technique, namely the sample selected based on a certain quota, the number of samples in this study was 35 people. This study used two instruments, namely questionnaires and observations.Taking care of the research permit letter from the campus to be submitted to the Community Health Center, the researcher asked for permission from the Community Health Center to conduct research and data collection, Data collection was carried out using the results of questionnaires and interviews from the Community Health Center, the questionnaires provided by the Community Health Center will be analyzed and input into Microsoft Excel to be grouped according to their respective categories, the data that has been categorized will be input into SPSS with a chi-square test to be analyzed related to Gold Mining Activities with the Impact of Gold Mining Activities.Data analysis techniques: 1. Collecting Data; Before processing the data, we must ensure that all the required data has been collected. 2. Editing Data; After all the data has been collected, the next step is to check whether the data is complete and clear so that it is easy to process. 3. Coding Data; At this stage, the process of identifying and classifying the data will be carried out by assigning symbols in the form of numbers to the respondents' answers according to the variables being studied. The next process is to enter the data into the SPSS application and then carry out the univariate and bivariate analysis process with the final statistical output being the presentation of the data in tabular form. 4. Data Tabulation; After coding, the next step is to tabulate the data. The data tabulation activity starts from inputting the data, compiling, and calculating the data into a table. The protocol in this study has received ethical approval through letter No. 076 / KEP-UNISM / IX / 2023 (dated September 9, 2023) from the Research Ethics Commission of Sari Mulia University, Banjarmasin.

RESULTS AND DISCUSSION

Results

1. Analysis of Gold Mining Activities by Economic Level

Correlation of respondent demographics based on economics with gold mining activities in the regionupdatedUjung Padang Rasian Health Center can be seen in the table explained in the following table.

Table 1 Analysis of gold mining activities by economic level

Category	Gold Mining Activities				Total		*P-Value*
	Tall		Very high				
	f	%	f	%	f	%	

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Currently	4	30.8	9	869.2	13	100	
Tall	16	72.7	6	27.3	22	100	0.019
Total	**20**	57.1	15	42.9	35	100	

Source: Primary Data (Processed in 2025)

Table 1 shows that the total chi-square test result is 0.019, equivalent to a P-Value <0.05. This means that the economy shows a significant relationship or correlation with gold mining activity in Ujung Padang Raisan.

2. Analysis of Gold Mining Activities with social and cultural gold mining

Correlation of respondent demographics based onsocio-cultural with gold mining activitiesin the regionupdatedUjung Padang Rasian Health Center can be seen in the table explained in the following table.

Table 2 Analysis of activities with social and cultural gold mines

Category	Gold Mining Activities				Total		*P-Value*
	Tall		Very high				
	f	%	f	%	f	%	
Low	2	50	2	50	4	100	
Currently	13	56.5	10	43.5	23	100	0.091
Tall	5	62.5	3	37.5	8	100	
Total	**20**	**57.1**	**15**	**42.9**	**35**	**100**	

Source: Primary Data (Processed in 2025)

Table 2 shows that the total chi-square test result is 0.091, equivalent to a P-Value >0.05. This indicates that there is no significant relationship or correlation between social and cultural factors and gold mining activities in Ujung Padang Raisan.

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3. Analysis of Gold Mining Activities by Length of Working Time

Correlation of respondent demographics based onLength of Working Time with gold mining activitiesin the regionupdatedUjung Padang Rasian Health Center can be seen in the table explained in the following table.

Table 3 Analysis of gold mining activities with length of working time

Category	Gold Mining Activities				Total		*P-Value*
	Tall		Very high				
	f	%	f	%	f	%	
1-4 Years	16	61.5	10	38.5	26	100	
5-8 Years	3	42.9	4	57.1	7	100	0.66
9-12 Years	1	50	1	50	2	100	
Total	**20**	**57.1**	**15**	**42.9**	**35**	**100**	

Source: Primary Data (Processed in 2025)

Table 3 shows that the total chi-square test result is 0.66, or a P-Value <0.05. This indicates that there is no significant relationship or correlation between length of service and gold mining activity in Ujung Padang Rasian.

4. Analysis of Gold Mining Activities by LevelIncome

Correlation of respondent demographics based on income with gold mining activities in the regionupdatedUjung Padang Rasian Health Center can be seen in the table explained in the following table.

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Table 4 Analysis of gold mining activities by level*income*

Category	Gold Mining Activities				Total		*P-Value*
	Tall		Very high				
	f	%	f	%	f	%	
1,000,000-2,499,999 Medium	4	30.8	9	869.2	13	100	
2,000,000-5,000,000 High	16	72.7	6	27.3	22	100	0.019
Total	**20**	**57.1**	**15**	**42.9**	**35**	**100**	

Source: Primary Data (Processed in 2025)

Discussion

1. Correlation of Gold Mining Activities with the Economy

The analysis of gold mining activity and the economy yielded a P-Value of 0.019, equivalent to a P-Value <0.05. This means that the economy shows a significant relationship or correlation with gold mining activity.

This research is in line with research by Sudiyarti et al. (2021), which states that artisanal mining provides various job opportunities not only for miners but also creates a multiplier effect for the informal sector, such as food stalls, lodging, and heavy equipment providers. Approximately 65% of people involved in mining activities experienced a daily income increase of more than twofold compared to before becoming involved in the mining sector. In the study by Oktryaningsih et al. (2024) in Lalar Liang Village, researchers found that communities involved in gold mining experienced a significant increase in well-being. As many as 58% of low-income families renovated their homes, and 44% stated they could afford to send their children to higher education. Furthermore, the study by Novendra et al. (2021) shows that 70% of respondents switched professions from farming to mining because mining offers more stable and higher short-term income. This data reinforces the argument that the mining sector provides a significant economic boost to local communities.

2. Correlation of Gold Mining Activities with Socio-Cultural Impacts

A total of 35 respondents were distributed across the low (4 respondents), medium (23 respondents), and high (8 respondents) socio-cultural categories. The distribution of respondents with high (20 respondents) and very high (15 respondents) mining activities remained proportional

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in each category. A p-value of 0.091 indicates no statistically significant relationship between gold mining activities and the socio-cultural conditions of the community..

From a sociological perspective, this study shows that despite the high intensity of gold mining activity, the social structure and cultural value system of the community remain stable. This is consistent with the results of other studies (Githiria & Onifade, 2020). This shows that communities involved in mining tend to maintain cultural values passed down through generations, despite increased economic activity. In this context, a new subculture has emerged that does not replace the local culture that is deeply rooted in the community.

In addition, a study by Dondo et al. (2021) on the social impact of gold mining in Bolaang Mongondow found that while mining activities did increase community income, they did not significantly alter existing cultural values. Social values such as mutual cooperation, togetherness, and solidarity among residents remained intact, demonstrating strong cultural resilience despite economic changes. In line with this, Zubir (2017) emphasized that despite the migration of people to mining areas that brought with them external cultural influences, local communities did not immediately accept all elements of this new culture. Of the total respondents, 76% stated that they maintained local customs despite exposure to external culture. The resulting social selection process resulted in only a small portion of external culture being adopted, while the majority of local traditional values and beliefs remained well-preserved and maintained.

3. Correlation of Gold Mining Activities with Length of Working Time

The results of the analysis showed that there was no significant relationship between the level of mining activity and the length of time respondents had worked, with a P-Value of 0.66.

This research indicates that length of time worked is not a primary indicator of involvement or work intensity in the mining sector. As stated by Sudiyarti et al. (2021), many mine workers are employed seasonally and lack long-term commitment to the profession. Even newly employed individuals may exhibit high work intensity due to pressing economic needs. Research conducted by Samangun et al. (2024) also stated that in small-scale mining, the length of work experience does not directly correlate with productivity or engagement, as factors such as age, physical condition, and financial motivation are more dominant in influencing work decisions. Furthermore, Kadarisman and Ardiansyah (2015) found that miners frequently move between locations depending on gold price fluctuations and the working season. This leads to variations in engagement that do not always align with length of service. Therefore, this study's findings reinforce the understanding that work duration is not the primary determinant of activity in the mining sector, and that external factors such as economic needs more strongly influence respondents' involvement in mining activities.

CONCLUSIONS

Based on a study of 35 respondents, gold mining activity in the working area of the Ujung Padang Rasian Community Health Center (UPTD) is categorized as high (57.1%) and very high (42.9%). The analysis shows a significant relationship between gold mining activity and the community's economic conditions ($p = 0.019$), where most respondents with high economic status are in the high mining activity category (72.7%). Conversely, no significant relationship was found

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between mining activity and social and cultural aspects (p = 0.091), indicating that the community's social structure and cultural values are relatively stable. Furthermore, length of work was also not significantly related to mining activity (p = 0.66), indicating that work duration is not a major factor influencing the intensity of mining activity. Analysis of income levels again confirmed a significant relationship with mining activity (p = 0.019), indicating a significant contribution of mining to increasing community income. Thus, gold mining activities play an important role in the economic aspect, but still require ongoing management and monitoring to minimize potential social, health, and environmental impacts in the future.

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